

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

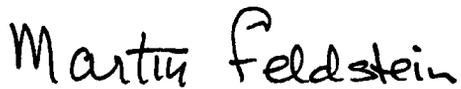
LETTER OF TRANSMITTAL

COUNCIL OF ECONOMIC ADVISERS,
Washington, D.C., January 31, 1983.

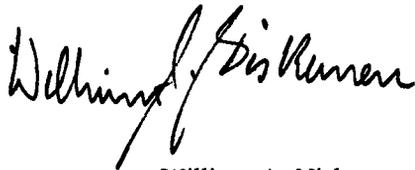
MR. PRESIDENT:

The Council of Economic Advisers herewith submits its 1983 Annual Report in accordance with the provisions of the Employment Act of 1946 as amended by the Full Employment and Balanced Growth Act of 1978.

Sincerely,



Martin Feldstein
CHAIRMAN



William A. Niskanen



William Poole

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CHAPTER 1

From Recession to Recovery and Growth

THE MAJOR ECONOMIC ACHIEVEMENT OF 1982 was a dramatic reduction of inflation to its lowest rate in a decade. The 4.6 percent increase in the gross national product (GNP) implicit price deflator between the fourth quarters of 1981 and 1982 was less than half the 10.2 percent rate of increase between the fourth quarters of 1979 and 1980. This decline in inflation has moderated the earlier widespread fears that inflation would accelerate. While some of this improvement in inflation was transitory, reflecting such special factors as the appreciation of the exchange value of the dollar, the largest share was almost certainly due to a decline in the underlying rate of inflation. The reduced rate of inflation is a major step toward the Administration's goals of full employment, healthy economic growth, and price stability.

The progress made in reducing inflation, however, was accompanied by a painful slowdown of the economy. Beginning in July 1981, the Nation suffered the second of two back-to-back recessions that brought the unemployment rate to 10.8 percent in December 1982. At that time, approximately 5 million more people were unemployed than in January 1980, when the first of the two recessions began.

The increase in long-term unemployment poses a particularly severe problem. In January 1980, about 550,000 people had been unemployed for more than 6 months. In December 1982 there were more than four times as many. Long-term unemployment is particularly serious in that it causes substantial financial hardship and is associated with a loss of job skills that may reduce future income significantly.

Some temporary decline in real economic activity was probably unavoidable in the process of reversing the upward trend of inflation. The United States entered the 1980s with a high rate of inflation and with widespread public expectations that the rate would remain high, and perhaps increase. As high inflation persisted, it became embedded in the plans and contracts of firms and workers, and lowering it involved a painful process. The decline of real GNP since early 1981

was in large part the price the United States paid for failing to control inflation in the late 1970s.

LEGACIES OF THE 1970s

In the 1960s, many economists believed that the Federal Government could keep unemployment down permanently by accepting a higher rate of inflation. Steady rises in productivity and living standards were taken for granted. During the 1970s these views proved to be incorrect. By the closing years of the 1970s, both the unemployment rate and the inflation rate were higher than they had been in the 1960s, and the rate of productivity growth was lower.

Why did unemployment, productivity growth, and inflation all worsen in the 1970s? These developments occurred in part because of factors outside the government's control, such as changes in the size and composition of the work force and rising world energy prices. But the economy also suffered from long-standing government policies that exacerbated inflation and distorted the incentives to work, save, and invest.

RISING UNEMPLOYMENT

Total employment grew rapidly in the 1970s but so did the rate of unemployment. The civilian labor force participation rate rose from 60.4 percent of the population in 1970 to 63.8 percent in 1980. The unemployment rate averaged 5.4 percent in the first half of the 1970s, greater than the 4.8 percent average of the 1960s. The recession of 1975 took the unemployment rate to a monthly high of 9.0 percent. Unemployment then declined to a monthly low of 5.6 percent in 1979, only to begin rising again to a peak of 7.8 percent in July 1980.

In addition to cyclical fluctuations in the economy, a number of structural factors contributed to the rise in the unemployment rate over the decade. These included the changing demographic structure of the labor force, the increased number of workers dislocated by changes in technology and international competitiveness, and the work registration requirements in a number of government welfare programs.

A more detailed analysis of unemployment and the labor market consequences of macroeconomic policy is presented in Chapter 2.

DECLINING PRODUCTIVITY GROWTH

From 1960 to 1970, real output per hour in the private sector rose at an annual rate of 3.0 percent; from 1970 to 1980 it rose at a rate of only 1.4 percent. Labor productivity growth would probably have

slowed somewhat in the 1970s regardless of the policies adopted. The sharp increases in the price of oil caused by supply disruptions in 1974 and 1979 reduced productivity growth as firms substituted capital and labor for energy. Furthermore, as the post-World War II baby-boom generation entered the labor force and the percentage of working-age women seeking employment rose, the proportion of less experienced workers increased, further depressing productivity.

The slowdown in productivity growth was, however, exacerbated by a decline in rates of capital formation. Net investment in fixed business capital fell from 3.5 percent of GNP in the 1960s to 3.0 percent in the 1970s, and the rate of growth of capital per worker fell even more sharply, from 3.2 percent per year in the 1960s to only 1.3 percent in the 1970s. The interaction of the tax system with inflation played an important role in reducing the rate of capital formation.

Another cause of slow productivity growth was an increase in government regulation. In some sectors of the economy, Federal regulations directly reduced labor productivity; in others, they diverted capital investment away from the improvement of productivity into the satisfaction of regulatory requirements. Some of these regulations served useful purposes, but some imposed economic costs that exceeded their economic benefits.

The tax changes proposed by the Administration and enacted by the Congress in 1981 and 1982 were designed to lead to faster growth and higher productivity by stimulating saving, investment, and individual effort. In addition, the Administration's policy of reducing government regulation is intended to enhance the efficiency of individual markets and thereby increase total production.

RISING INFLATION

Of all the economic problems that this Administration inherited when it came to office in 1981, the most urgent was the problem of rising prices. Double-digit inflation had created serious economic distortions. An equally serious concern was that the trend rate of inflation was rising over time.

From 1960 to 1970, the GNP deflator rose at an average rate of 3.0 percent per year. Between 1970 and 1973, the average rate of inflation by this measure was 5.3 percent. Then, aggravated by the sharp jump in world oil prices and other special factors, inflation reached 10.2 percent during 1974, but by 1976 it was down to 4.7 percent. In the next 4 years, which included the second oil price shock in 1979, inflation increased continually until it reached 10.2 percent again in 1980.

Over short periods of time a variety of factors influence the rate of inflation. One important factor in the 1970s was supply-determined changes in commodity prices resulting from fluctuations in harvests and disruptions in the supply of foreign oil. Another important factor was the increasing level of expected inflation. Once the expectation of continuing inflation has become firmly entrenched, prices and wages may continue to rise even in the face of declining demand, and the cost of reducing inflation may increase.

These factors, however, only affect the rate of inflation for a limited time. The popular axiom that attributes inflation to "too much money chasing too few goods" reflects a basic truth: it is difficult to imagine a sustained inflation that is not supported by excessive money growth. Over long periods of time, an additional percentage point in the rate of growth of the money stock will tend to produce an additional percentage point of growth of nominal GNP, that is, GNP measured at current prices. If the rate of real GNP growth does not change, the entire increase in nominal GNP growth will take the form of increased inflation. Although the relations between money growth, nominal GNP growth, and inflation are considerably more variable over shorter periods than they are in the long run, the impact of money growth on nominal income and inflation remains powerful even in the short run.

THE RECESSION

The substantial decline in the rate of growth of the M1 measure of money that occurred between the end of 1980 and the end of 1981 was a principal contributor to the decline in nominal income growth in 1982, a decline compounded by a marked change in the velocity of money. Part of the slowdown in nominal GNP growth took the form of lower inflation, and part of it took the form of a decline in real economic activity.

The adverse short-run effect of a slowdown in nominal GNP on real economic activity is a basic feature of our economy that reflects the stickiness of wages and prices in most markets. If prices and wages were perfectly flexible, reduced nominal GNP growth would translate immediately and painlessly into reduced inflation. However, not all wages and prices are flexible. When expectations of future inflation are deeply embedded, prices and wages may continue to rise for some time despite excess supplies of goods and labor. A change in inflationary expectations, together with the direct pressures exerted by excess supplies, eventually causes prices and wages to adjust to new market-clearing levels. But until that occurs a slowdown in nomi-

nal GNP growth is reflected in a slowing of real growth as well as in a slowing of inflation.

The severity of the recession in 1982 reflected a combination of circumstances which caused a very sharp decline in nominal GNP growth between 1981 and 1982. Between the fourth quarter of 1980 and the fourth quarter of 1981, nominal GNP grew at a rate of 9.6 percent; in contrast, nominal GNP rose only 3.3 percent last year. About one-third of the 6.3 percentage point drop in nominal GNP growth between 1981 and 1982 was reflected in a 1.9 percentage point decline in the real GNP growth rate—from an increase of 0.7 percent in 1981 to a decline of 1.2 percent in 1982. The reduction in inflation accounted for the remaining two-thirds of the drop in nominal GNP.

Although some slowdown in nominal GNP growth and in inflation in 1982 was a predictable effect of tighter monetary policies, the very sharp decline actually experienced did not reflect a decrease in the growth of the monetary aggregates. Rather the exceptional severity of the slowdown in nominal GNP growth can be traced to a combination of factors that led to an unusually sharp decline in the velocity of money, that is, in the ratio of GNP to the money stock.

THE DECLINE IN VELOCITY

The 1982 decline in the velocity of money—as measured by the velocity of either the M1 or M2 monetary aggregates—was historically atypical. Between 1961 and 1981, M1 velocity rose at an average annual rate of 3.2 percent, while the velocity of M2 remained essentially constant, rising at an average annual rate of 0.2 percent. In contrast, in 1982 the velocity of M1 fell 4.9 percent and M2 velocity fell 6.0 percent on a fourth quarter to fourth quarter basis. By either measure, the growth of nominal GNP was well below the rate that would have prevailed if the M1 or M2 measures of velocity had grown at their average historic rates. These velocity declines were the largest since 1959, the earliest year for which the Federal Reserve has published data on the monetary aggregates under the definitions currently in use.

If these velocity shifts had not occurred, the rise in nominal GNP in 1982 would have been between 10 and 12 percent. While it is uncertain how this hypothetical change would have been distributed between real activity and inflation, it is likely that real GNP would have increased enough to have ended the recession sometime before the final quarter of 1982.

Although the cause of the large velocity shift that occurred in 1982 is not fully understood, it is likely that major changes in asset demands of individuals and businesses played an important role. More

precisely, an increase in the demand for M1 or M2 at any income level decreases the corresponding velocity of money. Such shifts may occur because of regulatory changes that provide new financial opportunities—like the introduction of nationwide interest-bearing negotiable order of withdrawal (NOW) accounts—or because of changes in asset preferences—like the increased demand for money market mutual funds instead of long-term securities.

The uncertain cause of the recent decline in velocity is characteristic of the problems that the Federal Reserve has encountered in applying the new monetary control procedures that it adopted in October 1979. Changes in banking regulations and the development of new financial instruments by the private sector have compelled the Federal Reserve to make frequent revisions to the definitions of the monetary aggregates and reassessments of their economic impacts. In 1980 a complete revision of the definitions of the monetary aggregates was introduced. In the next year, a “shift adjusted” M1-B was defined in an effort to adjust for shifts from savings deposits to NOW accounts. Most recently, in 1982 and early 1983, definitional changes in M1 and M2 were required to deal with the advent of the new money market deposit account—which was added to M2—and the new super NOW account—which was added to M1.

The Federal Reserve was aware throughout 1981 and 1982 that the relationship between the monetary aggregates and economic activity was in a state of flux, and that future velocity trends were uncertain. While sustained but unanticipated shifts in velocity growth can be identified in hindsight, it is nearly impossible to know at the time they occur whether unusual quarter-to-quarter changes in velocity will continue or reverse themselves. The presumption, on the basis of past experience, is that most velocity changes are temporary. Thus, increasing the rate of money growth in response to temporary declines in velocity runs the risk of providing excessive liquidity and increasing inflation, while a failure to recognize a continuing shift in liquidity preference or velocity runs the risk of providing inadequate liquidity and reducing real GNP. Given the circumstances of 1982, the somewhat greater growth in the monetary aggregates than initially intended by the Federal Reserve appeared to be an appropriate way to balance those risks.

ECONOMIC RECOVERY

The Administration believes that the American economy will soon recover from the recession that began in July 1981. The forecast presented in Chapter 6 projects that economic recovery will begin in 1983, marking the start of a long period of sustained growth with low

inflation. More specifically, the Administration forecasts that real GNP will rise 3.1 percent from the fourth quarter of 1982 to the fourth quarter of 1983, and that nominal GNP will rise 8.8 percent. Realization of the economic forecast and steady noninflationary growth in subsequent years will depend upon the implementation of appropriate monetary and fiscal policies.

IMPLEMENTING A STABLE MONETARY POLICY

The Administration has repeatedly indicated that the fundamental guiding principle of monetary policy in an inflationary economy should be a gradual reduction in the rate of growth of the money stock until the rate is consistent with price stability. This principle is consistent with the general approach enunciated in recent years by the independent Federal Reserve.

The basic challenge for monetary policy at present is to balance the principle of stable money growth with the need to take account of changing asset preferences that may alter the velocity of money. While maintaining the approach of setting specified target ranges for money growth, the Federal Reserve will also need to use its judgment to adjust money growth rates and the corresponding targets to reflect lasting changes in asset demands.

The extent to which a policy of predetermined money growth rates is appropriate depends on the stability and predictability of the velocity of money. Strictly speaking, inflexible monetary growth rates are appropriate only if the trend in income velocity is constant or has purely random disturbances. The advisability of a strict policy rule depends on the degree of predictability of velocity disturbances. The more predictable velocity disturbances are, the more they can be offset by countervailing shifts in the money stock. The less predictable they are, the more likely it is that any attempt at countervailing shifts in the money stock will add to the overall volatility of nominal GNP.

The task of making appropriate adjustments to the monetary targets is enormously difficult. An excessive increase in the money stock will cause a period of increased inflation while an insufficient increase in the money stock will not provide adequate liquidity for the needs of an expanding economy. Eventually such deviations are self-correcting, but only after a period of accelerating inflation or weak economic performance.

One possible way to avoid such periods is to use the observed behavior of nominal GNP to guide a gradual recalibration of the monetary growth targets, recognizing that there are uncertain lags between money stock changes and the resulting changes in nominal GNP. Basing the recalibration of monetary targets on nominal GNP is con-

sistent with the basic principle of pursuing a stable monetary policy. Indeed, it is the relatively stable long-run relationship between the monetary aggregates and nominal GNP that justifies the Federal Reserve's policy of setting targets for the growth of M1 and M2. This implies that caution in revising these targets is appropriate. The principle of targeting money growth rates is not an end in itself but only a means of achieving control of nominal GNP.

Disadvantages of Interest Rate Targeting

From World War II until the mid-1970s the Federal Reserve, like most central banks, conducted monetary policy by focusing on interest rates and money market conditions. Over the 1970s, increasing emphasis was given to targeting monetary aggregates. More recently, under new procedures first adopted in October 1979, the Federal Reserve has given greater emphasis to keeping the growth of the monetary aggregates within pre-announced target ranges, even though it was recognized that this could result in greater variations in interest rates.

Since 1979 both long-term and short-term interest rates have proven more variable than in the past. Many critics attribute this change to the increased emphasis on monetary targets and the level of bank reserves as the operational basis for monetary policy. Although some have argued that the Federal Reserve should drop monetary targeting in favor of targeting interest rates, the Administration believes strongly that targeting interest rates, either nominal or real, would prove to be a serious error.

The *nominal* rate of interest is a very unreliable indicator of the thrust of monetary policy. The financial variable important to borrowers and lenders is not the *nominal* interest rate but a *real* interest rate determined by subtracting the rate of inflation from the nominal interest rate. Borrowers and lenders take into account the fact that the dollars repaid when a loan matures do not have the same purchasing power as the dollars originally borrowed. When inflation is expected, lenders insist that the nominal rate of interest include a premium to compensate them for the declining purchasing power of the dollar, and borrowers are willing to pay such a premium.

Although the real interest rate is more closely linked to borrowing and lending decisions than the nominal interest rate, the real interest rate is also not an appropriate target for monetary policy. There are several basic reasons for rejecting the policy of real interest rate targeting.

First, real interest rate targeting might well lead to an inflationary monetary policy. Any given real interest rate is compatible with a wide range of inflation rates. For example, a real interest rate of 2 percent could occur with a 5 percent nominal rate and a 3 percent

inflation rate, or with a 12 percent nominal rate and a 10 percent inflation rate. Thus, achieving a real interest rate target would provide no assurance of price stability.

Second, the real interest rate that governs economic behavior is the difference between the nominal interest rate and the *expected* rate of inflation. Since expectations of inflation are not observable, the monetary authorities cannot as a practical matter measure or target the expected real interest rate.

A third reason why real interest rate targeting is not feasible is that the relevant interest rate is not merely the real rate but the real net-of-tax interest rate. Because net-of-tax rates of interest vary among individuals and businesses in different tax positions, there is no way for the monetary authorities to determine the relevant average real net-of-tax interest rate in financial markets. Compounding the problem further, different rates of inflation can result in very different net-of-tax real interest rates corresponding to the same pretax real interest rate, even for a particular taxpayer. For example, a taxpayer with a marginal tax rate of 40 percent earns a real net-of-tax return of 1 percent if he receives a nominal rate of 10 percent and there is 5 percent inflation; that same taxpayer earns a real net-of-tax return of -2 percent if he receives the same real return of 5 percent but there is zero inflation. Similarly, the real interest rate and the real net-of-tax interest rate can easily move in opposite directions when the inflation rate changes.

There is a final and even more fundamental reason for rejecting real interest rate targeting. Even if the expected real interest rate were measurable, there would remain the virtually impossible task of determining what level of that interest rate is actually compatible with noninflationary growth. The problem of identifying the equilibrium interest rate is made even more difficult by the interaction of tax rules and inflation.

Monetary Rules and Discretion

There is no simple solution to the problem of guiding monetary policy in a time of rapid institutional change. Interest rate targeting, as shown above, is not a desirable approach. Instead, the monetary authorities should be guided by the principle of keeping money growth within a prespecified target range while adjusting those targets when a careful consideration of the evidence indicates that sustained shifts in asset demands have occurred.

The combination of monetary rules and discretion must be applied with great care and judgment. The observance of rules must not become a doctrinaire attachment to arbitrary standards, and the exercise of discretion must not degenerate into unprincipled fine tuning. Instead, the monetary rules must be understood as a way of achiev-

ing an appropriate long-run path for the economy. The exercise of discretion in recalibrating monetary targets must be subject to the discipline that such revisions are ultimately compatible with the desired long-run path of nominal GNP. With rules and discretion balanced in this way, monetary policy can support a sound recovery that leads to sustained and noninflationary growth.

THE BUDGET DEFICIT

The Federal budget deficit has become a major problem for the American economy. Without the savings proposed by the Administration in its budget plan for the years 1984 through 1988, the United States is forecasted to experience a series of deficits that would consume more than 6 percent of GNP in each of the next 6 years. Although budget deficits have been a nearly constant feature of our Nation's economic life for the past two decades, the prospective budget deficits that would result if no legislative actions were taken to reduce them would be far larger than those previously experienced in the postwar period. The economic effects of such deficits are beyond our previous experience.

The fiscal 1983 deficit is partially a result of the recession. Any recession reduces tax collections and increases outlays for unemployment benefits, retirement benefits, and certain other activities. A reasonable approximation is that the change in economic output associated with a percentage point change in the unemployment rate would raise the fiscal 1983 deficit by about \$25 billion. The Administration forecasts that the unemployment rate for fiscal 1983 will average 10.7 percent. If the unemployment rate were 6.5 percent instead, the budget deficit would be about half the \$208 billion now forecast for fiscal 1983. The cyclical component represents a similarly large share of the fiscal 1984 deficit.

Economic recovery and growth in the years ahead will reduce the cyclical component of the deficit. The Administration's forecast projects a decline in the unemployment rate by 4 percentage points between fiscal 1983 and fiscal 1988, leaving only a negligible cyclical component in the fiscal 1988 budget. Unless the Administration's proposals are enacted, a current services budget deficit of \$300 billion is forecasted to materialize.

To see the origin of these large deficits, it is useful to compare the components of the 1988 current services budget with the same components for 1970. Between those years, taxes decline very slightly as a percentage of GNP, from 19.9 percent in 1970 to 18.9 percent in 1988. The defense share of GNP remains unchanged at 8.1 percent of GNP in both years. By contrast, nondefense activities excluding interest rise from 10.6 percent of GNP in 1970 to 13.6 percent in

1988, an increase of about one-fourth. In addition, the accumulation of previous deficits raise the net interest component of the budget deficit from 1.5 percent of GNP to 3.4 percent of GNP.

Deficits and Long-Term Growth

A succession of large budget deficits is likely to reduce substantially the rate of capital formation. The government's borrowing to finance such deficits would compete directly with borrowing by private businesses and households. With a limited amount of savings available for borrowing, high budget deficits would cause interest rates to rise until private demand for funds was reduced to the amount that remained after the government's borrowing needs were satisfied.

The magnitude of the potential crowding out of private investment is immense. During the past two decades, the net saving of households and businesses totaled only about 7 percent of GNP. Prospective deficits of more than 6 percent of GNP would represent virtually all of current net saving. Even though existing saving would be augmented by borrowing from abroad and by some increase in the private saving rate, the reduced rate of capital formation would be very substantial.

A lower rate of capital formation would have adverse consequences because the accumulation of capital is a key determinant of future increases in productivity and economic growth and therefore of higher real wages and standards of living. Further reductions in the rate of capital formation would be particularly unfortunate because, as Chapter 4 discusses in detail, the U.S. rate of capital formation has been undesirably low for several decades. In the years since 1960, net private investment has averaged only 6 percent of GNP, significantly less than the rate in most major industrial countries. Moreover, since half of this 6 percent has gone into housing, only about 3 percent of GNP has been available for productivity-increasing investments in plant and equipment. Deficits of the level implied by the current services budget could reduce the rate of net investment in plant and equipment enough to preclude any increase in the amount of capital per worker. If this occurred, the process of increasing capital intensity would cease to contribute to rising productivity and real wages.

Deficits and the Recovery

The adverse effects of large budget deficits are not limited to the distant future. The deficits that would occur without the budget actions proposed by the Administration could seriously affect the degree to which various economic sectors share in the benefits of recovery from the current recession. The crowding out of private investment which would accompany large deficits could depress the level of output in the construction industries, the steel industry, the

machinery and equipment industries, and industries that produce other durable goods.

In addition, large budget deficits raise the exchange value of the dollar relative to foreign currencies by attracting foreign capital to the United States. This weakens the competitive position of U.S. exports in the world economy and hurts those domestic industries that compete with imports from abroad. The nature and magnitude of this effect are discussed in Chapter 3 of this *Report*.

A "lopsided" recovery in which some sectors remained relatively depressed might prove more fragile than a recovery which was broadly based. An increase in economic activity limited to some sectors and regions might result in greater upward pressure on prices and wages at any given level of total output and employment than would be the case if there were balanced expansion among industries. In addition, an unbalanced recovery would produce more inflation and less real growth, regardless of the rate of expansion of nominal GNP.

The prospect of large budget deficits in the second half of this decade may also have an adverse effect on the prospects for recovery in 1983. If the financial markets respond to expected future deficits by keeping real long-term interest rates higher in 1983 than they would otherwise be, the level of spending in 1983 on interest-sensitive purchases may remain depressed. Clear evidence of the willingness of the Administration and the Congress to reduce Federal budget deficits substantially in the second half of the 1980s can play an important part in ensuring a healthy and balanced economic recovery in the more immediate future.

CHAPTER 2

The Dual Problems of Structural and Cyclical Unemployment

UNEMPLOYMENT IS THE MOST SERIOUS ECONOMIC PROBLEM now facing the United States. By December 1982 the number of unemployed had risen by more than 4 million since the beginning of the recession in July 1981. The unemployment rate was higher in December 1982 than at any point since the Depression, with over 12 million persons counted as unemployed. Even after the economy recovers from the recent recession, it is likely that the unemployment rate will reach a plateau between 6 and 7 percent.

This chapter analyzes the two major types of unemployment: cyclical and structural. The high level of cyclical unemployment now prevailing in the United States is a major problem, but it should prove transitory. Only a healthy and sustained recovery from the recent recession can effectively diminish cyclical unemployment. Even after full recovery, however, a serious structural unemployment problem will remain unless measures are taken to improve the functioning of labor markets. Reducing structural unemployment will require attacking the special problems of young people and the long-term adult unemployed.

This chapter begins by describing the dimensions of the cyclical and structural unemployment problems. It then examines the potential of public employment programs and macroeconomic policies to lower cyclical unemployment. Finally, policies for reducing structural unemployment are considered.

THE RECENT RECESSION

The unemployment rate in December 1982 stood at 10.8 percent of the civilian labor force. Since the recent period of economic slack that began in January 1980, the unemployment rate has risen by 4.5 percentage points. During the recent recession, which began in July 1981, the unemployment rate rose by 3.6 percentage points. Historical experience suggests that the unemployment rate tends to increase for several months after the level of production bottoms out

and it is possible that the unemployment rate will reach 11 percent at some point during 1983.

Beyond those officially counted as unemployed, the recent recession has prevented many Americans from working as much as they would like. In December 1982 there were over two million persons involuntarily working part time. The Bureau of Labor Statistics also reported that there were over 1.8 million discouraged workers in December. These are individuals who have given up looking for work because they believe they cannot find jobs.

Unemployment is often linked to economic hardship. While many of the unemployed receive unemployment insurance and live in families that have other members who work, many unemployed individuals and their families suffer economic distress. Table 2-1 presents information on the incomes of families in which the husband, wife, or head of household experienced unemployment during 1981. (Data for 1982 are not yet available.) Three types of families are distinguished: (1) families in which both husband and wife worked, (2) families in which only the husband or male head worked, and (3) families in which only the wife or female head worked. For all of the family types, unemployment experienced by husband, wife, or head of household significantly lowered median family income. For example, single-earner families in which the husband (or male head) was never unemployed had a median income in 1981 of \$25,000. In contrast, the median income of similar families in which the male head experienced 1 to 26 weeks of unemployment was \$16,500. Families in which the male head was unemployed for more than 26 weeks had a median family income of \$10,200.

TABLE 2-1.—Median family income by unemployment and family status, 1981 (current dollars)

Family status	Unemployment status of husband, wife, or head of household		
	Person never unemployed	Person unemployed less than 26 weeks	Person unemployed more than 26 weeks
Husband and wife both work.....	\$31,600	\$23,000	\$17,900
Only husband or male head works.....	25,000	16,500	10,200
Only wife or female head works.....	18,900	15,200	11,200

Source: Department of Labor, Bureau of Labor Statistics.

The financial losses of the unemployed are not the only costs of a prolonged economic decline. Considerable anxiety and emotional distress is experienced by those who have lost their jobs or who fear that they might lose their jobs in an economy with a declining number of employment opportunities. Protracted unemployment is

frequently associated with poor health, psychological problems, and gradual erosion of job-related skills.

THE COMPOSITION OF CYCLICAL AND STRUCTURAL UNEMPLOYMENT

The unemployment problem can be divided into two components, cyclical and structural unemployment. The term *cyclical unemployment* is used to refer to the unemployment associated with cyclical downturns in aggregate economic activity. The incremental unemployment associated with the recent recession would fall into this category. The term *structural unemployment* is used to refer to the unemployment that remains even after cyclical recoveries in aggregate economic activity.

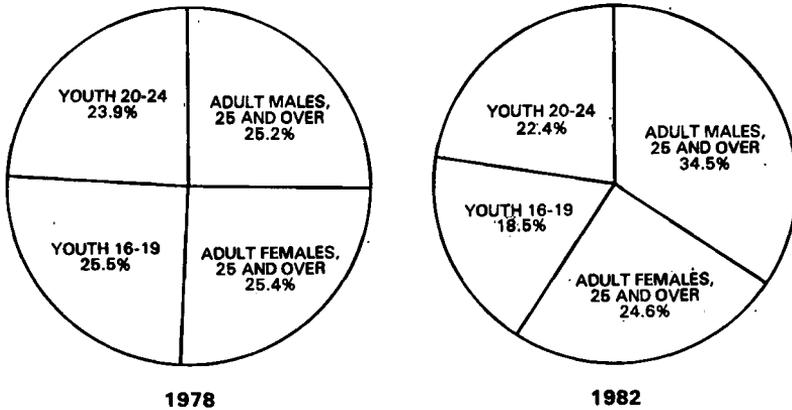
In large part, structural unemployment is a natural concomitant of a dynamic economy with constantly changing patterns of demand. Labor markets are in constant flux, with people entering and leaving the labor force, losing or quitting old jobs, and looking for and acquiring new jobs. Some amount of structural unemployment is an inevitable aspect of a large modern industrial economy such as ours. It is important to realize that although expansionary macroeconomic policies cannot reduce structural unemployment permanently, certain microeconomic policy interventions can affect the ease and speed of the process that matches workers with jobs.

Some insight into the differences between cyclical and structural unemployment can be obtained by comparing the characteristics of the unemployed in 1982 and in a period of low cyclical unemployment. Since the unemployment rate in 1978 was 6.1 percent, close to most observers' estimates of full employment, data from that year will be used to illustrate the characteristics of structural unemployment. The next two sections examine the composition of the unemployed population in 1978 and 1982 in terms of demographic composition and reasons for unemployment. A third section analyzes the dynamics of unemployment.

DEMOGRAPHIC COMPOSITION

Chart 2-1 provides information on the demographic composition of the unemployed population in 1978 and in 1982. The chart shows that young people under age 24 account for a substantial fraction of unemployment both when the economy is weak and when it is strong. Persons under 24 accounted for 49 percent of total unemployment during 1978 and 41 percent of unemployment in 1982. The decline in the share of youth unemployment reflected the large increase in unemployment among adult males in cyclically sensitive sectors of the economy, such as manufacturing.

Distribution of Unemployment by Age and Sex



NOTE.—DATA RELATE TO PERSONS 16 YEARS AND OVER.
SOURCE: DEPARTMENT OF LABOR.

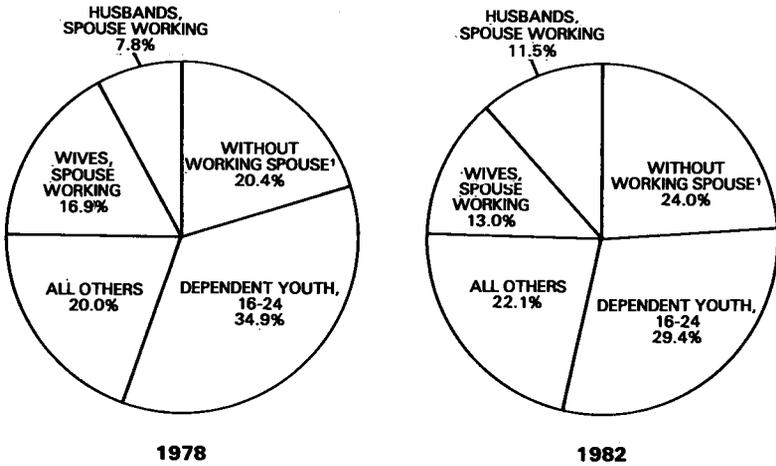
A pattern that appears in Chart 2-2 is the cyclical sensitivity of unemployment among those who provide the primary financial support for a family. The share of unemployment among husbands, wives, and family heads in families without a working spouse rose from 20 percent in 1978 to 24 percent in 1982. Because unemployment undoubtedly imposes its greatest hardship when it hits a worker upon whom others depend for their sole support, this increase is particularly distressing.

A continuing tragedy in both good and bad times is the very high rates of unemployment of blacks and other minorities. This group accounts for a share of unemployment that is greatly disproportionate to its share of the labor force. While blacks and other minorities comprised 13 percent of the labor force in 1982, they comprised approximately 23 percent of the unemployed. Chart 2-3, shows that the recent recession raised the unemployment rate of blacks and other minorities proportionally less than that of the rest of the population.

However, black and other minority unemployment rates increased sharply during the recession and continue to greatly exceed those of the entire population. The unemployment rate for black and other minority adult males was 16.2 percent in 1982, compared to 7.8 percent for white males. For black and other minority teenagers the unemployment rate was 43.9 percent, compared to 20.4 percent for white teenagers.

Chart 2-2

Distribution of Unemployment by Family Status



¹HUSBANDS AND WIVES WHOSE SPOUSE DOES NOT WORK AND PERSONS WHO MAINTAIN FAMILIES.

NOTE.—DATA RELATE TO PERSONS 16 YEARS AND OVER.

SOURCE: DEPARTMENT OF LABOR.

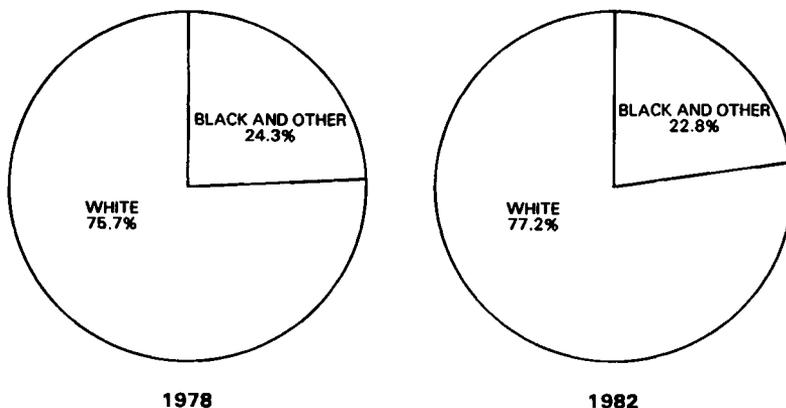
REASONS FOR UNEMPLOYMENT

Analyzing the problem of unemployment requires understanding the process by which people become unemployed. The unemployed are often described in stereotyped terms as the victims of permanent layoffs by firms that are either partially or fully shutting down. Even during the recent recession, however, this characterization applied to less than half of the unemployed.

As part of the monthly Current Population Survey, the unemployed are asked a number of questions designed to elicit the reasons for their unemployment. The answers to these questions permit a breakdown of the unemployed into five groups: (1) persons laid off who can expect to return to the same job; (2) persons who have lost jobs to which they cannot expect to return; (3) persons who have quit their jobs; (4) reentrants who are returning to the labor force after a spell of neither working nor looking for work; and (5) new entrants who have never worked at a full-time job before but are now seeking employment.

Chart 2-4 shows that the distribution of the unemployed among these categories is very sensitive to cyclical conditions. The share of persons who have lost their jobs, either temporarily or permanently,

Distribution of Unemployment by Race



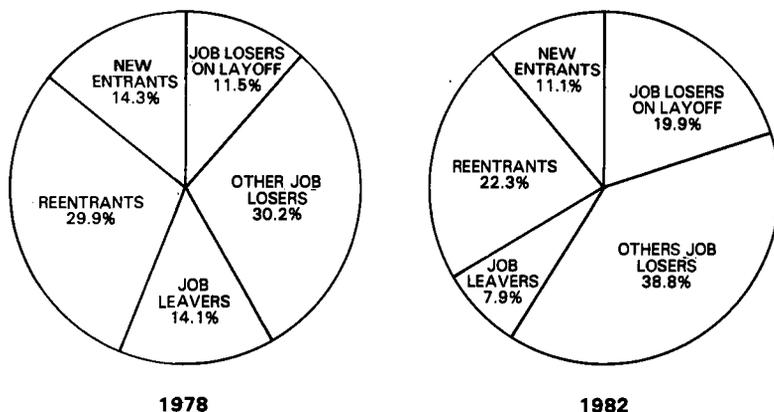
NOTE.—DATA RELATE TO PERSONS 16 YEARS AND OVER.

SOURCE: DEPARTMENT OF LABOR.

is particularly sensitive, rising from 42 percent in 1978 to 59 percent in 1982. Over this period the number of job losers on temporary layoff tripled and the number of permanent job losers more than doubled. The decline in alternative employment opportunities resulted in a decline in the share of unemployment traceable to workers leaving their jobs voluntarily during the recession—from 14 percent in 1978 to 8 percent in 1982. Finally, because the number of labor force entrants and reentrants is relatively constant, their share in total unemployment declined somewhat during the recession.

The data on reasons for unemployment indicate a major difference between cyclical and structural unemployment. Almost 90 percent of the increase in unemployment during cyclical downturns involves increases in job losses and layoffs, as firms respond to declines in demand for their products. On the other hand, almost 60 percent of structural unemployment is comprised of voluntary job leavers, labor force entrants, and reentrants. The remainder are job losers. As described below, the very different causes of cyclical and structural unemployment suggest that different policy responses are appropriate.

Distribution of Unemployment By Reason



NOTE.—DATA RELATE TO PERSONS 16 YEARS AND OVER.
SOURCE: DEPARTMENT OF LABOR.

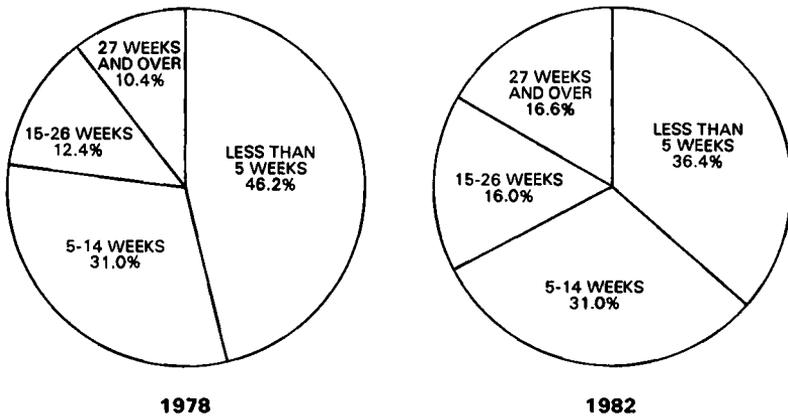
THE DYNAMICS OF UNEMPLOYMENT

An essential feature of the unemployment problem is its dynamic character. The appropriate design of policies to reduce unemployment depends on whether most of the unemployed are out of work for a long time and must wait for an economic upturn to find jobs or whether they are a group whose membership changes rapidly, even during recessions.

The principal source of information on the duration of unemployment is the monthly Current Population Survey, which asks persons who report themselves as unemployed to report how long they have been unemployed. Chart 2-5 presents information on the duration of unemployment in 1978 and 1982. The clearest difference between cyclical and structural unemployment emerges in the incidence of long-term unemployment. In 1982 the number of unemployed individuals who reported that they had been out of work for 6 or more months was almost three times the corresponding number in 1978, when the economy was operating without significant cyclical unemployment.

While the incidence of long-term unemployment increases sharply during recessions, it is important to recognize that many of the un-

Distribution of Unemployment by Duration



NOTE.—DATA RELATE TO PERSONS 16 YEARS AND OVER.
SOURCE: DEPARTMENT OF LABOR.

employed find jobs or withdraw from the labor force relatively quickly. Of all the persons who became unemployed in September 1982, over 45 percent were no longer unemployed by October, and over 65 percent were no longer unemployed by November. However, evidence on the duration of unemployment is not purely indicative of the ease or difficulty with which persons find jobs since almost half the unemployed leave the labor force without finding jobs.

While most persons who become unemployed look for work only briefly, this group does not comprise a large part of the unemployment problem. It is long-term unemployment that is of special concern. A recent study found that in 1978, more than 40 percent of total unemployment was due to the 15 percent of the unemployed population who were out of work a total of 6 months or longer during the year. This concentration of long-term unemployment among a relatively small group of the unemployed is particularly pronounced during cyclical downturns. Data on this subject are not yet available for 1982. During 1975, however, when the unemployment rate was 8.5 percent, an estimated 52 percent of unemployment was due to the 22 percent of the unemployed population who were out of work more than 6 months.

These findings suggest several conclusions. First, even during recessions, most persons who become unemployed either find jobs or leave the labor force relatively quickly. Second, the unemployment problem is most serious for those who are unemployed for prolonged stretches. Third, the incidence of long-term unemployment is very sensitive to cyclical conditions, which suggests that it will diminish as the economy recovers. Even after a recovery is well underway, however, a sizable fraction of total unemployment will involve protracted joblessness. The needs of the long-term unemployed deserve special recognition in the designing of policies to attack structural unemployment.

COMBATING CYCLICAL UNEMPLOYMENT

High rates of cyclical unemployment, which the American economy is now experiencing, are largely a consequence of fluctuations in aggregate demand caused by macroeconomic policies and shocks to the economy. As described in Chapter 1, the historical experience of the United States and other countries suggests that disinflation is generally associated with lost output and increased unemployment. During periods of disinflation and recession, the measures available to reduce the pain of the transition from accelerating inflation to price stability are limited. Greater fiscal or monetary stimulus might increase employment, but only at the risk of igniting inflation. Chapter 1 describes the principles that the Administration feels govern sound macroeconomic policies.

THE LIMITS OF MACROECONOMIC POLICY

The only way to reduce current high levels of cyclical unemployment is for the United States to achieve a sound recovery from the recent recession. Avoiding future recurrences of high cyclical unemployment requires avoiding an expansion so rapid as to lead to rapidly increasing inflation. Historical experience suggests that the change in the rate of inflation depends both on the rate at which economic activity is expanding and on the level of economic slack. If the slack in the economy declines too rapidly, or capacity utilization is held at too high a level, inflation will tend to increase. The lower limit on unemployment below which inflation will tend to increase is referred to as the *inflation threshold* unemployment rate.

While it is not easy to pinpoint the inflation threshold unemployment rate precisely, it probably lies between 6 and 7 percent. Econometric studies of historical data suggest that when unemployment is close to 6 percent, the rate of inflation tends to accelerate. For example, during 1978 when the unemployment rate was 6.1 percent, infla-

tion as measured by percentage changes in the gross national product (GNP) deflator rose to 7.4 percent from 5.8 percent in 1977. An even larger increase occurred in 1979 when the unemployment rate averaged 5.8 percent.

The Effect of Demographic Factors

There are a number of reasons to believe that the inflation threshold unemployment rate increased during the 1960s and 1970s. Many economists believe that demographic factors may have contributed to the increase. Persons with little labor market experience tend to have high rates of unemployment as they move from job to job in an effort to obtain a desirable career position. In the last 15 years, the children of the baby boom have reached maturity thus raising substantially the share of inexperienced workers in the labor force. In addition, women with little recent labor market experience have entered the labor force at an unprecedented rate during the last 15 years. It has been estimated that if the labor force had the same demographic composition today as it had in 1958, the unemployment rate would have been about three-quarters of a percentage point lower in 1982. The share of young people in the labor force will decline sharply over the next decade due to a dramatic reduction in the birth rate throughout the late 1960s and the 1970s. This provides grounds for cautious optimism that the inflation threshold unemployment rate will decline.

Social Insurance Programs

Other factors which have increased the inflation threshold unemployment rate in recent years are less likely to be reversed in the next decade. These include the effects of social programs. While providing important financial support to their recipients, these programs also have both behavioral and reporting effects on the measured unemployment rate.

Behavioral effects of social insurance programs such as unemployment insurance include the encouragement of firms to lay off workers and the inducement of persons to prolong their spells of unemployment. These effects are discussed in more detail below. Reporting effects occur when programs induce persons to change reporting of their labor force status, without changing their behavior. For example, some experts believe that the Federal Supplemental Benefits program instituted during the 1975 recession caused persons who otherwise would have withdrawn from the labor force to report that they were unemployed because of job search requirements. There is some evidence to suggest that the work registration requirements in the food stamp and AFDC programs have had a similar effect.

Wage Rigidity

A number of studies show that wages and prices are much more rigid now than prior to World War II, and that rigidity has increased within the post-War period. Increased wage rigidity is likely to raise the economy's inflation threshold level of unemployment, since less flexible wages increase the inevitable unemployment associated with the sectoral shocks which buffet the economy.

The reasons for this change are not well understood. A side effect of the provision of a "safety net" program is that employees may become more resistant to wage reductions, leading to increases in wage and price rigidity. To the extent that the two-earner family is a form of private "safety net" against the financial losses of unemployment, the recent growth in the number of two-earner families may also have contributed to increasing wage rigidity in the United States over time.

Increasing Structural Change

A final factor that may have contributed to a rising inflation threshold unemployment rate is the increasing rapidity of structural change in the economy. This acceleration, which is in part caused by the economy's increasing sensitivity to events in the world economy, is evidenced by increasing dispersion across industries and localities in rates of unemployment. Because transfers of human and physical resources are costly and take time, increased unemployment is a concomitant of structural change.

While the separate impacts of these factors—changing demographic composition, larger social insurance programs, increased wage rigidity, and increased structural change—are difficult to quantify, it is reasonable to conclude that together they may have significantly increased the inflation threshold unemployment rate. Expansionary macroeconomic policies are unlikely to reverse the effects of these changes.

PUBLIC WORKS EMPLOYMENT PROGRAMS

Direct provision of public works jobs by the government is a politically popular response to cyclical unemployment during recessions. Available evidence suggests, however, that public works programs adopted in past recessions proved counterproductive, and that the inherent capability of public works programs to combat cyclical unemployment is limited.

The Timing of Public Works Expenditures

Public employment programs that produce useful goods or services generally take time to plan and implement. Therefore, such programs often have their greatest effects on public employment long

after an economic recovery has begun. For this reason, public employment programs have sometimes exacerbated rather than mitigated cyclical fluctuations in aggregate demand. A study of the Accelerated Public Works program enacted in September 1962 by the Congress to combat the high unemployment rate of the early 1960s found that the number of jobs created by the program peaked in June 1964, 37 months after the bottom of the recession. More recent experience also confirms that lags in implementation are long. A recent study by the Office of Management and Budget found that 90 percent of the outlays for local public works projects designed to stimulate recovery from the 1974-75 recession occurred more than 2½ years after the trough of the recession. The lags in implementing public works programs result in their having destabilizing effects, since a large share of the resulting spending occurs during periods of economic expansion.

The Effect of Federal Funding of Public Works on State Expenditures

Even when spending for these programs begins immediately after they are enacted, many public works projects do not yield a net increase in employment. Because of the long planning and implementation lags, most of the projects available for immediate funding are those that were planned before the recession began. Thus, Federal expenditures on these projects often substitute for outlays that would have taken place anyway.

A major effect of Federal public works expenditures may be to alter the timing of public works projects. The expectation of new public works programs may induce State and local governments to delay making outlays during the early stages of economic downturns in the hope that they will receive Federal funds for projects they have "on the shelf." The importance of this possibility is suggested by experiences with the Local Public Works Capital Development and Investment Act of 1976 and the Public Works Employment Act of 1977, programs intended to spur recovery from the 1975 recession. Three characteristics of these programs may have created incentives for local governments to delay their own discretionary spending until they could see whether the Federal Government would pay their entire bill: (1) projects were financed fully by the Federal Government; (2) grants were limited to quick-starting projects; and (3) there was considerable uncertainty and lengthy delays in the process of awarding money to State and local governments. One study found that State and local public works expenditures fell substantially in mid-1976 and decreased further between 1976 and 1977. It suggested that this may have occurred because States and local governments delayed projects in anticipation of funds becoming available under the 1976 and 1977 public works programs. The study also suggested

that these measures may have caused the postponement of as much as \$22 billion in total government spending.

Crowding Out of Private Sector Employment

Another reason for discounting the efficacy of public works measures is their adverse side effects on private employment. If public works outlays are financed by additional taxes, the income and spending of consumers are reduced, decreasing the number of jobs in the private economy. Alternatively, insofar as public works outlays are financed by borrowing from the public, interest rates are raised, crowding out some forms of private spending and reducing private employment. The higher interest rates resulting from increased Federal borrowing also discourage capital investments that help create future employment.

Benefits to Workers

An additional reason to discount the efficacy of accelerated public works projects is their limited value to participants. Most jobs in countercyclical public works projects are of extremely short duration and are unlikely to provide participants with lasting job skills. Under the Public Works Impact Program, initiated in fiscal year 1972, the average duration of employment amounted to only 4.1 weeks. Almost 60 percent of all employees worked 2 weeks or less. Data for the local public works programs initiated in 1976 and 1977 and described above, indicate that the average job lasted only 3.5 weeks.

Although public works programs are motivated by a desire to provide jobs for the unemployed, very few jobs are actually filled by unemployed workers. Under the Public Works Impact Program, only 27 percent of all jobs were filled by the previously unemployed. Under the more recent public works programs of 1976 and 1977, it has been estimated that only 12 percent of all jobs were filled by previously unemployed workers.

COMBATING STRUCTURAL UNEMPLOYMENT

The preceding analysis suggests that it would be imprudent to use macroeconomic policies to reduce the unemployment rate below its inflation threshold level of 6 to 7 percent. Such an effort would increase inflation, and ultimately prove counterproductive as increased inflation was followed by recession. This does not mean that unemployment rates in the 6 to 7 percent range are either inevitable or desirable. The inflation threshold level of unemployment can be reduced by policies that consider the special problems of two groups of workers: (1) young people, and (2) adults experiencing long-term unemployment. It can also be reduced by reforms of the unemployment

insurance system, which, while providing valuable insurance, may increase the incidence of unemployment.

THE PROBLEM OF YOUTH UNEMPLOYMENT

At times of low cyclical unemployment, about half the unemployed are young people between the ages of 16 and 24. Close to one-fourth of all the unemployed are teenagers aged 16 to 19. While unemployment clearly imposes hardships on youths, it has very different economic impacts than it does for adults. Many unemployed youths are in school and looking for part-time work. Most of this group, and many other young people who have left school, are not economically independent, but rather live at home and rely on their parents for financial support. Many other young people experience only brief periods of unemployment as they move from one job to the next.

Table 2-2 provides information on the labor market activities of young men and women aged 16 to 19 in October 1981, when the teenage unemployment rate was 24.1 percent. Data for 1982 are not yet available. As the table reveals, only 5 percent of all teenagers were out of school and measured as unemployed (because they were looking for work). A striking feature of the youth labor market is the large fraction of young people who are out of school but are neither working nor looking for work. Over 30 percent of female and 14 percent of male out-of-school teenagers were not in the labor force. The factors underlying this labor force withdrawal by young people are not well understood. In some cases, young people may withdraw from the labor force because they are discouraged about their prospects for finding suitable employment. In other cases, labor force withdrawal may reflect a desire for leisure.

The observations about the dynamic character of unemployment made elsewhere in this chapter are especially true of young people.

TABLE 2-2.—*Educational and labor market activities of youth aged 16 to 19, by sex, October 1981*

Item	Number (thousands)	Percent of subgroup	Percent of population	Number		
				(thousands)	Percent of subgroup	Percent of population
	Males			Females		
Total population.....	8,036		100.0	8,059		100.0
Enrolled in school.....	5,683	100.0	70.7	5,526	100.0	68.6
Employed.....	2,024	35.6	25.2	1,829	33.1	22.7
Unemployed.....	424	7.5	5.3	429	7.8	5.3
Not in labor force.....	3,235	56.9	40.3	3,268	59.1	40.6
Unemployment rate (percent).....	17.3			19.0		
Not enrolled in school.....	2,353	100.0	29.3	2,533	100.0	31.4
Employed.....	1,585	67.4	19.7	1,340	52.9	16.6
Unemployed.....	434	18.4	5.4	417	16.5	5.2
Not in labor force.....	334	14.2	4.2	776	30.6	9.6
Unemployment rate (percent).....	21.5			23.7		

Source: Department of Labor, Bureau of Labor Statistics.

Most young people find jobs or leave the labor force fairly quickly. It was recently estimated that of those male teenagers who become unemployed in a given month only 42 percent remain unemployed in the next month.

Youth unemployment is nevertheless a critical economic problem. A large part of the youth unemployment problem is traceable to the small group of teenagers who experience extensive unemployment. More than 52 percent of all unemployment experienced by teenage males aged 16 to 19 in 1981 was due to the 4.4 percent of the male teenage population of this group who were out of work for more than 6 months during that year.

Evidence also suggests that certain teenagers who suffer extensive unemployment earn lower wages later in life. The direction of causation is very difficult to establish since persons with low skills may simply fare poorly both early and late in life. However, the best evidence available suggests that poor labor market experiences early in life cause reduced wages during adulthood. This suggests the importance of developing policies to improve employment opportunities for the long-term unemployed and to reduce job turnover.

Training, Unemployment, and the Minimum Wage

A major problem in the youth labor market is the dearth of "career-oriented" employment opportunities. While people who participate in post-secondary schooling are generally subsidized by the public sector, public support of equivalent magnitude has not been available for the post-high school training of youth who choose to enter the labor force after high school.

Employers may find it very difficult to offer such training because of the constraints imposed by minimum wage legislation. These laws discourage employers from hiring unskilled workers at very low wages and compensating them further by providing training. This may help explain very high job turnover among youths as they move rapidly in and out of "dead-end" jobs. Another consequence of minimum wage laws is that they prevent some young people from acquiring the training that would permit them to find steady, well-paying employment as adults. Statistical studies provide evidence that minimum wages significantly depress the accumulation of valuable skills and resulting growth in earnings among youths who are paid the minimum wage. There is also evidence that the negative effects of the minimum wage on employment and training are concentrated

disproportionately among youths with the fewest labor market skills. Thus, although the stated purpose of the minimum wage is to reduce poverty, experience suggests that it may actually decrease the lifetime earnings of some of the poor and thereby increase income inequality.

POLICIES TO REDUCE YOUTH UNEMPLOYMENT

Almost all observers agree that mitigating the problems of instability and high unemployment in the youth labor market requires increasing the availability of career-oriented employment and training. This can be accomplished through public support of training, minimum wage reforms, and employment tax credits.

The Job Training Partnership Act

The Job Training Partnership Act (JTPA) of 1982 represents a major Federal initiative to reduce structural unemployment among youth and adults. The JTPA departs from previous Federal employment training programs by establishing a formal partnership between private industry, the public sector, and vocational training institutions for the purposes of planning, designing, and providing federally financed training. Federal resources are targeted to individuals identified as most in need: economically disadvantaged youth, low-skilled and chronically unemployed adults, and skilled workers who have lost jobs in declining industries and regions. The problems faced by the latter group are discussed more fully later in this chapter.

The JTPA is intended to fill an important niche in the national employment and training system by serving individuals who are unable to make use of job training provided by more traditional institutions: high schools, vocational-technical schools, community colleges, universities, and employers. Federally funded training programs such as JTPA provide a second chance to youth and adults experiencing trouble in the labor market. The JTPA is administered at the State and local level. This allows training programs to be tailored to the particular needs of workers and employers in local labor markets.

Minimum Wage Reforms

The Administration will propose a summertime differential minimum wage for young people under the age of 22. Between May 1 and September 30 of each year the minimum wage for this group would be reduced to \$2.50 from \$3.35. This measure would encourage firms to hire young people, just out of school, and give them the experience needed to compete effectively in the labor market. It will also encourage employers to provide youth who remain in school with valuable work experience during the summer months.

The Targeted Jobs Tax Credit

An alternative policy avenue for encouraging employment and training of young people is to provide tax credits or wage subsidies

to employers who hire youths. Tax credits are currently provided to firms that employ economically disadvantaged youths, aged 18 to 24, under the Targeted Jobs Tax Credit program. The credits are also targeted to welfare recipients, and economically disadvantaged Vietnam veterans, cooperative education students, handicapped persons, and ex-convicts.

The tax credit lasts for up to 2 full years. In the first year it is equal to 50 percent of an individual's earnings, up to a maximum credit of \$3,000. In the second year it is equal to 25 percent of earnings, up to a maximum credit of \$1,500. Participation in the program has been limited since its inception in 1979. This is an apparent consequence of administrative problems encountered by the agencies responsible for determining program eligibility (especially the Job Service), reluctance on the part of eligible recipients to use the tax credit as a self-marketing tool, and employers' reluctance to let government programs influence hiring decisions.

Recent legislation added a second component to the tax credit program by providing a tax credit for summer employment targeted at economically disadvantaged youths aged 16 and 17. The tax credit for this group is quite large, equaling 85 percent of wages, up to a total summer income of \$3,000. The summer Targeted Jobs Tax Credit program, in effect, allows employers to hire eligible youths, who are paid the minimum wage for a net cost to the firms of 50 cents an hour. The program will be in place for the first time during the summer of 1983.

A virtue of measures which subsidize employment and on-the-job training for youth is that they counteract the large bias toward formal schooling over on-the-job training inherent in current policies. In part because of large public subsidies to higher education during the last two decades, the percentage of young people, aged 18 to 24, enrolled in higher education rose very sharply from 26 percent in 1963 to 41 percent in 1975. This shift toward increased formal schooling was accompanied by a decline in the relative wages of college graduates and high school graduates. The ratio of the average annual incomes of college graduates to that of high school graduates, aged 25 and over, fell from 1.53 in 1968 to 1.38 in 1978.

LONG-TERM UNEMPLOYMENT AND STRUCTURAL CHANGE

An especially visible and serious component of the unemployment problem is composed of adults suffering protracted unemployment. At present, most long-term unemployment is a consequence of the recession and the resulting reduction in the demand for labor. But as discussed earlier in the chapter, long-term unemployment will remain a significant problem even after the economy recovers.

Structural Change and Economic Adjustment

A large part of long-term unemployment among adults can be traced to structural changes in the economy. An increasingly important source of structural change is the growing interdependence of the U.S. economy with that of the rest of the world. The share of export and import-competing industries in GNP has increased over the last several decades, and many industries have consequently felt the cold winds of economic change. By December 1982 the unemployment rate had reached 23.2 percent in the motor vehicle industry and 29.2 percent in the primary metals industry. Other industries, including mining, construction, and lumber, have also contracted rapidly, leaving behind a significant number of long-term unemployed. These figures reflect both changes resulting from foreign competition and the sharp declines in the demand for manufactured goods caused by the recent recession. The gradual decline of the dollar in foreign exchange markets to historically prevailing levels, a drop in real interest rates, and general economic recovery would contribute to easing the problems of troubled industries, as explained in Chapter 3. However, most observers believe that foreign competition will present persistent problems in some domestic industries even in the long run.

In a number of these industries, significant adjustments will need to take place. If foreign firms can continue to produce goods at lower costs than U.S. firms, either domestic production will contract, forcing workers to leave the affected industries, or workers will have to accept constant or even declining real wages. The former option is particularly painful in industries like automobiles and steel, where workers have become accustomed to high standards of living. Because wages in these industries are substantially greater than wages in other manufacturing industries, workers find it difficult to locate suitable alternative jobs.

Programs which inhibit the transition of workers from declining industries to growing industries would raise the level of structural unemployment in the economy. Included in this group are programs which would provide financial assistance to industries without providing incentives for employee relocation or wage and price flexibility. In a dynamic economy subject to the pressures of domestic and foreign competition, our economic health depends critically on the ability of workers and firms to respond quickly to changing economic conditions.

Policies to Alleviate Long-term Unemployment

The centerpiece of Federal policy to alleviate long-term unemployment is Title III of the new Job Training Partnership Act discussed earlier in the chapter. Title III established State-administered programs of employment and training assistance for dislocated workers,

defined broadly to include individuals who have become unemployed as a result of plant closures, laid-off workers who are unlikely to return to their previous industry or occupation, and individuals experiencing long-term unemployment in occupations with limited employment opportunities. Matching grants are provided to States on the basis of their unemployment conditions. Title III authorizes States to establish a wide variety of employment and training activities, including job search assistance, job training, relocation assistance, and employment counseling. Individuals receiving Title III assistance may also receive unemployment compensation, if they are eligible.

The Administration in its 1984 budget has introduced two new approaches to the problem of reducing long-term unemployment. First, it has proposed that Federal unemployment laws be amended to permit States to use a portion of the unemployment insurance taxes they collect to support retraining and job search assistance for their unemployed workers. Second, the Administration has proposed that the Federal Supplemental Compensation program be replaced when it expires with a new temporary program that provides incentives for work as well as compensation for long-term unemployment. As an alternative to added weeks of unemployment compensation, this program would give recipients the option of receiving assistance in securing work through a system of tax credits to employers. This will give employers a significant incentive to hire the long-term unemployed.

THE EFFECTS OF UNEMPLOYMENT COMPENSATION

For more than 40 years, unemployment compensation has given valuable support to millions of unemployed workers and has provided an important source of security to millions more who are employed. Along with these beneficial consequences, however, the present structure of the unemployment insurance system has altered the incentives faced by employers in hiring and firing decisions and the incentives of unemployed workers to accept new employment opportunities. As a result, unemployment compensation seems to have increased the incidence and duration of unemployment.

The current system of unemployment compensation produces two distinct but related adverse incentive effects. First, for those who are unemployed it reduces the cost of unemployment, providing an incentive for longer durations of unemployment. Second, current methods of financing unemployment insurance increase the incidence of unemployment by increasing the size of seasonal and cyclical fluctuations in unemployment and by making temporary jobs more common.

Incentives to Prolong Unemployment

Payments to the unemployed clearly raise the level of household expenditures that can be maintained when one or more family members are not working. Such payments reduce the economic pressure to find work immediately, encouraging a longer period of job search during which the unemployed worker hopes to find a more attractive job than might otherwise be found. For some workers unemployment insurance replaces more than 70 percent of after-tax wages during periods of unemployment. Economic research indicates that there is a positive relationship between duration of job search and the level of unemployment benefits.

Workers who take longer to find jobs because of unemployment compensation are in no sense "loafing" or "cheating." An unemployed person who does not expect to be recalled by his previous employer can expect, on average, to find a better job the longer and more carefully he looks. Unemployment insurance, by reducing the cost of additional weeks without work, encourages unemployed workers to continue searching for better employment opportunities.

Incentives for More Unstable Employment

A second avenue through which the unemployment insurance system, as currently financed, tends to increase the economy's rate of structural unemployment is by increasing seasonal and cyclical fluctuations in the demand for labor and the relative number of short-lived, casual jobs.

The effect of unemployment compensation is to offset the market forces that would otherwise decrease, at least somewhat, the amount of unstable employment in the economy. Insofar as unemployment compensation provides a subsidy to unstable employment practices, it reduces the wage differential required to attract workers to seasonal, cyclical, and temporary jobs. And because employers pay a relatively small premium for unstable employment practices under current methods of financing unemployment insurance, they have little incentive to reduce this instability.

The current subsidy to unstable employment patterns would be reduced if unemployment insurance were financed through a more completely experience-rated employer tax that more accurately reflected the expected level of unemployment benefits to a firm's laid-off workers in the future. The theory of experience rating is clear: if an employer pays the full cost of the unemployment benefits that his former employees receive, he will not have an incentive to make excessive use of unstable employment practices. Recent statistical research demonstrates that there is, in fact, a strong positive relation-

ship between incomplete experience rating and employment instability.

Most States use experience rating to some extent, in that some employers contribute to the State unemployment compensation fund partially on the basis of the unemployment experience of their own employees. The degree of experience rating is highly imperfect, however, for two reasons.

First, a significant share of benefits paid are not directly charged to firms, but rather, are spread across all the firms in a State. These include benefits paid to job leavers, benefits to employees of firms no longer doing business in a State, and allowances for dependents. Extended benefits, which are available in high unemployment States to workers who have exhausted their regular unemployment insurance, are also not directly charged to employers.

Second, employer contributions are limited by minimum and maximum tax rates. Firms stuck at the maximum or minimum tax rates will find that their tax rates do not change even if the unemployment experience of their workers is altered. As a consequence they face reduced economic incentives to smooth employment fluctuations.

One measure of the extent of experience rating is the proportion of benefits received that are not effectively charged to the former employer. A value of 100 percent represents perfect experience rating. A recent study of nine States over the period 1971-1978 found that on average, less than 60 percent of total benefits were experience rated, by this definition. The degree of experience rating fell to 47.5 percent during the 1975 recession and reached a high of 62.6 percent in 1978, a year with relatively low unemployment.

The problem of imperfect experience rating has been partially remedied by a provision of the Tax Equity and Fiscal Responsibility Act of 1982 which raised the federally proscribed lower bound on State maximum unemployment insurance tax rates from 2.7 percent to 5.4 percent of employers' taxable payroll. Because of this change, fewer firms are likely to face the maximum tax rate.

CONCLUSIONS

The dual problems of cyclical and structural unemployment are both extremely serious. Increased unemployment during cyclical downturns, and the high levels of unemployment that prevail even after the economy recovers, impose large costs on the unemployed and the economy as a whole. Fortunately, both can be ameliorated by prudent public policy. Sound macroeconomic policies will avoid recurrences of the rising inflation of the 1970s and subsequent in-

creases in cyclical unemployment. Policies directed at young people and the long-term unemployed, and reform of the unemployment insurance system, can significantly reduce the level of structural unemployment.

CHAPTER 3

The United States in the World Economy: Strains on the System

DURING THE 1970s the world's market economies became more integrated with each other than ever before. Exports and imports as a share of gross national product (GNP) reached record levels for most industrial countries, while international lending and direct foreign investment grew even faster than world trade. This closer linkage of economies was mutually beneficial. It allowed producers in each country to take greater advantage of their country's special resources and knowledge, and to take advantage of economies of scale. At the same time, it allowed each country to consume a wider variety of products, at lower costs, than it could produce itself.

Underlying the growth in world trade and investment was a progressive reduction of barriers to trade. The postwar period was marked by a series of agreements to liberalize trade: both multilateral, like the Kennedy Round, and bilateral, like the Canada-U.S. auto pact.

In spite of its huge benefits, however, this liberalized trading system is now in serious danger. Within the United States, demands for protection against imports and for export subsidies have grown as a combination of structural changes, sectoral problems, and short-run macroeconomic developments has led to a perception that we are becoming uncompetitive in world markets. In Europe, a growing structural unemployment problem, aggravated by the recession, has increased protectionist pressures. In the developing countries a financial crisis threatens the integration of capital markets and is pushing many countries back toward the exchange controls and import restrictions they had begun to dismantle.

These problems must not be allowed to disrupt world trade. If the system comes apart—if the world's nations allow themselves to be caught up in a spiral of retaliatory trade restrictions—a long time may pass before the pieces are put back together.

This chapter reviews the strains on the international economic system and the policies by which the United States is attempting to overcome them. It is divided into four sections. The first section discusses long-term changes in U.S. competitiveness. The correction of

widespread misconceptions about the competitive position of the United States is essential if we are to get through the difficult period ahead without making major policy mistakes. The second section of the chapter is devoted to financial developments and their effects on trade, especially the appreciation of the dollar and its likely effects on the U.S. trade balance. Two final sections examine macroeconomic and financial problems in Europe and the developing countries.

LONG-RUN TRENDS IN U.S. COMPETITIVENESS: PERCEPTIONS AND REALITIES

Concern over the international competitiveness of the United States is as high as it has ever been. It is argued with increasing frequency that U.S. business has steadily lost ground in the international marketplace. This alleged poor performance is often attributed both to failures of management in the United States and to the support given to foreign businesses by their home governments. Feeding the perception of declining competitiveness is the persistent U.S. deficit in merchandise trade, especially the imbalance in trade with Japan.

Changes in U.S. trade performance must, however, be put into the context of changes in the U.S. role in the world economy. This wider approach reveals that much of the concern about long-run competitiveness is based on misperceptions. Although the recent appreciation of the dollar has created a temporary loss of competitiveness, the United States has not experienced a persistent loss of ability to sell its products on international markets; in fact, in the 1970s the United States held its own in terms of output, exports, and employment. Changes in the relationship of the United States to the world economy, however, have made the United States look less competitive by some traditional measures.

AGGREGATE PERFORMANCE OF THE UNITED STATES AND OTHER DEVELOPED COUNTRIES

Discussion of U.S. competitiveness often gives the misleading impression that the United States has consistently performed poorly relative to other industrial countries. The U.S. share of world trade and world GNP did in fact decline throughout the 1950s and 1960s, reflecting the recovery of the rest of the world from World War II, together with the narrowing of the huge and unsustainable U.S. technological lead. In the 1970s, however, this long decline leveled off.

- From 1973 to 1980, real gross domestic product (GDP) in the United States grew at an annual rate of 2.3 percent, compared

with 2.6 percent in the other Organization for Economic Cooperation and Development (OECD) countries.

- From 1973 to 1980 the U.S. share of OECD exports remained nearly constant, declining from 17.6 to 17.2 percent.
- Over the same period, employment in the United States grew at 2.1 percent a year, compared with only 0.5 percent in the rest of the OECD countries.

The United States, in part as a side effect of its relatively rapid growth in employment, did do poorly by comparison in one respect, productivity growth. Output per worker grew at only 0.2 percent in the United States, compared with 2.2 percent a year in the rest of the OECD countries. Productivity is, of course, crucial to living standards; ultimately, the level of consumption per capita depends on the level of output per worker. But there is no necessary relation between productivity and competition in international markets. Slow growth in productivity only hampers a country's international competitiveness if it is not offset by correspondingly slow growth in real wages. If U.S. workers, for example, were to receive real wage increases equal to those granted in other countries while their productivity failed to increase at a comparable rate, U.S. industry would find itself increasingly uncompetitive. The fact is, however, that this did not occur, as the comparative experience of the United States and the European Economic Community illustrates. From 1973 to 1980 output per manufacturing worker in the European Economic Community rose at an annual rate of 2.7 percent, but real compensation rose at an annual rate of 4.1 percent. By contrast, output per worker in the United States rose 1.1 percent annually, while real compensation rose only 1.8 percent annually. In fact, until the recent rise in the dollar's exchange rate, it was workers in the European Economic Community, rather than those in the United States, who were probably pricing themselves out of the world market in spite of their relatively good productivity performance.

The overall performance of the United States, then, does not suggest a long-term problem of competitiveness. The shift from persistent trade surplus to persistent deficit which occurred over the last decade is, however, often misinterpreted as a sign of an inability to compete. In fact, changes in the structure of the U.S. balance of payments are more the result of changes in the U.S. saving and investment position than of slow productivity growth.

THE CHANGING STRUCTURE OF THE U.S. BALANCE OF PAYMENTS

In the 1950s and early 1960s the United States normally had a trade surplus and invested heavily in other countries. In the years after 1973, however, the United States normally had a trade deficit,

and annual investment by foreigners in the United States began to approach annual U.S. investment abroad. The shift in the U.S. trade balance was closely connected with the shift in investment flows.

Taken as a whole, U.S. international transactions always balance. Any force tending to increase or decrease the balance in one category of transactions sets in motion a process leading to exactly offsetting changes in balances in other categories. For example, an increase in foreign demand for U.S. exports tends directly to improve the trade balance, but this improvement leads to a rise in the dollar's exchange rate against foreign currencies. The exchange-rate appreciation in turn leads to increases in imports, a worsened balance on services, and so on. Similarly, an increased desire by foreign residents to invest in the United States is reflected in an increase in the capital account but leads to an appreciation of the dollar and an offsetting decline in other parts of the balance of payments.

The shift in the U.S. trade balance from persistent surplus to persistent deficit was largely an offset to changes in the U.S. capital account. In the 1950s and the first half of the 1960s, rates of return on capital were lower and wage rates were higher in the United States than in other industrial countries. Since the United States suffered no war damage, its capital stock was intact, and the diffusion of U.S. technology abroad created a demand for new capital investment in the recipient countries. The result was that returns to investment were higher abroad than in the United States, and the United States was a heavy net foreign investor. The counterpart to this foreign investment was a persistent surplus on current transactions, including merchandise trade.

By the 1970s the other industrial countries had narrowed or eliminated these differences in capital and labor costs. The result was that the demand for new capital abroad was no longer a great deal larger than it was in the United States. At the same time, the supply of savings in the United States was restricted by a low national saving rate (the lowest among the major industrial countries). Thus the United States ceased to be a major net exporter of capital, and the current account of the balance of payments moved from surplus to rough balance. Meanwhile, the U.S. balance on items other than merchandise trade improved: the deficit in military transactions fell, the surplus in services rose, and, in particular, the accumulation of past foreign investments began to yield increasing income. This meant that a balanced current account was associated with a deficit in merchandise trade.

Table 3-1 and Chart 3-1 show how the structure of the U.S. current account has changed, measuring its components as percentages of GNP.

TABLE 3-1.—Structure of the U.S. balance of payments, as percent of GNP, 1960–80

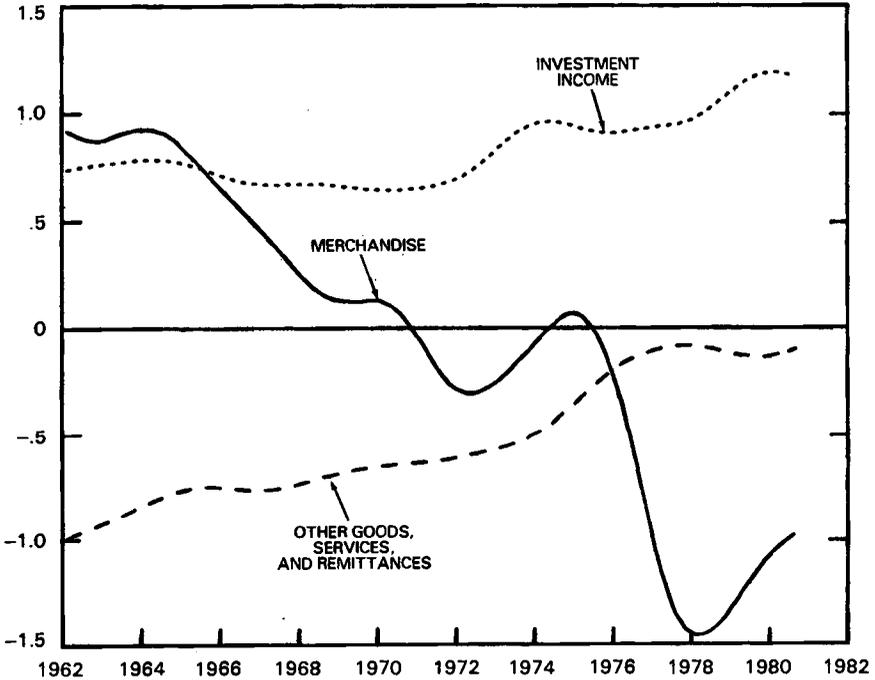
Type of balance	Percent of GNP		Change, percentage points
	1960–66	1974–80	
Merchandise trade.....	0.86	−0.80	−1.66
Investment income.....	.74	1.06	.32
Military transactions.....	−.41	−.03	.38
Travel and services.....	−.04	.12	.16
Remittances.....	−.44	−.30	.15
Current account.....	.70	.06	−.64

Source: Department of Commerce, Bureau of Economic Analysis.

Chart 3-1

Structural Changes in the Current Account Balance

PERCENT OF GROSS NATIONAL PRODUCT



NOTE.—DATA ARE 16-QUARTER WEIGHTED CENTERED MOVING AVERAGES.

SOURCE: DEPARTMENT OF COMMERCE.

THE ISSUE OF U.S. TRADE WITH JAPAN

The perception of diminished U.S. competitiveness stems not only from the U.S. trade deficit but from an impression that U.S. trade performance compares poorly with that of other countries, especially that of Japan. Japan runs a huge surplus in its manufactures trade, while the United States runs only a small one, and Japan also has a large surplus in its bilateral trade with the United States. These facts are often attributed to Japanese trade restrictions. Japan does maintain restrictions which seriously hurt U.S. businesses. Trade restrictions, however, do not in the long run improve the Japanese trade balance; as discussed more fully below, they lead to offsetting increases in other imports or declines in exports. The main explanation of Japan's surplus in manufactures trade and in trade with the United States is that Japan, with few natural resources, incurs huge deficits in its trade in primary products, especially oil, and with primary producers, especially the Organization of Petroleum Exporting Countries (OPEC). The surpluses in the rest of Japan's trade offset these deficits.

Table 3-2 and Chart 3-2 show the differences in the structure of the Japanese, European, and U.S. trade accounts. They show clearly how the huge Japanese surplus in manufactures offsets large deficits in primary products.

Corresponding to the Japanese sectoral deficit in primary products, especially oil, is a regional deficit with OPEC. Japan makes up for its deficit with OPEC by running surpluses in its trade with other regions. The extent of this regional imbalance—and its contrast with the U.S. position—is shown in Table 3-3. The point here is similar to that already made with respect to the overall U.S. trade balance: looking at Japanese-U.S. trade in isolation is misleading. The Japanese surplus in trade with the United States is largely a response to the rise of OPEC.

Although Japanese trade policy does not play a central role in causing the bilateral trade imbalance with the United States, Japanese import restrictions remain a major source of friction. Japan maintains a variety of nontariff barriers against imports. These include import quotas for a number of agricultural products and “red tape” barriers against manufactured goods, such as stringent inspection requirements applied against imported goods but not against Japanese products. These trade restrictions probably do not lead to a larger overall Japanese trade surplus. If they were removed, the yen would depreciate and increased Japanese imports in the currently protected sectors would be offset by reduced deficits or increased surpluses elsewhere. Japanese trade restrictions do, however, distort the composition of U.S. trade with Japan, imposing serious costs on some U.S. produc-

TABLE 3-2.—Trade balances by commodity group as percent of GDP, United States, Japan, and the European Economic Community, 1980

[Percent of GDP]

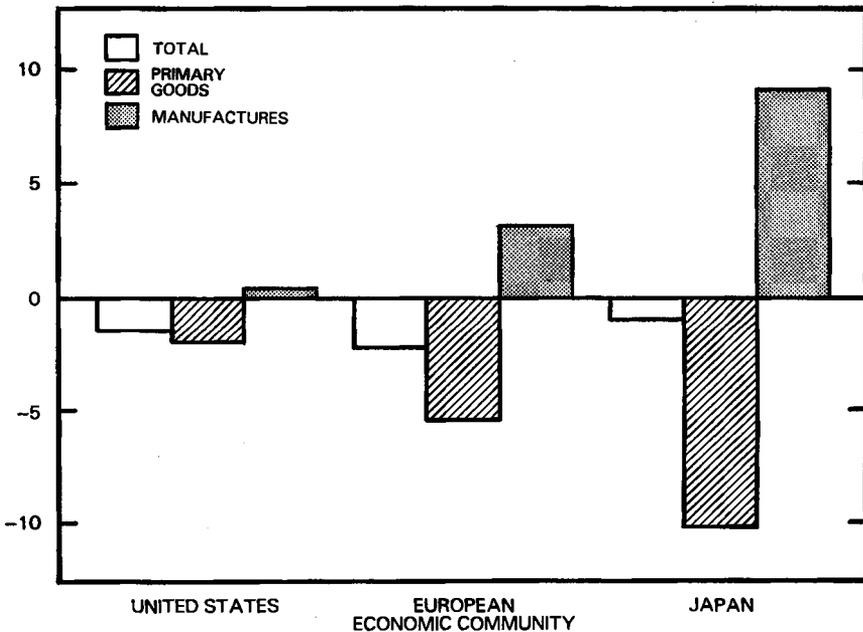
Commodity group	United States	Japan	European Economic Community
Total	-1.45	-0.99	-2.23
Primary products.....	-1.93	-10.11	-5.41
Food, beverages, and tobacco .....	.40	-1.26	-.41
Crude materials excluding petroleum .....	.54	-2.15	-1.23
Mineral fuels	-2.87	-6.71	-3.77
Manufactures.....	.48	9.12	3.18
Machinery and transport equipment.....	-.42	3.09	.88
Other manufactured goods .....	.90	6.02	2.30

Source: Organization for Economic Cooperation and Development.

Chart 3-2

Composition of Trade, 1980

PERCENT OF GROSS DOMESTIC PRODUCT



SOURCE: ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT.

ers. As the fastest growing and second largest market economy, Japan has a responsibility to help sustain the open trading system. A major trade liberalization by Japan would do much to relieve the political strains on that system, while the failure of Japan to make more than token concessions would intensify them.

TABLE 3-3.—Trade balances by region as percent of GDP, United States and Japan, 1980
(Percent of GDP)

Region	United States	Japan
Industrial countries.....	0.23	1.92
Oil-exporting countries.....	-1.45	-3.20
Non-oil developing countries.....	.52	1.46

Source: International Monetary Fund.

THE PROBLEM OF UNCOMPETITIVE SECTORS

Analysis of the overall U.S. trade deficit and the bilateral deficit with Japan suggests that worries about U.S. competitiveness are based in part on a misunderstanding of the situation. There is no question, however, that increased foreign competition has forced some sectors of the U.S. economy to contract.

This is partly a consequence of the fact that trade has become more important to the U.S. economy. Specialization by nations is the reason for international trade. If the United States is to expand its trade, the U.S. economy must become more specialized. This means that some sectors will grow and others will shrink. During the 1970s the United States developed increasing surpluses in areas in which it already enjoyed a comparative advantage and developed increasing deficits in sectors in which it was at a disadvantage. Some illustrative numbers are given in Table 3-4.

TABLE 3-4.—U.S. trade balances by sector as percent of GDP, 1972-79
(Percent of GDP)

Item	1972	1979
U.S. comparative advantage:		
Research-intensive manufactures.....	0.93	1.63
Resource-intensive products, other than fuels.....	.06	.67
Invisibles (services and investment income).....	.40	1.44
U.S. comparative disadvantage:		
Nonresearch-intensive manufactures.....	-1.27	-1.44
Fuels.....	-.27	-2.41

Sources: International Monetary Fund, National Science Board, and Organization for Economic Cooperation and Development.

Specialization of this kind is desirable both for the United States and for its trading partners. Specialization and trade raise the efficiency of the world economy as a whole by allowing each country to

concentrate on doing what it does relatively well, and by allowing increased economies of scale. But greater specialization can leave those involved in the contracting sectors worse off, at least temporarily. Attempts to prevent adjustment through trade barriers or subsidies, however, impose severe costs on unprotected sectors.

Some sectoral reallocation of resources, then, is a normal consequence of the increasing U.S. integration into the world economy. This is not the whole story, however. Some sectors of the U.S. economy are confronted by a problem that is not simply the result of market forces. Broadly speaking, these sectors fall into two groups. In one group are sectors where firms or their workers, accustomed to having substantial market power, now find that they have priced themselves out of the world market. In the other group are sectors which are hurt by foreign protectionism or export subsidies.

Market Power and Competitiveness

The "problem" of diminished market power in some sectors actually derives from a desirable aspect of trade: the fact that trade increases competition. One of the major benefits of an increasingly open U.S. economy is that it reduces the problems of monopoly and market power, thus increasing efficiency and helping consumers. But the transition to more competitive markets can prove painful. When an industry accustomed to having domestic market power encounters international competition, it must accept a reduction in the premium in prices and wages it previously commanded over other sectors of the economy. Both firms and workers may be reluctant to accept this implication of increased competition, and idle capacity and unemployment may result. Prices and wages in some U.S. heavy industries are probably too high to be sustainable in an integrated world economy.

Policies of Foreign Governments

A different problem is posed when foreign governments engage in protective or export promotion measures that harm U.S. producers. U.S. trade negotiators have emphasized four particular areas of concern:

1. *Agriculture:* Japan and the European Economic Community have high protective barriers against U.S. agricultural products. Further, the European Economic Community now engages in massive subsidized export of agricultural products to dispose of the surpluses created by its price-support program. These measures depress world prices of agricultural products, imposing substantial costs on U.S. producers in a sector where the United States holds a clear comparative advantage.

2. *High technology*: In recent years, many countries have come to view the high-technology industries as vehicles for economic growth and have sought to promote them through a complex mix of policies—outright subsidies, export credit subsidies, research subsidies, preferential procurement by State-owned enterprises, and so on. The United States holds a comparative advantage in high-technology products, and the U.S. export market share has remained roughly constant since 1973. Nevertheless, there is concern that in some specific areas, especially aircraft, foreign subsidies are threatening the position of U.S. producers.

3. *Services*: The United States has developed an increasingly strong net export position in services. Services, however, have never been recognized as being under the rules of the international trading system, and trade in services is limited by a maze of foreign government regulations.

4. *Investment*: Many countries impose “investment performance requirements” on foreign investors in exchange for the right to invest or to receive investment incentives. Many of those performance requirements are trade-related, requiring foreign companies to export more, reach a specified level of local content, or reduce imports.

CHALLENGES TO U.S. TRADE POLICY

The next few years are critical for the international trading system. Accumulating structural problems have combined with short-run macroeconomic stresses to produce a resurgence of protectionist pressures. The Administration’s aim, nonetheless, is to preserve and extend the benefits of freer trade. To do this will require resisting protectionist pressures at home while continuing to urge foreign governments to eliminate their more objectionable trade-distorting policies.

Responding to Foreign Actions

The practices of foreign governments pose extremely difficult issues for U.S. trade policy. The United States customarily seeks to induce other nations to move in the direction of freer trade. The dilemma is how to do this without imposing costs on ourselves that exceed the benefits from changes in other countries’ policies.

Trade-distorting measures, whether they take the form of protection against imports or the promotion of exports, hurt the country which adopts them as well as other countries, even when they are a response to foreign trade-distorting practices. If foreign governments limit imports from the United States and we respond in kind, the initial results will be further reductions in economic efficiency at home and higher domestic prices. If foreign governments subsidize exports, depressing world prices for U.S. products, a countersubsidy by

the United States will depress prices still further. The belief that departures from free trade are automatically called for if other countries do not play by the rules is a fallacy.

Intervention in international trade by the U.S. Government, even though costly to the U.S. economy in the short run, may, however, be justified if it serves the *strategic* purpose of increasing the cost of interventionist policies by foreign governments. Thus, there is a potential role for carefully targeted measures, explicitly temporary, aimed at convincing other countries to reduce their trade distortions.

There are obvious risks in such a course of action. Instead of inducing other countries to move toward freer trade, U.S. pressure might set off a cycle of retaliation which would leave everyone worse off. There are also domestic political risks. Trade measures intended to be temporary may end up permanent and institutionalized. The need to balance the strategic objective of reducing foreign trade barriers against the harm which might be caused by U.S. retaliatory measures explains the U.S. policy of negotiating for freer trade while holding open the possibility of more direct action as a last resort.

Responding to Problem Industries

The problems of industries which have recently lost their traditional market power also pose a serious policy dilemma. There is strong pressure to give these industries at least temporary relief from imports, in the hope that lower wage and price increases and improved productivity will eventually make them competitive again. On the other hand, protection reduces the incentives for both firms and workers to make these changes. Furthermore, protectionist measures, however temporary they are supposed to be, tend to become permanent. The limitation of protection for these problem industries is a central goal of U.S. economic policy.

EXCHANGE RATES AND THE BALANCE OF PAYMENTS

During 1982 the dollar rose against other major currencies to its highest level since the beginning of floating exchange rates in 1973. The strength of the dollar provided some benefits to the U.S. economy by reducing import prices and thus accelerating progress against inflation. On the other hand, the strong dollar caused severe problems by decreasing the cost competitiveness of exported U.S. goods.

CAUSES OF THE DOLLAR'S STRENGTH

Exchange-rate movements are not well understood. Econometric models of exchange-rate determination proposed in the past decade have not shown any consistent ability to track past exchange-rate movements, let alone predict future changes. Nevertheless, careful

analysis can narrow the range of plausible explanations of the dollar's rise.

The recent appreciation of the dollar, unlike many earlier exchange-rate movements, did not simply reflect contemporaneous changes in relative price levels. The well-known theory of purchasing power parity suggests that the rate of change in the exchange rate should equal the difference between the foreign and domestic inflation rates. Over the very long run, or in situations of very large differences in inflation rates, the purchasing power parity theory has proved to be a useful guide. But the theory has little or no power to explain the recent rise of the dollar. Price increases over the past 2 years in Germany and Japan, for instance, were lower than in the United States. Yet the dollar appreciated dramatically during that period against both the mark and the yen. Stated differently, the rise of the dollar was not simply a nominal but also a real appreciation, as illustrated in Chart 3-3.

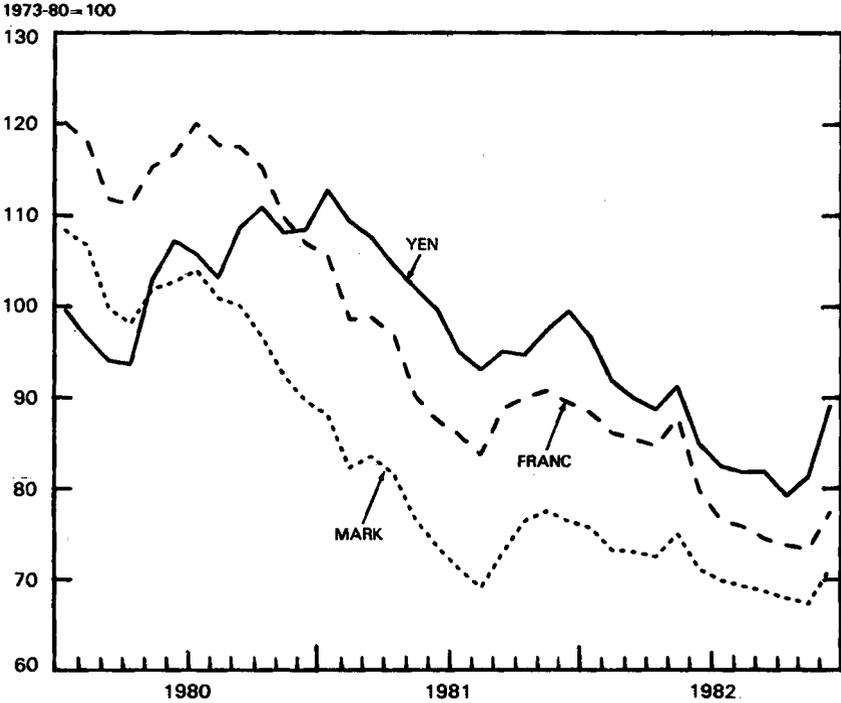
Large exchange-rate movements may also occur because of shifts in world demand for a country's exports or changes in a country's demand for imports. An example of such an event was Great Britain's discovery of oil in the North Sea, which has played at least some role in the high level of Great Britain's real exchange rate relative to other European currencies.

No comparable event accounts for the appreciation of the dollar, although U.S. oil imports have declined sharply. The rise of the dollar was not initially accompanied by a deterioration of the trade balance, a fact which might seem to suggest that there was an increase in demand for U.S. goods. The initial lack of deterioration, however, stemmed from lags in the effect of the exchange rate on the trade balance rather than from a shift in either export or import demand, and the U.S. trade deficit grew rapidly in the second half of 1982.

What the rise of the dollar seems clearly to reflect is a rise not in the demand for U.S. goods, but in the demand for U.S. assets. The reasons for the increased attractiveness of investment in the United States are somewhat controversial, but the effects are not. In order to buy U.S. assets, foreigners must first acquire dollars. The increased demand for dollars drives up the exchange rate.

One important factor in the increased demand for U.S. assets was that real interest rates in the United States were high relative to real interest rates elsewhere. Real interest rates are not directly measurable, since they equal the nominal rate minus *expected* inflation. But some rough measure is attainable by computing the nominal rate minus *actual* inflation. Chart 3-4 shows the differential in real interest rates computed in this way between the United States and other

Real Exchange Rates Of Major Currencies Against The Dollar

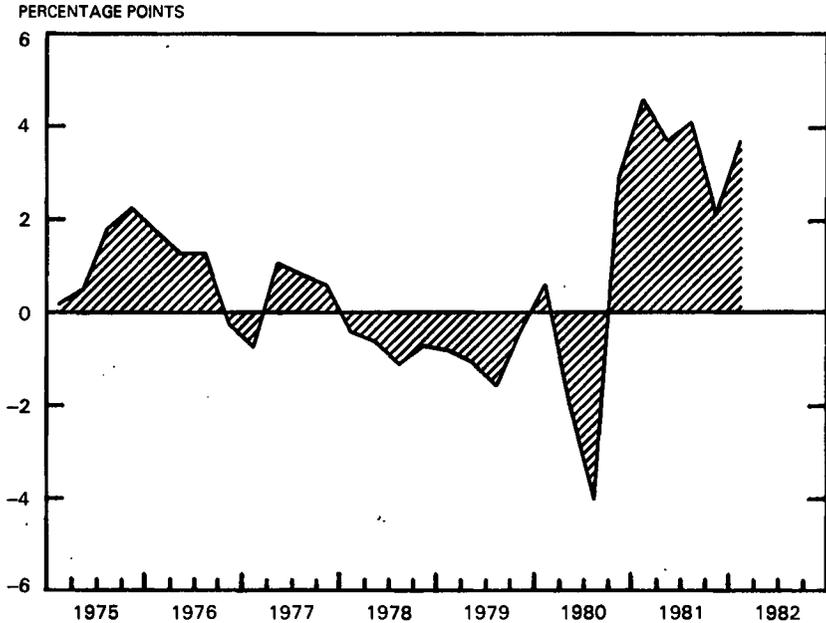


NOTE.—CONSUMER PRICES USED AS DEFLATOR.
SOURCE: INTERNATIONAL MONETARY FUND.

industrial countries. The chart suggests that the real interest rate in the United States was substantially higher than foreign rates in recent years.

But events in the fall of 1982 cast some doubt on whether real interest rates alone can explain the dollar's strength. As U.S. short-term interest rates fell sharply, the differential between short-term interest rates in the United States and other countries was greatly reduced. Yet the dollar continued to rise. The explanation for this may lie in the difference between short- and long-term rates. Most exchange-rate models suggest that long-term real rates, and not short-term ones, are what affect the real exchange rate. A notable feature of the U.S. financial scene in the fall of 1982 was that long-term rates

International Real Short-Term Interest Rate Differentials



NOTE.—DATA ARE U.S. RATE MINUS AVERAGE OF RATES FOR MAJOR INDUSTRIAL COUNTRIES WEIGHTED BY GNP, ADJUSTED FOR DIFFERENCES IN CONSUMER PRICE INFLATION.

SOURCE: INTERNATIONAL MONETARY FUND.

did not fall nearly as much as short-term rates. At the same time, long-run inflation expectations may have declined, so that it is unclear how much long-term real interest rates actually fell.

Many observers believe that other factors besides real interest rates help explain the dollar's strength. In particular, the unsettled state of the world economy—particularly the problems in Europe and Latin America described later in this chapter—may have created a desire on the part of investors for a safe haven for their funds. The United States, according to this argument, is still regarded as the most politically and economically stable of the market economies and has become a financial refuge in troubled times. While the importance of this factor is hard to assess, the worldwide search for financial security may partially explain this country's rising capital account surplus and its growing current account deficit.

AN UNDERVALUED YEN?

The explanations of the strong dollar discussed so far leave out a view which has received considerable attention—that the strength of the dollar reflects deliberate undervaluation of their currencies by our competitors, especially Japan. This view is important enough in its implications for U.S. international economic policy to deserve separate treatment.

Arguments that the yen is undervalued are of two types, which are basically independent of one another. One argument is that the Japanese government has persistently kept the yen undervalued. The other is that the Japanese have only recently engineered a decline in the yen to gain competitive advantage. Neither of these views appears correct in light of the actual behavior of Japan's balance of payments and exchange rate.

If the first allegation—that the yen has been persistently undervalued—was correct, Japan would run persistent current account surpluses in excess of what seems justified. We would also expect Japan to have experienced exceptionally rapid growth in its foreign exchange reserves. Neither of these was the case:

- From the beginning of floating exchange rates in 1973 through 1981, Japan had an average surplus in its current account of only 0.15 percent of GNP. This was not much more than the U.S. figure for the same period (0.11 percent), considerably less than that of Germany (0.47 percent), and much less than the U.S. surplus of the early 1960s (0.70 percent).
- From the beginning of floating exchange rates in 1973 to the third quarter of 1982, Japan's reserves minus gold grew at an annual rate of 4.8 percent, far less than the 9.7 percent rate of reserve growth for all non-OPEC countries.

These facts contradict the view that the yen was persistently undervalued. There remains the possibility that the yen's weakness during much of 1982 was excessive in some sense. A natural question is whether, after adjustment for purchasing power parity, the yen fell more against the dollar than other currencies. The answer to this question depends on the base period used for comparison. For most base periods, however, the real depreciation of the yen against the dollar appears smaller than that of the French franc and the German mark. Table 3-5 shows an illustrative set of numbers. As the table shows, only for a few base periods does the yen appear more "undervalued" than the other two currencies.

The actual behavior of the Japanese balance of payments and exchange rate thus do not support the view that there is any special undervaluation of the yen—that is, they suggest that exchange-rate

TABLE 3-5.—*Real appreciation of the dollar against major currencies to August 1982*

[Percent change from base year to August 1982¹]

Base year	French franc	German mark	Japanese yen
1971.....	-1.0	-2.1	-25.3
1972.....	11.8	9.5	-13.1
1973.....	27.9	31.4	2.0
1974.....	21.4	31.0	6.4
1975.....	39.5	33.7	7.3
1976.....	29.6	28.8	10.9
1977.....	29.4	35.9	24.3
1978.....	43.0	50.1	*53.1
1979.....	50.8	53.8	36.8
1980.....	51.6	44.2	25.9
1981.....	21.1	11.3	*22.9

¹Percent change in the price of the dollar in each currency, adjusted for differences in consumer price inflation.

*Indicates a base year relative to which the August 1982 exchange rate of the yen looks lower than that of the other currencies.

Source: Board of Governors of the Federal Reserve System.

movements over the last several years stemmed from a strong dollar rather than a weak yen. An examination of Japanese policy by the U.S. Treasury supports this conclusion. This study found that Japan has attempted to isolate its domestic capital market from world capital markets, but that this has tended to limit capital outflow rather than inflow, supporting rather than weakening the yen. Japanese capital controls have been relaxed in recent years, a move which the United States supports even though the result will be a weaker yen and an increase in Japan's current account surplus. In the 1980s, Japan may well become more of a capital exporter than it was in the 1970s, and thus have larger current account surpluses. These surpluses, if they materialize, will result from Japan's high domestic saving rate, which gives Japan a natural role as an exporter of capital to the rest of the world.

To show that there is no special yen issue is not to deny that a substantial deterioration has occurred in the relative cost position of U.S. firms. This deterioration was actually larger relative to other industrial countries, but since Japan is the United States' most important competitor, the depreciation of the yen worries U.S. firms more. There is no special yen issue, but the strong dollar does pose genuine problems.

EFFECTS OF A STRONG DOLLAR ON U.S. TRADE

The rise of the dollar was associated with a large rise in the production costs of U.S. firms relative to those of foreign competitors. To take one measure, unit labor costs in U.S. manufacturing rose 32 percent relative to those of a weighted average of other industrial countries from their low point in the third quarter of 1980 to the second quarter of 1982. This rise in relative costs has at least tempo-

rarily reduced the international competitiveness of U.S. industry dramatically. Other U.S. exporting and import-competing sectors, especially agriculture, have also been squeezed.

Despite this deterioration in competitive position, it was only in the third quarter of 1982 that the U.S. trade deficit began to show a significant increase. This delay was in line with previous experience of the effect of exchange rates on trade. The full effect of changes in exchange rates on the volume of exports and imports is felt only after some time has passed, because some trade takes place under contracts signed in advance and because customers do not always change suppliers immediately when relative prices change. The short-term effect of a rise in the dollar is to reduce import prices, which actually tends to *improve* the trade balance. Although the negative effects eventually dominate, some econometric estimates suggest that the full negative effect is not felt for more than 2 years.

As the effects of the strong dollar are increasingly reflected in U.S. trade, the trade deficit will widen. Economic developments elsewhere in the world will also contribute to a widening trade deficit. The recession in other industrial countries will depress the demand for U.S. exports, and financial constraints in developing countries will lead them to import less. Both developments will have negative consequences for U.S. exports. Record trade and current account deficits in 1983 will almost surely result.

Whether the trade and current account deficits persist will largely depend on U.S. macroeconomic policies, particularly on the fiscal side. If large budget deficits are allowed to continue to depress the U.S. national saving rate, real interest rates may rise again, sustaining or even increasing the high real exchange rate of the dollar. In this case the trade deficit could remain high for several years.

A large and sustained trade deficit would result in an economic recovery which would be "lopsided" in the sense that exporting and import-competing sectors would not share in the gains. Should this occur, government, business, and labor officials must bear in mind that even though protectionist foreign trade practices distort the composition of world trade and reduce economic efficiency both in the United States and abroad, large trade deficits are not the result of unfair foreign competition. Large projected U.S. trade deficits are a result of macroeconomic forces, particularly large budget deficits. The main sources of the U.S. trade deficit are to be found not in Paris or in Tokyo, but in Washington.

RESPONSES TO THE STRONG DOLLAR

The temporary adverse effects of a strong dollar create pressure to do something for the exporting and import-competing sectors. Three

kinds of policies might be used: microeconomic intervention in the form of protection or export subsidies, direct intervention in the foreign exchange market, and changes in monetary and fiscal policy.

Protection and Export Promotion

The negative effect of the strong dollar on the competitiveness of many U.S. firms has fueled pressures for an interventionist trade policy. These pressures must be resisted. Protecting import-competing industries or subsidizing exports is not just a harmful long-run policy. With a floating exchange rate, such policies would fail to improve the trade balance or create employment even in the short run.

The exchange rate always moves to clear the market. An increase in exports or a reduction in imports would lead to an increased demand for or reduced supply of dollars on the world market, raising the exchange rate. This would lead to a further loss of competitiveness in the sectors not protected or promoted. An export subsidy for agricultural products would worsen the situation of the auto industry, an import quota on steel would hurt the competitiveness of the aircraft industry, and so on. Although these indirect effects may seem of doubtful importance in the real world, they are not. That governments cannot simultaneously protect everyone is a basic principle of international trade.

Instead of creating additional employment and output, the distortion of trade through protectionist policies or export promotion would probably reduce them. Market-distorting policies reduce the efficiency of the economy. Thus, a turn to protectionism could create a "supply-side" shock that might have the same kind of stagflationary effects as an oil price increase. The effects would prove still worse if, as is likely, U.S. actions were to provoke foreign retaliation.

Although protectionism and export subsidies provide no answer to the problems caused by a strong dollar, the pressure to use them is increasing. Many of the exporting sectors, which make up the traditional constituency for freer trade, appear to have become convinced by the strength of the dollar and the resulting loss of U.S. competitiveness that a more interventionist policy is needed.

Exchange-Market Intervention

Since March 1981 the United States has abstained as much as possible from direct intervention in the foreign exchange market. This unwillingness to intervene is based on doubts about whether exchange-market intervention is effective or desirable. As long as the Federal Reserve continues to pursue a policy of targeting monetary aggregates, any U.S. intervention on the foreign exchange market must be *sterilized*—that is, offset by other transactions on domestic fi-

nancial markets. These transactions are likely to wipe out most of the effect of the initial exchange-market intervention.

The process of sterilization is straightforward. If the U.S. Government attempted to drive up the price of foreign exchange and weaken the dollar by buying foreign securities, the Federal Reserve would issue dollars to pay for the foreign assets. In order to prevent these dollars from increasing the U.S. money stock, however, the Federal Reserve would then have to withdraw an equal number of dollars from the market by selling Treasury bills. The only net result would be that the world's supply of dollar-denominated assets would increase, while its supply of assets denominated in other currencies would fall.

The increase in the level of dollar-denominated assets would probably have little effect on the exchange rate because of the sheer size of world financial markets. The world market in dollar-denominated securities includes not only the dollar assets actually owned abroad—foreign deposits in U.S. banks, foreign holdings of Treasury bills, Eurodollar deposits, and the like—but also all those dollar assets which are potentially tradeable. Thus, the total pool of internationally mobile dollar assets is probably in the trillions of dollars. This makes it questionable whether even very large interventions in the exchange market can have much effect on the exchange rate.

Macroeconomic Policies

Although the government cannot significantly affect exchange rates through direct intervention, monetary and fiscal policies do indirectly affect the exchange rate. A feasible strategy for bringing the dollar down would involve looser monetary policies and tighter fiscal policies. Both of these changes would tend to lower real interest rates (at least in the short run), making capital movement into the United States less attractive and thus driving down the value of the dollar.

Despite its unfortunate effects on the U.S. balance of trade, however, monetary restraint is the prime weapon in the fight against inflation. Disinflation, as we have learned, unfortunately involves substantial costs. Under fixed exchange rates the heaviest costs of monetary contraction and disinflation fell on the interest-sensitive sectors of the economy, such as construction and consumer durables. With floating exchange rates, however, much of the burden also falls on exporting and import-competing sectors, which are injured by the rise in the value of the dollar.

A tighter fiscal policy would also lower real interest rates and lead to a lower dollar. Under fixed exchange rates, budget deficits crowded out domestic investment. With a floating exchange rate they crowd out exporting and import-competing products as well. A re-

duction in deficits would lead—with some lag—to an improvement in the trade balance as well as higher investment.

The strength of the dollar has put considerable strain on the resolve of the United States to remain committed to free trade. This strain is not unique to the international sector. The recession and high interest rates have also put a strain on the resolve to let other types of markets, from housing to labor markets, operate freely. If there is special reason for concern about the international side, it is because of the danger that mistakes in U.S. policy could set off a spiral of retaliation among all the major trading nations.

The competitiveness of U.S. business as a whole—as opposed to that of particular sectors—and the balance of payments are macroeconomic phenomena. Microeconomic interventions cannot cure macroeconomic problems; they can only make one sector better off by hurting other sectors even more. The most effective strategy the United States can pursue for its exporting and import-competing sectors is to get its overall economic house in order—above all, by bringing budget deficits and real interest rates under control.

MACROECONOMIC PROBLEMS IN EUROPE

More than 90 percent of the output of the industrial countries, and more than 70 percent of the output of the world's market economies, is produced by the United States, Japan, and the European Economic Community. Table 3-6 shows some comparative figures for the three. The most striking feature of the table is the favorable performance of Japan by all measures. The United States and the European Economic Community look rather similar in their less favorable performances. They experienced nearly the same growth rates before 1979, have suffered nearly equal decelerations of growth since then, and had roughly the same unemployment rate in 1981. The U.S. inflation rate was lower than that in Europe, but the United States also showed lower productivity growth.

Behind the similarity of U.S. and European experience, however, lies a major difference. The U.S. economy, whatever its other difficulties, has provided employment opportunities for a rapidly growing labor force. The current high unemployment rate is a cyclical problem, not the result of a persistent failure of employment to expand. In Europe, by contrast, employment was virtually stationary over the last decade, and unemployment has risen in every year since 1973. This is a worrisome aspect of the European situation.

For a given rate of unemployment, the strains on society are probably greater if employment is stagnant than if it is growing. Growing employment means that more new jobs are always opening up, offer-

TABLE 3-6.—*Economic performance by major industrial countries, 1973-82*

[Percent]

Item	United States	Four large European countries ¹	Japan
Growth rate in:			
Real gross domestic product (GDP), 1973-80	2.3	2.2	3.7
Real GDP per employed person, 1973-80 .....	.2	2.2	3.0
Real GDP, 1980:I-1981:IV	-2	.1	2.3
Level:			
Consumer price inflation, year ending 1982:II	6.8	10.2	2.4
Unemployment rate, 1981	7.6	7.4	2.3

¹ France, Germany, Italy, and United Kingdom.

Sources: International Monetary Fund and Organization for Economic Cooperation and Development.

ing job losers a chance for reemployment and new entrants to the labor market a chance to get their first job. If employment is stationary, workers who have lost their jobs may stay unemployed for a long time, and young people may never find jobs. The results of near-zero employment growth are painfully visible in Europe, where long-term unemployment (more than 6 months) is several times higher than in the United States, and where the share of youth unemployment in the total pool of unemployed has risen steadily since 1973.

How did the problem arise? The causes of structural unemployment are always controversial, but a key element in the European employment problem was probably rapid increases in real labor costs in the first half of the 1970s in the face of declining productivity growth and rising oil prices. These increases in labor costs—which stemmed at least in part from increases in social insurance payments—squeezed profitability. Firms closed their marginal plants and invested in increasingly capital-intensive techniques, which helped to sustain the rate of productivity growth but also led to employment stagnation.

The unemployment problem in Europe is not caused solely by excessive labor costs. The periods of rapid increase in European unemployment, in 1973-76 and since 1979, came during business cycle contractions (Table 3-7). The most recent rise in unemployment is probably mostly due to restrictive monetary and fiscal policies adopted by the European countries following the oil price shock of 1979. These policies were adopted out of concern that the rise in import prices resulting from that shock—and, later, the further rise in import prices resulting from the appreciation of the dollar—would lead to an uncontrollable inflationary spiral. Thus, recent developments in the European economy are to some extent similar in character to those in the United States, which have also resulted largely

from disinflationary policies. The European situation is more serious, however, because the current recession comes on top of a steadily growing structural unemployment problem.

TABLE 3-7.—*Employment and unemployment in the European Economic Community, 1973-80*
[Percent]

Year	Increase in employment	Unemployment rate
1973	1.1	2.8
1974 .....	.1	3.0
1975	-1.1	4.2
1976	-.1	4.9
1977 .....	.4	5.2
1978 .....	.6	5.3
1979 .....	.8	5.3
1980 .....	.2	5.7

Source: Organization for Economic Cooperation and Development.

The United States has a major stake in the success of the European countries in dealing with their macroeconomic problems. The stake is not simply due to the fact that the major European countries are also allies of the United States, nor is it simply due to the fact that roughly one-quarter of U.S. exports go to Western Europe. More than this, Europe is a key part of the world economy, with an aggregate GNP as large as that of the United States itself. If European countries remain mired in economic stagnation and turn toward increased protectionism as a consequence, little chance will remain of saving the open trading system.

THE INTERNATIONAL DEBT PROBLEM

Different problems from those facing the United States and Europe afflict the economies of the developing nations. The problems of these economies have accumulated over the last several years and are products of both domestic policy mistakes and external developments, such as oil price increases, the recession in industrial countries, and high real interest rates. In the summer and fall of 1982 the problems came to a head in the form of a sharp reduction in international lending to the developing countries.

DEBT-FINANCED GROWTH IN THE 1970s

Until recently, the growth of such middle income developing countries as Brazil, South Korea, and Taiwan was widely viewed as one of the great success stories of the 1970s. Particularly notable was their success in expanding exports of manufactured goods. While the growth of these exports did give rise to some adjustment problems in industrial countries, the successes of some middle income countries

were undoubtedly a highly favorable development for the United States. Such success provided a dramatic demonstration to other countries of the potential of market-oriented economic policies.

An important aspect of growth in the developing world, however, was heavy borrowing from foreign sources. There is nothing inherently wrong in external borrowing to finance growth. Some of the developed countries, including the United States, relied heavily on foreign capital during earlier periods of industrialization. But some developing nations borrowed too much, investing in projects of doubtful productivity. When overly optimistic expectations about export earnings and interest rates turned out to have been wrong, these countries found themselves in serious financial difficulty.

From 1973 to 1981 the medium- and long-term external debt of non-oil developing countries rose at an annual rate of more than 20 percent. Lenders might have viewed this rate of increase as more alarming than they did, were it not for several factors which appeared to indicate that the eventual repayment of the debt would not impose a severe burden on borrowing countries. These factors included:

- *A rapid growth in the ability of these countries to service their debt.* Exports of the non-oil developing countries grew at an annual rate of 18 percent.
- *Very low real interest rates.* From 1973 to 1979 Eurodollar rates in London, which set the basis for most international lending, averaged 8.5 percent, while U.S. wholesale prices rose at an annual rate of 9.8 percent. Even allowing for the fact that third-world borrowers paid small spreads over the Euromarket rate, the real interest rates they paid were still negative.
- *Special factors which appeared to ensure rising export earnings in the future.* The most important of these was oil reserves, which were essentially treated as an asset against which countries could safely borrow.

CAUSES OF THE LIQUIDITY PROBLEM

Excessive borrowing by some developing countries made an eventual financial problem inevitable. The proximate factor which brought the era of debt-financed growth to a halt was, however, a sharp deterioration in the world economy. The rise in oil prices in 1979 was a blow to many debtor countries, and further strains resulted from disinflation in the United States and other industrial countries. The factors which led to a loss of lender confidence in the developing countries included:

- *The effects of the world recession on export demand.* The rapid export growth of the 1970s came to an abrupt end in the early 1980s. Exports of the non-oil developing countries actually fell by 7.5

percent from the first half of 1981 to the first half of 1982. Exporters of primary products were hit particularly hard: real commodity prices fell by 25 percent from the fourth quarter of 1980 to the second quarter of 1982.

- *High real interest rates.* In 1981 and the first half of 1982, Euro-market interest rates averaged 16 percent, while wholesale prices in the United States rose at an annual rate of only 4.5 percent.
- *The appreciation of the dollar.* Since most international debt is denominated in dollars, while commodity prices tend to follow a weighted average of industrial country currencies, the effect of the rise in the value of the dollar was a sudden increase in the size of developing country debt relative to prospective export earnings.

The result of these developments was that banks, which had been willing to lend large amounts to developing countries throughout the 1970s, lost confidence that the loans would be promptly repaid. The debtor countries were highly vulnerable to such a loss of confidence. Much of their debt was of short maturity, so that a large fraction of their debt required refinancing each year. Argentina, Brazil, and Mexico, for example, must make annual payments of principal and interest which exceed their total exports of goods and services. During the 1970s these large financing needs did not pose a problem, since countries were able to roll over their debt as it came due. In the summer and fall of 1982, however, banks became reluctant to make new loans and roll over old ones, first to Mexico and then to other countries. The result was a quick exhaustion of the foreign exchange reserves of the major debtors.

IMPLICATIONS OF THE DEBT PROBLEM

The debt situation of the developing countries poses two problems for the world economy. Although quite unlikely, failure to resolve the debt situation in an orderly way could lead to major financial market disruptions. More likely—indeed, it has already happened to a considerable extent—is a situation of forced austerity in debtor countries, with adverse effects on world trade and output.

Risks to Financial Markets

The threat of a financial disruption arises from the possibility that debtor countries will be unable to live within their new financial constraints. The unwillingness of banks to lend as much as in the recent past means that debtor countries will need to cut their imports or expand their exports. In the case of the most heavily indebted countries, this will almost certainly mean achieving substantial trade surpluses in spite of depressed demand for their exports. The concern

of lenders that some debtors will not be able to achieve the required adjustment is precisely what makes them reluctant to lend.

Fortunately, a serious financial disruption is unlikely. The debtor countries and the banks which are their major creditors share a strong interest in an orderly resolution of the debt problem. For the debtor countries, maintaining good financial standing is essential if they are to maintain access both to world capital markets and to their export markets. At the same time, banks realize that demanding too rapid a repayment from debtor countries could prove counterproductive, and they are probably willing to provide enough financing so that debtor countries can more easily handle the financial squeeze. Although banks find themselves in somewhat of a "prisoner's dilemma" situation, in which no one bank will want to lend if it believes that the loans will only go to repay other banks, this problem should not prove insoluble. The banking community should be able to work with the International Monetary Fund (IMF) in negotiating agreements which balance an adequate degree of new lending to the debtor countries with realistic economic adjustment plans. To aid in this process, the Administration and representatives of other industrial nations recently agreed in principle to an enlargement of the IMF's resources.

Perhaps the most important safeguard against a financial crisis is the ability of the governments and central banks of the major industrial countries to provide a safety net for the international financial system. Central banks act as lenders of last resort for commercial banks, providing effective protection against banking panics. At the same time, industrial country governments have demonstrated their willingness to help provide temporary financing for developing countries in order to bridge the interval until agreements can be reached with the IMF. (The IMF recently concluded agreements with Mexico, Argentina, and Brazil.)

Effects on World Trade

Although a serious disruption of the international financial system is unlikely, for all of the reasons cited, serious problems still exist. Even under optimistic assumptions, those developing countries with high ratios of debt to exports will be forced to improve their trade balances substantially in order to pay the interest on their debt. Much of this trade balance improvement will probably come through reductions in imports, involving painful reductions in output and real wages in the debtor countries. This will also depress demand for the products of industrial countries—particularly the United States, which has especially close trading relations with some of the major Latin American debtors. The debt problem of the developing countries may worsen the U.S. trade balance by \$10 to \$20 billion and

reduce U.S. GNP by one-half percentage point or more from the level it would otherwise reach.

The Outlook for Debtor Nations

The problems of the developing countries are not insoluble. If growth in the world economy resumes and real interest rates fall to historical levels, the debt burden of even the most heavily indebted countries will become much more manageable. Mexico and Brazil, among the most heavily indebted countries, both have debts well below half their GNPs. At a historically typical real interest rate of 2 percent, the real burden of debt service would fall to less than 1 percent of GNP—a fully manageable level in a growing economy.

The key to recovery from the debt problem, however, lies in increased exports from the debtor countries. Import restrictions by the developing countries can only accomplish so much in improving their trade balances. Imports have already fallen considerably in high debt countries in the last year, leaving limited room for further cuts. As growth resumes among the debtor countries, they will tend to import more, and will need to export more to pay for the imports. They will not be able to do this if the industrial countries, including the United States, institute new protectionist measures. Yet as developing countries attempt to increase their exports, strong political pressures will develop in the industrial countries to stop them. Leaders in the industrial countries must realize that shutting out imports from the developing world will not only incur the usual costs of protection—higher prices to consumers and jobs lost in unprotected sectors—but also will threaten the basic stability of the world financial system.

CHAPTER 4

Increasing Capital Formation

ATTAINING AN ADEQUATE RATE OF CAPITAL FORMATION in the United States is a crucial challenge for economic policy during the 1980s. Devoting a larger share of national output to investment would help restore rapid productivity growth and rising living standards. During the past two decades, fiscal, monetary, and regulatory policies contributed to the low rate of net investment in plant and equipment; the share of gross national product (GNP) devoted to capital formation was below the levels achieved by most other industrialized nations.

The Administration and the Congress have instituted a set of tax and regulatory policies designed to increase the share of output devoted to capital formation. The noninflationary monetary policies followed by the Federal Reserve, with the Administration's support, should also contribute in the long run to increased capital formation and improved efficiency in the allocation of the capital stock. This chapter examines the linkages between economic policy and capital formation, and discusses the rationale for the Administration's initiatives in this area.

Many forms of investment contribute to productivity growth. Research and development expenditures provide the basis for the technological change that is a wellspring of productivity growth. Another major source of productivity growth is investment in education and training that promotes the accumulation of valuable human capital. Public sector infrastructure investments may also have an important role to play. This chapter, however, focuses on nonresidential plant and equipment investment. Past public policies probably discriminated most heavily against this form of investment. Plant and equipment investment is also more amenable to quantitative analysis than other forms of capital investment because of the difficulties involved in measuring intangible capital.

By late 1982, investment and capacity utilization rates in the United States had fallen to very low levels. Even after the recovery from the recession begins, capacity utilization will increase only gradually, and it will take time for new policies to increase the share of national output devoted to saving and investment. Hence, levels of

investment may prove disappointing over the next several years despite the beneficial long-run impact of policies recently put in place. This should not cause us to lose sight of the importance of sound long-run policy and the need to increase net capital formation in the years and decades ahead.

THE HISTORICAL RECORD

Although gross private domestic investment, which includes residential and inventory investment, accounted for 16.1 percent of GNP between 1971 and 1980, gross investment in structures and equipment averaged only 10.8 percent of GNP during this period. Of this gross structure and equipment investment, more than two-thirds was devoted to replacing depreciated capital, leaving only 3.0 percent of GNP for new structures and equipment.

It is useful to place the patterns of investment in the United States during the last decade in historical and geographic perspective. Table 4-1 displays the behavior of alternative measures of capital accumulation. The data show that the rate of net nonresidential fixed investment as a fraction of GNP declined by 27.5 percent between the late 1960s and the late 1970s. The share of output devoted to net nonresidential fixed investment in the late 1970s was slightly lower than the average rate during the entire 1950-80 period.

Some analysts, examining only the data on gross investment, have concluded that investment performance was satisfactory during the 1970s. This procedure ignores the fact that depreciation as a share of GNP was greater during this period than in the 1960s because of a general shift in net investment from long-lived assets, such as structures, toward assets with shorter lives, and because of a higher ratio of capital to GNP. The appropriate focus in examining data on investment is the total stock of capital. Therefore, net investment, which measures the change in the total capital stock, is the most appropriate indicator of the adequacy of capital formation.

An alternative way to evaluate changes in the level of capital formation is to examine trends in the capital-labor ratio. Measures of capital per hour and capital per worker, displayed in Table 4-1 and Chart 4-1, both show a large decline in the growth rate of the capital stock relative to the growth in the supply of labor. Capital per hour increased at only a 0.9 percent annual rate between 1976 and 1980, compared to a 3.5 percent rate during the 1951-75 interval. Although this dramatic decline was in part due to the low rate of net investment during the late 1970s, it was primarily a consequence of the rapid growth of the labor force. To maintain the pre-1975 growth in the capital-labor ratio, a sharp increase in the post-1975

rate of net investment was required, instead of the decline which actually occurred.

TABLE 4-1.—*Alternative measures of capital formation, 1951-82*

[Percent]

Period	Net private domestic investment as percent of GNP		Growth rate of net capital stock ¹	
	Total investment	Nonresidential fixed investment	Per worker ²	Per hour ²
1951-55	7.2	2.9	3.1	3.5
1956-60	6.1	2.6	3.5	4.1
1961-65	6.7	2.9	2.5	2.4
1966-70	7.1	4.0	3.9	4.9
1971-75	6.4	3.1	2.2	2.6
1976-80	6.0	2.9	.4	.9
1951-80	6.6	3.1	2.6	3.0
1981	4.8	2.8	3.3	4.5
1982 ³	2.1	2.0	(*)	(*)

¹ Real net private nonresidential fixed capital stock at year-end.

² All persons in private business sector. Year-end obtained by averaging fourth quarter value with value for first quarter of subsequent year.

³ Preliminary.

* Not available.

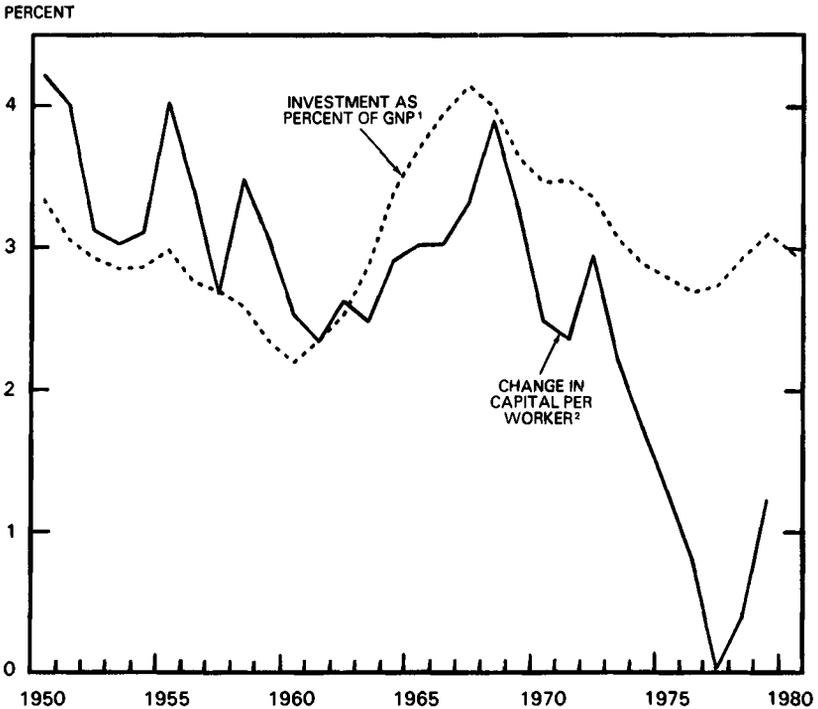
Sources: Department of Commerce (Bureau of Economic Analysis), Department of Labor (Bureau of Labor Statistics), and Council of Economic Advisers.

Properly measured, the decline in the growth rate of the capital stock is understated by the net investment figures in Table 4-1. The energy price shocks of 1973 and 1979 hastened the obsolescence of a variety of past investments, which implies that actual depreciation was greater than the official statistics suggest. One estimate placed the premature obsolescence of capital during the late 1970s at an average of 0.5 percent of GNP per year. Other studies have obtained much larger estimates using data on the market valuation of capital. In addition, it is important to recall that much of the investment of the 1970s took place in the energy-producing sector. The share of GNP devoted to net fixed nonresidential investment outside the energy sector averaged only 1.8 percent between 1975 and 1980.

Unfortunately, the combined effects of the recent economic recession and large Federal budget deficits will hold down the rate of capital formation, as currently forecasted, over the next several years. Between 1981 and 1985, net investment in plant and equipment may prove disappointing even by the standard of the late 1970s. The capital-labor ratio will grow only slowly and may even decline. While the low forecasted rate of net investment over the next several years is due primarily to cyclical conditions, it does not negate the importance of developing permanent policies to encourage capital formation. In light of the depth of the recent recession, it is reasonable to expect that investment performance probably would have proven

Chart 4-1

Measures of Capital Formation



¹ NET PRIVATE NONRESIDENTIAL FIXED INVESTMENT AS PERCENT OF GNP; FIVE-YEAR CENTERED MOVING AVERAGES.

² PERCENT CHANGE IN REAL NET PRIVATE NONRESIDENTIAL FIXED CAPITAL STOCK PER WORKER IN THE BUSINESS SECTOR; FIVE-YEAR CENTERED MOVING AVERAGES.

SOURCES: DEPARTMENT OF COMMERCE, DEPARTMENT OF LABOR, AND COUNCIL OF ECONOMIC ADVISERS.

worse if the Congress and the Administration had not enacted tax measures to spur capital formation. These laws, and the proposals incorporated in the President's fiscal 1984 budget, are designed to raise the share of net investment to a high level by historical standards in the late 1980s or before.

AN INTERNATIONAL PERSPECTIVE

Table 4-2 shows that the United States falls behind other major industrial nations in several key measures of net capital formation. The share of U.S. gross domestic product (GDP) devoted to net fixed investment during the last decade was only 34 percent of the compa-

able share in Japan and 56 percent of the comparable share in West Germany. No other major industrial nation devotes as small a fraction of total output to new investment as does the United States.

TABLE 4-2.—*Comparison of capital formation in six OECD countries, 1971-80*

[Percent]

Country	Investment as percent of GDP			Growth rate of output per hour in manufacturing
	Gross investment	Gross fixed investment	Net fixed investment	
France.....	24.2	22.9	12.2	4.8
Germany.....	23.7	22.8	11.8	4.9
Italy.....	22.4	20.1	10.7	4.9
Japan.....	34.0	32.9	19.5	7.4
United Kingdom.....	19.2	18.7	8.1	2.9
United States.....	19.1	18.4	6.6	2.5

Source: Organization for Economic Cooperation and Development.

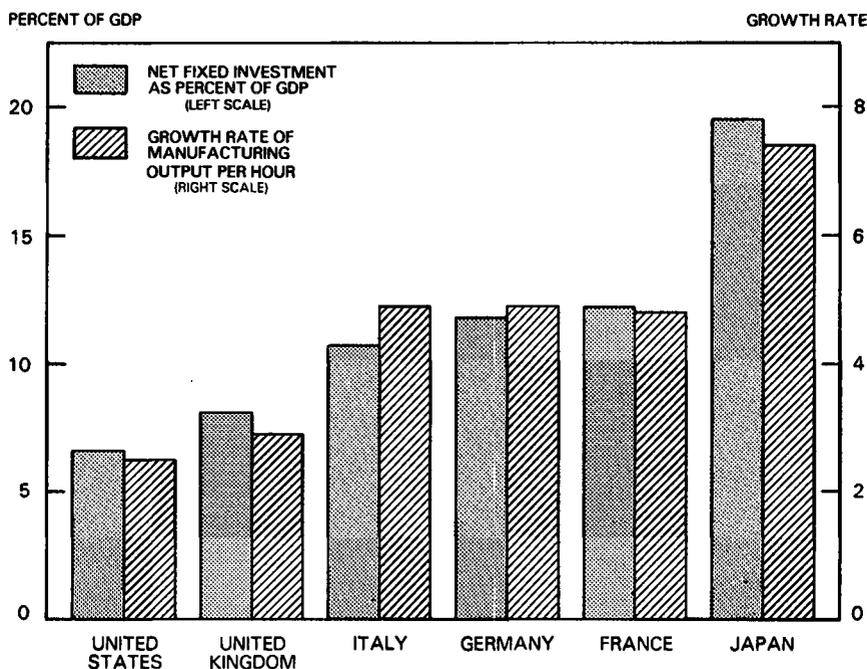
It is instructive to compare the growth rates of productivity for different countries with their shares of output devoted to new investment. Although productivity growth and investment rates are simultaneously determined by a multitude of factors, it is striking that a strong positive relationship emerges. As shown in Chart 4-2, Japan has both the highest investment share and the highest growth rate of productivity, while the United States has the worst investment performance and the lowest growth rate of productivity.

While the reasons for these large international differences in rates of capital formation are not precisely understood, some evidence suggests that the roots may lie in different public policies. After World War II, rebuilding of the capital stock was a primary goal of economic policy in continental Europe and Japan. Governments in those countries encouraged saving and investment and disregarded the early Keynesian fear that oversaving could reduce aggregate demand and depress real economic activity.

In contrast, officials in the United States feared a postwar relapse into depression and avoided policies which would encourage saving. For example, some economists advocated sustained budget deficits as a means of absorbing excess private savings.

It is now clear—on the basis of four decades of economic experience since the end of the Great Depression—that fears of secular stagnation caused by a high and rising saving rate are unwarranted. The much greater risk is that productivity growth in the United States will continue to stagnate at low levels, and that American workers will have to accept a lower growth rate in their standard of

International Comparison of Investment and Productivity Growth, 1971-80



SOURCE: ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT.

living than their foreign counterparts. Otherwise, American goods could cease to be competitive on world markets.

THE IMPORTANCE OF CAPITAL FORMATION

The case for increasing the rate of capital formation ultimately rests on three justifications. First, increased capital formation can reverse part of the productivity slowdown that the United States has suffered during the last decade. Second, government policies have discriminated in favor of consumption and against saving and investment. Third, as a result of tax policies, the pretax return to capital investment exceeds the after-tax return that any individuals are able to capture privately, leading to an inappropriately low level of capital formation.

During the 1970s, productivity growth in the United States decelerated rapidly. Between 1948 and 1967 the growth rate of productivity (as measured by output per hour in the private business economy) was 3.1 percent, compared to 2.3 percent between 1967 and 1973 and only 0.8 percent between 1973 and 1981.

The consequences of reduced productivity growth for our standard of living over the long run are greater than those of any other current economic problem. In 1981 the American economy produced approximately \$12,780 worth of output per capita. Had productivity growth continued at the 1948-67 rate during the 14 years subsequent to 1967, output per capita would have reached \$16,128 in 1981, 26 percent higher than the actual value. As a standard of comparison, the recent recession reduced per capita output by only 4 percent between the third quarter of 1981 and the fourth quarter of 1982, less than one-fifth the reduction attributable to the productivity shortfall. As time passes, the consequences of reduced productivity growth are compounded. Increasing the productivity growth rate by 2 percentage points annually would more than double our material standard of living by 2020, compared to the level it would reach otherwise.

The productivity slowdown is not reliably attributable to any single cause or combination of causes. Various analysts have suggested that higher energy prices, regulatory changes, reduced research and development spending, reduced opportunities for technical innovation, the changing composition of the labor force, and changing worker attitudes, as well as reduced capital formation, are responsible for the productivity slowdown. An accurate accounting of the sources of the slowdown is probably impossible in light of the multitude of competing explanations and the statistical difficulties associated with distinguishing between their relative effects precisely.

Many of the possible causes of the productivity slowdown are probably not reversible through public policy. There is relatively little the Federal Government could have done to offset the negative effect of sharp increases in oil prices or, for that matter, to influence changing cultural attitudes toward work. Changing the rate of capital formation, however, is a principal way in which Federal economic policy can affect productivity growth.

Increasing the rate of capital formation will raise productivity growth in several ways. More rapid capital formation results, on average, in workers having more equipment at their disposal. In addition, increases in investment reduce the average age of the capital stock, permitting physical assets to embody more recent technological innovations. Technological development and the level of capital formation are intertwined, because the development of more efficient and

sophisticated capital goods occurs when the demand for new capital goods increases.

The legacy of past policies, which have artificially depressed saving and investment, provides a second reason for increasing the rate of capital formation. As described below, this discrimination against capital formation has taken many forms, including tax policy, monetary policy and recurring Federal budget deficits. Although there exist instances of market failure, a market economy can generally be expected to allocate resources in an efficient way. When public policies systematically discriminate against one type of spending, however, there is a strong presumption that too little of it will take place.

A related and final justification for increased capital formation comes from a comparison of the total pretax return to investment with the return received by private investors. Estimates suggest that the total pretax return to investment in corporate capital, as measured by its pretax marginal product, is about 11 percent. This means that \$1.00 invested today yields society \$1.11 next year, or alternatively a permanent yield of 11 cents. While the total pretax return fluctuates from year to year with cyclical conditions, studies have tended to find that it has stayed within the range of 8 to 15 percent throughout the postwar period.

In contrast, private investors have earned much smaller rates of return over the last several decades, with many investors earning negative real after-tax returns over much of that period. Even leaving aside the effects of personal taxes, the real return on short-term debt instruments averaged less than 1 percent during the 1950-81 interval. While equity investments have yielded a higher average return, they carry with them a large amount of risk. The average real return on common stock before personal taxes was 6 percent over the 1950-81 period, but investors lost money in real terms in 12 of those years and over periods as long as 17 years.

This large spread between the total and private returns to investment is a consequence of the tax system, which extracts a portion of the total return to investment before it reaches private investors. Capital market returns are reduced because the corporate income tax reduces the return that corporations can pay out to investors. As a consequence of this tax-induced divergence between the private and total return to investment, too little investment takes place. This suggests the desirability of measures both to reduce tax distortions and to increase incentives to save and invest.

MEASURING NATIONAL SAVING

Domestic saving is an important determinant of a nation's level of investment. Economic output is either invested in capital assets, which help produce future output, or consumed privately or publicly. Only by forgoing consumption does it become possible for a nation to invest in a sustained way. While funds from abroad are available to finance some investment, experience suggests that most mature economies have financed investment through domestic saving. Increasing the rate of capital formation in the United States without increasing obligations to foreigners therefore probably requires increased national saving.

Table 4-3 provides information on net national saving as reported in the national income and product accounts. On average, from 1951 to 1981, the United States saved 6.7 percent of total output beyond that necessary to replace depreciated capital. Private saving, comprising personal saving and corporate retained earnings, totaled 7.3 percent of GNP. Federal Government dissaving through budget deficits averaged 0.9 percent of GNP, while the sum of State and local government surpluses averaged 0.3 percent of GNP.

TABLE 4-3.—*Net saving as percent of GNP, 1951-81*
[Percent]

Period	Total	Not adjusted for inflation			Adjusted for inflation ^a		
		Federal	State and local	Private ¹	Federal	State and local	Private
1951-55.....	6.7	-0.3	-0.1	7.2	0.9	-0.1	5.9
1956-60.....	6.9	.0	-.2	7.1	1.1	-.1	5.9
1961-65.....	7.4	-.4	.0	7.8	.2	.2	7.0
1966-70.....	7.5	-.6	.1	8.0	.6	.4	6.5
1971-75.....	6.4	-1.8	.6	7.6	-.3	1.1	5.6
1976-80.....	5.8	-1.9	1.2	6.5	-.2	1.6	4.4
1981.....	5.0	-2.0	1.1	5.9	.0	1.5	3.6
1951-81.....	6.7	-.9	.3	7.3	.4	.6	5.8

¹ Private saving less capital consumption allowances with capital consumption adjustment.

^a Adjusted by GNP implicit price deflator.

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

While the total saving rate can be measured unambiguously, there are serious conceptual problems in measuring its various components during an inflationary period. Inflation erodes the real value of the national debt. Interest rates incorporate inflation premiums and these premiums compensate lenders for the fact that they are repaid in cheaper dollars. Thus, they do not really represent income to borrowers or costs to lenders. This principle is recognized by the Financial Accounting Standards Board and is often applied in the private sector. Table 4-3 therefore also presents a breakdown between pri-

vate, Federal, and State and local government saving that is adjusted for the effects of inflation.

BUDGET DEFICITS AND SAVING

Unacceptably large Federal budget deficits are likely in the next several years unless legislative changes are made. These deficits could significantly reduce investment during the economic recovery. Increased public consumption with no reduction in private consumption leaves fewer resources available for investment. When the Federal Government must compete with private borrowers for savings, real interest rates are bid up, discouraging investment.

Federal dissaving would not represent a serious problem if it automatically called forth more private saving. While increased deficits do not induce an equal increase in private saving, they also do not crowd out investment expenditure dollar for dollar. Increases in the real rate of return caused by Federal deficits raise the yield savers receive and may call forth some additional private saving. Higher real interest rates also discourage spending on consumer durables, housing, and construction by State and local governments. Finally, by contributing to increases in real interest rates, budget deficits encourage capital inflows from abroad. These factors imply that deficits do not completely crowd out private investment; rather, a reasonable estimate is that funds available for private investment are reduced by perhaps one-half to three-fourths of the budget deficit.

The possibility that Federal budget deficits crowd out private investment takes on greater importance in light of the large deficits that will occur over the next 5 years unless actions are taken. The fiscal 1982 budget deficit of \$110.7 billion absorbed 3.65 percent of GNP. Projections now suggest the 1983 deficit will equal \$207.7 billion or 6.5 percent of GNP. Unless significant actions are taken, deficits of this magnitude or larger may continue even as the economy recovers from the recent recession. If such deficits materialize, the consequences for capital formation could prove very serious unless a dramatic increase in private saving also takes place. A budget deficit of 5 percent of GNP would likely reduce net investment by an amount equal to about one-half its historical level, relative to a balanced budget. With large deficits, significant improvements in labor productivity and the quality and quantity of housing would be less likely in the years ahead.

TAX RULES AND PERSONAL SAVING

Many economists believe that tax rules in the United States encourage consumer borrowing and discourage private saving. During the 1970s the combination of tax rules and inflation produced a dramatic decline in the private return to saving and a large reduction in the cost of borrowing.

During the 1960s, nominal interest rates on 3-month Treasury bills averaged 4.0 percent, and the consumer price inflation rate averaged 2.3 percent. On a pretax basis, this left savers with an average real return of 1.7 percent. For a saver in the 30 percent marginal tax bracket, the real after-tax return was only 0.5 percent.

The return to saving fell significantly below this level during the 1970s. While the average inflation rate rose to 7.1 percent, the average interest rate increased to only 6.3 percent. This caused a decline in the real interest rate measured on a pretax basis and a larger decline in the average after-tax rate (for a person in the 30 percent bracket) from 0.5 percent to -2.7 percent.

The return to saving has fallen because of corporate taxes as well as individual taxes. Corporate income taxes decrease the returns corporations can afford to pay to the holders of their securities. As described below, these tax burdens also increased substantially during the 1970s. In addition, corporate taxes reduce the amount of funds that corporations can retain for reinvestment.

At the same time that tax rules have reduced the return on savings, they have encouraged dissaving through borrowing. Because consumer interest payments are tax deductible, taxpayers who itemize their deductions are encouraged to use credit to finance their purchases of consumer durables and other goods. As inflation increased during the 1970s, the real after-tax cost of borrowing declined and eventually became negative. Indeed, in the first quarter of 1980 the real after-tax cost of borrowing for a taxpayer in the 30 percent bracket was -1.2 percent. The encouragement of borrowing to finance purchases of durable goods probably reduced the aggregate saving rate substantially during the 1970s.

The tax reforms supported by the President in 1981 and enacted by the Congress were designed to increase saving. Reductions in marginal tax rates raise the after-tax return to saving and the after-tax cost of borrowing. The Economic Recovery Tax Act of 1981 will reduce the marginal tax rate facing a median income family in 1984 from 28 percent, which would have occurred under pre-1981 law, to 22 percent. The act immediately reduced the marginal tax rate on high income taxpayers, who account for a large fraction of personal saving, from 70 to 50 percent.

The Economic Recovery Tax Act of 1981 also contained several other provisions directed specifically at encouraging private saving. The Individual Retirement Account (IRA) provisions in the tax code were extended to cover the entire working population. Working individuals are now permitted to make a yearly tax deductible contribution of \$2,000 to finance consumption during retirement. Taxes are only paid when the funds plus accumulated interest are withdrawn from the IRA. Private estimates suggest a substantial response to this legislation, with about \$10 billion placed in IRAs during 1982. A crucial issue in evaluating the efficiency of IRAs is their effectiveness in raising saving incentives on the margin. Some critics have argued that IRAs do not provide an incremental incentive for saving because contributors can simply transfer funds from other sources without increasing total savings. While this occurs to some extent, it is certainly not universal and will decrease in the future as contributors exhaust their funds available from other sources. The fragmentary evidence available from private sources suggests that more than half of all IRA contributors contribute less than the maximum amount allowable, indicating that they do face increased saving incentives on the margin.

The 1981 tax legislation also provided for an interest exclusion starting in 1985, allowing individuals to exclude 15 percent of their net interest income up to a limit of \$3,000. This will also raise the return to savings and spur capital formation. Extending the exclusion to dividends as well as interest payments would reduce the tax bias favoring debt over equity as a source of corporate finance.

The 1981 tax act also raised the return to saving by reducing the top marginal rate on capital gains from 28 percent to 20 percent. This reform partially compensates for the serious distorting effect of inflation on the measurement of capital gains. Because of inflation, an owner of an asset that experiences no real appreciation will nevertheless become liable, at the time of sale, for taxes on the nominal appreciation of the asset. Complete elimination of this distortion would require indexation for inflation in the measurement of capital gains.

In recent years support has grown among economists and other tax experts for moving the tax system toward taxation of consumption and away from taxation of income. This change might entail expanding the existing exclusions of interest and dividend income and those mechanisms, such as IRAs, which permit tax-deferred accumulation of savings. It might also involve limiting the deduction of interest expenses for consumer borrowing. Movement toward taxation of consumption is supported by some advocates on the grounds that taxing individuals on what they take from the economy is "more fair" than taxing what they contribute to the economy. A tax system based

on consumption taxation might also prove easier to administer than the current system because it would eliminate many of the problems involved in measuring certain types of capital income.

FINANCIAL REGULATION AND PRIVATE SAVING

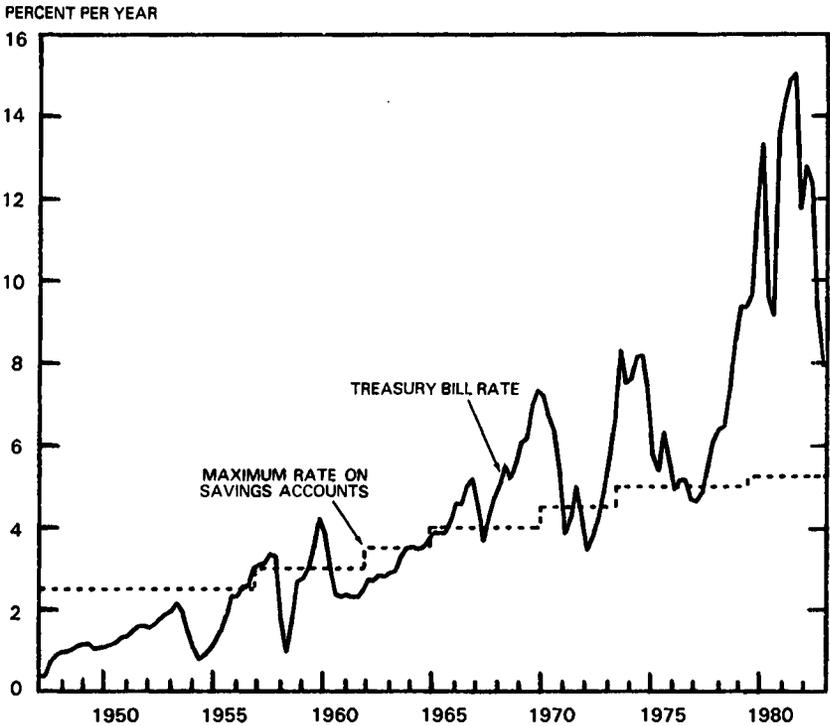
An additional set of public policies that has probably discouraged private saving over the last several decades is the regulation of financial institutions. As Chart 4-3 shows, small savers holding savings accounts subject to Regulation Q have received below market rates of interest, and holders of checking accounts have received even lower rates of interest. These low returns are largely consequences of regulations limiting the interest rates financial institutions may pay on customer deposits. As late as 1980, the spread between Treasury bill rates and the yield on savings deposits subject to Regulation Q was as great as 8 percent.

The adverse effects of financial regulations on personal saving have probably lessened considerably in recent years, due to both private and public actions. In the private sector, the development and explosive growth of money market funds has made it possible for most high and middle income savers to receive market rates of interest. Legislation adopted in 1982 with Administration support has allowed commercial banks and thrift institutions to offer financial instruments with competitive interest rates to a wide range of depositors.

The Administration has strongly supported removal of the many unnecessary regulations that have impeded competition in the financial services industry. As discussed in more detail in Chapter 5, the Depository Institutions Deregulation and Monetary Control Act of 1980 and the Depository Institutions Act of 1982 have played important roles in beginning this process of deregulation. Banks and thrift institutions can now offer insured accounts that are competitive with money market funds in terms of both the interest rates they pay and the services they provide, thereby increasing incentives for saving.

A related development has occurred in the Federal Government's policies regarding U.S. Savings Bonds. Savings bonds have historically paid low rates of return. In 1980, 10-year Treasury bonds paid 11.5 percent, while Series EE Savings Bonds paid an annual yield of only 7 percent from issue to maturity 11 years later. Because of legislation recently proposed by the President and passed by the Congress, the return on savings bonds is now based on market rates. Between November 1, 1982, and April 30, 1983, for example, U.S. Savings Bonds will earn 11.09 percent if they are held at least 5 years. Apart from making saving more attractive to savings bond purchas-

Three-Month Treasury Bill Rate and Regulation Q Maximum Rate on Savings Accounts



SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM.

ers, the new rates on Series EE bonds are desirable on equity grounds because small savers can now obtain yields close to those received by their higher income counterparts.

THE ROLE OF INTERNATIONAL CAPITAL FLOWS

It is likely that budget deficits, tax policies, and ceilings on bank interest rates have contributed to the lower net saving rates which the United States has experienced in recent years. In theory, however, this low level of saving need not have strictly limited the level of funds available for investment. Funds from abroad can also finance investment in the United States. The link between domestic investment and domestic saving is not absolute.

Nevertheless, a number of economic studies cast doubt on the proposition that the United States could offset low domestic saving rates through sustained borrowing from abroad. These studies have found a consistently high correlation between rates of domestic investment and domestic saving in the major industrialized countries. While the reasons for these results are not well understood, they may reflect the high information costs and serious monitoring difficulties associated with holding foreign investments. Whatever the exact reason for the historically high correlation between domestic saving and investment, it suggests that increasing the rate of investment in the United States significantly will probably require policy measures which increase domestic saving.

Insofar as savings from abroad are available for investment in the United States, it is not clear that they provide a desirable substitute for domestic saving. Throughout most of the postwar period, the United States was a net exporter of capital. However, the United States has recently experienced a large surplus in its capital account and incurred a large offsetting deficit in its current account. This has entailed large merchandise trade deficits, with deleterious impacts on U.S. export industries and those domestic industries which compete with imports.

THE ALLOCATION OF CAPITAL

With only a relatively small fraction of GNP available to finance investment, and with large budget deficits looming over the next few years, the allocation of capital in the United States among alternative uses takes on added importance. In addition to holding down the rate of national saving, previous fiscal and monetary policies have tended to alter the allocation of capital investment, favoring housing, consumer durables, and State and local construction at the expense of business investment. Inflation, caused by overly expansionary monetary policies, and taxes interact to affect the incentives on different kinds of investments. While a sound economic recovery will boost saving sufficiently to provide for increases in all forms of investment, eliminating tax-induced distortions in the allocation of capital would also aid in regaining a rapidly rising standard of living.

It is useful to examine how the tax structure has very different effects on alternative forms of investment. The income from investments by corporations is taxed at both the individual and the corporate level. Corporate profits are taxed as they are earned. When these profits are received by shareholders in the form of either dividends or capital gains, they are taxed again. By contrast, the implicit returns from most other forms of investment remain untaxed. The

services to investors in owner-occupied housing and consumer durables are largely untaxed.

The bias in our tax system against corporate capital investment was exacerbated during the 1970s by the effects of inflation. Corporations are permitted to take depreciation allowances based on historic rather than replacement costs for tax purposes. Thus, as the rate of inflation increases, the real value of depreciation allowances decreases, and the tax burden as a share of real profits rises. Another source of inflation-induced corporate tax increases is that inflation causes "phantom" gains in the value of inventories, raising taxes for firms using the first-in, first-out method of inventory valuation. One study estimated that the tax law's use of historic costs rather than replacement costs for depreciation purposes raised corporate tax payments by \$19.1 billion in 1977, and raised tax burdens for corporations using first-in, first-out inventory accounting by \$7.0 billion. Although these tax increases were partially offset because corporations deduct nominal rather than real interest payments in calculating their taxable income, the gains at the corporate level from the deductibility of nominal interest are offset to some extent by losses from taxation of the inflation component of interest rates at the individual level.

The effects of the interaction of taxes and inflation reached dramatic proportions during the 1970s. Increased taxation led to large market revaluations of corporate and noncorporate capital assets. The "q ratio," which measures the market value of capital in the nonfinancial corporate sector relative to its reproduction cost, fell from 1.09 in 1970 to .67 in 1980. The price of single-family nonfarm dwellings relative to the price of consumption goods rose by 29 percent during the same period. During the last 2 years of falling inflation, however, the q ratio rose to about .80 in the fourth quarter of 1982, and the relative price of single-family nonfarm dwellings fell by 5.3 percent.

The supply of different types of capital goods ultimately depends on their relative prices. The observation that reductions in inflation are associated with changes in the relative prices of different capital goods suggests that the reductions in inflation are likely to cause a reallocation of capital toward plant and equipment investment and away from investments in consumer durables and housing. These shifts simply reflect the reduced magnitude of the biases caused by our current tax system in periods of inflation.

TAX POLICY AND INVESTMENT

In 1981 the Congress instituted the accelerated cost recovery system as part of the Economic Recovery Tax Act. This tax legisla-

tion permitted businesses to depreciate most purchases of equipment according to an accelerated 5-year schedule. It also permitted businesses to depreciate structures over 15 years using a 175 percent declining balance schedule. The Economic Recovery Tax Act preserved the investment tax credit on equipment and called for further accelerations in depreciation schedules in 1985 and 1986.

The 1982 Tax Equity and Fiscal Responsibility Act altered the provisions of the Economic Recovery Tax Act by instituting a half-basis adjustment for investment tax credits in calculating depreciation and by eliminating the planned further accelerations in depreciation schedules. Table 4-4 shows the present value of the depreciation deductions and investment tax credits received by a corporation under the old accelerated depreciation system, Economic Recovery Tax Act (ERTA) rules and Tax Equity and Fiscal Responsibility Act (TEFRA) rules. The present value is calculated for a variety of hypothetical combinations of discount and inflation rates.

TABLE 4-4.—Investment incentives ¹ under different tax laws

[5-year property]					
Real interest rate	Tax law	Inflation rate (percent)			
		4	6	8	10
1 percent.....	Pre-ERTA ².....	.495	.473	.454	.436
	ERTA .....	.516	.500	.486	.472
	TEFRA.....	.495	.480	.466	.454
4 percent.....	Pre-ERTA ².....	.462	.444	.427	.412
	ERTA .....	.492	.478	.465	.452
	TEFRA.....	.472	.459	.446	.435
7 percent.....	Pre-ERTA ².....	.435	.419	.404	.390
	ERTA .....	.471	.458	.446	.434
	TEFRA.....	.452	.440	.428	.418
10 percent.....	Pre-ERTA ².....	.412	.397	.384	.372
	ERTA .....	.452	.440	.429	.418
	TEFRA.....	.435	.423	.412	.402

¹ Present value of depreciation deductions and investment tax credits per dollar of investment.

² Assumes depreciation over 9.5 years using double-declining balance switching to sum of years digits.

Source: Council of Economic Advisers.

Three qualitative conclusions emerge from these calculations. First, current tax laws provide significantly more stimulus to most categories of investment than did the pre-1981 law. Second, the reduction in inflation that has occurred during the past 2 years has also increased substantially the value of the depreciation allowances. Third, even with a relatively short 5-year cost recovery period, the value of the investment incentives remains quite sensitive to the anticipated rate of inflation.

In considering the economic effects of tax policies on investment, it is crucial to distinguish between measures which apply only to new investment, such as accelerated depreciation and the investment tax credit, and measures which reduce the tax burden on all kinds of

capital income, such as corporate rate reductions. These two types of investment incentives produce very different economic effects. Measures which apply only to new investments affect only marginal investment decisions; no tax benefit is conferred on the owners of existing capital. Therefore, in the short term more investment is stimulated per dollar of immediate revenue loss than would prove the case if the tax benefit were conferred on all capital. The tax legislation enacted in 1981 relied on tax incentives for new investments.

Incentives for new investment are viewed by some observers as benefiting primarily large wealthholders, but the reality may be different. Since measures like the accelerated cost recovery system reduce the effective cost of purchasing new capital goods, they are likely to reduce the value of the old capital goods with which they compete. For example, a subsidy for the purchase of new cars will reduce the value of used cars. Likewise, reduced taxation of new investment may temporarily reduce the level of stock market prices, which in part reflects the market's valuation of existing capital. Thus, investment incentives like those recently enacted, while raising the rate of return on new investments, may actually hurt holders of existing wealth. Workers should benefit as greater capital accumulation raises their productivity and wages. The effect on the distribution of income is ambiguous and might even prove progressive.

Beginning with the enactment of the accelerated depreciation provisions in 1954, policy has tended to rely on investment incentives that stimulate new investment and do not benefit existing investments. This continued reliance on measures that benefit new capital at the expense of existing capital carries a subtle but real risk. As investors come to anticipate this pattern of public policy, they may take into account expected future changes in tax laws as they make investment decisions. This might have an unintended effect. Investors who expect capital losses are less likely to invest. Stated differently, if the effective purchase price of new capital goods is expected to decline because of tax reforms, there will be a tendency to defer investments. This suggests that in designing future reforms it may be desirable to consider reducing taxes on existing as well as new capital.

While current tax law provides significantly more stimulus to investment than did earlier law, there is room for further reform. The value of depreciation allowances is still dependent on the rate of inflation, increasing the uncertainty of investment decisions. The acceleration of depreciation allowances has substantially reduced the burden of the corporate income tax, but investment in plant and equipment is still discouraged by taxes on dividends and capital gains.

A final problem under current tax law is the treatment of corporate losses. Because of low profits due to cyclical conditions, or large depreciation write-offs, many corporations do not have taxable income in some years, reducing the efficacy of investment incentives during those periods.

CONCLUSIONS

The tax programs put in place in the last 2 years should play an important role in increasing capital formation in the United States. Yet, much more can be done to ensure a rapidly growing standard of living in coming years. It is crucial that we take action to reduce large Federal deficits and to further stimulate private saving and investment.

In considering the issue of capital formation, policymakers should take a long view. The reasons for increasing capital formation primarily involve long-run growth rather than current economic conditions. We should not allow the poor performance of investment during a period of recession and high deficits to blind us to the importance of policies that can help us achieve sustained and rapid economic growth in the years to come.

CHAPTER 5

The Burden of Economic Regulation

FOR MANY DECADES, the Federal Government has regulated the prices and the conditions for entry in certain sectors of the U.S. economy. This type of regulation, often called “economic regulation,” was broadly applied to the transportation, communications, and financial sectors of the economy. Whatever historical purposes were served by economic regulation, there is an increasing consensus that much of this Federal regulation no longer serves the interests of the contemporary economy. Indeed, over the last several years a substantial part of this economic regulation has been relaxed or eliminated.

A second form of regulation, “social regulation,” is addressed to situations where unregulated activity may pose significant threats to public health, safety, or the environment. Although there is an increasing consensus that economic regulation should be substantially reduced, no such consensus exists concerning social regulation. Also, unlike economic regulation, the magnitude of social regulation has grown rapidly since the mid-1960s with the passage of extensive environmental and safety legislation.

Economic regulation has diminished in recent years due to a variety of deregulation measures. Substantial evidence is now available concerning the performance of industries that have experienced full or partial deregulation. This chapter summarizes the history of Federal economic regulation, its rationale, its impacts, and the effects of recent laws designed to ease economic regulation. The chapter also identifies some opportunities for further deregulation. Special attention is given to the economic regulation of energy, transportation, communications, and financial markets.

A BRIEF HISTORY OF ECONOMIC REGULATION

The first broad body of Federal economic regulation was established in 1887, when the Congress created the Interstate Commerce Commission (ICC) to resolve the increasing controversies between the railroads and shippers. Most of the regulation of other sectors, except for energy, was established by the end of the 1930s and re-

flected efforts to deal with problems similar to those that led to the creation of the ICC. The agencies created in the 1930s tended to operate in much the same way as the ICC, and the outcome was much the same.

Economic regulation often evolved from a dispute among several groups. For example, the Federal Communications Commission (FCC) was created to resolve disputes among users of the broadcast spectrum. The Civil Aeronautics Board (CAB) was created to resolve a dispute among several Federal agencies concerning the administration of air-mail contracts.

Congress delegated direct resolution of these disputes to an independent agency with very general authority. The typical "public convenience and necessity" standard cited in the enabling legislation provides no direct guidance about how the regulatory agencies should resolve disputes. The independent commissions are essentially quasi-judicial institutions that have developed their own bodies of administrative law.

The initial regulations of the independent agencies often served the interests of the regulated industry. For example, some scholars contend that the ICC, by initially reinforcing the railroad cartels, caused higher average prices and reduced the variance of prices. For a long time, both the CAB and the FCC restricted entry to the number of firms operating at the time these commissions were created.

The initial regulation led to more regulation that served to protect the interests of the initially regulated firms. For example, ICC regulation was extended to trucks, buses, freight-forwarders, and barges, thus restraining the developing competition to the railroads. FCC regulation was extended to cable television, protecting broadcasters using the frequency spectrum.

Over the long run, many economic regulations have not served the interests of either producers or consumers. The development of excess capacity, relatively high wages, restraints on technological improvements and operating practices, and competition outside the regulated environment led to the lower-than-average rates of return in many of the regulated industries. Consumers have often been adversely affected by higher prices and restrictions on service.

One other pattern of economic regulation was introduced in the 1930s. A belief that the depression was caused by excessive competition provided a rationale for many laws and regulations that directly restricted entry, output, and competition. The broadest such law, the National Industrial Recovery Act, was declared unconstitutional; other similar legislation, such as the Agricultural Adjustment Act of 1938, is still in force. One might argue that the several regulatory commissions and laws approved in the 1930s achieved their intended

effect of raising prices. A later generation questioned whether this effect was desirable.

THE TRADITIONAL RATIONALE FOR ECONOMIC REGULATION

The two traditional justifications for economic regulation have been to preserve the potential economic efficiencies associated with natural monopoly in some industries and to eliminate the inefficiencies thought to be associated with excessive competition in others.

Natural Monopoly

A *natural monopoly* exists when the entire relevant demand for a good or service can be satisfied at the least total cost by a single firm. At the local level it is probably wasteful to have duplicate distribution systems to provide telephone, electric, gas, and water services. Among industries regulated at the Federal level, major gas pipelines and high-voltage electric lines are often considered natural monopolies. Long-distance telephone transmission may also be a natural monopoly in areas of low density. Railroads are a potential natural monopoly only for that declining share of rail traffic for which the shipper does not have an effective choice of carrier or mode of transport.

Such industries present a dilemma. Competition may result in unnecessarily high production costs through duplication of facilities, but an unregulated monopoly may not act in the public interest. Without regulation, a monopoly would probably set prices too high and produce too little, with consumers willing to pay more for additional output than the cost of supplying that output. A typical solution to this dilemma is maximum price regulation. The primary objective of price regulation is to set the monopoly's price as close as possible to incremental cost while still assuring the monopoly a market rate of return on its investment.

The growth of demand or the introduction of substitutes for a product can often transform a natural monopoly into what—in the absence of regulation—could become an effectively competitive industry. Oil pipelines, for example, are often assumed to be natural monopolies. However, these pipelines now face competition from other pipelines and other modes of transportation. Regrettably, price regulation often continues long after it is efficient, restricting the emergence of a competitive market. The history of the railroads provides a compelling illustration. In many parts of the country rail lines were few and far between in the 19th century. But as the market for transportation services grew, and as technology developed, automobiles, buses, and airplanes provided increasing competition for passenger traffic, and trucks, barges, and pipelines provided increasing competition for freight. The natural monopoly justification for

regulation was probably not applicable in most rail markets by the middle of the 20th century.

Even in markets where elements of natural monopoly still exist, government intervention will not necessarily produce a more efficient use of resources. Increasingly, analysts are coming to recognize that, just as there are market imperfections, there are also government imperfections that must be considered in making public policy choices. The relevant tradeoffs are not between imperfect markets and flawless government regulation, but rather between markets with imperfections and regulation which is imprecise and sometimes counter-productive.

Excessive Competition

The second traditional justification for economic regulation is that unfettered markets result in *excessive competition*. This justification was used for regulating railroads in the late 19th century and other industries in the 1930s. A common element in early discussions of excessive competition was that without regulation, unrestrained rivalry among firms would result in losses for some or all of them and that adequate production of an otherwise viable product would prove unsustainable. This argument, which was often rather vague, failed to note that business losses are not a sufficient basis for government intervention. Losses and business failures are a normal part of the operation of competitive markets; they act to eliminate inefficient firms and to shift production to meet changes in consumer demands.

While the concept of excessive competition was not generally well defined, it has now come to refer to at least four possible sources of market imperfection: natural monopoly, cyclical demand with imperfect capital markets, predatory pricing, and suboptimal product quality.

As explained earlier, where natural monopoly conditions exist, competition among several firms can lead to higher costs because of wasteful duplication.

A second interpretation of excessive competition is based on the argument that certain industries, particularly those with cyclical demand and heavy fixed investment, are prone to excessive price fluctuations. According to this argument, firms are forced to close down during recessions and then unnecessarily incur large start-up costs during recovery because of alleged imperfections in capital markets. These wasteful shutdown and start-up costs are avoidable, it is argued, if government regulation sets minimum prices or allows firms to do so.

A third definition of excessive competition focuses on the concept of predatory pricing. Unregulated competition in some markets is alleged to result in monopolization by a firm that engages in predatory

pricing—setting prices below cost in order to drive out competitors. To succeed, a predator must outlast its rivals and barriers must exist to prevent the entry of new competitors once the predator raises prices. Regulation to prevent firms from charging excessively low prices is intended to prevent such predatory practices and hence the higher monopolistic prices that would prevail once the predator has eliminated its competitors. No consensus exists among economists that such predatory tactics are effective. Indeed, many economists believe that apparently “predatory” behavior, if ever successful, is a manifestation of cost advantages or an enhanced ability to bear risk.

A fourth interpretation concerns the alleged tendency of certain competitive markets to produce goods or services of inadequate quality, safety, or reliability if consumers are imperfectly informed about those characteristics. For example, it has been argued that under competitive pressure banks might choose excessively risky investments in order to offer their customers high rates of interest on deposits. Similarly, some have claimed that airlines may skimp on safety in a highly competitive market. Even if such claims were true, it does not follow that restricting competition will necessarily improve quality or safety. Moreover, there are more direct ways of addressing these potential market defects, such as Federal Aviation Administration airplane safety inspections and Federal Deposit Insurance Corporation guarantees.

PROBLEMS OF ECONOMIC REGULATION

Most economists agree that the regulation of price and entry in markets that would otherwise be competitive is inefficient. Regulation of transportation, for example, has generally resulted in higher prices, higher production costs, and slower technological growth. Regulation of oil and gas prices has occasionally kept prices too low, causing shortages and inefficient choices among competing fuels.

Deregulation usually leads to a reduction in cost to the marginal user, whether the discarded regulations established maximum or minimum prices. A price kept below the market price by regulation has the effect of creating a system of nonprice rationing in which excluded consumers are forced to pay higher prices for substitutes. The elimination of maximum price ceilings may lead to higher average prices but lower prices to the marginal consumer. Exceptions to this conclusion are where natural monopoly conditions exist or where regulations lead to some cross-subsidy among consumers.

In some cases, price regulation leads to an excessively high level of some service characteristic, because firms are prevented from competing on price. Because of price regulation of airlines by the Civil

Aeronautics Board, for example, the airlines competed primarily through frequency of flights, which led to low load factors and considerable excess capacity.

Direct economic inefficiencies are not the only costs of rate and entry regulation in inherently competitive industries. Some additional resources are used to lobby politicians and regulators for favorable regulatory actions. The greater the benefits to groups created by regulation, the more such groups have an incentive to spend to block deregulation. The magnitude of the benefits defended are often substantial. Trucking firms have sold operating rights, initially granted them by the ICC, for over \$20 million, and the broadcast rights of individual television stations have sold for substantially more.

The argument that full deregulation is the appropriate policy for industries with competitive market structures applies strictly only in the long run. To minimize the risk of adverse short-run consequences from deregulation, most deregulatory initiatives have called for either partial deregulation or a gradual transition to full deregulation. The Civil Aeronautics Board was not immediately abolished by the Congress, and it retained some temporary domestic authority through 1982. The Staggers Rail Act provided railroads with greater price flexibility but did not provide for eventual elimination of all price and entry controls. The Natural Gas Policy Act provides for only partial deregulation of natural gas prices.

It is not clear how much information about the long-run benefits of deregulation can be obtained by observing the process of gradual or partial deregulation. For example, minimum price regulation may cause excess capacity in an industry. When deregulation occurs, some firms in the industry may go bankrupt. This may lead some to consider deregulation a failure and to propose re-regulation. Once the excess capacity is eliminated, however, the industry may operate profitably without any regulation.

Economists can offer one important piece of advice on partial deregulation: relaxing price restrictions without also relaxing entry restrictions may cause problems, such as developed in the air freight market. Eliminating minimum price constraints while barring entry may result in predation. Eliminating maximum price restrictions without allowing free entry may result in monopoly pricing.

Competitive economic forces, while powerful, are not the only means available to consumers of products from deregulated industries to defend themselves. Antitrust policies may also be used to protect consumers against the abuses regulation is sometimes claimed to prevent. The antitrust laws prohibit anticompetitive behavior. Since regulated industries have often enjoyed broad exemptions from the antitrust laws, a review of the antitrust policies per-

taining to these industries should accompany the deregulation process. At the same time, however, it is important to avoid misusing the antitrust laws to maintain inappropriate types of regulation.

ENERGY POLICY

The pricing and allocation of energy resources was a frequent focus of public policies over the last decade. Many of these policies reduced the long-run supply of these important resources. In the last few years, several measures have been taken to remove the inefficiencies and uncertainty caused by these policies.

STEPS TOWARD A MARKET-ORIENTED OIL POLICY

In January 1981, President Reagan ended the petroleum price and allocation controls that were previously scheduled to expire in September 1981. Oil prices were first directly controlled as part of the general system of wage and price guidelines imposed in 1971. The data on subsequent production, drilling, consumption, imports, and the energy/gross national product (GNP) ratio suggest that oil price deregulation has had many beneficial effects.

Despite the disincentives provided by the "windfall profits" (excise) tax on crude oil, the data suggest that decontrol has reversed the steady decline in production (exclusive of Alaska) observed during the period of price controls. As of October 1982, there were seven consecutive monthly production increases over year-earlier levels, a series of increases not observed in the United States for 10 years. Reported oil well completions in 1982 were 49 percent higher than in 1980, despite the recent decline in real oil prices.

Since full decontrol, U.S. consumption has decreased by almost 11 percent. While part of this decline is due to the recession, a major cause is the continuing adjustment to the price increases of the 1970s. Since decontrol, the energy/GNP ratio has declined by over 5 percent and imports (net of additions to the Strategic Petroleum Reserve) have declined by about 34 percent. The elimination of the regulatory framework for petroleum prices removed the artificial incentives to import crude oil and residual fuel oil. The weakening of oil prices has contributed to a stronger dollar and, thus, to lower prices on all imported products.

NATURAL GAS PRICING AND ALLOCATION

Following the 1954 Supreme Court decision in *Phillips Petroleum Co. v. Wisconsin*, the wellhead prices of natural gas sold in interstate commerce were regulated by the Federal Power Commission (FPC). Since intrastate gas prices were not subject to regulation, a two-market

system resulted. Price controls, when effective, led to shortages in the interstate market both because the interstate pipelines could not compete effectively against intrastate pipelines for gas supplies, and because artificially low prices encouraged consumers to demand more natural gas than they would have otherwise.

Rising oil prices in the 1970s triggered occasional gas shortages in interstate markets. Industrial use of gas was curtailed during periods of shortages, and many potential users of gas, both at the industrial and residential level, were proscribed from using gas. The abnormally cold winter of 1977 produced a severe interstate gas shortage, resulting in numerous factory shutdowns, thousands of layoffs, and other serious problems. It was evident by the mid-1970s that the existing system of wellhead price controls produced serious inefficiencies causing the underproduction of gas for the interstate market and the misallocation of gas between the interstate and intrastate markets and among different users within the interstate markets.

The Natural Gas Policy Act of 1978

The natural gas regulatory environment was changed substantially by passage of the Natural Gas Policy Act (NGPA) in 1978. This act was intended to encourage production by deregulating the prices of newly discovered gas while restraining the growth of average gas prices through permanent controls on the price of older gas. The Federal Energy Regulatory Commission replaced the Federal Power Commission, and price controls were extended to gas sold in intrastate markets. Over twenty regulated categories of gas were created, each with its own initial ceiling price and rules for price escalation over time.

The NGPA provides for the phased deregulation of the wellhead price of most gas discovered after 1977, which should account for 40 to 60 percent of all gas in January 1985, while a smaller volume of gas is scheduled for deregulation in July 1987. A small amount of high-cost new gas was deregulated under the NGPA in 1979. Most gas to be deregulated in 1985 or 1987 is fixed until those dates at a price, in inflation-adjusted dollars, leading to the oil equivalent price level existing in 1978. The NGPA also includes "incremental pricing" provisions intended to allocate high-priced gas to industrial users, thus preserving lower prices for other users. Along with the NGPA, the Congress passed the Powerplant and Industrial Fuel Use Act; this law authorizes nonprice rationing of gas to counter the problems inherent in continued price controls.

As with many efforts to regulate prices, the NGPA has created numerous problems. Instead of producing the lowest cost gas supplies first and moving successively to higher cost sources, producers are induced by the different price categories to produce high-cost gas

first in many cases, and generally to shift production efforts away from cost-minimizing alternatives. The initial boom in the production of deep gas illustrated this effect.

Further problems arise from the control of the prices of new gas until those prices are decontrolled in 1985 and 1987. Since oil prices have risen substantially since 1978, partial decontrol will generate a continued increase in delivered gas prices in 1985 as consumers bid up gas prices to levels equivalent with those of close substitutes such as oil. Although real gas prices have risen and real oil prices have fallen in the last year, average real domestic wellhead prices of gas will rise by about 28 percent between 1983 and 1985 if there is no change in the NGPA according to a preliminary Department of Energy estimate.

The price of decontrolled gas is averaged with the price of controlled gas in determining the price to gas users and the demand for gas is affected by prices for fuel substitutes. This is reflected in preliminary Department of Energy estimates which indicate that the average 1985 prices of gas under the NGPA are not likely to differ greatly from those that would evolve under full decontrol. Under the partial decontrol authorized by NGPA, the prices of decontrolled gas are bid up somewhat above the levels that would be observed in a fully decontrolled market. Indeed, even now decontrolled deep gas is being sold at the wellhead for over \$7.00 per million cubic feet. The preliminary Department of Energy estimates suggest that the average 1985 price under full decontrol will be \$3.78 per million cubic feet (both in 1982 dollars).

The higher prices to be paid for decontrolled gas in 1985 and thereafter suggest that the average gas consumer will not benefit from the remaining controls, and that the primary beneficiaries will be the producers of decontrolled gas. Under the NGPA, however, different groups of consumers will fare differently. Pipelines with access to substantial quantities of price-controlled gas will be able to bid deregulated gas away from other pipelines. This is because the higher prices on decontrolled gas can be averaged with the lower prices paid for gas still subject to controls.

This means, for some period, that consumers in different regions may face different average prices, and that some gas will be reallocated artificially because of differential access to controlled gas. In particular, the intrastate pipelines will have relatively little access to controlled gas, and so some amount of gas will shift out of the intrastate market into the interstate market. Interstate pipelines also will vary in their ability to bid for decontrolled gas, depending on their access to controlled gas and the actions of local regulatory authorities. In summary, in addition to the waste in gas production caused by the

NGPA, both controlled and decontrolled gas will be allocated inefficiently among pipelines. The preliminary Department of Energy estimate of the present value of the efficiency gain that would accrue to the economy from full gas decontrol in 1983, relative to the partial deregulation authorized by the NGPA, is about \$4.2 billion (in 1982 dollars).

The prospect of a price increase in 1985 may provide an impetus toward extension of the NGPA price controls beyond 1985. Such an extension would sustain the inefficiencies experienced as a result of the NGPA. The preliminary Department of Energy estimate of the present value of the efficiency gain of full decontrol in 1983, relative to extension to 1995 of price controls now imposed by the NGPA, is about \$27 billion (in 1982 dollars). Because gas production would be reduced by extension of controls, oil consumption would probably increase. The preliminary Department of Energy estimate is that extension of gas price controls would increase oil import levels by about 288,000 barrels per day between 1983 and 1995.

Reported gas well completions in 1982 increased 21 percent over 1980, while under full decontrol, reported oil well completions increased by 49 percent in the same period. Total proved gas reserves (excluding Prudhoe Bay) declined over one-third during the 1970s. The extension of controls thus would have very serious implications for future domestic gas reserves.

Recent Natural Gas Price Developments

Natural gas prices have risen sharply in recent months because gas controlled at relatively low prices is gradually becoming a smaller component of total production and because some contracts fixing very low prices have expired. Moreover, the NGPA allows price increases for some gas beyond a simple inflation adjustment. While it appears that gas prices in some regions have reached short-term market clearing levels, that is not true for other regions. On average, gas prices are still apparently below market clearing levels—hence, the expected price increase in 1985 under the path outlined by the NGPA.

Some observers have noted that pipelines are buying expensive gas while gas subject to lower price ceilings remains unsold. They have concluded from this that gas markets are “irrational,” and that full price decontrol would not work effectively. This analysis is questionable. Under “take-or-pay” contracts, pipelines agree to pay for a given volume of gas whether or not they resell (“take”) it. Since price controls have prevented pipelines from competing for gas on the basis of price, they compete on the basis of contract terms. Increased “take-or-pay” contractual requirements are one form of such nonprice competition. This behavior is a rational response to the ar-

tificial constraints imposed by price controls and the general expectation of future shortages. In essence, increased "take-or-pay" requirements are a way for pipelines (and implicitly their customers) to buy insurance against future shortages. Pipelines with high levels of "take-or-pay" commitments must now take and pay for relatively expensive gas, even though "cheaper" gas is available. This is "irrational" only in hindsight since surpluses of gas exist. If shortages had developed instead, the use of "take-or-pay" commitments would look quite rational and "farsighted."

EMERGENCY PREPAREDNESS

Conditions in the world oil market and preceptions about the effects of supply disruptions have both changed substantially in the last several years. Trends in world oil production and consumption are similar to those of the United States. World (non-Communist) consumption fell from 51.5 million barrels per day (mmbd) in 1978 to 45.5 mmbd in 1982. Production outside of the Organization of Petroleum Exporting Countries (including Communist nations) increased from 30.3 mmbd in 1978 to 34.3 mmbd in 1982 (for the first 10 months). Furthermore, excess production capacity in OPEC has increased to at least 8.5 mmbd. It is likely that a future oil supply disruption, should one occur, would have smaller proportionate price effects than those caused by disruptions during the 1970's. Both the increasing geographic diversification of production and the presence of substantial excess production capacity would mitigate the effect of future disruptions.

The threat to use oil production as a political weapon may be less effective than was previously perceived. It is very difficult to "target" individual nations with such a weapon because the international oil transport industry has substantial capacity to transfer oil among nations. This is why the United States and the Netherlands, despite their status as the intended targets of the 1973 embargo, faced the same prices for imported oil as other oil-importing nations. Gasoline lines in the United States were caused by the U.S. regulations. Equally important, oil producers cannot impose large penalties upon others without imposing substantial revenue losses upon themselves.

The policies of this Administration reflect the view that preparation for disruptions in energy supplies can best take place through the operation of market forces, and that price adjustments present the most effective mechanism for dealing with such disruptions when they occur. Minimizing the aggregate adverse effects of energy supply disruptions is most efficiently accomplished by allowing prices to allocate available supplies to their most productive uses and by encouraging market forces to increase production of substitute fuels.

Price and allocation controls only redistribute some of the adverse effects of the disruption away from politically favored groups, therefore making matters worse for other groups. In the aggregate, price and allocation controls would exacerbate the adverse effects of the disruption.

Standby controls, even if never implemented, are harmful because they increase the perceived likelihood that controls will be imposed and thereby deter private preparedness. This is why the President vetoed the standby controls legislation in March 1982.

Present policies also reflect a recognition that firms may have insufficient incentives to prepare for energy supply disruptions, in substantial part because of past government policy. Previous price and allocation controls had the effect of penalizing those who had prepared for disruptions and subsidizing those who had not. Because of governmental responses to energy supply disruptions in the past, and the recent congressional proposal to establish standby price and allocation controls, firms must regard as substantial the likelihood that controls would be imposed once again, despite this Administration's firm commitment to avoid such policies. This expectation discourages both those who expect to benefit from controls and those who expect to have their supplies appropriated from preparing sufficiently for a disruption beforehand.

In recognition of this perverse effect of past policy, the Administration is striving to build up crude oil stocks in the Strategic Petroleum Reserve (SPR) at an efficient rate. Built up to only slightly more than 100 million barrels from 1977 until early 1981, the SPR now contains over 290 million barrels and is growing steadily toward the planned level of 750 million barrels. The SPR is intended to supplement, not substitute for, private sector stocks; accordingly, it would be used only in the event of a severe disruption. Once a decision was made to use SPR crude oil, it would be sold at market-clearing prices to whomever wished to purchase it. The Strategic Petroleum Reserve Plan submitted to the Congress in December 1982 contains a provision allowing the Secretary of Energy to reserve for special groups faced with extraordinary circumstances up to 10 percent of a given period's drawdown; oil allocated under this provision would be priced at the level established in the most recent competitive auction of SPR crude oil. This provision is not intended as a subsidy for particular groups. The policy of this Administration to fill the SPR at a steady rate will move energy security preparedness in the United States toward a more optimal level. To the extent that the availability of SPR crude oil, combined with other energy policies and programs, enables future Administrations to resist pressures for price and allo-

cation controls during a disruption, the SPR may enhance private sector preparation as well.

Except to the extent that use of foreign energy supplies is increased artificially by price controls and other adverse policies, it is not the policy of this Administration to reduce dependence on foreign energy suppliers beyond the level determined by market forces. In a world with relatively free trade and substantial capacity for reallocation of supplies, the allocative effects of a change in oil prices (other than those operating through the exchange rate) are independent of whether a given nation's use of foreign supplies is great or small. A disruption would raise prices and thus reallocate all available supplies whether foreign or domestic. Thus, a nation totally self-sufficient in energy supplies still would face the same oil prices as a nation totally dependent on foreign sources. It is the policy of this Administration to facilitate free trade while preparing for future contingencies through primary reliance on market adjustments and judicious use of the Strategic Petroleum Reserve.

TRANSPORTATION AND COMMUNICATIONS

The transportation and communications industries serve vital linkage functions in our Nation's economy. Until recently, these industries were broadly subject to traditional rate and entry regulation.

Regulation of most transportation sectors is probably not efficient under contemporary market conditions. Most transportation markets, due to the mobility of most of the capital assets of the firms in those markets, are highly contestable. That is, with nearly costless entry and exit, new firms can enter markets which have excessive prices and can take advantage of the profitable opportunities that they provide. Thus, even with significant economies of scale in a transportation market, the threat of entry by new rivals should result in near-competitive pricing of transportation services. Additionally, most transportation firms face significant intermodal competition. They are also disciplined indirectly in some cases by competitive conditions in the national or international markets in which the commodities they transport are sold. The only segments of the interstate transportation system for which regulation on a natural monopoly basis may be justifiable are the major gas pipelines, long-distance electric transmission lines, and those sections of the rail system where shippers do not have an effective choice of carrier or mode of transport.

Telecommunications, due to a high rate of technological development, is one of the most rapidly changing sectors of the U.S. economy. The Federal Government plays an active role in the telecommu-

nications industries through the regulation of common carriers and broadcasters. Several important steps toward deregulation of these industries were initiated in 1982. The government can enhance the development of these industries through continued deregulation.

EFFECTS OF AVIATION DEREGULATION

Until the late 1970s the Civil Aeronautics Board (CAB) regulated the airline industry extensively. It allocated interstate routes among the airlines and controlled airline fares on those routes. Through its control of air routes, the CAB restrained entry into the airline industry. From its inception in 1938 until the late 1970s, the CAB did not allow any new airline to enter the interstate trunk market. Largely as a consequence, air fares were higher on most interstate routes than if price competition and freedom of entry were permitted. This was reflected by the differences in fares between intrastate city-pairs that were not subject to CAB regulation, such as Los Angeles-San Francisco, and comparable interstate city-pairs that were. The latter often had fares that were as much as 60 percent higher than the former.

In 1977 the CAB began to ease restrictions on fares and entry. In 1978 the Congress affirmed and extended the CAB's measures by passing the Airline Deregulation Act. This act provided for the gradual deregulation of the airlines, with the termination of CAB domestic route authority in 1981, the termination of CAB domestic pricing authority in 1983, and the elimination of the CAB itself in 1985. Subsequent steps were taken to increase potential competition in international aviation. In July 1982 the U.S. Government entered a multilateral agreement with several European governments that permits greater flexibility in airline fares for trans-Atlantic flights than was previously allowed.

While rising aviation fuel costs, the weak economy, and the 1981 air traffic controllers strike complicate assessment of the effects of gradual deregulation, route and fare competition have increased substantially since 1977. From 1978 to 1981, the number of U.S. certificated airlines more than doubled (from 36 to 86). The market share of the major trunk airlines declined from 87.3 to 80.4 percent in the past 3 years while, during this same period, the market share of the local, intrastate, and new airlines increased from 11.5 to 16.4 percent. Aircraft departures from large, medium, small, and nonhub airports increased substantially over the 2 years immediately following airline deregulation. The percentage of domestic markets with four or more carriers grew from 13 in May 1978 to 73 in May 1981. In April 1982, 77 percent of the domestic coach traffic of the major airlines moved on discount fares, compared to 46 percent in April 1978. And while operating expenses per available seat mile rose by

73 percent from 1976 to 1981, airline revenue per available seat mile rose by only 58 percent in this same period.

Deregulation has also led to increases in operating efficiency. Airline labor cost increases have slowed and have actually declined relative to inflation. The established airlines have been forced to control their labor costs in order to compete effectively with the new entrants, many of which pay substantially lower wages. Load factors (the ratio of revenue passenger miles to available seat miles) rose from an average of less than 55 percent between 1973 and 1977 to more than 59 percent between 1978 and 1982. Airlines are now using a wider variety of airplanes to serve their diverse markets. Small markets are more likely to be served by smaller airplanes.

There is little need to fear monopoly in airline markets when the CAB expires. Several studies have demonstrated that no system-wide economies of scale exist. Since airplanes are easily transferable from one market to another, airline markets are readily contestable. The prospect of potential entry by rival carriers creates pressures for close-to-competitive fares even in markets served by only one airline.

Deregulation of airlines has established a competitive and more efficient airline industry. As air travel in the United States increases over this decade and as the busiest airports become even more congested, the new competitive structure may be challenged. Allowing competition and the full transferability of the right to land and take off at these airports may be necessary to sustain this competitive structure. Additionally, the maintenance and future development of a safe and effective national airway system is important to ensure that consumers are well served.

EFFECTS OF PARTIAL DEREGULATION IN SURFACE TRANSPORTATION

The traditional rate and entry regulation of the trucking, freight-forwarder, intercity bus, barge, and maritime industries is now largely out of date. Many studies have demonstrated the absence of significant economies of scale in these industries, weakening the "natural monopoly" rationale for entry restrictions. The high degree of capital mobility in these industries implies that individual city-pair and port-pair markets are highly contestable. The existence of intermodal sources of competition and competitive international output markets for transported commodities further reduces any misallocations resulting from monopoly behavior. Additionally, the high rate of technological development in the transportation sector renders many regulations inapplicable. The experience since the recent deregulation of airlines and the partial deregulation of surface transportation indicates that a competitive industry structure would not reduce the financial viability of firms in these industries.

Several major pieces of legislation were enacted in the last few years to reduce the degree of regulation in the surface transportation industries, including the Railroad Revitalization and Regulatory Reform Act of 1976, the Motor Carrier Act of 1980, the Staggers Rail Act of 1980, and the Bus Regulatory Reform Act of 1982.

The effects of the partial deregulation of trucking—initiated by the Interstate Commerce Commission and affirmed by the Motor Carrier Act of 1980—have proven very encouraging. Published trucking rates are now subject to large and widely available discounts. Shippers appear to be overwhelmingly satisfied with the rates, service options, and competition for their business. Service to small communities has not deteriorated, as was originally predicted by the opponents of deregulation, and most shippers in small communities also appear to support deregulation. Both the number of new firms and failing firms have increased substantially, the latter due in part to the recession. Concerns have been expressed over the last year that the Interstate Commerce Commission may be slowing the deregulatory process. For example, the percentage of applications for grants of operating authority approved by the ICC declined slightly in both fiscal years since the passage of the Motor Carrier Act. On net, however, the ICC has facilitated increased competition in the trucking industry. The chaos predicted by the opponents of deregulation has not materialized, even during a sustained recession. The experience to date clearly supports the case for more general deregulation of surface transport.

The experience since the partial deregulation of railroads is similar. Although direct evidence on rail rates is not available, the number of contracts negotiated between rail carriers and shippers (a measure of the operating flexibility granted by the Staggers Rail Act) increased from 580 in fiscal 1980 to 2907 in fiscal 1982. Railroads have increased their share of total freight traffic and have substantially increased their shipments of some commodities, such as fruits and vegetables, that were previously carried almost exclusively by trucks. Railroad profits remained essentially steady despite the sustained recession.

While recent partial deregulation of the surface transportation industries has increased the competitiveness of these industries, the opportunity remains for significant gains from further deregulation. There seems to be little danger that further deregulation would enhance the monopoly power of carriers. The high degree of capital mobility in the trucking, bus, barge, and maritime industries should prevent monopoly pricing over a sustained period, even where there is only one carrier on a route.

FURTHER DEREGULATION OF SURFACE TRANSPORTATION

For many decades, both carriers and shippers have made decisions based on expectations that the general regulatory system would continue. As a consequence, the transition to deregulation can be disruptive. The major conceptual problems of further deregulation involve the following four issues: (1) the antitrust status of the rate bureaus, (2) the vulnerability of shippers who do not have an effective choice of carrier or mode, (3) the restrictions on multimodal ownership, and (4) the restrictions on route abandonment.

As suggested below, these problems especially affect the prospects for further deregulation of the railroads.

Antitrust Status of Rate Bureaus

For many years the regional rate bureaus (composed of transportation firms) have performed the normal functions of a trade association and have provided the forum for multilateral agreements on both single-line and interline rates. These rate bureaus were exempted from the antitrust laws, and their proposed rates were generally endorsed by the ICC. The Motor Carrier Act of 1980 removed the antitrust immunity of the truck rate bureaus for single-line rates beginning in mid-1984, and established the Motor Carrier Ratemaking Study Commission to study whether the antitrust immunity for multilateral agreements on interline rates should be maintained. In testimony to this commission, the Administration supported elimination of the antitrust immunity of the truck rate bureaus. Members of the commission, which was scheduled to complete its study by the end of 1982, were equally divided on this issue at that time. Additionally, following the Railroad Revitalization and Regulatory Reform Act of 1976, the ICC restricted the authority of the rail rate bureaus to address single-line rates and restricted the carriers that could participate in an agreement on interline rates.

There remains a legitimate dispute about whether the rail rate bureaus should retain antitrust immunity when setting interline rates. The general view of economists is that further deregulation should be accompanied by the elimination of antitrust immunity. This approach would prevent the adverse effects of a carrier cartel and permit interline agreements to be treated as a joint venture. Some clarification of the application of the Sherman Act would also be appropriate to provide a stable legal environment for these interline agreements. The contrary view is that the antitrust immunity should be maintained as long as no carrier is bound by any bureau rates to which it did not agree. A multilateral agreement on interline rates may have substantially lower transactions costs on small shipments than the alternative pattern of bilateral joint ventures, and any at-

tempt to set cartel rates would be disciplined by the freedom of any carrier to set other rates. (This issue is less important for trucks, because interline traffic is now less than 15 percent of total truck traffic, and complete freedom of routes would further reduce such interline traffic. Interline rail traffic, however, is 48 percent of total rail traffic, and it is more important to maintain a process that economizes on the contracting costs for small interline shipments.) The alternative may be an undesirable situation in which rail carriers refuse small interline shipments, use trucks for shipments to points beyond their routes, or face an artificial incentive for mergers.

The "Captive Shipper Problem"

The "captive shipper problem" is what initially led to rail rate regulation. This problem was substantially reduced by the development of alternative carriers and modes but has not been eliminated. Two dimensions of this problem, however, have sometimes been misunderstood. This relation is a bilateral monopoly. Both the rail carrier and the shipper have substantial bargaining power, and it is not clear that this relation leads to rates that are generally "too high." Second, this relation does not lead to any long-term misallocation of resources as long as the price of the shipped commodity is determined in a competitive market. In any case, the sum of the rents on rail and shipper property is constant. This inherent tension suggests that it is important to avoid any effective restraint on the common ownership of rail carriers and major shippers. One alternative may be to require joint track use by competing carriers. Another alternative would be to index the rate bands now authorized for, say, another decade and to terminate these bands at that time. Unless this problem is resolved, however, some form of maximum rate regulation is likely to be maintained in the rail industry.

Restrictions on Multimodal Ownership

There no longer appears to be any case for restrictions on multimodal ownership. It is especially important to allow rail carriers to own trucking operations to facilitate container and piggyback traffic. A change in the law would be required to allow rail carriers to own barge lines. A change in the law would also be required to allow freight-forwarders to own trucks, even though trucking companies are now allowed to own freight-forwarders. The Bus Regulatory Reform Act of 1982 provides a substantially streamlined process for approving intermodal mergers not prohibited by law.

Restrictions on Route Abandonment

The primary problem of the railroads is excess route capacity, a problem that reflects a combination of increased truck competition and ICC restrictions on route abandonment. Some studies have indi-

cated that less than half of the existing rail mileage generates enough traffic to cover total costs. The Staggers Rail Act provides for more flexible procedures to resolve disputes on route abandonment. Recent highway legislation, by increasing allowable truck size, is expected to make trucks more competitive with railroads in moving low density freight. A better resolution of the route abandonment issue is probably necessary for a healthy railroad industry and an efficient distribution of freight traffic across modes.

In summary, pending a resolution of these four issues as they affect railroads, it is probably appropriate to focus any near-term legislative proposals on the other modes of surface transport and for the ICC to pursue selective rail deregulation within its existing authority. Additionally, the government should continue, through the appropriate application of user fees, to ensure that each mode of transport bears the entire costs of its operations when utilizing public facilities.

COMMON CARRIER TELECOMMUNICATIONS

Economies of scale provided the original rationale for making long-distance telecommunications a regulated monopoly. But rapid technological change has reduced the industry's natural monopoly characteristics and has paved the way for a more competitive industry structure. The growth of the market for telecommunications, due largely to the convergence of data processing and telecommunications technology, has further reduced the natural monopoly characteristics of the industry. These rapid developments in both demand and supply conditions have probably made the inherited regulatory framework inappropriate.

Major legal changes were made recently to allow increased competition. In 1982 a U.S. district judge gave final approval to a settlement between the American Telephone and Telegraph Company (AT&T) and the Department of Justice, transforming long-distance telecommunications services into a competitive market with a greater number of companies and less regulation.

In conjunction with other deregulatory steps by the Federal Communications Commission, the settlement is expected to have major benefits for both the telecommunications industry and its customers. Equal access to local facilities, which is the cornerstone of the settlement, should allow competition to act as an adequate substitute for regulation of interstate services. While the transition to equal access will take a few years, individual telephone customers will have progressively increased opportunities to make their own arrangements with AT&T's competitors in long-distance services. Meanwhile, AT&T will be allowed to develop its data processing subsidiary, American Bell Inc. While AT&T is prohibited from offering home

computer information and advertising services via its long-distance lines for 7 years, it is likely to become a vigorous competitor in other fields, such as cellular mobile radio technology. It is also likely to face increasing competition in these areas.

In 1982 an appeals court affirmed the Federal Communication Commission's power to deregulate where technological change makes regulation outmoded. Developments in data processing and transmission have tended to make many Federal and State regulations unnecessary, inappropriate, or unworkable.

BROADCASTING

The FCC regulates the radio and television industries through issuance and renewal of broadcast licenses. It promulgates guidelines on the amount of news and public affairs programming that stations must broadcast, the maximum number of commercials permissible in any time period, the recording of broadcast materials, and the ascertainment and fulfillment of community needs. As a result, broadcasters are prevented in some cases from carrying programming that listeners and viewers would prefer.

The original purpose of FCC regulation was to allocate broadcast spectrum space. The FCC allocated these valuable spectrum rights in exchange for commitments on program content. Whatever the merits of this argument 50 years ago, it may be appropriate to review this form of regulation to reflect the rapidly developing competition from cable television, pay television, and direct satellite transmission.

Recently, the FCC has made several moves toward deregulation. In 1981 the Commission deregulated most commercial radio broadcasting and attempted, subject to legal challenge, to simplify the application renewal process. The FCC is in the process of repeating this deregulatory initiative for the television industry. It will soon attempt to amend the renewal process by eliminating the following criteria for renewal: nonentertainment content, ascertainment of community needs, advertising concentration, and recording. The last Congress also considered bills to repeal many requirements, such as the "reasonable access," "equal time," and "fairness" doctrines that are costly to broadcasters and unevenly applied to the mass media. These steps would partially remove the government from the determination of broadcast content.

DEREGULATION OF FINANCIAL MARKETS

The financial service sector has been among the most heavily regulated areas of the economy. Price regulation, entry restrictions, and portfolio regulation were pervasive in both the banking and securities

industries. Substantial and numerous innovations in the financial sectors in the last decade largely preceded and were later facilitated by recent partial deregulation.

DEPOSITORY INSTITUTIONS

The present structure of regulatory restraints on commercial banks and other depository institutions was imposed primarily in response to the collapse of the banking system in the 1930s. A common interpretation of the events at that time is that the banking collapse was the result of an unsound banking structure which caused too much competition. Competition among banks was thought to force them into paying high interest rates for deposits, which in turn led them to seek out high-yielding but risky—and ultimately unsound—investments in the stock, bond, and real estate markets.

Legislative remedies in the Banking Acts of 1933 and 1935, and various revisions of the Federal Reserve Act, focused on limiting price competition between banks, separating banking from securities market activity, supervising banking and financial markets more closely, and restoring public confidence in the financial system.

Reflecting a general concern about excessive competition, the payment of interest on demand deposits was prohibited by law. In addition, the Federal Reserve Board and the Federal Deposit Insurance Corporation were given the power to place interest rate ceilings on the passbook and time deposits of commercial banks. Interest rate ceilings were extended to the deposits of mutual savings banks and savings and loan associations in 1966.

The type and quality of assets held by banks were closely monitored. Commercial banks were not permitted to hold securities of a speculative nature in their portfolios, and thrift institutions were subject to even greater limits on their asset acquisition powers. In addition, most securities activities were divorced from commercial banking by the Glass-Steagall sections of the Banking Act of 1933, and entry into banking became more closely controlled. To maintain the confidence of the public in the banking system, deposits were insured by the Federal Deposit Insurance Corporation and the Federal Savings and Loan Insurance Corporation. With the introduction of deposit insurance, the other regulations served mainly to limit the exposure of the insurance funds rather than to protect depositors. Nevertheless, recent studies suggest that the web of regulatory restraints was generally greater than required for this purpose.

Moreover, this extensive regulatory framework for financial institutions has adapted slowly to the economic changes of the last two decades. High inflation rates and consequent high nominal interest rates, combined with reduced transactions costs from the application

of computer technology to the payments system, have created serious distortions in financial markets. As market interest rates rose above Regulation Q ceilings, inflows of funds to depository institutions were curtailed, and new nonregulated instruments (especially money market mutual funds) were created. The allocation of savings to various sectors of the capital market—particularly housing vis-a-vis other sectors—was altered, and small and less informed savers suffered declines in the real rate of return on their savings. In addition, Regulation Q generated a considerable amount of nonprice competition between financial institutions, such as an excessive number of branch offices, with resulting adverse effects on efficiency. Interest rate ceilings on selected deposits were removed progressively beginning in 1978.

The Administration continues to support the removal of unnecessary and excessive regulatory constraints on depository institutions. It is now widely asserted that the length and severity of the banking collapse of the 1930s was not the result of overly risky bank portfolios. Rather, many economists argue that these failures became widespread, initially, because of the reluctance of the Federal Reserve System to engage in aggressive open market operations to counter the conversion of deposits to currency and, later, because of the Federal Reserve's failure to assure adequate liquidity to banks experiencing runs on their deposits. As banks scrambled to liquidate their assets to meet the demands of their depositors for currency, their asset values fell, thus creating insolvencies. The provision of adequate liquidity by a lender of last resort has long been recognized as a primary responsibility of the Federal Reserve System.

Partial deregulation of depository institutions is now proceeding under provisions of the Depository Institutions Deregulation and Monetary Control Act of 1980 and the Garn-St Germain Depository Institutions Act of 1982. Under the 1980 act, interest rate ceilings on time and savings deposits are to be phased out over a period of 6 years. The same law permits depository institutions to offer negotiable order of withdrawal (NOW) accounts and preempted certain State usury ceilings. This act also created the Depository Institutions Deregulation Committee (DIDC) to administer the phaseout of interest rate ceilings at banks and thrifts.

In March 1982, the DIDC adopted a deregulation schedule that phases out interest rate ceilings, beginning with longer term time deposits. With the deregulation schedule in place, the focus of the DIDC turned to short-term deposit instruments. Prevailing high interest rates had caused a continued erosion of low-cost deposits at banks and thrifts, as depositors sought market rates elsewhere, particularly through money market mutual funds. The DIDC addressed

this problem by authorizing, effective May 1, 1982, a 91-day time deposit with a \$7,500 minimum denomination indexed to the 91-day Treasury bill rate, and establishing, effective September 1, 1982, a 7- to 31-day deposit account with a \$20,000 minimum denomination, also indexed to the 91-day Treasury bill rate.

Following the directions given by the Garn-St Germain Act, the DIDC authorized, effective December 14, 1982, a new money market deposit account that can be offered by commercial banks, savings and loan associations, and mutual savings banks. In addition, the DIDC authorized a new super NOW account, effective January 5, 1983. Neither account is subject to interest rate ceilings when account balances exceed \$2,500. The DIDC also reduced to \$2,500 the minimum denomination required on the 6-month money market deposits, the 91-day time deposits, and the 7- to 31-day time deposits.

The introduction of NOW accounts nationwide in 1981, the authorization of the new money market accounts at banks and thrifts, and the general phasing out of interest rate restrictions substantially increase the ability of depository institutions to compete for funds. Simultaneously, various actions have been taken to allow thrift institutions greater flexibility in the investment of funds. The Deregulation and Monetary Control Act expands the asset powers of saving and loan associations and mutual savings banks to include consumer, corporate, and business loans. This will lead to more diversified portfolios for these institutions. In addition, new regulations issued by the Comptroller of the Currency in 1981 and the Federal Home Loan Bank Board in 1982 permit depository institutions to offer variable rate mortgages. Finally, the Garn-St Germain Act provides for Federal preemption of State laws and judicial decisions that restrict the enforcement of due-on-sale clauses in real property loans.

The Garn-St Germain Act also deals with the problems of the savings and loan institutions discussed above. It provides capital assistance to depository institutions that have suffered earnings and capital losses resulting from regulatory restraints on their assets and liabilities. The assisted institutions issue capital investments, called "net worth certificates," which the insuring agencies purchase with promissory notes. This increase in net worth reduces the likelihood of insolvencies arising from losses created by holdings of old, fixed-rate mortgages. As market rates of interest fall, and the earnings of these depository institutions improve, the net worth certificates will be retired.

Legislation following the banking collapse of the 1930s tended to prevent competition among financial institutions and created a complex and often counterproductive labyrinth of financial regulations. Recent legislation and regulatory changes have begun to reverse this

trend by widening the sources and uses of funds available to depository institutions, and by allowing for a far larger measure of price competition in the financial services industry. These actions should contribute to a stronger and more responsive financial system.

STOCK EXCHANGES

Much of the regulation of the Nation's stock exchanges began in the 1930s, largely in response to the crisis in the financial markets created by the Great Depression. This regulation was broad and diverse, and included mandatory and systematic disclosure of corporate records as well as rule-setting authority over stock exchanges. Over the last several years, much of this regulation has been relaxed.

Commission Rates

Prior to 1968, commissions paid to members of stock exchanges were fixed by those stock exchanges and approved by the Securities and Exchange Commission (SEC). After 1968, however, the fixed commission schedule was slowly dismantled in favor of negotiated commissions. Beginning in May 1975, commission rates on all security transactions were negotiated.

Negotiated commission rates were the product of a market-induced breakdown of the fixed-rate commission structure. From 1961 to 1966 the dollar volume and market share of the regional stock exchanges increased dramatically because of the fixed-rate system. Regional stock exchanges allowed customers dealing on those exchanges to "give up" or have transferred a portion of their fixed commission to a third party who supplied other services. The New York Stock Exchange (NYSE) stipulated that customers of that exchange could only give up commissions to other members of the NYSE. This constraint that the NYSE imposed on its customers encouraged many of those customers to turn to the regional exchanges, where competition had effectively driven down the cost of exchange services.

Faced with a declining share of stock transactions, the NYSE asked the SEC to force regional exchanges to eliminate the rules that were affording them a competitive advantage. Commenting on the NYSE proposal, the Department of Justice suggested that the broader issue of possible elimination of the fixed-rate commission structure should be examined. In defense of the fixed-rate commission structure, a NYSE study suggested that "destructive competition," reflected in a decline in the quality of broker services, could result from the absence of fixed commission rates.

Despite the objections of the NYSE, the Congress passed the Securities Acts Amendments of 1975. These reconfirmed that nonmember commission rates were fully negotiable and made exchange floor

rates fully negotiable by May 1976. The deregulation of fixed commission rates illustrates the efficiency gains that follow deregulation. Since the total deregulation of commission rates, average commissions charged to customers have decreased. Services which were previously provided jointly whether customers used them or not, are now substantially unbundled.

Financial Disclosure

The Securities Exchange Act of 1933 required financial disclosure for corporations seeking to raise capital through the issuance of new securities. The Securities Exchange Act of 1934 required periodic financial disclosure for corporations with publicly traded securities. One of the motivations for this original legislation was a belief that corporations must be forced to disclose financial information in order to protect the interests of investors. In recent years there has been concern that these requirements have precluded new security issues thus inhibiting the efficiency of the capital market. Additionally, a growing body of scholarship has questioned whether these requirements have served the interests of investors. Recently, some of these stringent disclosure requirements were ended for certain types of corporations. Specifically, corporations with less than \$3 million in assets and 500 stockholders are now exempt from the filing requirements of the Securities Exchange Act of 1934.

The SEC has also recently allowed, on an experimental basis, some firms issuing new securities to use "shelf registration" forms, thus eliminating the requirement to file for each new security issue. The initiation of shelf registration is expected to reduce the costs of raising equity capital, allowing firms to manage their risk more efficiently by entering the capital markets more often.

Industry Structure

Before 1980, stocks listed on stock exchanges could not be traded by members of those stock exchanges in any other markets. This barrier to entry was partially lifted in June 1980, when the SEC approved Rule 19c-3. This rule allows members of stock exchanges to trade securities in other markets that were listed on those stock exchanges after May 1979.

Stock exchange members are now also allowed to execute trades in the "19c-3 securities" in markets other than the stock exchanges. The market share of non-19c-3 stocks on the Over-the-Counter (OTC) markets is considerably less than the OTC market share for 19c-3 securities. This larger market share for the OTC in 19c-3 securities suggests that, for some exchange members, it is more efficient to execute orders on the OTC rather than on the stock ex-

changes. That is, members can arbitrage price differentials that may exist between the OTC market and the exchanges.

Futures Markets

The Commodity Futures Trading Commission (CFTC) has also been very active in deregulation. In January 1982, the CFTC eliminated the 03 report, which had obligated large traders in future contracts to report their market positions daily to the CFTC. This action reduced the filing costs of these large traders by around 50 percent. In an effort to lessen the burden of Federal regulation on the futures industry, the CFTC's new legislation eases the disclosure, registration, and rule approval process.

OPPORTUNITIES FOR FURTHER DEREGULATION IN THE FINANCIAL INDUSTRY

While the financial and securities markets of today operate relatively unencumbered by unnecessary regulations, owing to the deregulatory advances discussed above, several opportunities for further deregulation remain.

Geographic Restrictions in Banking

Federal laws, such as the McFadden Act of 1927 and the Douglas Amendment to the Bank Holding Company Act of 1956, continue to impose geographic restrictions on commercial banking activities. The former law subjects the branching activities of national banks to the limits imposed by the States; the latter law prohibits bank holding companies from engaging in interstate banking unless given specific State authorization to do so. Although these prohibitions may reduce the concentration of financial resources on a national scale, they may also increase market concentration and lessen competition in local banking markets.

Moreover, these restrictions are effective only insofar as they affect the taking of retail deposits. Loan production offices, Edge Act corporations, personal finance companies, mortgage lending companies, and bank holding companies have long been the means used by banks to conduct wholesale and retail business on an interstate basis. With the emergence of automatic teller machine networks, the electronic revolution is incorporating even retail deposit-taking into large-scale operations. This process would be enhanced by exempting automatic teller machines from the existing restrictions on the establishment of branch offices. It is time to reconsider these geographic restrictions because they are probably not in the best interests of consumers or the more efficient financial institutions.

Portfolio Restrictions in Banking

The prohibitions of the Glass-Steagall Act have been eroded in recent years as both banking organizations and securities firms have attempted, either directly or indirectly, to enter each others' traditional lines of business. Moreover, Glass-Steagall now makes no important contribution to the protection of the public against bank failure or undue concentrations of economic power. Other government measures, such as Federal deposit insurance and broadened and strengthened Federal supervision, appear to have been more effective in that role. The Administration has proposed an amendment to the Glass-Steagall Act that would authorize bank holding company subsidiaries to conduct two new activities immediately: (1) to underwrite and deal in municipal revenue bonds, and (2) to sponsor and underwrite shares of mutual funds. The Garn-St Germain Act authorizes a new account at banks and thrifts that is directly competitive with money market mutual funds. However, the act does not provide for the operation and sale of shares in mutual funds or the underwriting of municipal revenue bonds. Moreover, the act also extends the long-standing protection of insurance companies against bank competition.

Margin Requirements

Margin requirements presently exist in the stock, options, and futures markets. In futures trading, the margin is a performance bond intended to protect other participants from the consequences of a failure to make good on a contractual obligation. Each futures exchange determines the margin without Federal regulation or oversight. In stock and options exchanges, the Federal Reserve Board sets initial margin requirements, and the exchanges set maintenance margins subject to SEC oversight. Margin practices in the stock and options markets may be less efficient than in futures markets, since regulation constrains decisionmaking by participants. It is now appropriate to review these regulations.

CONCLUSIONS

Federal regulation of price and entry are products of an earlier era, when both economic conditions and perceptions of economic problems were very different than they are today. Federal regulation of railroads began nearly a century ago, when there was no significant competition from other transport modes and political debate reflected strong populist sentiment. Most other Federal economic regulations date from the 1930s, when the severe economic problems, now believed to be due to a collapse in aggregate demand, were per-

ceived to be a consequence of excessive competition. The present structure of Federal regulation of the energy markets dates from the 1970s and primarily reflects an attempt to protect consumers from the effects of the large increase in oil prices originating abroad.

These policies may or may not have been appropriate to the period in which they were initiated. But both conditions and perceptions are now very different. Increasing demand and changing technology have substantially reduced the initial monopoly power of many regulated firms. Our perceptions have also changed, largely in response to developing conditions during the long history of regulation and the encouraging developments during the more recent period of partial deregulation. There is now a more general perception that the developments in regulated markets have largely outrun the present structure of economic regulation.

As we approach the 100th anniversary of the first broad body of Federal economic regulation, it is time for a comprehensive review of whether this form of regulation serves the interests of the contemporary economy. A resolution of this issue would then permit greater attention to the different and more complex issues affecting the recent Federal regulation of health, safety, and environmental conditions.

CHAPTER 6

Review of 1982 and the Economic Outlook

FOR THE U.S. ECONOMY, 1982 was a year of painful transition toward price stability. The momentum of high inflation, built up over the last 15 years, was broken and inflation was reduced to its lowest rate in a decade. Success in reducing inflation, however, was accompanied by a recession that began in mid-1981 and lingered through 1982. A drop in real exports, along with inventory adjustments, accounted for the decline in U.S. production. Despite the recession, final sales to domestic purchasers increased. Expenditures for some interest-sensitive goods, such as housing and consumer durable goods, registered their first rise in recent years.

Economic developments in 1982 clearly set the stage for a recovery in 1983. The sizable slowdown in inflation contributed to the sharp drop in interest rates in the summer of 1982. The inventory cycle that held down production in 1982 is expected to turn around sometime in 1983. This development, combined with recovery in housing and durable consumer goods and continuing gains in defense spending, is expected to bring a moderate sustainable economic recovery. Prospects are good that this recovery can be maintained through the 1980s without reigniting inflationary pressures.

OVERVIEW OF 1982

Real gross national product (GNP) in 1982 was no higher than in 1979. After a surge of economic growth in 1978, the economy stalled in 1979. Cyclically volatile types of spending, such as auto sales and housing starts, had peaked in 1978. Since 1978 the output of goods and services in the United States has followed a saw-tooth pattern of alternating periods of growth and decline. The recessions of 1980 and 1981-82 bracketed the shortest economic expansion in 50 years. Employment in 1982 was below its 1979 level.

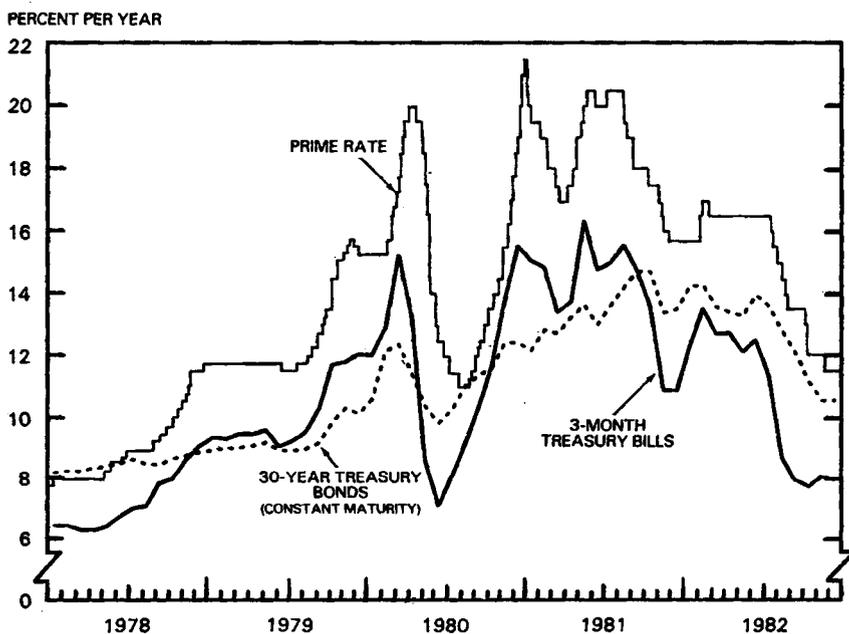
Production and employment remained sluggish for 4 years while supplies of labor and capital continued to grow, so that by the end of 1982 the unemployment rate rose to nearly 11 percent—its highest level since the early 1940s—and the capacity utilization rate fell to its

lowest point in the post-World War II period. With this high level of unused economic capacity, inflationary pressures subsided.

The inflation rate fell dramatically in 1982 to its lowest level in a decade. The upward trend in inflation from 1976 through 1980 strengthened the Federal Reserve's determination to slow the growth in the monetary aggregates and contributed to high interest rates for an extended period. By mid-1982, when evidence of progress against inflation and continued weakness in economic activity became clear, interest rates began to fall sharply. The ensuing decline reduced interest rates to their lowest levels in more than 2 years, as illustrated in Chart 6-1.

Chart 6-1

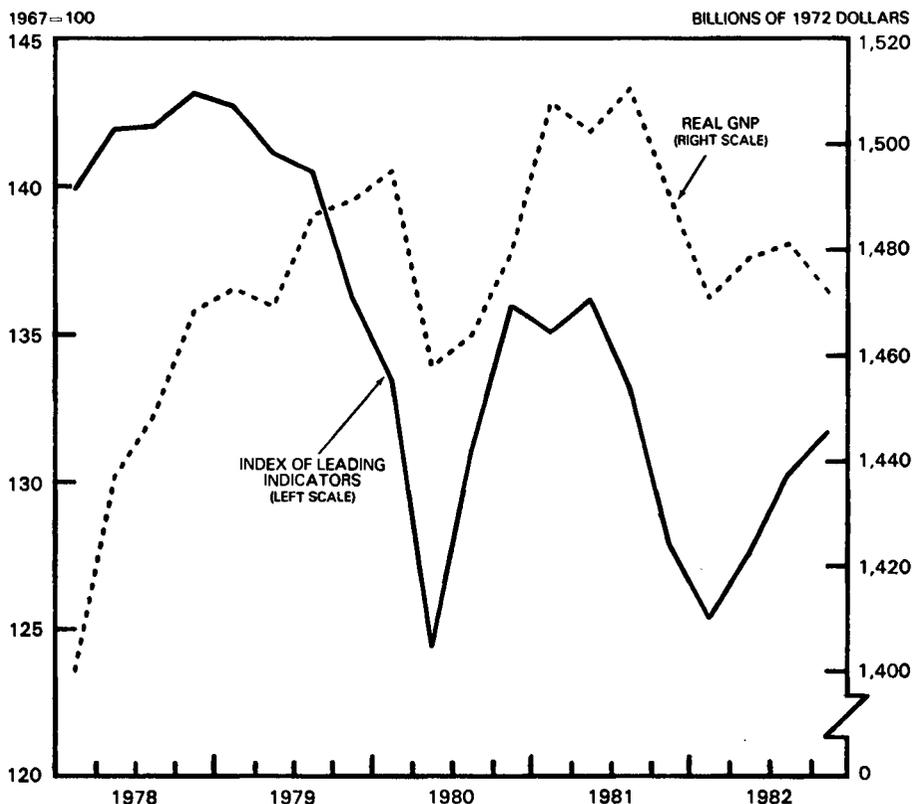
Interest Rates



SOURCES: DEPARTMENT OF THE TREASURY AND BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM.

The decline in interest rates brought much-needed relief to the interest-sensitive, cyclical sectors of the economy. By the end of 1982, clear progress toward recovery had been made, as reflected in continuing gains in the composite index of leading indicators of economic activity, as shown in Chart 6-2.

Index of Leading Indicators and Real GNP



SOURCE: DEPARTMENT OF COMMERCE.

MAJOR SECTORS OF AGGREGATE DEMAND

Real output declined 1.2 percent from the fourth quarter of 1981 to the fourth quarter of 1982. This was the fourth consecutive year of little change in economic activity (Table 6-1). Businesses liquidated inventories in 1982, in contrast to the previous year when inventory levels increased. Another important factor in the decline was a sharp drop in U.S. exports that reflected both the strong dollar and the worldwide recession. Real final sales to domestic purchasers increased 1.3 percent in 1982, the largest increase in 3 years. Gains in personal consumption expenditures, residential investment, and Federal purchases dominated a large decline in business capital spend-

ing. Partly in response to the drop in interest rates, residential investment increased for the first time in 5 years, and consumer purchases of durable goods increased for the first time since 1978. State and local government purchases of goods and services were virtually unchanged over the year.

TABLE 6-1.—Growth in major sectors of real GNP, 1978-82

(Change, fourth quarter to fourth quarter and 5-year average)

Component	1978	1979	1980	1981	1982 ¹	5-year average
Percent change:						
Real gross national product.....	5.8	1.4	-0.7	0.7	-1.2	1.5
Personal consumption expenditures.....	4.4	2.1	.3	.3	2.6	2.1
Consumer durables.....	5.7	-2.5	-4.6	-3.8	6.5	.1
Business fixed investment.....	12.8	3.5	-2.6	4.7	-8.4	3.3
Residential fixed investment.....	-2	-8.3	-12.7	-19.4	4.5	-8.0
Government purchases of goods and services.....	2.3	1.3	.7	2.9	2.6	1.6
Federal.....	.6	1.0	1.4	10.7	6.6	2.9
Defense.....	2.6	3.0	2.1	9.3	6.8	3.8
State and local.....	3.4	1.4	.3	-1.7	.1	.7
Real final sales.....	5.4	2.6	-.4	.0	.3	1.8
Real final sales to domestic purchasers ²	4.7	1.7	-.5	.6	1.3	1.7
Change in billions of 1972 dollars:						
Change in business inventories.....	5.1	-17.5	-3.9	11.0	-22.5	-4.4
Net exports of goods and services.....	11.2	14.9	1.4	-9.1	-15.4	1.7

¹ Preliminary.

² Based on annual data.

³ Final sales less exports plus imports.

Source: Department of Commerce, Bureau of Economic Analysis.

PERSONAL CONSUMPTION EXPENDITURES

Despite declines in production, employment, and real wage and salary income, real disposable (after-tax) personal income increased in 1982, due in part to the reduction in personal income tax rates and an increase in transfer payments. The average effective Federal personal income tax rate fell from 12.5 percent to 11.4 percent between the third quarters of 1981 and 1982. Real personal consumption expenditures increased 2.6 percent in 1982 to reach their highest share of real GNP since 1949. Although real personal saving declined from its high level at the end of 1981, the personal saving rate in 1982 was higher than in any year since 1976, as shown in Table 6-2.

Consumer purchases of durable goods increased 6.5 percent in real terms in 1982, the first increase since 1978. The turnaround occurred early in the year, when auto sales rebounded from the depressed level of late 1981. Sales then languished until late in the year, when they again climbed, due in part to the decline in interest rates that produced lower financing costs. Nevertheless, domestic

TABLE 6-2.—*Real household income, consumption, saving, and residential investment, 1978-82*
 (Percent change, fourth quarter to fourth quarter and 5-year average)

Item	1978	1979	1980	1981	1982 ¹	5-year average ^{1, 2}
Income by type:						
Labor income ³	4.7	1.2	-0.4	0.9	-1.9	1.6
Other income ⁴	8.9	3.5	-1.0	8.8	.7	4.6
Net transfer payments ⁵	-3.0	4.3	13.1	-1	11.1	3.9
Personal income.....	4.9	2.0	.7	2.5	.0	2.4
Less: Federal tax payments.....	10.9	5.6	1.5	1.8	-5.5	3.6
Other tax and nontax payments ⁶	5.4	1.8	.6	3.6	3.5	3.1
Disposable personal income.....	4.0	1.5	.5	2.6	.6	2.3
Personal consumption expenditures.....	4.4	2.1	.3	.3	2.6	2.1
Personal saving.....	-5.3	-11.4	9.3	39.8	-22.7	4.1
Personal saving rate ⁷	6.1	5.9	5.8	6.4	6.5	6.1
Housing starts ⁸	-1.7	-23.1	-4.3	-42.3	44.5	-11.6
Single family.....	-3.3	-29.2	-5.2	-45.0	48.0	-14.4
Multifamily.....	2.3	-7.9	-2.5	-37.3	38.9	-5.3
Mobile home shipments ⁹	-7.5	-9.8	-6.7	-13.1	12.1	-2.8
Residential investment.....	-2	-8.3	-12.7	-19.4	4.5	-8.0

¹ Preliminary.

² Based on annual data.

³ Wage and salary disbursements and other labor income.

⁴ Proprietors' income, rental income, personal dividend income, and personal interest income.

⁵ Transfer payments less personal contributions for social insurance.

⁶ State and local tax and nontax payments plus Federal nontax payments.

⁷ Annual average.

⁸ Units.

Note.—Income items, consumption, and saving deflated by the personal consumption deflator; residential investment deflated by the residential deflator.

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

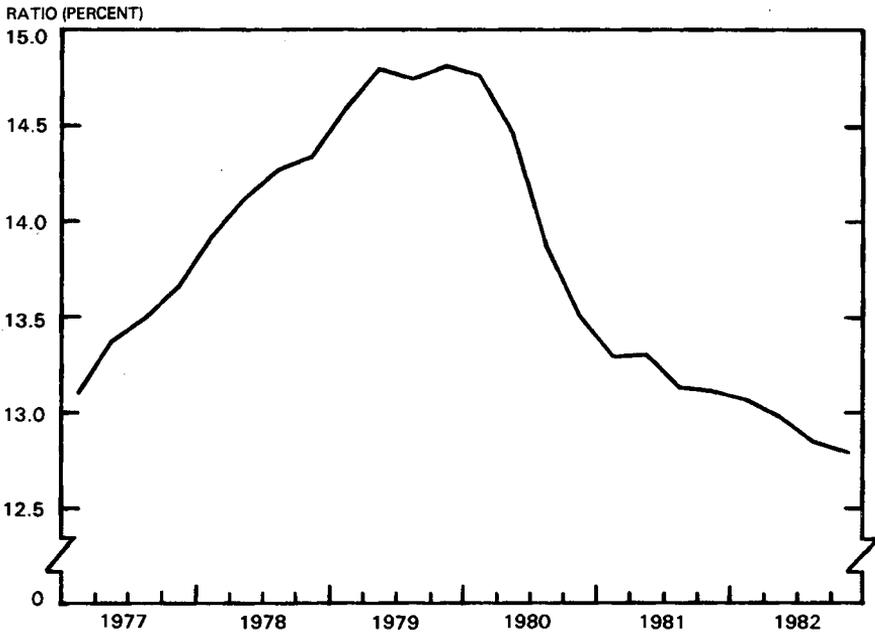
auto sales in 1982 for the entire year were lower than in any year since the early 1960s.

The extended period of weakness in durable goods sales accompanied a reduction in the burden of consumer debt. Consumer installment debt repayments relative to disposable personal income fell steadily from their 1978 peak to reach, by the third quarter of 1982, their lowest level since 1964, as illustrated in Chart 6-3. Total household debt has also fallen sharply relative to households' net worth.

RESIDENTIAL INVESTMENT

As indicated in Table 6-2, 1982 showed the first rise in housing activity in 5 years. By the fourth quarter of 1982, housing starts rose to 1.25 million at an annual rate, up nearly 45 percent from their trough of 865,000 units in the fourth quarter of 1981. Starts averaged less than one million units until mid-1982 as interest rates on mortgage commitments stayed around 17 percent. In August, mortgage interest rates began to fall, dropping below 14 percent by year-end. This drop encour-

Ratio of Consumer Installment Credit to Personal Income



SOURCES: DEPARTMENT OF COMMERCE AND COUNCIL OF ECONOMIC ADVISERS.

aged the sale of houses, reduced the inventory of unsold new houses relative to current sales, and spurred new construction.

For the first time in recent years, house prices increased at a slower rate than general inflation. Moreover, the conventional measures of house price increases, which rose less than 3 percent, may well have overstated the 1982 rise because increased builder and seller financing at below market rates is not fully captured in the price data. Lower interest costs and more moderate house price increases helped to hold down mortgage payments and, thus, may favor a recovery in housing investment.

BUSINESS FIXED INVESTMENT

Real business fixed investment peaked in the last quarter of 1981, having grown at a 5.2 percent annual rate from 1977 to 1981. From

its 1981 peak to the last quarter of 1982, real business fixed investment dropped 8.4 percent.

The 1982 decline in capital spending was broadly based, affecting even sectors that had fared well in previous years. Industrial and commercial construction declined about 1 percent in real terms from the fourth quarter of 1981 to the fourth quarter of 1982 having grown at an annual rate of more than 10 percent from 1977 to 1981. Computer, communications, and instrumentation equipment investment fell about 4 percent in 1982, a sharp contrast to over 9 percent annual rate of real growth from 1977 to 1981.

In the energy area, real investment in coal mine development continued to rise strongly in 1982. Real investment in oil field exploration and development dropped 15 percent between the fourth quarters of 1981 and 1982 as weak oil prices impaired cash flow in the petroleum industry. Reflecting the weakness in overall economic growth, investment in transportation equipment—autos, trucks, aircraft, ships, boats, and railroad equipment—continued to decline in 1982.

Business capital spending is likely to lag behind the recovery in the economy. Contracts and orders for new plant and equipment declined about 12 percent in real terms between the last quarters of 1981 and 1982. In addition, a Department of Commerce survey of business spending plans indicated that real nonfarm investment will decline about 5.2 percent in 1983.

INVENTORY INVESTMENT

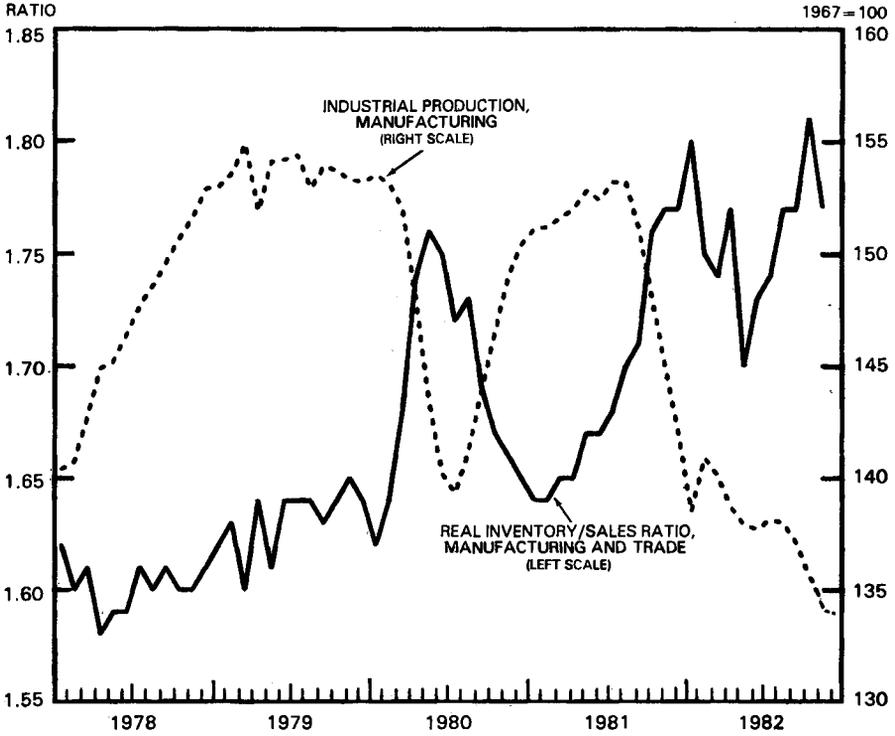
Sluggish sales and high carrying costs encouraged business to pare inventories in 1982. A sharp drop in final sales in late 1981 triggered a swing to inventory liquidation in the first half of 1982. Even the more moderate sales forecasts for the second half of 1982 proved overly optimistic, and inventory-sales ratios climbed, prompting further cutbacks in production, employment, and inventories (Chart 6-4). Toward the end of the year, inventories were brought more in line with sales. Auto inventories, which accounted for about one-third of inventory liquidation in the final quarter of 1982, were especially lean, as the industry's aggressive pricing and marketing efforts helped to increase sales.

THE FARM ECONOMY

Total income per farm family in 1982 fell about 11 percent in real terms. Over two-thirds of farm family earnings came from off-farm sources as income from farm sources declined.

Net farm nominal income from farm operations declined from \$25 billion in 1981 to about \$19 billion in 1982. Relatively tight meat

Real Inventory/Sales Ratio and Industrial Production



SOURCES: DEPARTMENT OF COMMERCE AND BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM.

supplies and low feed prices in 1982 contributed to larger profit margins for most livestock producers. Many crop farmers, on the other hand, were hard hit by lower prices and increased production costs. Large domestic crops were only one of several factors contributing to lower prices. Livestock production declined, and domestic use of feedgrains and meals increased slowly. The value of agricultural exports in fiscal 1982 fell about 11 percent, primarily because of lower prices and reduced shipments of corn and grain sorghum. The weak export market reflected the world recession, a strong dollar, and an increase in world grain stocks. The U.S. share of world grain stocks is expected to continue its rapid growth of recent years and to reach over 50 percent in the 1982-83 crop year.

Lower crop prices, high mortgage rates, and lower inflation were the major factors leading to a decline in land values. Farm liabilities continued to increase and farmers' debt-to-asset ratio is estimated to have increased to about 20 percent, a significant rise from the 15 to 17 percent range typical of the late 1960s and 1970s.

U.S. agricultural policies have once again become a major factor in determining farm prices and incomes. Federal budget outlays for commodity price support and related programs soared to \$12 billion in fiscal 1982 from \$4 billion in the previous fiscal year. A program of voluntary acreage controls, including payments to those who restrict production in the 1983-84 crop year, was adopted in 1982 and supplemented by the addition of the "payment-in-kind" option in early 1983.

Food prices rose about 4 percent in 1982, with marketing costs rising at more than twice the rate of the farm value component of food prices.

FOREIGN TRADE

A reduction in U.S. trade was a key factor in the decline in aggregate demand in 1982. The main causes of the decline in net exports were the strength of the dollar and the worldwide recession. In December 1982 the trade-weighted value of the dollar was about 40 percent above its low point in 1980. Because exchange-rate appreciation lowers import prices and affects trade volume with a substantial lag, it initially tends to improve the trade balance. By the second half of 1982, however, the reduced cost competitiveness of U.S. firms began to overwhelm the short-term positive factors.

A secondary cause of the deteriorating trade balance was the international debt problem. Some heavily indebted developing countries, especially in Latin America, experienced difficulty in attracting capital inflows and were forced to cut imports sharply in 1982. Because several of the major high-debt developing countries have close trading ties with the United States, a large proportion of the import cuts came out of U.S. exports.

Cyclical factors had conflicting effects on the trade balance in 1982. On one side, the recession in the United States tended to reduce import demand, so that import volume fell more than 4 percent. On the other side, the recession in other industrial countries contributed to the 13 percent decline in real U.S. exports.

GOVERNMENT PURCHASES OF GOODS AND SERVICES

Real Federal, State, and local government purchases of goods and services increased 2.6 percent from the fourth quarter of 1981 to the fourth quarter of 1982. Much of the increase was attributable to a 6.8

percent increase in real defense purchases. Federal nondefense purchases rose in real terms, due to a large increase in real purchases of agricultural commodities by the Commodity Credit Corporation. State and local government purchases were virtually flat.

LABOR MARKET DEVELOPMENTS

Along with output, employment declined 1 percent in 1982, as shown in Table 6-3. At the end of the year, employment was 1.7 million persons below the peak level reached in the second quarter of 1981. The reduction in employment predominantly occurred among production workers and other blue-collar employees. Sales, clerical, and service workers' employment did not peak until September 1982.

TABLE 6-3.—*Labor market developments, 1978-82*
[Fourth quarter of indicated year]

Component	1978	1979	1980	1981	1982
	Percent change from year earlier ¹				
Change in civilian employment.....	3.8	2.3	-0.2	0.6	-1.0
Males 20 years and over.....	2.7	1.5	-6	2	-1.5
Females 20 years and over.....	5.6	4.0	1.6	2.8	7
Both sexes 16-19 years.....	2.7	-8	-6.6	-8.9	-8.0
White.....	3.3	2.2	-1	6	-1.2
Black and other.....	7.3	3.3	-6	-1	4
	Percent ²				
Unemployment rate ³	5.9	5.9	7.4	8.3	10.7
Males 20 years and over.....	4.1	4.4	6.2	7.1	10.0
Females 20 years and over.....	5.8	5.7	6.7	7.2	9.0
Both sexes 16-19 years.....	16.4	16.3	18.3	21.2	24.3
White.....	5.1	5.2	6.5	7.3	9.5
Black and other.....	11.5	11.2	13.7	15.3	18.6
Participation rate ⁴	63.5	63.8	63.7	63.8	64.1
Males 20 years and over.....	79.8	79.6	79.2	78.8	78.8
Females 20 years and over.....	50.1	51.0	51.5	52.3	52.9
Both sexes 16-19 years.....	58.2	57.9	56.3	54.6	54.1
White.....	63.6	64.0	64.0	64.2	64.5
Black and other.....	62.4	62.3	61.8	61.4	62.0

¹ 1978 data adjusted to reflect changes in sample and estimation procedures, which increased employment and labor force by 250,000 in January 1978.

² Seasonally adjusted.

³ Unemployed as percent of civilian labor force.

⁴ Civilian labor force as percent of civilian noninstitutional population.

Note.—Data relate to persons 16 years and over.

Source: Department of Labor, Bureau of Labor Statistics.

Generally speaking, the older the age cohort, the lower the unemployment rate. For example, the unemployment rate for the 55 and over age group was 5.7 percent in the final quarter of 1982. Young workers experienced the highest unemployment rate. Employment of the 16 to 19 year age group has dropped in every year since 1979. This decline was far faster than the decline in the number of persons

in this age group. Women workers now have somewhat lower unemployment rates than men, a reversal of the historical relation.

The labor force participation rate—the ratio of the labor force to the population over 16 years of age—has experienced a modest upward drift as women workers continue to join the labor force. The growth in adult women's labor force participation has been strong in the past. Declining participation has occurred among workers less than 20 years of age and among workers, especially males, over 55—who are likely to have an income cushion provided by social security, private pension plans, and savings.

WAGES, PRODUCTIVITY, AND PRICES

In response to slack labor markets and lower rates of price inflation, wage increases slowed substantially in 1982. As shown in Table 6-4, the rate of increase in several measures of wages and compensation declined about 2 percentage points from 1981. The 5.9 percent increase in the hourly earnings index for private nonfarm workers was the smallest since 1973. As measured by the employment cost index, wages and salaries of private industry workers increased 6.9 percent between the third quarters of 1981 and 1982. The deceleration was about the same for union and nonunion workers. A survey of major collective bargaining settlements reached in private industry showed that in the first 9 months of 1982 the agreements provided wage adjustments that averaged 3.8 percent in the first contract year, exclusive of cost-of-living adjustments, compared with 8.3 percent when the same parties last bargained. Total labor compensation in the nonfarm business sector increased 6.7 percent, compared with

TABLE 6-4.—*Changes in wages and compensation, 1978-82*

[Percent change, fourth quarter to fourth quarter and 5-year average]

Measure	1978	1979	1980	1981	1982 ¹	5-year average ^{1, 2}
Adjusted hourly earnings index ³	8.4	8.0	9.6	8.4	5.9	8.2
Employment cost index ⁴	7.7	8.7	9.0	8.8	* 6.9	8.1
Union workers.....	8.0	9.0	10.9	9.6	* 7.4	8.8
Nonunion workers.....	7.6	8.5	8.0	8.5	* 6.6	7.8
Nonfarm business sector: ⁵						
Compensation per hour.....	9.0	9.4	10.6	8.8	6.6	9.0
Real compensation per hour.....	.0	-2.9	-1.7	-.6	2.0	-.7

¹ Preliminary.

² Based on annual data.

³ Private nonfarm employees.

⁴ Wages and salaries, private nonfarm industry workers.

⁵ Third quarter 1981 to third quarter 1982.

⁶ All persons.

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

8.8 percent in 1981. These declines in wage inflation provide a basis for expecting that recent reductions in price inflation may be sustained.

Real compensation per hour rose 2.0 percent in 1982 as pay increased more rapidly than consumer prices. This was the first rise in this series since early 1978 and suggests that the historic trend of rising real wages and family incomes may resume.

Even though output declined for the third straight year, as shown in Table 6-5, labor productivity in the nonfarm business sector experienced its first substantial improvement since 1977. Lower rates of increase in hourly compensation and higher productivity growth together resulted in labor costs per unit of output increasing only 4.6 percent. This was less than half the rate of increase recorded in 1980, when labor productivity was weaker and hourly compensation rose at double-digit rates. The 4.6 percent increase in unit labor costs was associated with a rise of 4.3 percent in the nonfarm business sector price deflator.

TABLE 6-5.—*Productivity, costs, and prices in the nonfarm business sector, 1978-82*
(Percent change, fourth quarter to fourth quarter and 5-year average)

Item	1978	1979	1980	1981	1982 ¹	5-year average ^{1,2}
Output	5.6	0.2	-0.6	-0.2	-1.7	1.2
Output per hour .....	.3	-1.9	.3	-.1	1.9	.0
Compensation per hour	9.0	9.4	10.6	8.8	6.6	9.0
Unit labor cost	8.6	11.6	10.2	8.9	4.6	9.0
Implicit price deflator	8.2	8.5	10.7	9.6	4.3	8.3

¹ Preliminary.

² Based on annual data.

Note.—Data relate to all persons.

Source: Department of Labor, Bureau of Labor Statistics.

By all other measures as well, the rate of inflation declined significantly in 1982, as shown in Table 6-6. After increasing at double-digit rates in 1980 and by nearly 9 percent in 1981, the broadest measures of inflation—the GNP fixed-weight price index and the GNP implicit price deflator—increased nearly 5 percent in 1982. The all-urban consumer price index increased 4.5 percent, the slowest rate since 1972. Even when food and energy prices, which were especially weak, are excluded, consumer prices increased about 5 percent.

Beginning in 1983, the homeownership component of the consumer price index for all-urban consumers will be computed on a rental equivalence basis. On this conceptual basis, consumer prices increased about 5 percent in 1982.

Producer prices of finished goods increased only 3.6 percent in 1982, about the same as in 1972 and 1976. Price increases for both consumer finished goods and capital equipment showed a marked deceleration.

TABLE 6-6.—Price changes, 1978-82
(Percent change, fourth quarter to fourth quarter and 5-year average)

Item	1978	1979	1980	1981	1982 ¹	5-year average ^{1,2}
GNP price measures:						
Fixed-weighted index.....	8.9	9.3	10.3	8.9	5.0	8.6
Implicit deflator.....	8.5	8.2	10.2	8.9	4.6	8.2
Consumer prices: ³						
All items.....	9.0	12.7	12.6	9.6	4.5	9.8
All items less food and energy.....	8.5	10.7	12.2	10.2	5.2	9.4
Producer prices—finished goods:						
Total.....	8.7	12.7	12.4	7.2	3.6	9.1
Consumer goods.....	9.0	13.9	12.6	6.8	3.4	9.2
Capital equipment.....	7.8	8.8	11.7	9.1	4.2	8.7

¹ Preliminary.

² Based on annual data.

³ All urban consumers.

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

CREDIT MARKETS

During the first three quarters of 1982 the total amount of funds raised in U.S. credit markets averaged slightly more, at an annual rate, than the volume raised in 1981. As shown in Table 6-7, over the last 5 years the volume of funds raised by the nonfinancial sector has dropped from 18.6 percent to 13.6 percent of nominal GNP, a return to the cyclical lows recorded in 1974 and 1975.

TABLE 6-7.—Funds raised by the nonfinancial sector of the economy, 1978-82

(Billions of dollars, except as noted)

Sector	1978	1979	1980	1981	1982 ¹
Total funds raised.....	401.7	402.0	397.1	406.9	413.7
Households.....	169.3	176.5	117.5	120.4	87.0
Business.....	126.3	146.9	143.9	149.5	139.1
Federal Government.....	53.7	37.4	79.2	87.4	139.1
State and local government.....	19.1	20.2	27.3	22.3	37.2
Foreign.....	33.2	21.0	29.3	27.3	11.1
Funds raised as percent of GNP.....	18.6	16.6	15.1	13.9	13.6

¹ Average of first three quarters at seasonally adjusted annual rate.

Note.—Detail may not add to total due to rounding.

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

Different sectors of the credit market experienced widely different trends in 1982. High interest rates in the first half of the year and sluggish disposable income contributed to reduced borrowing for

housing. Borrowing by the nonfinancial business sector also declined during the first three quarters of 1982. However, the easing of credit conditions in late summer encouraged an expansion in net corporate bond issues; the funds raised were used in part to pay off short-term debt.

Combined borrowing of State and local governments and the Federal Government rose approximately 60 percent in the first three quarters of 1982 from 1981 levels, as the growth of tax receipts slowed sharply relative to expenditures. For fiscal 1982, U.S. Treasury borrowing totaled \$135.0 billion, of which \$23.4 billion was used for making direct loans. Federally guaranteed loans declined sharply from 1981 levels, but borrowing by federally sponsored enterprises surged. Total Federal and federally assisted borrowing climbed to 48.9 percent of the funds raised in U.S. credit markets, surpassing the previous peacetime peak of 41 percent reached in 1976.

INTEREST RATES

As shown in Chart 6-1, interest rates rose in the first part of 1982 but began to decline sharply in the summer. The decline in interest rates partly reflected diminishing inflationary expectations that tend to be built into nominal interest rates.

The yield on 3-month Treasury bills, which had averaged just under 11 percent late in 1981, held in the 12 to 13 percent range until mid-1982 and then fell to less than 8 percent in the closing months of the year. The prime rate charged by commercial banks began the year at 15½ percent, climbed to 17 percent in February, and then in July began a steady fall to 11½ percent by December. The corporate Aaa bond rate, which peaked at 15½ percent in February, fell below 12 percent by November.

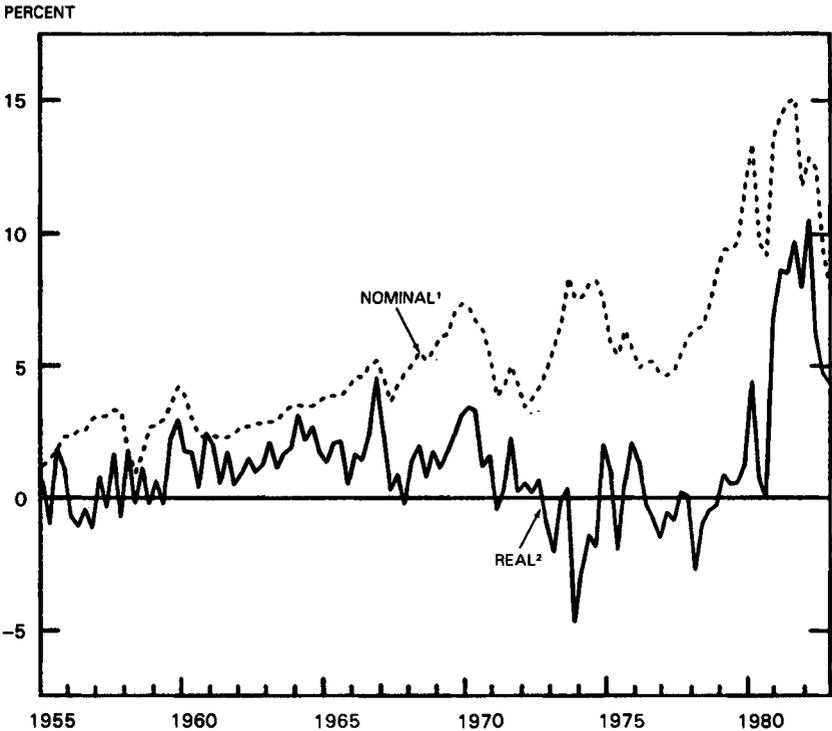
The expected real after-tax interest rate is the correct measure of the cost of credit to borrowers and lenders. It is approximately equal to the after-tax nominal interest rate less the anticipated rate of inflation. For example, with a 12 percent nominal interest rate, the after-tax cost of credit to a borrower in the 30 percent marginal tax bracket is 8.4 percent. If a 5 percent inflation rate is anticipated, the expected real after-tax cost of credit is 3.2 percent.

Because the tax brackets of borrowers differ widely and the expected rate of inflation cannot be observed directly, the realized real pretax interest rate—approximated by the nominal interest rate less the actual rate of inflation—is a more convenient measure of the cost of credit. The nominal 3-month Treasury bill rate and the corresponding realized real pretax rate are shown in Chart 6-5 for the period since 1955. The real pretax Treasury bill rate was abnormally low in 1972-73 and 1976-77, tending to increase aggregate demand.

It then moved to relatively high levels from 1980 through the first half of 1982, tending to reduce aggregate demand. By the end of 1982, however, the real pretax Treasury bill rate had fallen to about the same level as its highs in the 1950s and 1960s.

Chart 6-5

Nominal and Real 3-Month Treasury Bill Yield



¹CONVERTED TO EFFECTIVE ANNUAL YIELD FROM DISCOUNT BASIS.

²EQUALS NOMINAL YIELD LESS ACTUAL RATE OF INFLATION, DEFINED BY PERSONAL CONSUMPTION DEFLATOR, OVER THE PERIOD TO MATURITY. DEFLATOR FOR FIRST QUARTER 1983 FORECAST BY COUNCIL OF ECONOMIC ADVISERS.

SOURCES: DEPARTMENT OF COMMERCE, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, AND COUNCIL OF ECONOMIC ADVISERS.

The sharp run-up and subsequent decline in real pretax rates during the 1980-82 period probably reflect in part the adjustment of credit markets to the decontrol of interest rates. During the late 1970s variable interest rate time and savings accounts were introduced by depository institutions, and the process of financial innovation speeded up the movement of funds out of regulated, fixed-rate accounts. In addition, the consumer has recently become a more vig-

orous competitor for credit as usury laws have been eliminated. As a result, the financial system now relies less on nonprice rationing of credit and may exhibit higher interest rates when credit is tight.

Even though real short-term rates have returned more nearly to the levels of the 1950s and 1960s, the equilibrium level of both long- and short-term rates may now be somewhat higher than before. To the extent that the accelerated cost recovery system in the Economic Recovery Tax Act of 1981 reduced the tax on earnings of depreciable property, it raised the real interest rate that business borrowers are willing to pay. In addition, large budget deficits in many countries have lowered national saving rates, tending to lead to higher real interest rates worldwide.

At the end of 1982, long-term interest rates were considerably higher than short-term interest rates, perhaps reflecting the concern that the inflation rate may be higher in the future than at present. To the extent that these inflationary expectations decline, further declines in nominal long-term interest rates can be anticipated.

MONETARY DEVELOPMENTS

The Administration's economic program includes support for a policy of gradual reduction in the rate of monetary growth in order to bring down inflation. Consistent with this policy, the Federal Reserve reduced the M1 target growth rate range from 3.5 to 6 percent in 1981 to 2.5 to 5.5 percent in 1982. The target range for M2 growth was kept at 6 to 9 percent.

In its February 1982 review of the tentative target ranges for 1982, established in July 1981, the Federal Open Market Committee recognized that the rapid increase of M1 in December 1981 and January 1982 had already placed it well above the top of its target range. Judging that the rapid money growth was temporary and that no basic change in the relation between the monetary aggregates and nominal GNP had occurred, the committee reaffirmed the tentative targets for 1982.

Consequently, the Federal Reserve slowed the growth of nonborrowed reserves during the first half of the year, with a view to gradually bringing M1 and M2 back into their target ranges. By June, M1 was within its target range, while M2 remained somewhat above the top of its range. Because M1 had shown virtually no growth since January, resumption of growth implied a step-up in the provision of bank reserves. After midyear, continued weakness in the economy, and a more ample supply of reserves and money contributed to a sharp drop in short-term interest rates. The 3-month Treasury bill rate fell from about 12 percent in July to 9 percent in August. A series of reductions in the Federal Reserve's discount rate followed,

maintaining its alignment with short-term market rates and preventing sharp changes in the incentive for banks to borrow from the Federal Reserve.

Starting in August, M1 growth began to speed up. By the fourth quarter of 1982, M1 had risen 8.5 percent above its level in the fourth quarter of 1981, well above the upper end of the 1982 target range. Over the same period, M2 increased 9.8 percent, slightly more than the top of its target range. These increases in the monetary aggregates occurred against the background of an economy that was still in recession.

Part of the strength in M1 may be attributable to the effects of a large volume of All-Savers Certificates maturing in the fourth quarter of 1982, as the maturing funds moved through checking accounts or were temporarily "parked" there. Federal Reserve analysis suggested that an additional factor was an unusual demand for liquidity. Much of the increase in M1 was in interest-bearing negotiable order of withdrawal (NOW) accounts, which provide elements of both savings and transactions accounts. From the fourth quarter of 1981 to the fourth quarter of 1982, checkable deposits other than demand deposits grew about 35 percent. With market interest rates falling, these interest-bearing deposits, such as NOW accounts, provided a safe and convenient store of liquidity at a time of economic and financial uncertainty. Increased liquidity demand may also account for the above-target growth of M2.

As discussed in Chapter 1, the behavior of the "income velocity" measures—the ratios of GNP to the various monetary aggregates—was unusual in 1982. The velocity of M1 rose 3.2 percent a year on average over the 20 years ending in 1981, but in 1982 it declined 4.9 percent. While a tendency toward slower velocity is not unusual in the midst of a recession when interest rates generally are falling, the only other fourth quarter to fourth quarter decline in M1 velocity since the beginning of the current series in 1959 was a 0.1 percent fall in 1967. The velocity of M2, which historically has been relatively trendless, declined 6.0 percent in 1982; the largest previous decline was 3.8 percent in 1976. Without some accommodation of monetary growth—particularly for M1—to this drop in velocity, monetary policy would have been more restrictive than had been intended when the 1982 targets were established.

The number, size, and rapidity of recent changes in the financial sector may well have affected the behavior of velocity. As indicated in Table 6-8, checkable deposits other than ordinary demand deposits accounted for only 2.3 percent of M1 in December 1978. In December 1980, just before NOW accounts were authorized nationally, other checkable deposits were 6.5 percent of M1, but by December

1982 their share had risen to over 21 percent. Because these interest-bearing deposits may be regarded by their holders in part as savings rather than solely as transactions balances, the reported growth of M1 in 1981 and 1982 probably overstates the growth in transactions balances.

TABLE 6-8.—*Components of M1 and M2, 1978-82*
(Averages of daily figures; billions of dollars; seasonally adjusted, except as noted)

Item	December				
	1978	1979	1980	1981	1982 ¹
Currency	97.4	106.1	116.1	123.1	132.6
Plus: Demand deposits ²	257.4	265.9	271.4	240.7	244.6
Other checkable deposits	8.4	16.9	26.9	77.0	101.3
Equals: M1	363.2	389.0	414.5	440.9	478.5
Plus: Savings deposits ³	479.9	421.7	398.9	343.6	400.3
Small time deposits	533.9	652.6	751.7	854.7	904.2
Overnight repurchase agreements (RPs) and overnight Eurodollars ⁴ ..	24.0	26.3	35.0	38.1	45.6
Money market mutual fund balances (excluding institution accounts) ⁵	7.1	34.4	61.9	151.2	177.5
Equals: M2 ⁵	1,403.9	1,518.9	1,656.2	1,822.7	1,999.1

¹ Preliminary.

² Includes travelers checks.

³ Includes Money Market Deposit Account introduced December 14, 1982.

⁴ Not seasonally adjusted.

⁵ M2 will differ from the sum of components by a consolidation adjustment that represents the estimated amount of demand deposits and vault cash held by thrift institutions to service time and savings deposits.

Source: Board of Governors of the Federal Reserve System.

In general, the demand for any particular monetary aggregate—and hence its income velocity—depends in part on the difference between market rates of interest and the rates earned on the deposits in that aggregate. Consequently, the increased portion of M1 deposits that pay interest and the decline in market interest rates have combined to lower M1 velocity.

The rapid growth of general purpose and broker/dealer money market mutual fund balances, which are included in M2 but not in M1, has tended to raise M1 velocity and to lower M2 velocity. From December 1980 to December 1982 these money market mutual fund balances grew from \$61.9 billion to \$177.5 billion, which exceeded the growth in other checkable deposits by \$41.2 billion. Although most money market mutual fund balances are subject to transfer by check, the average turnover of these accounts has been relatively low.

Interpretation of the macroeconomic significance of changes in the monetary aggregates became more difficult in late 1982 when the Depository Institutions Deregulation Committee authorized two new accounts. In mid-December, banks and thrift institutions introduced a Money Market Deposit Account with limited transactions capabilities and no interest rate ceiling. Within about 2 weeks, these accounts

had attracted an astonishing \$87 billion. The Depository Institutions Deregulation Committee also authorized a new super NOW account effective January 1983, with no transactions limitations and no interest rate ceilings, having the same \$2,500 minimum balance as the Money Market Deposit Account.

Financial deregulation and innovation favorably affect the efficiency of the U.S. financial system but also complicate the implementation of monetary policy. Large asset reallocations caused by changes in the financial and regulatory system can have large and unpredictable effects on M1 and M2 and on their relations to nominal GNP. In light of the particular difficulties with regard to M1, the Federal Open Market Committee has voted to place greater emphasis on M2 and M3 for an indefinite period. However, the broad framework of targeting the monetary aggregates has been retained, as have the reserve operating procedures, for implementing it.

PROSPECTS FOR 1983

Assuming that the Administration's 1984 budget proposals are enacted and that the monetary aggregates grow within the Federal Reserve's target ranges, the prospects for a moderate, sustainable economic recovery beginning early in 1983 are good (Table 6-9). As was true in the early stages of previous recoveries, the unemployment rate is likely to stabilize for several months before a downward trend becomes evident. A pattern of reduced inflation in 1982 is expected to continue in 1983. The sharp rise in the Federal budget deficit reflects reduced receipts because of lower inflation, as well as the effects of the 1981-82 recession.

The expectation of economic recovery is based on the view that continuing strength in household and defense spending will bring a turnaround in the inventory cycle. Cuts in production and increases in sales brought business inventories more in line with sales by the end of 1982. Future sales gains are thus likely to be met by increases in production, income, and employment, enhancing sales further. Once even a moderate but sustained increase in sales is underway, this sequence of events may lead to a temporary surge of above-average economic growth.

Increases in sales will come primarily from households whose income will be bolstered by the third stage of the personal income tax cut, whose debt burden has declined sharply relative to income and assets, and whose financial assets, in many cases, appreciated in rallies in the stock and bond markets. With continued moderate increases in food and oil prices, more income will become available for other consumer purchases. Because outlays on durable consumer

TABLE 6-9.—*Economic outlook for 1983*

Item	1982 ¹	1983 forecast
Percent change (fourth quarter to fourth quarter):		
Real gross national product.....	-1.2	3.1
Personal consumption expenditures.....	2.6	2.7
Nonresidential fixed investment.....	-8.4	-3
Residential investment.....	4.5	27.6
Federal purchases.....	6.6	1.2
State and local purchases.....	.1	-2.0
GNP implicit price deflator.....	4.6	5.6
Compensation per hour ²	6.6	6.0
Output per hour ²	1.9	2.2
Level in fourth quarter: ³		
Unemployment rate (percent) ⁴	10.7	10.4
Housing starts (millions of units, annual rate).....	1.3	1.5

¹ Preliminary.

² Nonfarm business, all persons.

³ Seasonally adjusted.

⁴ Actual rate for 1982 is percent of civilian labor force; forecast rate for 1983 is percent of total labor force including persons in the Armed Forces stationed in the United States.

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

goods and houses have been depressed for the last 4 years, consumers are expected to devote increases in their income, and perhaps some of the recent gains in their financial wealth, to replenishing their holdings of durable goods. The sharp easing of credit terms and lower house price increases have already encouraged more households to consider buying houses. This uptrend is expected to intensify in 1983. New house purchases are invariably followed by a pickup in expenditures for furniture, appliances, and other housing-related goods.

The pace of the recovery in 1983 will probably be moderate by historical standards. Low capacity utilization rates and the need to rebuild corporate liquidity will restrain capital spending. The worldwide recession and the lagged effect of the appreciation of the dollar will curtail the growth of exports. Continued reductions in the non-defense public sector will limit it as a source of increased aggregate demand.

PROSPECTS AND POLICIES BEYOND 1983

Economic prospects for the rest of the 1980s depend greatly on the economic policies that are followed. The Administration believes that the four-point program it has pursued—reducing the growth of Federal outlays, taxes, regulation, and the money supply—constitutes the best approach for attaining and maintaining the economic goals set forth in the Full Employment and Balanced Growth Act of 1978.

The Full Employment and Balanced Growth Act calls for annual numerical goals for several key economic indicators over a 5-year period. The projections provided in Table 6-10 show gradual, steady progress toward our economic goals. These figures illustrate the Administration's belief, explained in Chapter 1, that policies based on consistent, long-term objectives can simultaneously achieve full employment, price stability, and sustained growth in real income. A major cause of our present economic ills was the inclination in the past to pursue one economic goal single-mindedly, without adequate attention to the longer run consequences for other economic objectives. This Administration remains determined to avoid the errors of past policies.

TABLE 6-10.—*Projections of economic goals, 1983-88*
[Calendar years, except as noted]

Item	1983	1984	1985	1986	1987	1988
	Level					
Employment (millions) ¹	101.5	104.2	107.0	109.6	112.3	114.9
Unemployment rate (percent) ²	10.7	9.9	8.9	8.1	7.3	6.5
Federal budget outlays as percent of GNP (fiscal year basis)	25.2	24.3	24.1	23.9	23.5	23.0
	Percent change					
Consumer prices ³	4.9	4.6	4.6	4.6	4.5	4.4
Real GNP	1.4	3.9	4.0	4.0	4.0	4.0
Real compensation per hour ⁴	1.2	.8	1.1	1.4	1.6	1.6
Output per hour ⁴	2.1	1.9	1.6	1.7	1.6	1.7

¹ Labor force series includes persons in the Armed Forces stationed in the United States.

² Unemployed as percent of total labor force. See footnote 1.

³ Wage earners and clerical workers.

⁴ Nonfarm business, all persons.

Source: Council of Economic Advisers.

A major prerequisite for achieving our economic goals is control of inflation. Marked progress toward this end has been made in the last 2 years. With continued moderate growth in the monetary aggregates, increased reliance on the private sector, and increased domestic and international economic competition, the prospects for sustaining and extending the progress against inflation are now quite favorable.

An important factor in achieving and sustaining high real economic growth is a high level of capital formation. Chapter 4 of this volume, which fulfills the legislative requirement for an annual Investment Policy Report, explains that lower inflation and the recently enacted tax incentives for saving and investment are the important first steps in fostering capital accumulation. Controlling the Federal deficit is now the single most important method of encouraging more capital formation.

A critical element in achieving healthy economic growth is maintaining a liberal worldwide trading system. As explained in detail in Chapter 3, the world's economies are now more integrated than ever before. This system has recently experienced severe strains. It is of utmost importance that these challenges be met in a manner consistent with an open, growing, balanced network of international trade.

Just as an open worldwide trading system is crucial for the free world economies, a competitive free market system unfettered by unnecessary government regulation is essential for a strong domestic economy. As Chapter 5 points out, substantial progress toward reduction of traditional price and entry regulation has been made in recent years, but further opportunities for deregulation exist.

The year 1983 is expected to be the first of many years of sustained economic growth. Continued economic growth is the only way to sustain progress in reducing unemployment. But macroeconomic policies alone cannot reduce structural unemployment and achieve an acceptable level of employment. Chapter 2 describes some of the macroeconomic policies that, along with a sustained recovery, are necessary to achieve noninflationary full employment. These policies are designed “. . . to foster and promote free competitive enterprise . . .” as mandated in the Full Employment and Balanced Growth Act.

One major remaining threat to a sustainable, balanced recovery is the danger that large Federal budget deficits would preclude the continuing declines in real interest rates that are necessary for healthy growth in all sectors of the economy. The Administration's 1984 budget provides a plan which can lead to a steady decline in budget deficits and thus, ultimately, to a balanced Federal budget.