INFLATION AND UNEMPLOYMENT:

A REPORT ON THE ECONOMY

June 30, 1975

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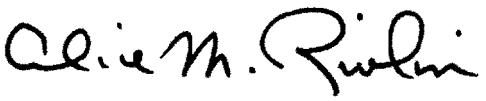
PREFACE

Inflation and Unemployment is the first in a series of reports on the state of the economy that will be issued periodically by the Congressional Budget Office. This report was prepared by the Fiscal Policy Division of the Congressional Budget Office under the direction of Frank de Leeuw, Nancy Barrett and Alan Blinder.



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Director

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SUMMARY

This report is intended to provide Congress with an analysis of the current economic situation, forecasts of likely economic developments over the next year and a half, and estimates of the probable impact that alternative government policies might have on inflation and unemployment. In keeping with the Congressional Budget Office's mandate to provide nonpartisan analysis of policy options, the report contains no recommendations. It was prepared for the use of the Committees on the Budget of the House and Senate.

THE CURRENT ECONOMIC SITUATION

The economy is in the throes of the worst economic recession since World War II. Not only are 8.5 million people out of work (not counting those too discouraged to continue seeking employment), but also factories and equipment are standing idle and the nation's total output is at least $230 billion (or $1,000 per person) below its potential level. At the same time inflation, while considerably below the double digit rates of 1974, continues at a pace that would have seemed high a few years ago.

But there are definite signs that the worst of the recession is over and recovery is under way. Personal income is growing faster than the cost of living, consumer spending is picking up, housing starts are increasing and the hard-hit automobile industry is beginning to recover. Because the recession has been unusually deep, however, it will take much longer to return to full employment than it did after previous postwar recessions.

THE ECONOMIC OUTLOOK

Economic forecasts are uncertain at best--especially when unemployment and inflation rates are so different from those that have occurred together in the past--but forecasts must be made if policy is to be intelligently considered. The forecast made by the CBO assumes implementation of the budget policy reflected in the First Concurrent Resolution on the Budget (passed by the Congress in May), a significant increase in oil prices, and an increase in the money supply of about 8.5 percent per year. Using these assumptions the CBO forecasts the following developments:

--The economy will soon begin a slow recovery from the depths of the current recession.

--However, unemployment will be high for a long time, remaining at about 9 percent through 1975 and falling to approximately 8 percent by the end of 1976.

--The rate of inflation can be expected to remain in the 6 to 9 percent range through 1976.

This forecast implies somewhat higher rates of unemployment and inflation than were projected by the budget committees in May. The differences are attributable to the CBO's different assumptions concerning energy developments. If, as the CBO assumed, the $2.00 a barrel oil import tariff is maintained, a phased decontrol of "old" oil occurs and the OPEC nations raise international oil prices this fall, additional government policies will be required to attain the unemployment and inflation rates foreseen by the budget committees during the formulation of the First Concurrent Resolution on the Budget.

Policy Alternatives

In addition, the CBO analyzed the impact of several alternative economic policies on the economy and tried to isolate the impact of the assumed changes in energy prices. The policy alternatives are not

recommendations, but are intended to illustrate the probable effects of policy changes on the economy.

--One policy option would be to cut the projected Federal deficit by allowing the temporary provisions of the recent Tax Reduction Act to expire at the end of 1975. By the end of 1976, it is estimated that this move would cut the Gross National Product by about $8 billion and increase the unemployment rate .1 percent, without affecting inflation. These impacts would continue to grow in 1977.

--On the other hand if the tax cuts were extended and an additional tax cut of $15 billion were enacted, the Gross National Product would probably be about $14 billion higher, unemployment would be about .3 percent lower, and prices would not be affected very much.

--If the money supply were allowed to grow at 10 percent per year, instead of the 8.5 percent assumed in the basic forecast, GNP would be higher and unemployment lower, while if the money supply grew at only 7 percent, the reverse would be true.

--If the new energy developments assumed in the basic forecast could be avoided, the price level would be lower by about 2.4 percentage points and the unemployment rate would be .6 percentage points lower than the forecast by the end of 1976. These effects would continue to grow in later years.

These forecasts should be viewed as imprecise estimates. With economic policy changing rapidly and energy developments uncertain, unforeseen events could greatly alter the relationships on which these projections are based. Nevertheless they illustrate two important conclusions:

--First, increases in energy prices threaten both to rekindle inflation and to slow down the recovery from the recession.

--Second, in the present state of the economy, moderately expansionary policies (increases in the deficit or in the rate of growth of the money supply) could help to bring down unemployment somewhat without appreciably increasing inflation, while more restrictive policies (lowering the deficit and cutting money supply growth) could worsen unemployment while doing little to reduce inflation. At the present time prices appear relatively insensitive to moderate changes in fiscal and monetary policy, while employment and output are relatively sensitive. In the longer run, however, when the economy is operating closer to full employment and full capacity, the reverse might be true. Expansionary policies at a time of higher employment might have a major inflationary impact without affecting the unemployment rate significantly.

ESTIMATED CHANGES FROM THE BASIC FORECAST RESULTING FROM ALTERNATIVE FISCAL AND MONETARY POLICIES AND ENERGY DEVELOPMENTS

	Change in Forecast Fourth Quarter	
	1975	1976
(1) Not Extending Temporary Provisions of Tax Reduction Act		
GNP, current dollars (billions)	0	-8
GNP, 1958 dollars (billions)	0	-4
Price deflator, GNP (percent)	0	0
Unemployment rate	0	+0.1
(2) Additional Tax Cut, $15 Billion, Effective 1975 III		
GNP, current dollars (billions)	+8	+14
GNP, 1958 dollars (billions)	+5	+8
Price deflator, GNP (percent)	-0.1	-0.1
Unemployment rate	-0.1	-0.3
(3) 10 Percent Annual Growth in Money Supply (Demand Deposits and Currency)		
GNP, current dollars (billions)	+2	+21

(continued on next page)

Continued--ESTIMATED CHANGES FROM THE BASIC FORECAST RESULTING FROM ALTERNATIVE FISCAL AND MONETARY POLICIES AND ENERGY DEVELOPMENTS

	Change in Forecast Fourth Quarter	
	1975	1976
GNP, 1958 dollars (billions)	+2	+12
Price deflator, GNP (percent)	-0.1	-0.3
Unemployment rate	0	-0.3
(4) 7 Percent Annual Growth in Money Supply (Demand Deposits and Currency)		
GNP, current dollars (billions)	-2	-26
GNP, 1958 dollars (billions)	-1	-13
Price deflator, GNP (percent)	0	+0.1
Unemployment rate	0	+0.3
(5) Recent and Possible Future Energy Developments		
GNP, current dollars (billions)	0	-2
GNP, 1958 dollars (billions)	-2	-21
Price deflator, GNP (percent)	+0.2	+2.4
Unemployment rate	0	+0.6

CHAPTER I
INTRODUCTION

Low unemployment and stable prices are twin goals of economic policy. Some people give more weight to one goal and some to the other, but, as everyone knows, the American economy has been doing worse than usual with respect to both. As may be seen in Chart 1, unemployment has reached a new high for the post-World War II era; it is now at its highest level since the Great Depression. Inflation too, measured by the rate of change in the Consumer Price Index, remains at an historically high level despite relief in recent months from the "double-digit" rates which plagued us during the severe price rises of 1974.

The poor performance of the economy on these two fronts makes the formulation of wise economic policy both more important and more difficult. Faced with an economic situation that has not occurred before, no one can say with certainty what will happen next or what the effect of particular policies will be. But economic policy choices cannot be avoided. They have to be made and should be based on the best available information about what is happening to the economy and the best informed guesses about the probable effects of alternative policies on unemployment and inflation.

This report is the first of a series of reports by the new Congressional Budget Office (CBO) summarizing for the Congress what is happening to the economy. The report contains forecasts of what is likely to occur in the next year or two if current policies continue and estimates of the probable effect of alternative policies that the Congress might want to pursue. The report does not recommend any particular policy. Its purpose is to elucidate the choices facing the Congress and the country.

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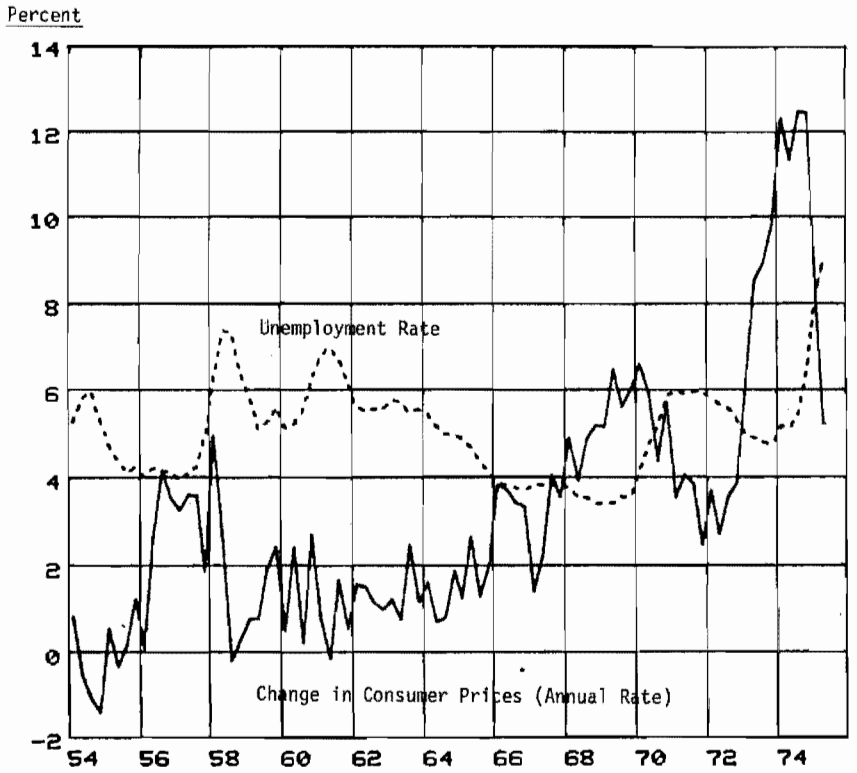
CHART 1--INFLATION AND UNEMPLOYMENT, 1954-75



Source: Bureau of Labor Statistics.

Note: Price changes are percent changes in adjacent quarterly averages converted to annual rates. Unemployment rates are quarterly averages. Latest figures are estimates for the second quarter of 1975.

This first chapter summarizes the report's main findings about the current situation, the outlook, and the effect of alternative policies. It then offers an explanation of why the economy has been performing so badly--why inflation and unemployment are occurring simultaneously and seem likely to pose a continuing dilemma for the future. Chapter II describes in greater detail the current economic situation and the outlook. Chapter III gives a fuller discussion of current economic policy and the likely effect of alternative policies, including a smaller deficit than the one now projected for FY 1976, a larger deficit, a more restrictive monetary policy than the current one, and a less restrictive one.

THE CURRENT ECONOMIC SITUATION

There are strong signals in recent business statistics that the economy slide has reached bottom and is turning up again. New orders for durable goods advanced significantly in April and May, and both housing starts and retail sales also rose in the latter month. The Industrial Production Index, while still declining in April and May, fell at a much lower rate than earlier in the year. Output of finished products in fact turned up, although output of materials continued to decline. The fact that inventory liquidation is proceeding at an extraordinarily rapid pace is another hopeful sign. Finally, a sharp rebound in stock prices and declines in short-term interest rates, both beginning in late 1974, are financial developments favorable to recovery.

The recovery is more apparent in consumer goods and housing than in business spending for machinery and buildings. The upturns in retail sales and housing starts are partly a consequence of a favorable trend in personal income. In April and May, personal income rose faster than the rate of inflation for the first time in many months; the tax rebate and reduction in withholding rates in May added further to consumer purchasing power.

On the business capital spending side, the one favorable development was the rise in orders which followed the increase in the investment tax credit. Capacity utilization and corporate profits remained seriously depressed, however. Recent surveys of business spending plans indicate a reduction from earlier plans and a level of capital spending for 1975 of less than 2 percent above 1974 in dollar terms, and thus well below 1974 after adjustment for price increases.

As already noted, the latest news about inflation is not as gloomy as the situation was just a few months ago. The rate of increase in consumer prices declined from 12 percent during 1974 to 6 percent during the first four months of 1975. In May, consumer prices increased at an annual rate of only 5 percent, with prices of new autos and mortgage interest rates declining from the previous month. Wholesale prices rose even less than consumer prices during the first five months of this year, after rising much faster during 1974.

Despite recent moderation, however, all overall measures of inflation remain high compared to what they have been over the last 25 years. Next year, furthermore, the inflation rate may be pushed upward again, not because of demand pressures, but because of energy developments and policies. Oil excise taxes, the widely anticipated additional price increase by oil producers, possible deregulation of "old" oil prices, and accompanying rises in prices of other fuels will all contribute to renewed commodity market inflation.

On the unemployment front, no improvement is apparent in the aggregate rate through May.[1] There are, however,

1. Moreover, because of technical problems in measuring seasonal forces, it will be very difficult to interpret June unemployment statistics. Several months may pass before any confident statement can be made about changes in the trend of overall unemployment.

signs that labor market forces now in motion will bring an end to the rise in unemployment some time in the near future. The manufacturing workweek, which normally lengthens in advance of a decrease in unemployment, has risen slightly from its February low, although overtime hours have not yet shown any sign of increase. New claims for unemployment insurance are down from their peak in February.

THE ECONOMIC OUTLOOK

While the economy appears to be turning up, the judgment of the CBO is that assuming continuation of present Congressional and Federal Reserve policies, unemployment and excess capacity will remain high (compared to their average levels over the last quarter century) at least through 1976. An economic revival can be expected in the months ahead, but unemployment rates will probably not drop much below 8 percent before the end of 1976. At the same time, inflation will remain high--probably rising from current levels--primarily because of further increases in energy prices.

These projections are subject to uncertainty, since economic forecasters obviously have no more solid information about the future than anyone else. Forecasters can only examine past events and relationships and make guesses about what is likely to happen in the future if specified assumptions hold true. They can use two basic methods: statistical models of economic relationships and informed judgments based on examination of trends in particular sectors of the economy. Both methods are based on an assumption that the relationships that have held true in the past will continue in the future. Neither method can be expected to predict the occurrence of noneconomic events that might have an impact on the economy, such as war, crop failure, the collusion of foreign governments to raise prices, or a sharp change in the policy of our own government. Forecasters can only be expected to predict (imperfectly) the likely economic consequences of such noneconomic events.

Chapter II of this report presents economic projections relying heavily on three widely used statistical models of the economy under identical policy assumptions. The assumptions include fiscal policies as voted in the First Concurrent Resolution, monetary policies that would result in an 8.5-9.0 percent annual growth of the money supply (demand deposits and currency), and phased deregulation of "old" oil as well as the $2 tariff already imposed and an assumed $2.25 price increase in foreign oil.

The projections show an improvement in real output beginning after the second quarter of this year. Unemployment rates, however, are still projected in the range 8.8-9.2 percent in the last quarter of 1975, with subsequent declines to 7.8-8.2 percent by the end of 1976. Price increases are projected as accelerating slightly from the current low rate, due largely to the impact of energy developments. The change in the Consumer Price Index from the end of 1975 to the end of 1976 is projected in the range of 6.3-8.7 percent. The assumptions about energy account entirely for the differences between these projections and the ones used in the reports of the House and Senate budget committees preceding the First Concurrent Resolution.

The next year and a half, in short, does not promise to bring about any end to the dilemma of coexisting high levels of unemployment and high rates of inflation. Even with rapid growth over the next few years, the severity of the recession means that the unemployment rate will remain high for some time. The forecast is for some improvement over recent experience with respect to both unemployment and inflation, but not nearly enough to restore the situation of the 1950s or 1960s. It should be emphasized, however, that there is as yet very little information on the shape of the incipient recovery. It will be at least two or three months before a solid factual basis is available for judgments about strength and nature of the recovery.

POLICY ALTERNATIVES

What actually happens to the American economy in the months ahead will depend on millions of separate decisions, private and public, foreign and domestic. But the Federal government has two major policy instruments that can be used to influence what happens: fiscal policy (the size and timing of government outlays and tax rates) and monetary policy (the size and timing of changes in the money supply and interest rates). Knowledge about how these policies work is far from perfect, but there is widespread agreement as to the direction of the effects they produce:

(1) Increasing the federal government deficit through fiscal policy tends to stimulate the economy. The government is adding to the demand for goods and services by paying out more and taking in less. In general, adding to the deficit is likely to increase both employment and prices. At times of high unemployment and excess capacity the effect of the deficit on employment is likely to be unusually large relative to its effect on prices, while at times of low unemployment and capacity pressures the reverse is likely to be the case.

(2) Increasing the money supply also tends to stimulate the economy. Expansionary policies by the Federal Reserve System make funds more available and interest rates lower. Businesses and households are thereby induced to spend more on both investment and consumption. This spending, like that induced by expansionary fiscal policy, is likely to increase both employment and prices, with the employment effect relatively large in a slack economy and the price effect relatively large in a tight economy.

In Chapter III, an attempt is made to examine several alternative economic policies and to estimate their probable effects on employment and inflation, as well as to show whether expansionary fiscal policies involving higher federal deficits are likely to "crowd out" private investment.

These alternative policies include (a) expiration on schedule instead of extension of the temporary provisions of the 1975 Tax Reduction Act, (b) a further tax reduction (in addition to extension of the temporary provisions) effective in January 1976, (c) a rate of monetary growth of 7 percent per year (demand deposits and currency) instead of the 8.5-9.0 percent assumed in the basic forecasts and in fact achieved in recent months and (d) a rate of monetary growth of 10 percent per year instead of 8.5-9.0 percent. Estimates are also made of the economic effects of recent and possible future oil price changes; specifically, of the second dollar of the oil tariff, a possible $2.25 OPEC price increase, and deregulation of "old" oil.

The statistical models used to estimate these benefits and costs are of course far from perfect, as their forecasts over the last year have demonstrated. Some of the key variables influencing the results are outside of the range of historical experience used to fit the models. Nevertheless they represent a necessary and useful attempt to estimate major influences on output, unemployment, inflation and investment in an integrated, comprehensive framework.

A major conclusion emerging from these estimates is that at the present time--a time of exceptionally high unemployment and excess capacity--more expansionary fiscal or monetary policies would have unusually high employment-creating effects relative to their effects in worsening inflation. More restrictive policies at the present time would have only small effects in bringing down inflation relative to their effects in worsening unemployment. Another conclusion is that under present conditions there is little danger that expansionary fiscal or monetary policies will lead to "crowding out" of private investment.

It is no surprise that under present conditions of high unemployment and excess capacity, the forecasts imply that output and unemployment respond significantly to fiscal and monetary policy. What is not

obvious, and requires some explanation, is the conclusion that neither inflation nor the "crowding out" of private investment is significantly affected by policy changes under present conditions.

With respect to inflation, this conclusion rests partly on the observation that wage rates are less sensitive to reductions in unemployment at high unemployment rates than at low ones, and that wage increases caused by more expansion will be offset at least in part by the productivity improvements that normally accompany an economic recovery. The statistical models do not fully capture the effect of actual inflation on inflationary expectations; but if the effect on actual inflation is small the effect on expected inflation may be assumed small as well. The CBO projections do predict continued inflation over the next year and a half, although at lower rates than in 1973-74; but the inflation is due to past demand pressures and commodity market developments. Inflation would not be appreciably changed by moderate changes in current demands.

It also does not appear that large federal deficits and the borrowing they require are likely to "crowd out" private investment in periods of high unemployment. In such periods, a deficit due to an expansionary fiscal move (for example a tax cut) is accompanied by a positive effect on investment coming from general revival of demands which more than outweighs the negative effect due to tighter credit markets. Conversely, a lower deficit due to a restrictive fiscal move (for example a tax increase) on balance reduces private investment. Only when the economy is operating at high utilization rates will the credit-market effect outweigh the positive general demand effect and cause government deficits to "crowd out" private investment.

The projections thus imply that the inflationary effects and "crowding out" of private investment that would be the costs of more expansionary policies are much lower at present than they would be under other economic circumstances. An additional tax cut of

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$15 billion per year effective immediately, would reduce the unemployment rate by .3 percent (or 285,000 workers) at the end of a year and a half, with a positive rather than a negative effect on private investment and a negligible effect on inflation. A rate of monetary growth of 7 percent rather than the 8.5-9.0 percent in the basic forecast would raise the unemployment rate by .3 at the end of a year and a half, would have a negligible effect in reducing inflation, and would reduce rather than increase private investment.

The projections have important implications with respect to oil prices as well as with respect to fiscal and monetary policies. Recent and prospective oil price increases could contribute substantially to both inflation and unemployment. The combination of the second dollar of tariff on imported oil, an assumed OPEC price increase of $2.25 per barrel, and assumed deregulation of "old" oil prices over two years is estimated to add 2.4 percent to the price level and .6 to the unemployment rate by the end of 1976. These effects would continue to grow in later years. To offset the inflation effect of these actions through fiscal or monetary policies would require enormous increases in unemployment beyond present levels. To offset the unemployment effect of energy developments through fiscal policy would require a tax cut greater than the one enacted earlier this year.

Policy choices must, of course, depend on much more than these estimates of their impacts. Not only are there uncertainties about any measures of impact, but there are great differences--both in Congress and in the public at large--about the weights to be attached to the twin goals of reducing unemployment and avoiding inflation. Some people are primarily concerned with unemployment and willing to take some risk of increasing inflation in order to reduce unemployment. Others are primarily concerned with inflation and are not willing to take any risks of further exacerbating inflation even to get reductions in unemployment.

It is worth stressing, furthermore, that the projections of policy impact in this report hold only for moderate policy changes under present economic conditions. The relationship between the inflation and unemployment effects of different policies could shift significantly after a year and a half of recovery. As the recovery brings the economy back toward more normal ranges of resource utilization, there is increasing danger that more expansionary policies might stimulate demand to the point where a new round of demand inflation would be added to other inflationary forces at work.

THE CHANGING RELATION BETWEEN UNEMPLOYMENT AND INFLATION

Until the last few years analysis of economic fluctuations suggested that there was a rough but simple relationship between unemployment and inflation. When unemployment rates were 5-6 percent, inflation stayed at negligible rates of 1-2 percent a year. Only when unemployment dropped to 4 percent or below did prices begin to rise at "high" rates like 4 or 5 percent. But in the last seven or eight years the situation has changed. Inflation rates have been so much higher that a 5 percent inflation rate now seems "low," and it has become apparent that substantial inflation does not necessarily go with low rates of unemployment. The analysis of the current situation and outlook summarized above suggests some improvement over the next year and a half but nothing resembling a return to the relationship between unemployment and inflation that held in the 1950s and early 1960s. Why is the situation so much worse?

What appears to have happened is that two major forces have intervened to disturb or shift the earlier trade-off relationship between unemployment and inflation. One of the major forces is the emergence in recent years of a significant <u>expected rate of inflation</u>. More and more lenders and borrowers, employees, and employers, and investors and savers have let expectations about future increases in prices--consistent with actual experience during

the 1960s--affect their decisions about investment, wage negotiations, or long-term sales contracts. Under these conditions inflationary expectations themselves become an inflationary force; the expectation of future price rises causes wages and prices to rise faster than they would otherwise.

Chart 1 suggests the importance of this expectational factor. During the period through 1967, high unemployment was accompanied by low rates of inflation, and high inflation (for that period) by low unemployment, with the average rate of inflation some 3 percent or so below the average rate of unemployment.

From 1968 to 1972 the trade-off between unemployment and inflation worsened so that the average rate of inflation was no longer below the average rate of unemployment. A plausible interpretation of this change is that by the late 1960s some expectation of future inflation--no more than a few percent per year, however--had come to influence wage, price, and financial contracts. Since the history of the 1960s had been one of gradually accelerating inflation, the emergence of expected inflation was, in this interpretation, part of the consequence of expansionary policies, both fiscal and monetary, of the 1960s.

The years since 1972 begin with a very sharp rise in prices due largely to food and petroleum developments. Once this inflationary surge was under way it, too, contributed to higher inflationary expectations and hence to a worsening of the trade-off. The average rate of inflation has been well above the average unemployment rate since 1972. The decline in the rate of inflation in recent months may help to moderate inflationary expectations, especially if it is maintained during the next year or two.

The other major force responsible for the poor performance of the economy in recent years is commodity market inflation, or price increases due to unique food and fuel market circumstances. In 1973 a

variety of special developments in food markets, some of them acts of nature and some of them government policies, contributed to the very sharp rise shown in Chart 2. The escalation of world oil prices, which largely accounted for the rise in fuel prices shown in the chart, followed just as food prices were beginning to recede moderately from their peak.

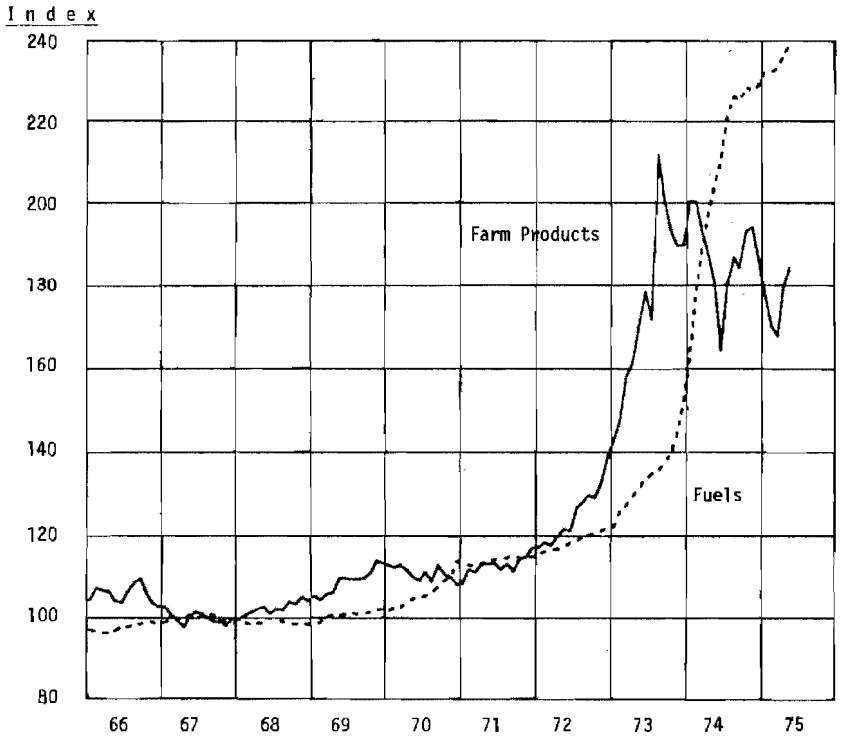
These two sets of forces, inflationary expectations and commodity market inflation, go a long way toward explaining the high inflation of 1973-74. They were not, however, the only forces at work. Foreign exchange developments, especially devaluation of the dollar in the early 1970s, were important contributing factors. The timing of price control and decontrol beginning in the summer of 1971 had discernible influences on the timing of inflation, including the emergence of "double-digit" rates after the removal of all controls in early 1974.

Demand pressure also played a role in inflation although it was a selective rather than a general role. Chart 3 shows that while the rate of unemployment in 1973 remained well above the level of the late 1960s, excess capacity in major materials industries did not. Capacity bottlenecks for a number of materials caused significant price pressures and shortages.

High rates of inflation in 1973 and 1974 were themselves a major contributor to the subsequent recession. Since food and energy are major items in the budget of the average consumer, commodity market inflation caused an important reduction in the purchasing power of most households. Thus, although the effect of these external events on the price level was inflationary, their effect on incomes and the demand for goods and services was deflationary, putting into motion the initial impetus for a downward spiral in spending.

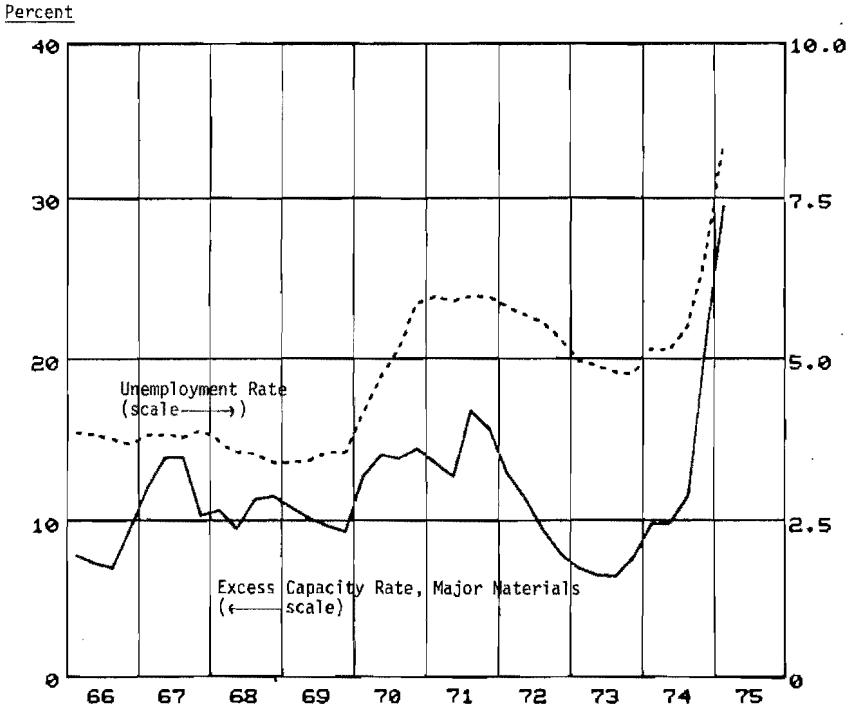
The reaction of public policy was to attack the inflation and thereby contribute to the downswing by restrictive policy measures, in part deliberate but

CHART 2--WHOLESALE PRICES, FARM PRODUCTS AND FUELS, 1966-75 (1967 = 100)



Source: Bureau of Labor Statistics.

CHART 3--UNEMPLOYMENT AND EXCESS CAPACITY, 1966-75



Source: Bureau of Labor Statistics, Federal Reserve.

in part unintentional consequences of the inflation. The growth in the money supply (demand deposits and currency) slowed to an annual rate of 2 percent between June and October 1974. Even a rate of growth of 6 percent--historically a fairly high rate, and in fact the actual rate from October 1973 to October 1974--reduces real money balances when prices are rising at a rate of 10 percent. A 2 percent rate is low by any historical standard.

Fiscal policy was also restrictive, although the restrictiveness was largely unintentional. Inflation coupled with a progressive tax system caused tax collections to rise at accelerating rates in 1973 and 1974, depleting the purchasing power of households and businesses. Tax receipts (national income accounts basis) rose at an annual rate of 6.2 percent per year from the start of 1969 to the start of 1973. During the next year they rose at a rate of 11.6 percent and during the subsequent half-year at an annual rate of 18.6 percent. Not until incomes fell off sharply at the end of 1974 did tax receipts begin to decline.

To summarize: Two new factors in the economic picture--the emergence of inflationary expectations and commodity market inflation in food and oil markets--were major contributors to the inflation of 1973-74. The inflation itself depleted purchasing power, and this depletion plus restrictive economic policies brought about a recession, the worst in thirty years and much more serious than almost anyone had anticipated. Recovery from this recession is beginning, but the dilemma of high unemployment and high inflation will probably continue to trouble the economy for some years ahead.

CHAPTER II
THE CURRENT SITUATION AND OUTLOOK

THE DEPTH OF THE RECESSION

The events of 1973 and 1974 triggered a sharp and rapid decline in spending that has produced the deepest recession in the American economy since the Depression of the 1930s. Output dropped 7.8 percent from its peak in the fourth quarter of 1973 to the first quarter of 1975, a percentage decline that was more than twice that of 1957-58 (which had been the deepest of the previous postwar recessions). Unemployment has increased from 4.6 percent in October 1973 to 9.2 percent in May 1975. Because the recession has been unusually deep, the return to full utilization of the nation's human and capital resources will take much longer than in previous postwar recovery periods. With a steady recovery of real output at a rate of 6 percent a year, it would take about five years to return to prerecession capacity utilization levels.

The GNP Gap

As shown in Chart 4, the recession has produced an enormous gap between current output levels and the potential productive capacity of the economy. In the first quarter of 1975 real GNP was only 86 percent of its potential, the lowest rate in the twenty-three years for which a measure of potential GNP is available. In current dollar terms, the GNP gap is about $230 billion. This represents a loss of goods and services that is nearly 80 percent greater than the entire amount of Federal government purchases of goods and services, estimated to be about $131 billion in calendar 1975. On a per capita basis the GNP gap represents a $1,000 loss for every American.

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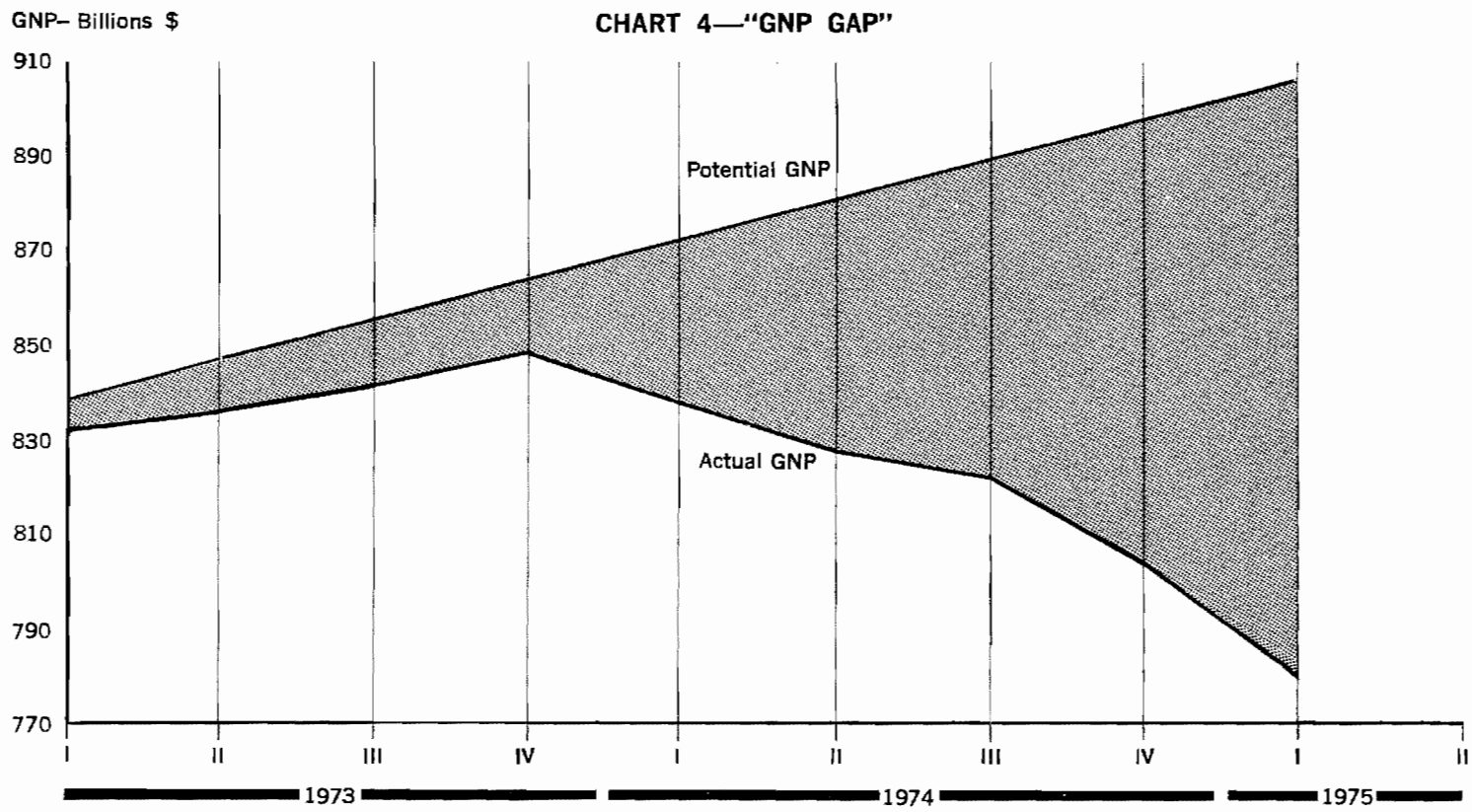
CHART 4—"GNP GAP"



Actual and potential GNP: constant (1958) dollars
Source: *Business Conditions Digest*, May, 1975.

The gap between actual and potential GNP reflects underutilization of the nation's economic resources, both capital and labor. The rate of utilization of the capital stock is at its lowest point since 1946. In manufacturing, for instance, the Federal Reserve Board estimates that the ratio of output to capacity was about 68 percent in the first quarter of 1975, compared with 83 percent during 1973. Business fixed investment has fallen sharply in this recession, down 13 percent in real terms from its peak in the second quarter of 1974.

The Unemployment Problem. Labor as well as capital is underutilized in this recession. While unemployment of labor, like that of capital, represents a loss of potential output of goods and services, unemployment of persons has real human costs to the unemployed and their families. Consequently, there is concern not only about the number of unemployed persons in a recession and the effect on GNP, but also how this unemployment is distributed among individuals in the population.

In May 1975, 8.5 million persons were unemployed (on a seasonally adjusted basis), adding up to an overall unemployment rate of 9.2 percent, higher than in any previous postwar recession. In addition, at least an additional 1 million persons are estimated to have stopped looking for work because they do not think they can find a job. If these discouraged workers are included, the jobless rate is well over 10 percent. Moreover, the number of persons working part time for economic reasons--those who would have preferred more work but could not find it--increased from 2.7 million in May 1974, to 3.9 million in May 1975.

Not only are more people unemployed now than a year ago, but they are staying unemployed longer. The average duration of unemployment rose from 9.3 weeks in December 1973 to 13.4 weeks in May 1975, the highest level in more than ten years. Those unemployed less than five weeks represent only about one-third of the unemployed, compared with more than one-half

a year ago, and the incidence of long-duration unemployment (fifteen weeks or more) has increased to 31.5 percent in May 1975 from 17 percent in December 1973.

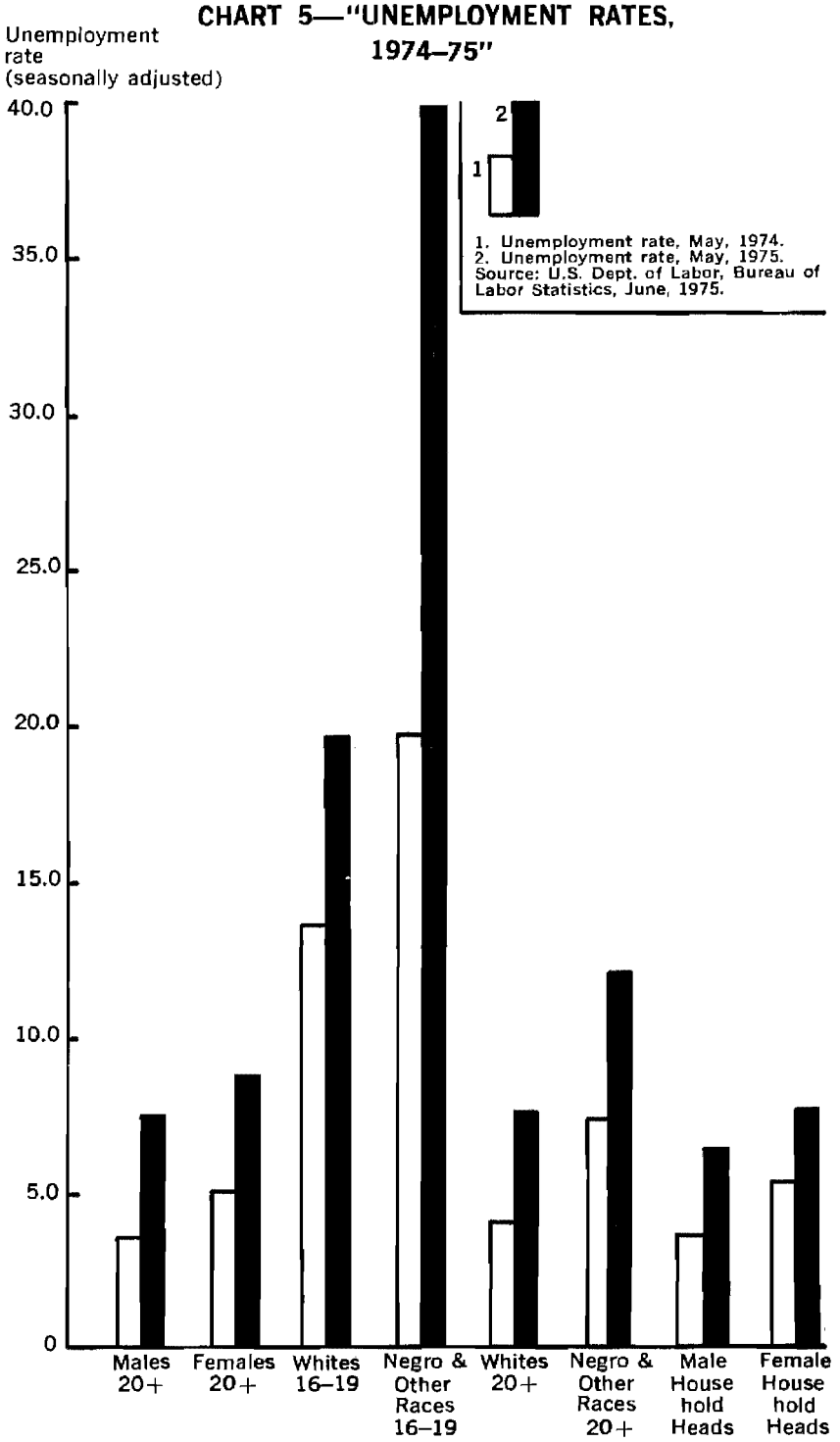
No major group of the labor force has escaped the burden of the large increase in unemployment. The unemployment rate for household heads has more than doubled between September 1973 and May 1975, from 2.7 to 6.3 percent. The rate for married men has nearly tripled during this period (from 2.1 percent to 5.8 percent).

Sharp increases in unemployment among primary breadwinners have been accompanied by substantial increases in unemployment for secondary workers. Chart 5 shows a breakdown of unemployment by demographic group in May 1975 compared with a year ago. In terms of added incidence of unemployment, blacks have suffered more than whites, and teen-agers more than adults. Unemployment rates for adult males have increased more than for adult females, but the incidence of discouraged workers who drop out of the labor force is probably higher for women than for men.

There are also differences in the severity of unemployment by occupation and by area of the country. The recession impacted first on blue-collar workers and then on white-collar workers. Between May 1974 and March 1975 the blue-collar rate increased from 5.8 percent to 12.5 percent, and then rose only slightly more to 13 percent in April and May. The white-collar rate of unemployment, although lower than the blue-collar rate, increased more than the blue-collar rate between March and May, from 4.6 percent to 5.4 percent.

In March 1975, 105 out of the 150 major labor markets were classified by the U.S. Department of Labor as having "substantial unemployment" (6 percent or higher). Cities hard hit by unemployment include Flint, Michigan--18.7 percent; Columbus, Georgia--16.1 percent; Detroit, Michigan--16.1 percent; Providence, Rhode Island--16.0 percent; and New Bedford, Massachusetts--15.8 percent.

CHART 5—"UNEMPLOYMENT RATES, 1974–75"



Within metropolitan areas, unemployment rates are highest in the "poverty areas" designated by the U.S. government. The unemployment rate for the first quarter of 1975 in the poverty sections of metropolitan areas was 13.5 percent compared with 8.6 percent in the nonpoverty sections. Among nonwhites unemployment was 16.9 percent in poverty areas and 11.7 percent in nonpoverty areas.

All of this adds up to an enormous waste of human resources and a loss of potential output. For the unemployed the cost is particularly heavy. Unemployment insurance, while cushioning the economic shock, does not fully replace former incomes. One reason is that not everyone is eligible for unemployment insurance benefits. Approximately 20 percent of the unemployed persons in March received no benefits; this proportion is likely to increase during the summer because many of the sizeable number of persons who enter the labor force in May or June are not covered. In addition, the jobless who have dropped out of the labor force receive no benefits. As a consequence, the sizeable loss of potential income in this recession has fallen most heavily on that segment of the population experiencing unemployment.

Inflation. The sharp decline in real output and resource utilization in this recession was accompanied by a rapid rate of price inflation. This situation of inflation amid slack poses a major dilemma for monetary and fiscal policy, since traditional policy prescriptions have assumed that low inflation rates will accompany low levels of economic activity and high unemployment. When rapid inflation and high unemployment occur together, it is not always apparent whether restraint or stimulus is an appropriate policy.

The downturn in economic activity in 1974 was accompanied by a 12.2 percent increase in the Consumer Price Index, the greatest yearly increase since 1947. The Wholesale Price Index jumped 20.9 percent in the same period, with prices of industrial commodities rising 25.6 percent.

Although there was considerable progress on the inflation front in the first quarter of 1975, the slowdown is endangered by prospective energy developments. Wholesale prices are already picking up again, partly due to an upturn of food prices; and oil price increases later this year could add greatly to a renewed upsurge.

As shown in Table 1, the Wholesale Price Index rose at an annual rate of 12 percent in April and May, compared with a decline of 5.8 percent in the first quarter, reflecting price increases for food and crude materials. The Consumer Price Index registered a gain of 6.2 percent in April and May, up slightly from the first quarter but substantially below the double-digit rate of 1974.

Energy developments could cause even more inflation. As documented in Chapter III of this report, the combined effects of another OPEC price increase, phased-in decontrol of old oil, and the additional $1 import fee recently announced could increase the rate of inflation an additional 2 to 3 percent over the next 18 months.

The Effect of Food and Energy Prices. Increases in both wholesale and consumer prices during April and May were modest if food and energy prices are excluded. As shown in Table 2, wholesale prices of industrial commodities rose at annual rates of 1.2 percent in April and 2.4 percent in May. If price increases for crude materials (largely due to rising energy prices) are excluded from the industrial commodities index, the increases were even more moderate--0.5 percent in April and 1.3 percent in May. Wholesale prices for intermediate goods showed no change in the last two months taken together. Prices for consumer finished goods rose 2.4 percent in April and 3.7 percent in May, at annual rates. These nonfood, noncrude components of the Wholesale Price Index are relatively insensitive to rising energy and food prices in the shortrun, and hence can be viewed as a measure of inflation resulting from economic conditions other

TABLE 1--CHANGES IN THE CONSUMER PRICE INDEX AND THE WHOLESALE PRICE INDEX DURING THE RECESSION OF 1974-1975*

	Consumer Price Index		Wholesale Price Index	
	All Commodities	Food	All Commodities	Farm Products Processed Foods and Feeds
December 1973-December 1974	12.2	12.2	20.9	11.0
December 1974-March 1975	5.7	0	-5.8	-27.7
March 1975-May 1975	6.2	5.5	12.0	37.3

Source: U.S. Department of Labor, Bureau of Labor Statistics.

*All figures are percent changes at a compound annual rate.

TABLE 2--RATE OF CHANGE IN WHOLESALE PRICE INDEX AND COMPONENTS
(percentage changes, seasonally-adjusted annual rate)

	All Commodities	Farm Products and Processed Foods and Feeds	Industrial Commodities					
			Total	Industrial Commodities Excluding Crude Materials	Crude Materials Excluding Selected Food Items	Intermediate Materials Excluding Selected Food Items	Consumer Finished Goods Excluding Foods	Producer Finished Goods
	1974: (December 1973 to December 1974)							
	20.9	11.0	25.6	25.7	23.0	28.5	20.5	22.6
	1975							
January	-2.4	-26.2	6.2	7.5	-19.6	8.7	7.4	15.4
February	-9.2	-33.1	4.9	5.4	- 4.7	.0	1.2	7.4
March	-5.8	-23.4	1.2	1.6	- 5.8	2.4	2.4	12.7
April	19.6	75.5	1.2	0.5	14.0	2.4	2.4	7.4
May	4.9	7.4	2.4	1.3	25.3	-2.4	3.7	3.7

Source: U.S. Department of Labor, Bureau of Labor Statistics.

than changing energy and food prices. These indices--unlike comprehensive measures of price change--did not accelerate in April and May above the relatively low rates of increase in the first quarter.

Trends in Unit Labor Cost. Higher labor costs also contribute to inflation. Unit labor costs have increased slightly faster than the overall rate of inflation in the recession, and this, together with higher materials prices, has resulted in a heavy squeeze of corporate profits.

Accelerating unit labor costs have been largely caused by the sharp decline in manhour productivity that occurred as output fell. Manhour compensation in 1974 increased only 10 percent, less than the rate of price inflation. But when this increase was coupled with a 3.6 percent fall in manhour productivity during 1974, labor cost per unit of output rose 13.9 percent. In the first quarter of 1975, there was a smaller increase in unit labor cost, 11.4 percent, at an annual rate.

Economic recovery should reverse the downward trend in productivity. Furthermore, as long as unemployment remains high, a strong upward pressure on wages is unlikely. For this reason, recovery could well be accompanied by smaller increases in unit labor cost, particularly in the early stages when productivity gains are likely to be rapid. Over the longer run, however, there will be larger increases in unit labor cost, since upward pressure on wages is not likely to be offset fully by continued rapid productivity growth.

THE ECONOMIC OUTLOOK

Although there is widespread agreement that the recession is bottoming out, forecasting the shape of the economic recovery is extremely difficult. First, the recovery is just beginning, so there is very little concrete information on whether it will be fast or slow. Second, the statistical models of the economy that generate forecasts have made exceptionally large

errors in the last few years and are therefore subject to wide margins of uncertainty. Nevertheless, since the wisdom of present policies depends so heavily on the future of the economy, it is impossible to avoid trying to estimate what the future course of unemployment and inflation is likely to be.

To make the projections presented in this report CBO used three different statistical models of the economy and then made judgments about the range within which actual events were likely to fall.[2] The forecasts are based on the same assumptions about fiscal and monetary policies and energy developments. With respect to fiscal policies, the assumptions are based on the First Concurrent Resolution. The monetary policy assumed is a rate of growth in the money supply (demand deposits and currency) of 8.5 to 9 percent per year, which is the actual rate of growth over the last four months. The assumptions about oil prices include a $2 domestic tariff on imported oil, a $2.25 increase in foreign oil prices as of October, phased deregulation of "old" oil, and some resulting increase in the price of other fuels.

Projections based on these assumptions are shown in Table 3 for the last quarter of this year and the last quarter of next year. They are best described as indicating a moderate recovery, fast enough for significant improvement in production but not nearly fast enough to restore unemployment to the average of the last 30 years. Inflation rates, while lower than 1973-74, also remain high in comparison to the normal range of the last 30 years.

More specifically by the end of 1976 the projections show unemployment ranging from 7.8 to 8.2 percent, a distinct improvement over the May 1975 figure of 9.2 percent but far above the 1946-74 average of 4.7. As shown in Chart 6, the real GNP range of $830 billion

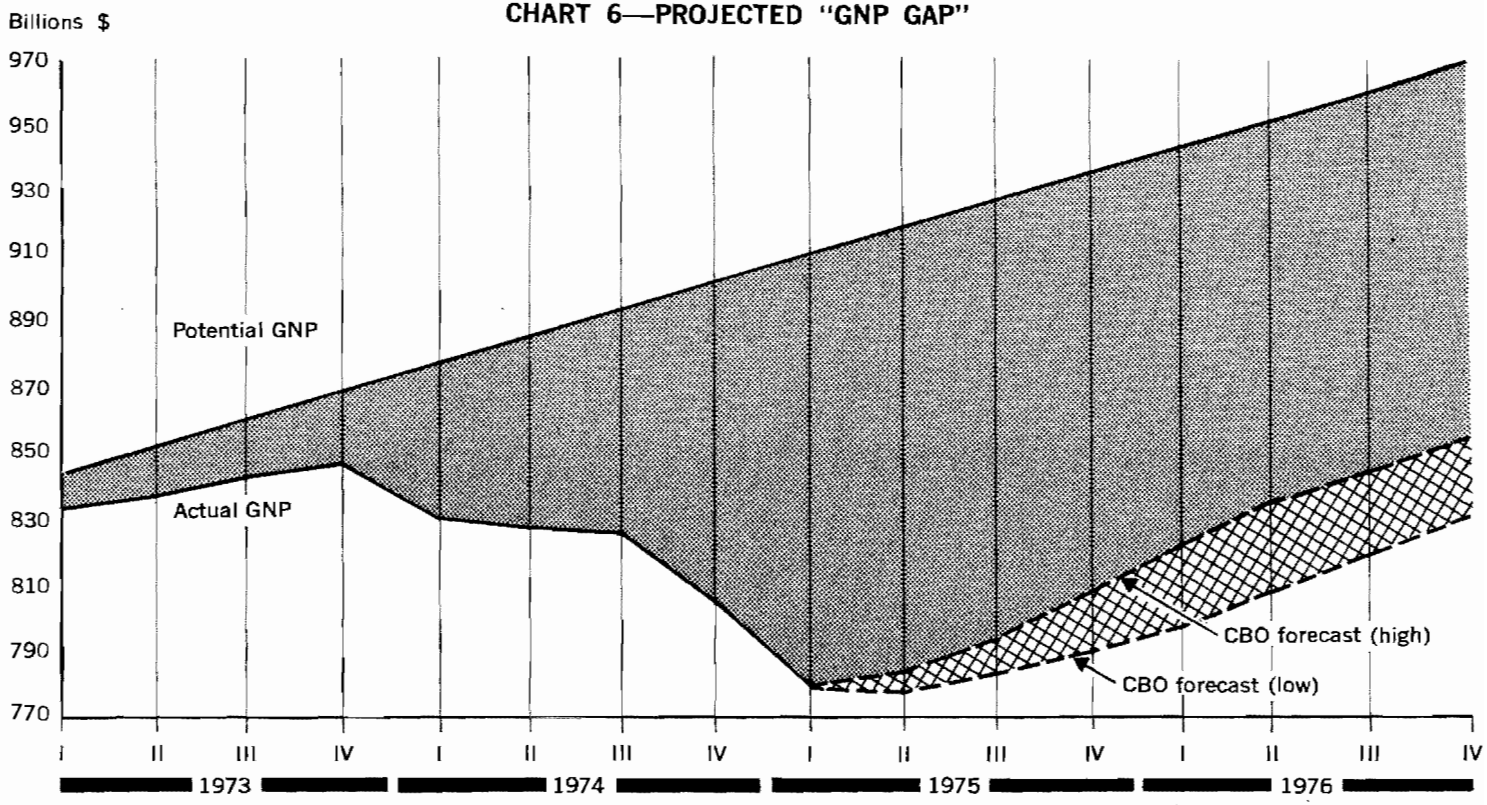
2. The three models are those of Chase Econometrics; Data Resources, Inc.; and Wharton Econometric Forecasting Associates, Inc.

TABLE 3--ECONOMIC PROJECTIONS

	Actual 1975:I	Range: 1975:IV	Range: 1976:IV	Percent Change 1975:IV to 1976:IV
GNP (current dollars annual rate)	1417	1500-1530	1685-1735	+12.6-+14.0
GNP (1958 dollars, annual rate)	780	790-805	830-855	+5.0-+6.0
General Inflation Rate (GNP deflator, 1958 = 100)	182	190-192	203-208	+6.5-+8.5
Consumer Price Index (1967 = 100)	157	163-166	175-180	+6.3-+8.7
Unemployment Rate (percent)	8.4	8.8-9.2	7.8-8.2	-- --

Note: The projections in the table are based on three quarterly models of the economy: those of Chase Econometrics; Data Resources Inc.; and Wharton Econometric Forecasting Associates. As explained in the text, identical assumptions about fiscal policy, monetary policy, and energy developments were introduced into each model. Unemployment rates in each of the resulting projections were lowered by .2 in the fourth quarter of 1975 and .1 in the fourth quarter of 1976 to reflect the labor intensiveness of special employment programs assumed to be enacted by the Federal government.

CHART 6—PROJECTED "GNP GAP"



Measurements in constant (1958) dollars.

Source: Potential and actual GNP—*Business conditions Digest*, May, 1975.
Forecasts—Congressional Budget office.

to $855 billion produces a small decline in the GNP gap, with the ratio of actual to potential GNP rising to 86.8 percent from its low of 85.2 percent in the third quarter of 1975.

These projections suggest that, although real output will grow and unemployment decline over the next eighteen months, full recovery is a long way away. Potential GNP, according to the President's Council of Economic Advisers, will increase by an estimated 4 percent per year. Although CBO has not made formal long-range projections, it is clear that even if actual real GNP grows by around 6.5 percent each year, the GNP gap will close by only 2.5 percent each year. The historical relationship between the gap and unemployment implies that the unemployment rate will fall by 0.8 each year, and so in five years would still be well above 5 percent. Such a pattern of recovery is essentially the one projected in the President's Mid-Year Budget Review, which set the unemployment rate for 1980 at 5.1 percent and projected unemployment of 7.2 percent in 1977.

CBO's projections are moderately less optimistic than the forecasts in the President's mid-year budget review, although even those projections envision an unemployment rate as high as 7.6 by the end of 1976. They are slightly more optimistic than forecasts based on the money supply-GNP relationship developed by the Federal Reserve Bank of St. Louis. According to that relationship, growth in the money supply at a rate of 8.5 percent starting in the first quarter of this year would produce a money GNP of $1,655 billion in the fourth quarter of 1976, a figure below the $1,685-$1,735 billion range projected in the table.

The inflation rates projected by CBO during 1976 are an annual rate of 6.5 to 8.5 for the general inflation rate (the GNP deflator) and 6.3 to 8.7 for the Consumer Price Index. Like the unemployment figures these are improvements over last year's performance but remain high by historical standards. The average annual rate of increase during 1946-74 was 3.7 for the deflator and 3.4 for the CPI.

The fact that inflation rates, although declining, remain fairly high in the forecast is influenced heavily by projected energy developments. An increase in the price of oil both raises the rate of inflation and raises the unemployment rate by reducing purchasing power in the hands of the public. In the very long run the higher unemployment rate may induce a lower rate of inflation, as the effect of increased oil prices is offset by lower wage increases that are caused by unemployment. But that is a period much longer than the two-year span in Table 3.

The oil/energy situation is the major factor accounting for differences between the projections in Table 3 and those prepared by the House and Senate budget committees earlier this year. Indeed, apart from oil/energy effects, the projections in Table 3 closely resemble those of the budget committees', which forecast a turnaround and recovery at the time when there were fewer signs pointing in that direction than there are now.

CURRENT SIGNS OF RECOVERY

The CBO forecast of a slow return to full employment rather than a rapid recovery reflects underlying weakness in some sectors of the economy. While consumption spending is picking up, business investment is likely to remain sluggish for the next several months. And although there are signs that the deep recessions in the housing and automobile industries are just about over, neither is expected to regain sufficient momentum to lead a strong recovery as they have in previous postwar recessions. Thus, while improvement in consumption is expected to keep the economy from a further downward slide, a stronger pickup in investment spending (including housing) would be needed for a more rapid recovery.

The energy situation poses added uncertainties for interpreting current signs of recovery, although there is no doubt that it has the potential for choking off a revival of economic activity. The prospect of more inflation coupled with a sizeable deflationary shock to consumers' purchasing power as a result of

rising energy prices is likely to produce an atmosphere of cautious expectations on the part of households and firms. This renders statistical forecasts based on past experience less useful than past forecasts.

Thus such statistical models need to be supplemented with judgments about strengths and weaknesses in the economy. This section discusses some of these strengths and weaknesses and points out potential roadblocks to the recovery that can be seen in the current statistics.

Trends in Output and Final Demand.
Industrial production continued to decline in real terms in April and May, at an annual rate of 3.2 percent. However, the falloff was much less than the 28 percent drop (annual rate) in the first quarter. A revival of consumer spending is beginning to offset the depressing effect on final demand of continued weakness in business and housing investment.

In May, personal incomes rose faster than the rate of inflation, reductions in withholding rates raised take-home pay, and tax rebates began to reach consumers. The value of retail sales rose 2.2 percent in May, the second month of increase. Auto sales increased in May and June, but remained 13 percent below the levels reported for the same period a year earlier. And measures of consumer confidence have improved since the lows registered late last year. On the basis of this evidence, consumer spending is likely to have a positive effect on the recovery; however, given high unemployment rates and the prospects of increased inflation caused by increased energy prices, the revival of consumer spending is likely to be moderate.

While consumer spending appears to be slowly picking up, business investment has continued to decline and the prospects for an early recovery are not very bright. By the first quarter of 1975, business fixed investment in real terms had fallen 13.2 percent from its peak in the second quarter of 1974. Exceptionally low capacity utilization rates together with the slow rate of recovery of final demand will not induce a

strong and early increase in purchases of equipment. The decline in corporate profits, off 38.8 percent in constant dollars since their peak in the third quarter of 1974, will have an added unfavorable effect on the liquidity position of many firms, and this may also impede a recovery of investment spending.

In May, the capital goods component of the industrial production index dropped another 1.6 percent after falling 8.2 percent in the first quarter. The Federal Reserve Board reported that production of all materials fell 1.4 percent in May, while steel production was off 10 percent. The reductions in production reflect both the cutback in spending for new investment projects as well as an inventory excess resulting from materials build-ups last fall when manufacturers feared materials shortages. When surveyed by the Commerce Department in April and May, U.S. businessmen had again reduced their capital spending plans for 1975; they now expect that 1975 expenditures will be only 1.6 percent above 1974, implying a decline in real (constant-dollar) terms. This is even lower than the 3.3 percent increase estimated earlier this year, which also implied a real decline.

A sluggish rate of recovery of business fixed investment would have three important consequences. First, investment could not be counted on as a strong component of aggregate spending to help pull the economy out of the recession. Second, low rates of investment now would result in lower rates of productivity growth and slower trend rates of growth in real output in the future. And third, low rates of investment would aggravate the problem, foreseen by some analysts, of a "capital shortage" which might stifle the recovery before full employment is reached.

Housing. The housing industry has been one of the most hard-hit sectors of the economy in this recession. The number of new housing starts by the end of 1974 had fallen to about 40 percent of the early 1973 level. Despite the fact that more favorable mortgage market conditions should be conducive to a reversal of the

housing decline, and despite signs of an upturn in the production of new houses in April and May, the prospect of a sharp recovery appears small at this time.

With declines in short-term interest rates, savings have been flowing back into thrift institutions, and savings and loan associations reported a significant increase in mortgage lending in April and May. Housing starts rose very slightly in April, after a long decline, but increased substantially in May to 1,126,000 units, up 14.2 percent from 986,000 units in April. In addition, residential building permits turned up sharply. Some lift to housing activity may have been provided by the tax rebate on the purchases of existing new homes; sales of such homes rose sharply in April. But the housing industry still remains depressed, with housing starts in May being what a spokesman for the housing industry calls "the lowest rate on record for a May." Relative to a high of 2.4 million units at the beginning of 1973, recent levels of starts still look extremely low and the industry is continuing to be affected by a stock of unsold houses and condominium units estimated at over 600,000 in May.

Automobiles. Like housing, the automobile industry has been a traditional recovery sector; in previous postwar recessions, it has turned up before a revival in other areas. At present, however, it is experiencing structural problems as a result of the energy situation and changing environmental standards, which may reduce its potential for leading a revival. Another problem of the auto industry related to energy developments is that small car imports have gained a competitive advantage over domestic makes, despite the devaluations of the dollar that have made imported automobiles more costly in relation to domestic products. A significant fraction of imports are produced by overseas subsidiaries of domestic industry, but increasing the demand for even those imports has its direct impact on foreign, not American, labor.

Another roadblock facing the automobile industry has to do with foreign exchange rates. If the value of the

dollar rises in the near future as many observers expect, the dollar price of foreign-made goods (including foreign cars) will tend to fall, and the competitive position of domestically produced cars will deteriorate.

To summarize, the outlook is for an end to the decline in real output and spending in the second or third quarter and an upturn later this year. The strongest boost to aggregate spending in the private sector is likely to come from consumers as the full effect of the tax rebates and reductions is felt in the second and third quarters. However, if the effect of higher energy prices on consumers' real incomes is not offset, the anticipated beneficial effects of the recently enacted tax measures on consumer spending may not materialize.

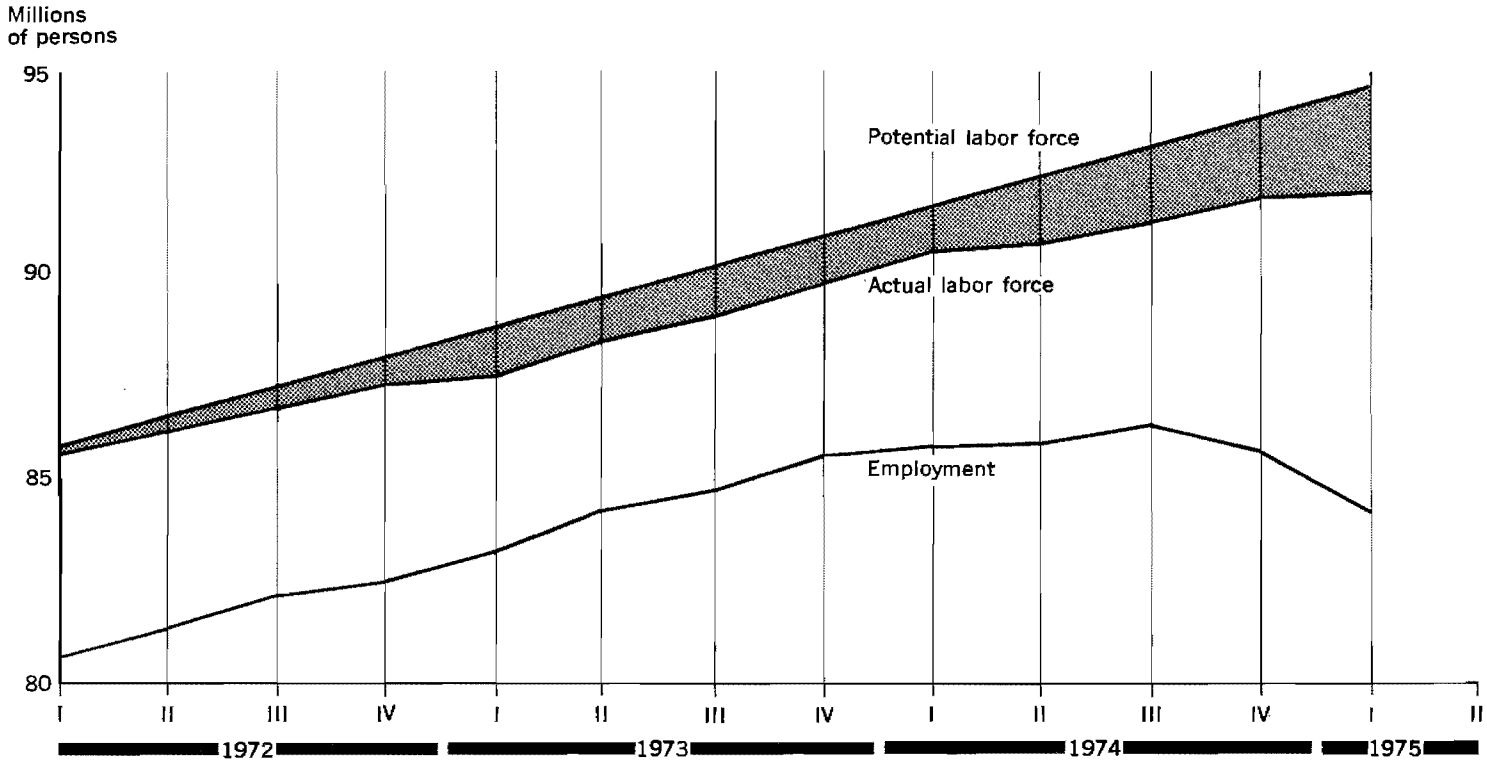
Employment and Earnings

The sharp decline in employment that occurred as a result of production cutbacks began in the fourth quarter of 1974. As shown in Chart 7, there was a decline of 2.6 million jobs as employment dropped 3 percent.

The decline seems to have ended--total employment picked up slightly in April and May. The unemployment rate, however, is likely to remain above 9 percent throughout 1975.[3] Even employment increases of 4 percent in the last half of 1975, will not affect the unemployment rate if the labor force also grows at the same rate. Normal population growth, coupled

3. In June, according to the Commissioner of Labor Statistics, it appears possible that a decline in the unemployment rate will be reported that does not represent the true unemployment situation. The problem arises from a seasonal adjustment technicality that can cause considerable distortion in June. The Commissioner has suggested, "If the unemployment rates for May-June-July are averaged, one would have a better measure of the unemployment situation during that period."

CHART 7—LABOR FORCE AND EMPLOYMENT, 1972–75



Source: Employment and actual labor force—U.S. Dept. of Labor, Bureau of Labor Statistics;
Potential labor force—Congressional Budget office.

with a return of previously discouraged workers, could produce an increase in the number of new job seekers that would just about offset the number of new jobs.

Although total employment increased in April and May, about half of this gain was in agriculture, and most of the rest in government, private household service and self-employment. In the private industrial sector, employment is likely to remain depressed for a considerable time. Employment in manufacturing and contract construction, for instance, is down by 12.3 percent over its peak in mid-1974 and is not expected to regain earlier levels until 1977 or later.

Income Trends. Inflation and unfavorable labor market conditions have resulted in a deterioration of workers' real incomes in this recession. Per capita personal income fell 4.0 percent in 1974 in real terms and another 2.9 percent at an annual rate in the first quarter of 1975.

A further cut in households' spending power was caused by the built-in tax increases that occur during inflation. Tax payments increase faster than income in an inflation because higher money incomes push households into higher tax brackets, even if real incomes are falling. Per capita disposable income (personal income less personal tax payments) dropped 5.2 percent during 1974 in real terms. In the first quarter of 1975 it fell another 3.2 percent at an annual rate. Thus, households' disposable incomes actually fell by more than pretax income during this recession, indicating that the progressive personal tax system operated as a destabilizer rather than having its usual stabilizing effect.

Real income has increased slightly in recent months, although it has a long way to go to regain prerecession levels. Real spendable earnings--the after-tax income of a production worker with three dependents in the private nonfarm economy--rose 4.4 percent in May, due primarily to the reduction in income tax withholding. However, both real personal income and

real spendable earnings are still lower than they were this time last year. Real personal income is 4.8 percent below its prerecession peak, and real spendable earnings remain 6.6 percent below their former high.

CHAPTER III
THE IMPACT OF ALTERNATIVE POLICIES

The Federal government can affect the level of economic activity and inflation through two traditional sets of instruments: (1) fiscal policy, which involves taxing and spending and the resulting deficit or surplus in the Federal budget; and (2) monetary policy, which involves the rate of change in the money supply and the level of interest rates. The first two sections of this chapter discuss these sets of instruments in turn, describing recent developments and offering estimates of the probable impact of some alternative policies.

In the last few years, however, it has become clear that another set of developments, not entirely controlled by U.S. government policy, could have major effects on both employment and inflation; these are developments with respect to the price of energy, especially oil. The third section of this chapter discusses how oil prices impact upon the economy and what the effects of prospective new developments are likely to be.

FISCAL POLICY

Recent Changes in Tax Policy

In March of this year, the Congress enacted, and the President signed into law, a large tax cut designed to stimulate the lagging economy. The tax cutting provisions of the Tax Reduction Act of 1975 are expected to lower personal income tax payments and corporate tax liabilities by about $20.3 billion in 1975 and $5.2 billion in 1976, according to the Department of Commerce.

The reductions in personal taxes take a variety of forms. Foremost is the 10 percent rebate on income

taxes paid for 1974; rebate checks totaling approximately $8.1 billion recently have been mailed to taxpayers. 1975 tax liabilities are reduced about $7.8 billion by increases in standard deductions, and by a $30 tax credit for each taxpayer and dependent. The act also incorporates several innovative ways of cutting taxes, each involving small amounts of revenues. Purchasers of homes either under construction or built but unsold as of March 25 are eligible for a credit on 1975 taxes of 5 percent of the purchase price, up to a maximum of $2,000. Families with low incomes are to receive a special "earned income credit" of 10 percent of earnings up to a maximum of $400; the credit is scaled down as income rises, and vanishes entirely at $8,000.

Tax liabilities of corporations in 1975 are lowered in two ways. First, profit taxes are cut an estimated $1.5 billion by lowering tax rates to 20 percent on the first $25,000, 22 percent on the next $25,000, and 48 percent thereafter. (The rates applicable in 1974 were 22 percent on the first $25,000, and 48 percent thereafter.) Second, the tax credit for investment expenditures rises from 7 percent for most corporations and 4 percent for utilities to 10 percent for all corporations. Eligible equipment acquired and placed in service between January 1975 and January 1977 qualifies for the credit: The Commerce Department estimates the revenue loss at about $2.8 billion in 1975 and $3.4 billion in 1976.

The act also includes some provisions to raise corporate taxes, chiefly by eliminating percentage depletion for major oil companies, which are estimated to yield $1.7 billion and $2.6 billion in 1975 and 1976 respectively.

While the legislation installs as permanent features of the tax code those parts of the act that increase taxes on corporations, it explicitly specifies that the tax cuts for both individuals and corporations are temporary. However, the First Concurrent Resolution provides for extension of the tax cuts.

Table 4 shows the estimated effect of the tax reduction provisions of the act on Federal revenues, quarter-by-quarter during 1975 and 1976, in the top line. The second line assumes that each of these provisions except the 5 percent credit for home buyers is extended through the end of 1976. In either case there is a noticeable "bulge" in the second quarter of 1975, reflecting the importance of the rebate in the total tax package.

It must be emphasized that the indicated tax reductions are only estimates. For example, the amount of revenue lost by lowering withholding rates will depend on the behavior of taxable income. Economic forecasting is always uncertain, even in the best of times; these difficulties become particularly acute when the economy is near a cyclical turning point, as it now appears to be.

The tax cut is large, but care should be taken to put the numbers in perspective. First, it may be useful to compare the tax-cutting provisions of the Tax Reduction Act of 1975 with the corresponding provisions of the Revenue Act of 1964, the last big countercyclical tax cut. As may be seen in Table 5, the raw figures make the 1975 act look larger, but the "real" amounts involved--the volume of goods and services which people can buy with their reduced taxes--are much closer together. Further, the U.S. economy of 1975 is far bigger than that of 1964. Expressed as a fraction of GNP, the two tax cuts look strikingly similar. Relative to the size of the economy, they represent roughly equivalent amounts of fiscal stimulus. Yet at the start of 1964 the economy was in the midst of a strong recovery from a mild recession, whereas in March 1975 it was nearing the trough of the deepest recession of the postwar era. Moreover, the Revenue Act of 1964 made all of its tax reductions permanent features of the tax code. By contrast, as noted, all of the tax-cutting provisions of the 1975 act, particularly the rebate, are explicitly temporary. The income tax surcharge in 1968 is this country's only previous experience with a major

TABLE 4--ESTIMATED AMOUNT OF TAX REDUCTIONS
(in billions of dollars, seasonally-adjusted)

	1975 I	1975 II	1975 III	1975 IV	1976 I	1976 II	1976 III	1976 IV	Total in FY 75	Total in FY 76
1. Tax Reduction Act of 1975	0.9	11.2	4.1	4.1	1.7	1.7	0.9	0.9	12.1	11.6
2. Extension of Act through 1976	0.9	11.2	4.1	4.1	3.9	3.8	3.6	3.7	12.1	15.9

Source: Bureau of Economic Analysis.

TABLE 5--COMPARISON OF 1975 AND 1964 TAX CUTS

	1975 Act[1]	1964 Act[2]
Amount of Tax Cut in Current Dollars		
Personal	$18.5 billion	$9.1 billion
Corporate	4.3 billion	2.4 billion
Amount of Tax Cut in Constant (1964) Dollars		
Personal	$10.8 billion	$9.0 billion
Corporate	2.5 billion	2.4 billion
Tax Cut as a Percentage of Gross National Product		
Personal	1.2%	1.4%
Corporate	0.3	0.4
Tax Cut as a Percentage of Tax Receipts		
Personal	15.5%	17.8%
Corporate	11.4	9.0

Source: Bureau of Economic Analysis and Congressional Budget Office.

[1]First full year on liability basis.

[2]Since 1964 tax cuts were phased in over two years, figures refer to average of calendar years 1964 and 1965 on liability basis.

temporary tax change for countercyclical purposes, and there is some evidence that its temporary nature reduced its effectiveness.

Second, because we have a progressive income tax system, inflation automatically enforces an unlegislated tax increase each year by pushing taxpayers into higher brackets, and eroding the purchasing power of the standard deduction and per capita exemptions. As compared with a situation in which tax receipts rise only at the rate of inflation, rather than roughly one and one-half times as fast as at present, the unlegislated increases in personal taxes over FY 1974-76 will amount to an estimated $17.5 billion, nearly as much as the personal tax cuts embodied in the first full year of the act.

Expenditure Policy

The First Concurrent Resolution proposes Federal outlays for FY 1976 of $367 billion, which are about 13.4 percent higher than those for FY 1975. This is considerably less than the 20.6 percent growth in outlays between FY 1974 and FY 1975, but the difference is not quite so dramatic in real terms because the rise in prices, as measured by the general inflation rate (GNP deflator), is projected to be 11 percent for FY 1975 over FY 1974, but only 6.7 percent for FY 1976 over FY 1975. Thus, while the FY 1975 budget increases Federal outlays some 8.6 percent in real (1974 purchasing power) terms, the FY 1976 budget contained in the concurrent resolution represents a 6.3 percent increase in real terms. In this sense, the Congressional expenditure program is slightly less expansionary than last year's.

In his original budget message, the President requested outlays of $349.4 billion; but in the President's Mid-Session Review of the 1976 Budget, this total was raised to $358.9. The increase of $9.5 billion in requested outlays reflects both Congressional actions and Administration changes in programs and projections. Additional Congressional programs, and refusals to agree with program

reductions requested by the President, account for about $3.8 billion. Foremost among these is the Congress' refusal to "cap" the cost-of-living escalator provision for Social Security benefits at 5 percent; but the Congress also added funds for food stamps and highways. The remaining $5.7 billion reflects a number of expenditure increases in the Administration's program, such as public employment and extended unemployment benefits ($3.0 billion), more money for highways and veterans' benefits, and a marked increase in participation in the food stamp program ($2.3 billion).

As compared to FY 75, the President's mid-session budget represents an increase of 10.9 percent in nominal terms, or 3.9 percent in real terms. By contrast, his February budget called for an 8.0 percent increase in nominal outlays, only 1.2 percent in real terms.

Comparing the Congressional budget in the concurrent resolution with the President's budget in his mid-session review reveals an $8.1 billion discrepancy in outlays. It should be remembered, however, that both the Congressional and Presidential budgets are estimates of expected outlays, based on projections of both the state of the economy and the extent of participation in the various Federal programs, and these estimates are subject to error. A major difference in the spending figures between the Congress and President comes in their estimates of receipts from leasing oil rights on the Outer Continental Shelf. The Administration estimates this item, which counts as a deduction from outlays in the "undistributed offsetting receipts" function of the new budget breakdown, as $6.9 billion in FY 1976, while the Congress estimates it as $2.9 billion. This discrepancy alone, which is a difference in projections rather than in programs, accounts for half the difference between the outlay figures given by the President and by the Congress. It is interesting to note that the Administration reduced its original estimate of revenues from this source by some $2.7 billion in

its mid-session review, noting that this "indicates the difficulty of projecting what bidders will pay for leases of uncertain value."

The important difference between the two budgets involves allocation of the total, rather than differing judgments about how large the total should be. Table 6 compares the Administration and Congressional budget expenditure estimates. The President is requesting considerably more than the concurrent resolution allows in the areas of national defense and "allowances." The latter is almost entirely attributable to offsetting payments included in the President's energy package. By contrast, the Congressional budget allows more spending than the Administration has requested in the areas of natural resources, commerce and transportation, community and regional development, and education, manpower, and social services.

The Federal Deficit

The first thing to be said about the Federal budget deficit for FY 1976 is that it will be very large. In absolute terms, the budget deficits in calendar years 1975 and 1976 will undoubtedly be the largest ever recorded. Even as a percentage of GNP, it appears that the deficits will be the biggest since just after World War II.

The next thing to be said is that estimating the precise magnitude of the deficit is difficult; as previously noted, figures on both budgetary outlays and receipts are estimates, each subject to error. A principal source of error, though certainly not the only one, is uncertainty over the level of economic activity during the coming fiscal year. A rough rule of thumb is that the Federal deficit increases by $15 billion to $16 billion for each one point increment in the unemployment rate. This is due principally to the responsiveness of tax receipts, especially personal and corporate income taxes, to economic conditions, but also to the fact that certain transfer payments, particularly unemployment

TABLE 6--ADMINISTRATION AND CONGRESSIONAL BUDGETS FOR FISCAL YEAR 1976 COMPARED BY FUNCTION (UNIFIED BUDGET)
(in billions of dollars)

Budget Function	President's Mid-Session Budget Review	First Concurrent Resolution
National Defense	$ 94.1	$ 90.7
International Affairs	5.5	4.9
General Science, Space and Technology	4.6	4.6
Natural Resources, Environment and Energy	10.3	11.6
Agriculture	2.0	1.8
Commerce and Transportation	15.7	17.5
Community and Regional Development	6.1	8.65
Education, Manpower and Social Services	16.8	19.85
Health	29.0	30.7
Income Security	122.8	125.3
Veterans' Benefits and Services	17.1	17.5
Law Enforcement and Justice	3.3	3.4
General Government	3.2	3.3

(continued on next page)

TABLE 6 Continued--ADMINISTRATION AND CONGRESSIONAL BUDGETS FOR FISCAL YEAR 1976 COMPARED BY FUNCTION (UNIFIED BUDGET)
(in billions of dollars)

Budget Function	President's Mid-Session Budget Review	First Concurrent Resolution
Revenue Sharing and General Purpose Fiscal Assistance	$ 7.3	$ 7.2
Interest	34.4	35.0
Allowances	6.8	1.2
Undistributed Offsetting Receipts	-20.1	-16.2
TOTAL UNIFIED BUDGET	$358.9	$367.0

Source: House and Senate budget committees.

benefits, rise when economic activity is falling. An error of 0.3 percent in the FY 76 unemployment rate, which is well within the realm of possibility, would imply a change in the deficit of about $5 billion.

The President's mid-session review shows a deficit of $59.9 billion arising from $358.9 billion in spending and $299 billion in receipts. The First Concurrent Resolution projects a deficit of $68.8 billion, with outlays of $367 billion and receipts of $298.2 billion. The discrepancies on the outlay side have already been discussed.

The almost-identical revenue figures conceal some important differences. The Congressional budget includes extension of the Tax Reduction Act through the end of FY 1976 at a revenue cost of about $4.3 billion. It also fails to include the President's energy tax proposals, except for the $1 per barrel import duty that was in effect when the concurrent resolution was considered; this reduces net revenues an additional $4.5 billion or so.[4] About $1 billion of this revenue loss is assumed to be recouped, in the resolution, by tax reform, leaving a shortfall of nearly $8 billion in receipts. Yet the budgets show the Congress lower on revenues by only $0.8 billion. The large discrepancy reflects different economic assumptions in estimating personal and, especially, corporate tax payments; the assumptions underlying the concurrent resolution are more optimistic than those of the Administration. The important point is that, apart from these estimating differences, the Congressional budget includes almost $8 billion less in tax receipts.

It should not be forgotten that by far the most important cause of the deficit is the recession. The Office of Management and Budget now estimates that

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4. This estimate is based on the net tax increase implied by the energy program in the mid-session review. The energy package also affects the expenditure side of the budget.

if the economy were operating at 4 percent unemployment during FY 76 instead of at roughly 9 percent as now expected, the President's unified budget would show a surplus of about $7.2 billion. Given the larger deficit in the Congressional budget, this suggests that the budget in the concurrent resolution would be approximately in balance at 4 percent unemployment.

Impacts of Alternative Fiscal Policies

This section reports CBO estimates of the effects of alternative fiscal policies on the behavior of the economy over the next eighteen months. They are judgmental estimates based on the results obtained with the three statistical models previously mentioned, and are subject to the usual uncertainties surrounding such estimates.

In conformity with the First Concurrent Resolution, our basic projections for the next eighteen months (see Table 3, p. 28) are predicated on an extension of the temporary provisions of the Tax Reduction Act of 1975 for at least another year. Since this requires legislative action which is by no means certain at this point, it is worth asking what the consequences would be if the tax cuts expired as scheduled at the end of 1975.

This assumption amounts to an increase over the basic forecast in personal taxes for 1976 averaging about $8 billion, and an increase in corporate taxes averaging about $2 billion, both at annual rates. Table 7 summarizes our estimates of the effects of this action on GNP in current dollars, GNP in constant dollars, the general price level (as measured by the implicit deflator for GNP), the unemployment rate, fixed investment (business investment in equipment and structures plus residential construction), and the Federal deficit.

In general, the effects are not very dramatic over the short time horizon considered in this report. However, the impacts are still building at the end of

TABLE 7--ESTIMATED EFFECTS OF NOT EXTENDING THE TAX REDUCTION ACT OF 1975

Economic Variable	1976:II	1976:IV
Current Dollar GNP (in billions of dollars)	-$4.6	-$7.8
Real GNP (in billions of 1958 dollars)	- 2.5	- 4.0
Price Level (percentage change in GNP deflator)	0	0
Unemployment Rate (in percentage points)	0	+ 0.1%
Business Fixed Investment (in billions of dollars)	-$0.5	-$0.8
Federal Deficit (NIA basis) (in billions of dollars)	-$9.1	-$9.8

Note: All quantities are seasonally-adjusted; dollar magnitudes are expressed at annual rates.

1976 and will ultimately be much larger. GNP in current dollars would be roughly $8 billion lower by the end of 1976. Since the price level is virtually unaffected, the entire decrease represents a reduction in real output. Unemployment would not react for about six months, but would rise slightly late in the year and would be expected to rise even more later. The Federal deficit falls by roughly the amount of the tax increase, and the reduction in Federal borrowing is associated with a decrease in fixed investment. The reasons for this are discussed later in this section.

The impacts shown in Table 7 are attributable mainly to the personal tax hike; the small increase in corporate income taxes makes very little difference.[5] It should also be noted that our estimates assume that the tax increase does not alter Federal Reserve behavior. If, instead, the Federal Reserve reacted to the falling interest rates by curtailing the pace of monetary expansion, the drop in GNP would be greater, the Federal deficit would show less improvement, and eventually the price level would be affected.

Rather than raising taxes on January 1, 1976, the Congress might wish to explore the possibility of lowering tax rates further. The President has proposed substantial reductions in both personal and corporate income taxes as part of his energy plan. For these reasons, CBO next analyzed the impact of an immediate reduction in personal taxes of about $10 billion, and in corporate taxes of about $5 billion, over and above extending the provisions of the Tax Reduction Act. Apart from the one-shot rebate for individuals, this hypothetical tax cut is roughly equivalent to the provisions of the 1975 act.

Table 8 summarizes CBO's estimates of the effect of this additional tax cut on the same variables

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5. Even without extension of the act, the higher rates of investment tax credit will be in effect throughout 1976.

considered in Table 7. Averaged over the four quarters of 1976, nominal GNP is increased roughly $11 billion by the more stimulative fiscal policy, and unemployment is reduced by about .2-.3 percent, or perhaps 200,000-250,000 workers. The price level actually is slightly lower in late 1975 and throughout 1976, because of productivity gains. But the effect is very small and quickly dissipates; the rate of inflation is essentially unchanged after the first quarter of 1976. The aggregate demand effect of the tax cut is still building after eighteen months, and ultimately there will be a small inflationary price to pay.

Again, the "crowding out" hypothesis is contradicted, because fixed investment is higher despite the larger Federal deficit (about $12.5 billion more in FY 1976). As before, the preponderance of the effects shown in the table are attributable to the personal tax cut.

Like the preceding ones, these estimates assume that the Federal Reserve adheres to its original monetary policy. If it were to interpret the rise in short-term interest rates as signaling the need to accelerate the pace of monetary expansion, the increase in output would be substantially enhanced, and the higher tax revenues would cushion the impact on the Federal deficit of any tax cut. Accelerated monetary expansion might also lead to some additional inflation in later years.

These results suggest that, given the depressed state of the economy at the moment, expansionary fiscal policies to reduce unemployment would have only minor ill effects on the inflation rate. Two important caveats must be appended to this conclusion. First, this is not a characteristic of the U.S. economy all the time, but holds only when the economy is in a deep recession. Indeed, at other times the tradeoff is lopsided in the other direction, when even very small reductions in the unemployment rate can be achieved only at substantial inflationary costs.

TABLE 8--ESTIMATED EFFECTS OF ADDITIONAL
$15 BILLION TAX CUT, EFFECTIVE
JULY 1, 1975

Economic Variable	1975:IV	1976:II	1976:IV
Current Dollar GNP (in billions of dollars)	+$7.9	+$11.0	+$13.5
Real GNP (in billions of 1958 dollars)	+ 4.8	+ 6.7	+ 7.9
Price Level (percentage changes in GNP deflator)	- .1%	- .1%	- .1%
Unemployment Rate (in percentage points)	- .1	- .2	- .3
Business Fixed Investment (in billions of dollars)	+$1.1	+$2.0	+$2.2
Federal Deficit (NIA basis) (in billions of dollars)	+$13.3	+$12.3	+$11.7

Note: All quantities are seasonally-adjusted; dollar magnitudes are expressed at annual rates.

Given a reasonable recovery, the conclusion may not hold eighteen months or two years from now; nor does it necessarily hold for fiscal and monetary stimuli much stronger than those considered here.

Second, this basic conclusion, derived as it is from statistical models of the economy, is subject to more than the usual degree of uncertainty. As noted earlier, all of these models are based on statistical evidence about the U.S. economy acquired since World War II, and that experience differs greatly from the present situation. Thus, all the models can do is extrapolate the experience of the past--experience primarily with unemployment rates between 3.5 percent and 7 percent--into the circumstances of the present. The conclusion that unemployment can be reduced without aggravating inflation is precisely such an extrapolation.

Hence it is vital at present to supplement the "objective" conclusions of the models with informed judgment. The models may imply an overly sanguine view about the extent to which the economy can be pumped up without rekindling inflation, but there are common sense reasons for some optimism on this point.

One reason to expect inflation to be unusually insensitive to expansionary policy right now is that wage changes respond rather weakly to changes in unemployment when the level of unemployment is high. Recently, substantial slack in virtually every labor market has forced workers to accept the reductions in real wages which higher prices for food and energy made inevitable. Unions and workers are concentrating relatively more on job security, less on pay. It would thus be very surprising if pushing the unemployment rate down from 9 percent to 7 or 8 percent led to a marked escalation in wage demands.

In addition, though productivity has been a serious problem lately, it is one that promises to rectify itself once recovery begins. Output per manhour

always falls in a recession as firms cut back employment less than output. Because this has been a particularly severe recession, the deleterious effects on productivity have been correspondingly large. However, a silver lining in this cloud generally has appeared in the past when a recession ends. Given the excess labor which has been accumulated during the downswing, firms can increase production much more than employment during the upswing. While this keeps the unemployment rate high for a while, the increases on output per manhour have a salutary effect on prices as unit labor costs fall. There is every reason to believe that these productivity gains await us in late 1975 and early 1976. It is this phenomenon that leads the models to predict slightly lower prices following a fiscal stimulus.

A final determinant of the rate of inflation is the expected rate of inflation. Workers anticipating rapid hikes in prices are likely to demand larger nominal wage increases as compensation. Similarly, firms are likely to raise prices with greater alacrity when they anticipate rapid inflation, since they expect that their competitors are about to do likewise. Economists have always had difficulty coping with inflationary expectations because, aside from a few surveys, subjective expectations are simply not observed. Economists typically suppose that inflationary expectations follow the actual course of the inflation rate, though with a long lag. If this is true, then the recent slowing of inflation should pay future dividends as anticipated inflation falls. However, it should be noted that people may not let past inflationary experience slavishly dictate their expectations. If workers and firms interpret an aggressive monetary and fiscal policy stance, or tough talk by OPEC, as an indication that inflation will soon accelerate again, their behavior could make this a self-fulfilling prophecy. While this is a highly speculative scenario, and not based on hard statistical evidence, it is not inconceivable.

The tradeoff between government budget deficits and private investment also is a matter of concern at present. If the government ran a large deficit, it would be forced to the capital markets to borrow large sums of money, unless the Federal Reserve bought the bonds. In the private market, the argument goes, the Federal government would be competing with thousands of firms wishing to borrow to finance investment; inevitably, the risk-free government bonds would crowd corporate bonds out of the market, thereby hampering investment plans. The expectation is not that firms would literally be forced to withdraw their bond offerings for lack of a buyer, but that the additional supply of bonds offered by the government would lower prices on both corporate and government issues. The resulting increase in borrowing costs might dissuade some firms from embarking on capital-spending plans that looked attractive at lower interest rates. In this sense, government deficits could "crowd out" private investment.

It should be remembered, however, that as long as deficit spending succeeds in its goal of stimulating business activity an important counterforce, which we might call "crowding in," exists. Specifically, as sales rise and capacity utilization increases, businessmen typically add to their capacity in order to meet the anticipated rise in demand. Also, an improved sales picture does wonders for business confidence, and this also stimulates investment spending.

Which of these two effects is likely to predominate in the near-term future? The answer depends on several factors.

First, will stimulative fiscal policies actually increase output and employment? With so many idle resources, it seems likely that they will.

Second, how much will interest rates rise as a consequence of the huge Federal deficits? The evidence here suggests that a large Federal deficit, given the inhibition of the government against borrowing in the long-term market, promptly creates sharp

upward pressures on short-term interest rates, but does not raise long-term rates nearly as much, nor as quickly. Since corporate borrowing to finance investment is concentrated in the long-term credit market, the higher interest rates may not be that significant for corporate investment, at least in the short-run.

However, rapid boosts in short-term interest rates while long-term rates lag behind may, as in the past, cause serious problems for thrift institutions, and thus for the housing market in general; potential home buyers are more likely to be crowded out than business firms. Furthermore, long- and short-term interest rates are linked in the capital markets, so a sustained rise in short-term rates is certain to show up in long-term rates eventually.

Third, how is investment likely to respond to an improvement insales (which stimulates investment) coupled with a simultaneous rise in interest rates (which depresses investment)? Economists have studied and debated the relative sensitivity of investment to sales and interest rates for years. While controversy still exists, by now even the most devoted advocates of the importance of interest rates agree that the interest-sensitivity of investment spending is rather limited when there is so much spare capacity, and that the lags are long. By contrast, investment seems to respond strongly and promptly to changes in sales.

On balance, then, it appears likely that more investment would be "crowded in" by a stimulative fiscal policy than would be "crowded out," given the present state of the economy. The opposite conclusion might well be drawn if resources were more fully employed.

MONETARY POLICY

While this report is intended primarily to assist in the formulation of fiscal policy, it cannot ignore monetary policy, since the behavior of money and interest rates affects the influence of fiscal policy on output, employment, and prices. Monetary policy, of course, is formulated neither by the Congress nor by the Administration, but by the country's independent central bank, the Federal Reserve System, acting mainly through its Federal Open Market Committee (FOMC).

The workings of monetary policy lose some of their mystery if money is viewed as a commodity, but one which plays a particularly crucial role in our economy. The demand for money arises chiefly because it is needed to conduct the millions of daily business transactions that are the lifeblood of our economy. This makes it important that the supply of money be regulated so that its value is maintained.

The Federal Reserve System is charged with regulating the supply of money and also with the responsibility for maintaining orderly conditions in credit markets; that is, for moderating movements in interest rates. Unfortunately, these two objectives often clash.

The reason is not hard to discern. The short-term interest rate is governed by the usual laws of supply and demand. When economic activity is slack, as it recently has been, the demands for money and credit drop. In such a situation banks have less financial incentive to expand their loans, causing the money supply and interest rates both to fall as long as Federal Reserve policy remains unchanged. Conversely, when business activity picks up, a fixed Federal Reserve policy will result in a greater volume of loans, a larger money supply, and higher interest rates.

Of course the FOMC can, and does, exercise considerable control over both the supply of money and the rate of interest. By providing banks with more reserves, the FOMC can induce them to increase the supply of money by granting more loans at lower interest

rates. This normally stimulates business activity. Conversely, a "tight" monetary policy leads to both higher interest rates and a lower money supply, with a correspondingly depressing effect on GNP.

Given the ability to manipulate only the supply of money, and not the demand, the Federal Reserve is unable to achieve target values for both interest rates and the money supply, just as producers of ordinary commodities cannot dictate both the price and the quantities which consumers will buy.

Due to the importance of both short and long-term interest rates for economic activity, the FOMC historically has been more concerned with stabilizing interest rates than with the money supply. This policy stance was criticized relentlessly by many economists, especially the monetarists, because of the important long-run effects that the money supply has on the price level. Since 1970, the FOMC has specified targets for both a short-term rate of interest (typically, the Federal funds rate) and two monetary aggregates: M_1, the narrowly defined money supply (currency plus demand deposits), and M_2, the broadly defined money supply (M_1 plus commercial bank time deposits other than large certificates of deposit). However, there is a chasm between specifying targets and actually achieving them.

Recent evidence suggests that the Federal Reserve usually sticks closer to its interest-rate goal than to its money-supply goal when conflicts arise. Table 9 compares the actual money supply and the actual interest rate on Federal funds, month by month, with the "ranges of tolerance" that the FOMC specified as its targets. In twelve of the last sixteen months for M_1 and in eleven of sixteen months for M_2 the actual rate of growth of money has fallen outside the target range. The Federal funds rate, on the other hand, falls outside the target range in only seven of sixteen months.

The figures further indicate that monetary growth rates are higher than the targets when the Federal funds rate rises too high and lower than the targets when the funds

TABLE 9--FEDERAL OPEN MARKET COMMITTEE MONEY AND INTEREST RATE TARGETS

Month	Rate of Growth from Preceding Month (percent per year)				Level of Federal Funds Rate (percent)	
	M1		M2			
	Actual	Range of Tolerance	Actual	Range of Tolerance	Actual	Range of Tolerance
1 9 7 4						
February	10.2	3-6	11.9	6-9	9.0	8.75-10
March	9.6	6.5-9.5	9.9	9.5-12.5	9.4	8.25-9.5
April	6.3	5.5-8.5	8.3	6.75-9.75	10.5	9-10.5
May	4.4	3-7	4.6	5.5-8.5	11.3	9.75-10.75
June	10.9	3-7	11.7	4.5-7.5	11.9	11-11.5
July	1.7	3.5-7.5	5.1	5.5-8.5	12.9	11.25-12.25
August	0.4	2-6	4.7	4.5-7.5	12.0	11.5-13
September	0.9	4.75-6.75	3.0	5.5-7.5	11.3	11.5-12.5
October	3.9	3-6	8.7	5-7.5	10.1	10.5-12
November	8.9	4.75-7.25	8.2	5.75-8.25	9.5	9-10.5
December	3.4	6.5-9.5	3.8	8-10.5	8.5	8.5-10

(continued on next page)

TABLE 9 Continued--FEDERAL OPEN MARKET COMMITTEE MONEY AND INTEREST RATE TARGETS

Month	Rate of Growth from Preceding Month (percent per year)				Level of Federal Funds Rate (percent)	
	M1		M2			
	Actual	Range of Tolerance	Actual	Range of Tolerance	Actual	Range of Tolerance
1 9 7 5						
January	-8.9	5-7	4.0	7.5-10	7.1	7.5-9
February	5.7	3.5-6.5	9.8	7-10	6.2	6.5-7.25
March	11.6	5.5-7.5	12.5	6.5-8.5	5.5	5.25-6.25
April	4.3	5-7.5	7.9	8-10	5.5	4.75-5.75
May	11.9	6.5-9	14.2	9.5-11.75	5.2	4.75-5.75

Source: Federal Reserve Bulletin, various issues.

rate falls too low. There are two reasons for this. First, an unexpected surge in the demand for money--caused, say, by an upturn in economic activity--pushes up interest rates while simultaneously inducing profit-seeking banks to issue more loans and therefore supply more money. Second, the Federal Reserve may well react to a rapid hike in interest rates by providing the banks with more reserves so as to limit the rise. The reverse may happen when the demand for money falls.

Why does the Federal Reserve typically sacrifice its money supply goal in order to achieve (or at least come closer to) its interest rate goal? One simple hypothesis, which has been advanced by many Federal Reserve watchers, is that the FOMC attaches much more importance to interest rate fluctuations than it does to the growth rate of M_1, M_2, or any other monetary aggregate. Another hypothesis, equally simple though less frequently stressed, is that interest rates, which are monitored continuously and with great accuracy on the financial markets, are much easier to control than is the supply of money, which is observed only with a reporting lag in which data revisions are notoriously large. For example, preliminary data showed that the money supply grew at an annual rate of only 1.3 percent between March and April 1975, but this was subsequently revised to 4.7 percent. On the day it meets, the FOMC has up-to-the-minute and accurate data on interest rates, but it can only guess at the current money supply.

Whatever the reasons, an important consequence of this behavior is that movements in the money supply often mirror changes in the pace of business activity. Money growth rates were higher in each of the expansionary years 1971, 1972, and 1973, than in the recession years of 1970 and 1974. The average rate of growth in the money supply for the three expansionary years was about 7 percent, versus an average of about 5 percent for the two recession years.

Recent history illustrates the point. From June 1973 to June 1974 the rate of growth in the money supply

declined a full three percentage points from its growth rate over the preceding eighteen months. The resulting scarcity of money and credit, coupled with the buoyant demand for money, forced interest rates to record-high levels during the summer of 1974. Treasury bills traded as high as 9 percent, while Federal funds reached a peak of 13 percent. Rapidly falling demand as the recession picked up momentum probably accounted for part of the further decrease in monetary growth--to an astonishingly small 1.4 percent annual rate between June 1974 and January 1975. However, the Federal Reserve undoubtedly could have taken stronger actions to arrest the slide if it had so desired. In any case, this drastic monetary deceleration aggravated the continued deterioration in output and employment, while contributing to the gradual dampening of inflationary pressures.

The future course of money-supply growth depends principally on Federal Reserve behavior, though the anticipated revival of demand will play some role. Federal Reserve Chairman Arthur Burns, testifying on May 1 before the Senate Banking Committee, disclosed that the Federal Reserve plans to pursue a "moderate" policy, which he defined as a money growth rate between 5 percent and 7.5 percent in the twelve months from March 1975 to March 1976. Given the high observed growth rate of 9.3 percent during the first three months of this period (which is roughly the assumed rate of growth underlying the First Concurrent Resolution), staying within the target range requires an average rate of growth of no more than 6.9 percent for the remaining nine months.

Past experience suggests, however, that if economic recovery and increased borrowing from the Treasury threaten to push interest rates far beyond the stated range of tolerance, the FOMC may respond by permitting the money supply to grow more rapidly. At this writing interest rates have just ceased to decline and appear to be heading up. Large Federal deficits and a more buoyant economy could accelerate this movement, pushing the Federal funds rate well over 5.75 percent, the upper limit of the System's last announced range

of tolerance. This report's basic projections assume that upward movements in interest rates will induce the System to allow monetary growth rates of about 8.5 percent per year over the next eighteen months. The next section explores alternative projections predicated on faster or slower money growth.

Alternative Monetary Policies

It seems useful to give some indication of the probable sensitivity of economic activity in 1975 and 1976 to changes in monetary policy. Hence, the CBO investigated a hypothetical scenario of faster money growth which assumes that the money supply (M_1) grows roughly at a 10 percent annual rate, rather than the 8.5 percent rate which underlies our basic forecast. We have also studied a case of slower money growth, where the Federal Reserve manages to achieve the upper limit of its range of tolerance for monetary expansion, as outlined in Chairman Burns' May 1 testimony. More precisely, the growth rate of M_1 averages about 7 percent over the forecast period.

Table 10 displays our estimates of the effects of the "faster money growth" policy, while Table 11 does the same for the "slower money growth" case.

It will be noted that the effects of the easier monetary policy on output and employment are substantially greater than the corresponding effects of the $15 billion tax cut. Equally significant are the contrasting compositions of final demand. Whereas the tax cut concentrates its stimulus on consumer expenditures, with rather minor amounts of induced investment spending, the easy-money policy impacts about equally on consumption and investment.

TABLE 10--ESTIMATED EFFECTS OF
FASTER GROWTH IN MONEY SUPPLY

Economic Variable	1975:IV	1976:II	1976:IV
Current Dollar GNP (in billions of dollars)	+$2.0	+$8.5	+$20.8
Real GNP (in billions of 1958 dollars)	+ 1.5	+ 5.3	+ 12.0
Price Level (percentage changes in GNP deflator)	- .1%	- .2%	- .3%
Unemployment Rate (in percentage points)	0	- .1	- .3
Business Fixed Investment (in billions of dollars)	+$0.9	+$4.7	+$11.9
Federal Deficit (NIA basis) (in billions of dollars)	-$0.9	-$3.3	-$ 7.9

Note: All quantities are seasonally-adjusted; dollar magnitudes are expressed at annual rates.

That the faster rate of money growth in these models actually lowers the price level (though by small amounts), while reducing the jobless rolls by roughly 280,000 people by late 1976, is perhaps surprising. The reason is the same as in the case of the tax cut--transitory productivity gains--and we would not extrapolate this favorable performance on the inflation front far into the future. Eventually, inflation will be higher on account of the acceleration in monetary growth; but such inflationary costs apparently come after 1976.

Table 11 shows that the effects of slower money growth are very nearly, but not precisely, the mirror images of the effects of faster money growth. The impact on each variable is always in the opposite direction from the previous case. Typically, the restrictive monetary policy has slightly weaker effects at first, but slightly stronger effects eventually. In terms of end-of-1976 targets, we estimate that adherence to a 7 percent growth rate for the money supply would reduce GNP by about $25 billion, and cost 0.3 percent on the unemployment rate, while having a miniscule (and unfavorable) effect on inflation. There will be some payoff in terms of fighting inflation, but only several years beyond the forecast period. Slower money growth is much more effective than fiscal stimulus at "crowding out" private investment, and once again the impact on the Federal deficit is marked. It is striking that the deficit (though not the national debt) deteriorates just about as much under the tighter monetary policy with an unchanged budget policy as it does when taxes are cut by $15 billion (see Table 8).

TABLE 11--ESTIMATED EFFECTS OF
SLOWER GROWTH IN MONEY SUPPLY

Economic Variable	1975:IV	1976:II	1976:IV
Current Dollar GNP (in billions of dollars)	-$1.6	-$9.8	-$25.5
Real GNP (in billions of 1958 dollars)	- 1.1	- 5.2	- 12.8
Price Level (percentage changes in GNP deflator)	0	+ .1%	+ .1%
Unemployment Rate (in percentage points)	0	+ .1	+ .3
Business Fixed Investment (in billions of dollars)	-$0.5	-$4.7	-$12.8
Federal Deficit (NIA basis) (in billions of dollars)	+$0.6	+$3.9	+$ 9.7

Note: All quantities are seasonally-adjusted; dollar magnitudes are expressed at annual rates.

ENERGY DEVELOPMENTS

Recent and potential energy developments threaten another round of price increases which could undermine progress on both the inflation and unemployment fronts. The President has already imposed a second $1 per barrel import fee on crude oil and $.60 on petroleum products. The Administration has also proposed to decontrol the price of the 6.3 million barrels of domestic "old" oil used each day as well as the price of natural gas. In addition, the OPEC nations have indicated that they will increase the price of imported oil still further in October. They also are planning to abandon the dollar as the standard of value for oil prices, which would raise the dollar price of oil even further. Although it is not yet known by how much they will increase prices, estimates of $1, $2, and $4 per barrel have been mentioned. The basic forecasts in this report assume an increase of $2.25 per barrel, reflecting a $2 increase in October and an increase of $.25 when they abandon the dollar as the standard of value for oil prices.

All of these actual and potential changes in the energy situation are embodied in the economic forecasts summarized in Table 3. As noted in the discussion of the forecasts, it is the energy changes that account for the greater pessimism in those forecasts than in the April reports of the budget committees.

Projected Increase in Energy Prices

The sharp rise in oil prices in 1973-74 caused a severe shock to the world economy, setting off a deflation in consumer purchasing power which was a major factor contributing to the present recession.

The 1973 OPEC embargo and its aftermath raised the price of imported oil by about $7.50 per barrel. But since the embargo occurred when a substantial portion of domestic oil was subject to price controls, the effect on the average domestic price of oil was less, approximately a $5.35 per barrel increase. The combined effects of an added $1 per

barrel import fee on crude oil and $.60 on petroleum products, a $2.25 OPEC increase, and phased decontrol of domestic "old" oil over a two-year period would produce an increase of about $5.50 in the domestic price of oil by the end of 1976. Of this increase, about $2 is due to the rise in the price of imported oil (and corresponding increase in the price of domestic uncontrolled oil) and $3.50 would result from decontrol of domestic "old" oil.[6] Thus, the effects of the assumed 1975 developments on the domestic price of oil are approximately the same as those of the OPEC embargo of 1973.

Oil Prices and the Economy

How can inflation produce a contraction of economic activity? The answer to this paradox is best understood by considering the various ways that an increase in oil prices affects the economy:

(1) Inflation. A increase in oil prices affects composite price indices both directly and indirectly. First, since energy is one component of the Wholesale Price Index (WPI) a rise in the price of oil produces a direct increase in the WPI. Second, when oil prices rise, prices of substitutes like natural gas and coal also rise. Third, the prices of goods and services that use energy increase as higher energy costs are passed on to consumers. In addition, many wage contracts are tied to price indices via cost-of-living escalators, and so initial increases in prices generate second-round wage effects. A currently used rule of thumb is that for each $1 increase in the domestic price of oil, the deflator for GNP will rise by .5 percent. According to this formula, if oil rises $5.50 per barrel the GNP deflator will increase by about 2.75 percent, which is not far from CBO's estimate.

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6. For an explanation of crude oil prices, see the Addendum, page 79.

(2) Real Income Effect. Oil, like food, is a necessity that can be conserved on short notice only with great difficulty. While in the longer run, consumption patterns can be changed and substitutes can be found, in the short run there is very little choice but to spend more money to purchase oil when its price goes up.

Rising energy prices reduce the purchasing power of consumers. When OPEC raises the price, real income is redistributed from American households to oil exporting nations. Import fees redistribute real incomes from households to the government and to domestic producers of decontrolled oil. If prices of coal and natural gas also increase, as is likely to be the case, consumers' real incomes will fall even further. Corporations also feel the pinch of higher energy prices, but to some extent they pass the cost increases on to consumers and workers in the form of higher prices for finished goods and services and reduced employment.

The effect on purchasing power can be indicated by a simple example. Domestic oil consumption is roughly 16.6 million barrels per day or 6.06 billion barrels per year. If domestic oil prices increased $5.50 per barrel and consumption were not reduced, the initial impact would be $5.50 times 6.06 billion or $33 billion. Households and businesses, that is, would have to reduce nonoil outlays or savings by $33 billion to maintain their level of oil consumption. And this allows only for higher oil prices; if prices of natural gas and coal also increase, the cost would be closer to $40 billion. This would represent a direct loss of purchasing power almost twice as great as the increase provided by the recently enacted tax cut. A similar reduction in purchasing power in 1973 and 1974 occurred as a result of the OPEC embargo; the sharp cutback in real spending it produced was a major factor in the current economic downturn.

A useful way of viewing the effect of a sharp rise in energy prices is to compare it to the effect of a very heavy excise tax placed on a vital commodity. Imposition of excise taxes produces higher prices, which in turn have contractionary effects on output and real income. Restrictive fiscal and monetary policies may lessen the inflationary impact of an excise tax, but will intensify the contractionary effect on output and real income.

(3) Automatic Effects on Fiscal and Monetary Policy. Since government outlays are typically fixed in money terms, unexpectedly high inflation erodes their real value; that is, the volume of goods and services which they represent. In addition, if monetary targets are set in nominal terms, inflation reduces the stimulative impact of any set rate of money growth. The real value of the stock of money would be lower and interest rates higher, thus reducing spending for interest-sensitive components of GNP such as investment and housing. Hence, if not offset, inflation would make both fiscal and monetary policy more restrictive, contributing to the decline in aggregate spending.

(4) Balance-of-Payments Effect. Price increases on imported oil have a further depressing effect on the economy, since part of the national income of the importing country flows abroad. The 1973-74 round of price increases was concentrated on foreign oil, while the new increases that CBO projects for 1975-76 are mainly (although by no means entirely) due to domestic policies. Thus this aspect of the "oil problem," while not absent, should be less severe than in 1973-74.

Most of these effects are reflected in forecasts generated by statistical models of the economy. Rapid hikes in oil prices--or, for that matter, in any other price--cause more subtle problems, however, that the models ignore. For example, sharp movements in energy prices alter relative prices of consumer goods, with corresponding changes

in the pattern of demand. Some industries will be severely damaged (automobiles, for example), while others will probably benefit. In a well-functioning market economy, such dislocations will ultimately be ironed out, but knowledge that the problems are temporary does not make them any less burdensome while they are occurring. The adjustment period will certainly require transitorily higher unemployment.

On the other side, there are presumably benefits which will accrue from letting market forces operate in the domestic oil market; secondary and tertiary recovery should be encouraged, for example. The models ignore these benefits, simply treating decontrol like any other price increase. On this count, they overstate the harm done by energy developments.

Given the time constraints on this report, CBO was unable to incorporate all of these factors--or others that might be appended to the list--in its examination of the importance of energy. Of all the forecasts in this report the ones relating to energy are subject to the greatest uncertainty.

The Impact of a Rise in Oil Prices

The results reported in this section are an answer to the question: What are the effects on the economy of recent and prospective energy developments? To measure these effects the assumptions underlying our basic forecasts were changed by taking out:

--The additional import fee on imported oil imposed by the Administration on June 1, 1975;

--The $2.25 increase in the price of imported petroleum assumed to occur in October, 1975; and

--The two-year decontrol of "old" oil prices assumed to begin in October, 1975.

Comparison of the basic projections with projections omitting the energy developments provides measures of the impact of energy on the economy.

In the basic projections including the energy developments, a number of additional assumptions were made supplementing the three principal assumptions just mentioned. One such assumption was that the price of domestic "new" oil would rise in accord with any increase in the price of imported oil reaching this country, whether that increase were attributable to OPEC or to the Administration's import duties. Another was that the price of foreign oil reaching this country adjusts gradually to both the duty and the OPEC actions.

It was further assumed that other fuels would eventually rise in price, but that the price boosts for coal, natural gas, and electricity would proceed much more gradually than those for oil. This is because sharply higher oil prices would encourage more judicious use of energy and induce some oil customers to switch to alternative sources. However, the latitude for significant alterations in behavior is rather modest in the short run. Thus, in the projections, alternative fuels had still not caught up to oil by the end of 1976. If this assumption attributed too much inertia to the prices of coal, natural gas, and electricity, then the analysis underestimated the importance of the higher oil prices.

It is important to note that while natural gas prices were assumed to rise, deregulation of natural gas in interstate commerce was not assumed. The ceiling price at the wellhead for such gas was $.51 per million cubic feet (MCF) in January, but the actual transaction price in 1974 was only $.32 per MCF. Thus gas prices could, and no doubt would, rise even if the present ceiling were maintained. However, deregulation would probably mean a price hike many times as large as the anticipated rise in the price of oil. Transactions in

unregulated intrastate gas have been reported at prices approaching $2 per MCF, or about six times the price of regulated gas. And eventual parity on a BTU basis with oil selling around $15 per barrel would suggest a price of around $2.50 per MCF. Thus, deregulation implies an eventual price rise of several hundred percent, which was not incorporated into the simulations.

It should be stressed that the energy simulation is not a prediction, but merely a device to recreate what might have been a logical base projection two or three months ago. Comparing these simulations with the base projections is simply a way to estimate the impacts of the higher price of oil on economic performance. Table 12 displays the results. With higher prices and lower real output, the net effect on GNP in current dollars is minimal. The top line of the table strongly suggests that current dollar GNP is <u>not</u> the place to look for the impact of increases in the price of energy.

GNP in constant dollars, on the other hand, is affected dramatically. The adverse effect on real output, while negligible at first, is about two and one-half times as great as the estimated effect of a $15 billion tax cut by the end of 1976 (see Table 8). It is nearly twice as large as the effect of accelerating the rate of monetary expansion to 10 percent (see Table 10).

The models suggest that the coming increases in energy costs will raise the unemployment rate some .6 percent over the value it otherwise would have attained at the end of 1976. This is almost exactly the amount by which our unemployment forecast exceeds the budget committees' earlier forecasts. Again, it greatly exceeds the employment-creating impacts of either a $15 billion tax cut or a 10 percent growth in the money supply. In human terms, it means an additional half-million people out of work.

TABLE 12--ESTIMATED EFFECTS OF RECENT ENERGY DEVELOPMENTS

Economic Variable	1975:IV	1976:II	1976:IV
Current Dollar GNP (in billions of dollars)	-$0.1	+$0.8	-$ 2.0
Real GNP (in billions of 1958 dollars)	- 1.9	- 8.1	- 21.1
Price Level (percentage changes in GNP deflator)	+ 0.2%	+ 1.1%	+ 2.4%
Unemployment Rate (in percentage points)	0	+ .2	+ .6
Federal Deficit (NIA basis) (in billions of dollars)	-$1.7	-$2.9	-$1.6

Note: All quantities are seasonally-adjusted; dollar magnitudes are expressed at annual rates.

Inflation in 1976 is about 2.3 percent higher than it would be in the absence of higher energy prices, according to the models. By the end of 1976, the cumulated increase in the price level over the six quarters (as measured by the GNP deflator) is about 2.4 percent. Unlike monetary and fiscal policies at this juncture in our history, energy developments exercise a powerful and immediate effect on inflation.

The Federal budget deficit shows a slight improvement, mainly reflecting annual collections of nearly $2 billion from the higher import duties.

The earlier discussion mentioned several reasons why the estimates in Table 12 may be rather conservative. Another is that the forecast period ends only about a year after the assumed $2.25 per barrel OPEC price increase; because such a shock takes time to work itself through the system, there would probably be further effects in 1977. More importantly, the decontrol of old oil prices is assumed to occur gradually over a two-year period ending in the third quarter of 1977. This means that only about 63 percent of old oil has been decontrolled by the end of 1976; and, given the lags in the system, probably less than 50 percent of the ultimate effect of decontrol has shown up in economic variables.

Some perspective on this is provided by two recent studies of the Arab oil embargo of 1973 and the subsequent fourfold increase in the price of imported oil, an episode which some economists feel is comparable in magnitude to the coming price increases, though greatly compressed in time.

Using comparable, but certainly not identical, investigative techniques, two Federal Reserve economists estimated that the 1973-74 price hikes left real GNP about $16 billion lower after

five quarters, and prices about 2.6 percent higher. [7] These are quite comparable to the effects attributed to the next hike in oil prices, but their estimated effect on unemployment--an increase of 1.1 percent--is much higher.

Another recent study concluded that the oil embargo and its aftermath raised the price level about 1.5 percent to 2.6 percent after five quarters and lowered real GNP (in 1958 dollars) by about $21 billion to $23 billion.[8] These estimates coincide remarkably well with CBO's, though again a much greater effect on the unemployment rate--also 1.1 percent--was found.

Thus, while different techniques of analysis lead to somewhat different impact measurements, they all support the conclusion that oil price increases of the magnitude experienced in 1973 and possibly about to be experienced again have major adverse effects on both inflation rates and unemployment.

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7. James Pierce and Jared Enzler, "The Effects of External Inflationary Shocks," Brookings Papers on Economic Activity (1:1974), pp. 13-60. The price level referred to is the deflator for consumption expenditures, not the GNP deflator.

8. George Perry, "The Petroleum Crisis and the U.S. Economy," unpublished paper, 1974.

ADDENDUM

Prices of crude oil vary over a range, depending on quality, shipping costs and the like. The calculations made in this paper represent rough estimates based on data provided by the Federal Energy Administration and the Bureau of Mines.

In December 1974 the price of imported oil, including shipping and refiners' acquisition costs, was approximately $12.25 per barrel. The average domestic price of oil which represents a mix of domestic and imported oil was about $9.25. The first increase in import fees, enacted in February 1975 raised the price of imported oil another $.60 to $12.85 (since only about 60 percent of oil imports were subject to the $1 import fee). Under the assumption that uncontrolled domestic oil prices rose proportionately, the average domestic price would rise by about $.35 to $9.62. This increase was taken into account in the forecasts made by the budget committees in April.

Since then, the recently enacted increase in the import fee on oil raised the average price of imports another $.85. Added to this is the expected OPEC increase of $2.25 per barrel. These combined actions will raise the price of imported oil another $3.10 to around $15.95 per barrel. Imports and uncontrolled domestic oil account for 62 percent of domestic consumption. Assuming uncontrolled domestic prices rise to the international price, additional import fees and OPEC actions would raise the price of domestic oil by about $1.90 to $11.55.

If the roughly 6.3 million barrels per day of "old" oil now subject to a price ceiling of $5.25 per barrel are decontrolled, the rise in the domestic price would be

even greater. The President proposes to decontrol old oil at a rate of 4 percent per month beginning in September until all of it is decontrolled. This action would result in a rise of domestic prices to $12.11 by the end of 1975 and to $15.12 by the end of 1976. Thus, in eighteen months the domestic price of oil would have risen by $5.50 per barrel as a result of energy policies and OPEC actions.

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