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A Review of U.S. Macroeconomic Developments & Policies, 1946-78

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FOREWORD

A significant part of the General Accounting Office's work deals with the Federal programs and issues related to the overall performance of the U.S. economy, such as productivity, capital formation, employment, health, and international trade and finance. Another significant part of GAO's work involves reviewing programs that either influence or are strongly influenced by national economic activity.

These areas are studied because to determine whether a change in the growth of productivity has actually occurred one needs to see how productivity has typically varied over the course of the business cycle. Furthermore, the performance of the U.S. economy is affected by Federal employment programs, and the size of those programs is often influenced by the stage of the business cycle the economy is in. Thus, the relationship between these Federal programs and the performance of the U.S. economy runs in two directions. Not only does the need for such programs vary with the performance of the economy, but if the programs are effective the performance of the economy will improve.

Other examples of such mutual relationships are rates of inflation, unemployment, and capital formation. Changes in the average rate of capital formation influences the price and output performance of the economy. At the same time, however, permanent changes in average rates and variability of inflation and unemployment affect the rate of capital formation. Furthermore, the U.S. international trade balance is influenced very much by our rate of inflation and by the cyclical position of our economy relative to those of our major trading partners.

Thus, to help analyze issues or programs where national economic activity is a significant factor, GAO has prepared this special study to provide a background for considering current economic developments. The study traces the behavior since World War II of such key macroeconomic variables as interest rates, unemployment rates, and growth rates of output, money supply, and prices. Also described and analyzed in some detail are the fiscal and monetary policies pursued by the Federal Government.

The aim of this report is to provide a convenient data source on a limited but very important set of macroeconomic variables. Some explanation is provided showing how these variables helped to shape, and were shaped by, the Federal Government's macroeconomic policies. The expla-

nations, however, are not to be viewed as our judgments on issues, such as the impact of fiscal and monetary policy, about which economic researchers disagree. Several of these controversies are noted in the text.

We hope that analysts both within and outside the Federal Government will find this study to be a handy and useful reference on macroeconomic developments in the American economy since World War II.

Director,
Program Analysis Division

CONTENTS

TABLES

CHAPTER ONE

THE U.S. ECONOMY FROM 1946 TO 1960

This chapter discusses macroeconomic developments and policies from the end of World War II to 1960. The behavior over this period of aggregate output (measured, as is conventional, by real gross national product), unemployment, inflation, the behavior of capital formation, and the nation's international accounts, are described briefly. This discussion sets the stage for the more extensive sections that follow on the conduct of fiscal and monetary policy.

Output, Unemployment, and Inflation

As World War II drew to a close, the Federal Government promptly began to relax and remove its comprehensive program of controls on spending and prices established during the War. These controls had forced many businesses and households to accumulate large volumes of both liquid assets and unsatisfied wants. During 1946 and 1947, the end of controls resulted in a spending spree, and a rapid rise in prices as reflected by the producer and consumer price indexes and by the gross national product deflator. 1/

The consumer price index (CPI) rose by almost 25 percent during this 2-year period. The rise was even steeper in the implicit GNP deflator, a price index of the economy's entire output of goods and services (in contrast to the CPI, which is a price index only of the economy's output of consumer goods and services). The steepest rise, however, occurred in the producer price index (PPI) which rose 40.1 percent in 2 years. (See Table 1.)

In contrast, real GNP fell significantly as the Federal Government cut back sharply on its purchases of goods and services. These purchases fell from $264.3 billion in 1945 to $93.1 billion in 1946 and to $75.4 billion in 1947. 2/

Table 2 presents data on the unemployment rate and on real GNP for 1945-1960.

1/The producer price index was formerly known as the wholesale price index. The name-change occurred in April 1978 with the release of the data for March of that year.

2/Economic Report of the President, 1978, p. 259. (All dollars are constant 1972 dollars.)

Table 1

Consumer Price Index, Producer Price Index and Implicit GNP Deflator 1945—1960

	CPI (1967 = 100)	Percent Change	PPI (1967 = 100)	Percent Change	Implicit GNP Deflator (1972 = 100)	Percent Change
1945	53.9	—	54.6	—	37.99	—
1946	58.5	8.5	62.3	14.1	43.88	15.7
1947	66.9	14.3	76.5	22.8	49.70	13.1
1948	72.1	7.8	82.8	8.2	53.13	6.9
1949	71.4	-1.0	78.7	-5.0	52.59	-1.0
1950	72.1	1.0	81.8	3.9	53.64	2.0
1951	77.8	7.9	91.1	11.4	57.27	6.8
1952	79.5	2.2	88.6	-2.7	58.00	1.3
1953	80.1	0.8	87.4	-1.4	58.88	1.5
1954	80.5	0.5	87.6	0.2	59.69	1.4
1955	80.2	-0.4	87.7	0.2	60.98	2.2
1956	81.4	1.5	90.7	3.3	62.90	3.2
1957	84.3	3.6	93.3	2.9	65.02	3.4
1958	86.6	2.7	94.6	1.4	66.06	1.6
1959	87.3	0.8	94.8	0.2	67.52	2.2
1960	88.7	1.6	94.9	0.1	68.67	1.7

Source: *Economic Report of the President*, 1978.

The years 1948-1951 saw rapid fluctuation in both the inflation and the unemployment rates. Although the annual inflation rate for 1948 was between 7 and 8 percent, prices began to decline in September and 1949 was a recession year of falling prices and an unemployment rate of almost 6 percent. This recession, however, was short-lived; in 1950 real GNP grew at an annual rate of almost 9 percent. While the rate of inflation was low, the unemployment rate remained high. Then in 1951, the unemployment rate dropped sharply and inflation rates rose even more sharply because the decision to intervene in the Korean fighting had stimulated demand. "Remembering the scarcities and price increases of World War II, consumers rushed into the markets to get ahead of the hoarders." 1/

1/Lester V. Chandler and Stephen M. Goldfeld, The Economics of Money and Banking, Harper and Row, 1977, p. 563.

Table 2

Unemployment Rate and Real Gross National Product 1945—1960

	Unemployment Rate	Real GNP (billions of 1972 dollars)	Percent Change in Real GNP
1945	—	559.0	—
1946	3.9	477.0	-14.7
1947	3.9	468.3	-1.8
1948	3.8	487.7	4.1
1949	5.9	490.7	0.6
1950	5.3	533.5	8.7
1951	3.3	576.5	8.1
1952	3.0	598.5	3.8
1953	2.9	621.8	3.9
1954	5.5	613.7	-1.3
1955	4.4	654.8	6.7
1956	4.1	668.8	2.1
1957	4.3	680.9	1.8
1958	6.8	679.5	-0.2
1959	5.5	720.4	6.0
1960	5.5	736.8	2.3

Sources: *Historical Statistics of the United States, Colonial Times to 1970*, 1975; *Survey of Current Business*, Aug. 1978, p. 67; *Economic Report of the President*, 1978, p. 258.

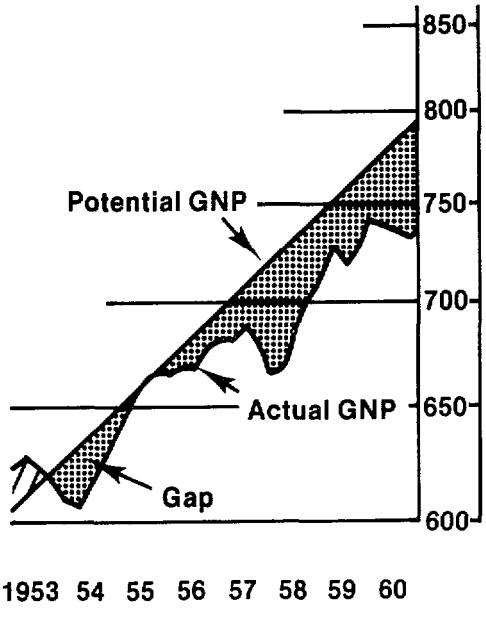
The Korean hostilities ended in 1953 and the remainder of the 1950s was characterized by slow economic growth, moderately high unemployment rates, and (especially by today's standards) general price stability. Real GNP growth exceeded 4 percent in only 2 years of the decade, the unemployment rate never fell below 4 percent after its rise to 5.5 percent in 1954, and inflation rates never exceeded 3 percent (and were often below 2 percent). Superimposed on this slow growth was a pattern of mild recessions and weak recoveries. Although the growth rates in real GNP of 6.7 percent in 1955 and 6.0 percent in 1959 appear substantial following the 1954 and 1958 recessions, these rates were followed by weak performances in the immediately subsequent years.

During this decade, the concept of the "GNP gap" was used to criticize the Eisenhower Administration's management of the economy. This gap connotes the difference between actual output of goods and services and the output that would have been produced had full employment been maintained. Choosing the middle of 1955 as a point at which the economy was at a cyclical peak, critics argued that real GNP, with sufficient

aggregate demand, could have grown at a constant annual rate of 3-1/2 percent from that point on. (Figure 1 provides data on the GNP gap for the decade of the 1950s.) During the 7 years, 1954 through 1960, owing to inadequate total demand in the economy, $166.8 billion in output of goods and services (evaluated at 1972 price levels 1/) were apparently lost to the economy.

Figure 1

GNP Gap
(billions of 1972 dollars)



Source: *Business Conditions Digest*, May 1976. p. 61.

Capital Formation

Annual data on real net stock of fixed nonresidential capital, both for the entire economy and for the manufacturing sector, are shown in Table 3.

1/Estimates of the GNP gap at the time the concept was introduced were not, of course, based on 1972 price levels. Originally the U.S. Commerce Department used 1954 price levels in reporting constant dollar GNP data. With a major revision of the National Income Accounts in 1965, a switch was made to 1958 price levels. The use of 1972 price levels was initiated by the Commerce Department in 1976.

Table 3

Real Net Stock of Fixed Nonresidential Capital 1948—1960 (billions of 1972 dollars)

	Total	Percent Change	Manufacturing	Percent Change
1948	334.2	—	97.2	—
1949	350.0	4.7	100.3	3.2
1950	367.5	5.0	102.6	2.2
1951	385.9	5.0	107.4	4.6
1952	401.1	3.9	111.5	3.8
1953	418.3	4.3	115.1	3.2
1954	432.6	3.4	118.6	3.0
1955	451.3	4.3	121.9	2.8
1956	472.2	4.6	127.5	4.6
1957	492.3	4.2	132.7	4.1
1958	503.3	2.2	133.9	0.9
1959	517.0	2.7	133.7	-0.1
1960	533.0	3.1	134.7	0.7

Source: *Survey of Current Business*, April 1976, p. 49.

Annual growth rates of both series were reasonably constant until 1958 when they fell precipitously. The low rates of capital formation that occurred at the end of the decade were undoubtedly related to the inadequate aggregate demand that gave rise to the GNP gap of the period.

Balance of Payments

Throughout 1946-60, the trade or merchandise balance was in surplus. (See Table 4.) However, the magnitude of the annual surplus and its direction of change from the previous year varied a good deal. Since, as we have seen, there was also a good deal of cyclical movement in the domestic economy, a plausible hypothesis is that the trade surplus was lower in years of domestic prosperity; in those years, U.S. demand for imports would be higher. A crude test of this hypothesis suggests that while the trade surplus and the annual percentage growth rate in real GNP are somewhat associated, the link is certainly not very tight. 1/

1/The correlation coefficient between the two series is -0.54.

Table 4

Merchandise Exports and Imports and Various International Balances (millions of dollars)

	Merchandise Exports	Merchandise Imports	Merchandise Balance	Balance on Goods and Services	Balance on Current Account	Overall Balance on Liquidity Basis
1946	11,764	5,067	6,697	7,807	4,885	993
1947	16,097	5,973	10,124	11,617	8,992	4,210
1948	13,265	7,557	5,708	6,518	1,993	817
1949	12,213	6,874	5,339	6,218	580	136
1950	10,203	9,081	1,112	1,892	-2,125	-3,489
1951	14,243	11,176	3,067	3,817	302	-8
1952	13,449	10,838	2,611	2,356	-175	-1,206
1953	12,412	10,975	1,437	532	-1,949	-2,184
1954	12,929	10,353	2,576	1,959	-321	-1,541
1955	14,424	11,527	2,897	2,153	-345	-1,242
1956	17,556	12,803	4,753	4,145	1,722	-973
1957	19,562	13,291	6,271	5,901	3,556	-578
1958	16,414	12,952	3,462	2,356	-5	-3,365
1959	16,458	15,310	1,148	310	-2,138	-3,870
1960	19,650	14,758	4,892	4,040	1,732	-3,677

Sources: *Economic Report of the President*, 1978, p 368; *Business Statistics, Supplement to the Survey of Current Business*, 1967, p. 12

Table 4 also provides data on the overall balance on goods and services which, in addition to merchandise trade, takes into account military expenditures, receipts and payments of income associated with international investments, and expenditures on international transportation and travel. The surplus in the goods and services balance exceeded the trade balance in every year through 1951, but was smaller than the trade balance in all subsequent years. The major explanation for this pattern was the growth of foreign military expenditures that occurred after 1950. From an average level of $0.6 billion in the years 1946-50, these expenditures jumped to $1.3 billion in 1951, $2.1 billion in 1952, $2.6 billion in 1953 and 1954, and an average of $3 billion in the next 6 years.

The balance on current account adds to the overall balance of goods and services the net balance of private and government unilateral transfer payments to foreign countries. The balance on current account was negative in most years after 1950, indicating that private and Government transfer payments from the United States to other countries exceeded such payments from other countries to the U.S. by more than the amount of the positive balance on goods and services. The (negative) net balance of

transfer payments was largest in 1949, 1950, and 1951. Presumably this is explained by payments associated with the Marshall Plan.

Finally, the overall balance of payments (arrived at by adding the change in U.S. official reserve assets to the change in liquid liabilities to all foreigners 1/) was negative in all years but one after 1950, and always by a considerably larger margin than the current account balance indicating that the 1950s were years of large net capital out-flows.

FISCAL POLICY 1945—1960

Fiscal actions are those which change the Government's overall budget position, its spending and revenue totals and the resulting surplus or deficit. Actions which increase spending relative to revenue have an expansionary effect on the economy; actions which increase revenue relative to spending have a contractionary impact. This section begins with a discussion of two preliminary considerations. The first is the question of how the effect of fiscal actions on the economy is to be measured. It is shown that the state of the actual budget is not a good measure of this impact because the cyclical position of the economy has more of an effect on the actual budget than vice versa. To abstract from this effect, economists use the concept of the full employment budget.

The second preliminary consideration is to describe the Employment Act of 1946, which legitimized the modern role of fiscal policy as an economic stabilizer. Following that description, the remainder of this section describes the actual conduct and effects of fiscal policy from 1947 to 1960.

Full Employment Surplus Is a Better Measure of Fiscal Policy

Fiscal policy can be measured using either the actual or the full-employment budget surplus (or deficit). This report analyzes data on both, although the full-employment surplus is generally considered the more accurate measure.

The actual budget surplus or deficit, the difference between total Federal revenues and expenditures, does not accurately indicate whether changes in the Federal budget are having an expansionary or contractionary influence on the economy. The Government does not determine Federal tax revenues; it sets income tax rates. Revenues thus depend on actual income. So the state of the actual budget, in addition to influencing the

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1/Data are not available for the pre-1960 period on three measures of the overall balance of payments that were reported quarterly by the U.S. Commerce Department between 1971 and 1976: the balance on current account and long-term capital, the net liquidity balance, and the official reserve transactions balance.

economy's cyclical position, is also determined by it. This point becomes most apparent in recessions. For example, the 2-year swing of $16.4 billion from an actual surplus of $6.1 billion in 1956 to an actual deficit of $10.3 billion in 1958 was not the result of any cut in taxes; rather, it was the result of a reduction in tax revenue caused by the recession of 1957-1958.

In place of the actual budget surplus, the full-employment budget surplus is often proposed as an alternative measure of fiscal policy. This surplus is computed by estimating what Federal revenues and expenditures would be if the economy were operating at full employment and then subtracting the expenditures from the revenues. Changes in the full-employment surplus can be attributed to shifts in discretionary fiscal policy, 1/ whereas changes in the actual surplus might instead be due primarily to changes in the cyclical position of the economy. As a result, changes in the full-employment surplus measure more reliably the thrust of discretionary fiscal policy than do changes in the actual surplus.

Full-employment expenditures used in this study differ from actual expenditures only by the difference between the amount of unemployment compensation that would have been paid at full employment and the amount actually paid. Since for the period 1948-1960, a 4 percent unemployment rate was defined as "full employment," full-employment expenditures are greater (less) than actual expenditures in years in which the unemployment rate was below (above) 4 percent. In contrast, calculating full-employment revenues is not so direct and does not explicitly define full employment

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1/The assertion that changes in the full employment surplus can unequivocally be attributed to shifts in discretionary fiscal policy is subject to numerous qualifications discussed in Arthur M. Okun and Nancy H. Teeters, "The Full Employment Surplus Revisited," Brookings Papers on Economic Activity #1, 1970, pp. 77-116, and in Alan S. Blinder and Robert M. Solow, "Analytical Foundation of Fiscal Policy," in The Economics of Public Finance, Brookings, 1974. For example, the level of nominal GNP at full employment will only be constant from year to year if there is no real economic growth and no inflation. Thus, while a rise in full employment revenues is definitely not caused by an upswing in the business cycle, it is not definitely attributable to a change in fiscal policy. It may be due to inflation or to real economic growth. Measures of the full employment surplus should therefore be adjusted for inflation and growth (and other factors) in order to get a pure measure of the stance of fiscal policy. Unfortunately, while various authors (cited in Blinder and Solow) have calculated measures of the full employment surplus adjusted for these problems, none of these authors has updated his calculations. The only continuously maintained data series available is a measure of the full-employment surplus unadjusted for inflation, growth, and other factors, issued by the Federal Reserve Bank of St. Louis. This is the series reported and discussed in the text.

as occurring at a 4 percent unemployment rate. Therefore, full-employment revenues are not necessarily greater (less) than actual revenues in years in which the unemployment rate was above (below) 4 percent, except, predictably, when the unemployment rate was considerably above 4 percent. Furthermore, in years in which the unemployment rate was near 4 percent, the actual surplus and the full employment surplus should have been very close; in fact, with the exception of 1957, they were. Table 5 presents these surpluses for the years 1947-1960.

Table 5

Actual Surplus and Full-employment Surplus
1947—1960
(billions of dollars)

	Actual Revenues	Actual Expenditures	Actual Surplus	Full-employment Revenues	Full-employment Expenditures	Full-employment Surplus
1947	43.2	29.8	13.4	43.9	30.0	13.9
1948	43.2	34.9	8.3	44.5	35.0	9.5
1949	38.7	41.3	-2.6	43.3	40.8	2.5
1950	50.0	40.8	9.2	47.2	40.5	6.7
1951	64.3	57.8	6.5	61.0	58.0	3.0
1952	67.3	71.1	-3.7	66.7	71.4	-4.7
1953	70.0	77.1	-7.1	69.4	77.5	-8.1
1954	63.7	69.8	-6.0	68.2	69.2	-1.0
1955	72.6	68.1	4.4	72.2	68.0	4.2
1956	78.0	71.9	6.1	78.1	71.9	6.2
1957	81.9	79.6	2.3	85.5	79.5	6.0
1958	78.7	88.9	-10.3	89.8	87.2	2.6
1959	89.8	91.0	-1.1	97.2	90.3	6.9
1960	96.1	93.1	3.0	105.1	92.3	12.8

Sources: Data on the actual budget are on a National Income Accounts basis and are reported in Economic Report of the President, 1979, p. 267. Data on the full-employment budget are annual averages of quarterly data reported in Federal Reserve Bank of St Louis, "Data Listings" (Mimeo).

The Employment Act of 1946

Congress legitimized the modern role of fiscal policy as an economic stabilizer by passing the Employment Act of 1946. The decade of the 1930s had been a traumatic one in which the unemployment rate had been above 10 percent from 1931 through 1940, and above 20 percent from 1932 through

1935. The tremendous wartime government purchases of goods and services 1/ caused the unemployment rate to fall below 2 percent in 1943, 1944, and 1945. It was generally agreed that a return to the conditions of the 1930s was unthinkable, but it was also feared that the private economy in peacetime would not be able to generate anywhere near the number of jobs required for full employment. Thus, it was felt, the Federal Government would have to take responsibility for maintaining full employment, and an active fiscal policy would have to be a major instrument, perhaps the major instrument, for discharging that responsibility. Although the Employment Act of 1946 as finally passed was substantially modified and compromised from the original bill, it is fair to say that the Act confirmed and institutionalized that view. 2/

The Early Post-War Years

Because the economy operated near full employment in 1947 and 1948, the surpluses in the actual and full-employment budgets were, predictably, quite close. In the recession year of 1949, both surpluses dropped very sharply because of the large rise in Government expenditures. Nevertheless, the reduction of $10.9 billion in the actual budget surplus exceeded the reduction of $7 billion in the full-employment budget surplus by almost 50 percent.

All but $0.5 billion of this $3.9 billion difference was attributable to the different ways actual and full-employment revenues had behaved. Full-employment revenues did fall slightly, by $0.8 billion, because in April 1948 Congress passed a tax cut over President Truman's veto. Yet actual revenues fell by a full $4.5 billion because the 1949 recession had reduced GNP and, hence, total taxes collected.

1/Measured in 1972 dollars, real Federal government purchases rose from $26.3 billion in 1940 to over $200 billion in 1943, 1944, and 1945. (They were $100 billion in 1978.)

2/The original bill was called the Full Employment Act. It stated that every American had a right to employment which it was the government's responsibility to guarantee. The word "Full" was removed from the title of the final bill, and the government was committed to maintain "maximum" employment rather than guarantee employment for every American. In his account of the legislative history of the bill, Herbert Stein observes: "It does not sound as if there could be anything more than 'maximum,' but in the context of the debate, 'maximum' was a clearly less absolute goal than full." (The Fiscal Revolution in America, University of Chicago Press, 1969, p. 201.) The original bill was quite specific about the policy of Federal spending to be utilized in achieving full employment. The final bill calls upon the government to use "all its plans, functions, and resources." Deficit spending is not forbidden but it is given no special role.

This difference illustrates the fallacy of judging the thrust of fiscal policy by examining the state of the actual budget. While the reduction in the full-employment surplus shows that the proper fiscal policy for fighting recessing was followed, the fact that a $2.5 billion surplus did remain shows that this policy was not applied in a strong enough dose to prevent the 1949 recession. The $2.6 billion deficit in the actual budget, therefore, gives a misleading indication of how expansive fiscal policy actually was. Rather than regarding that deficit as an unsuccessful attempt to prevent the recession, it is more accurate to view the deficit as having been caused by the recession.

The Korean War Years

In the early 1950s, tax rates changed frequently and these changes are reflected in the difference between actual and full-employment surpluses. Individual income tax rates were raised in 1950, 1951, and 1952, and then reduced in 1954. Corporate income tax rates were raised in 1950, 1951, and 1952. An excess profits tax was levied in 1950, and in 1951 existing excise taxes were increased and new ones were adopted. Undoubtedly the need to finance the Korean War and not a desire to use taxes as a tool to smooth the business cycle motivated these changes. In fact, the 1952 increase in individual income tax rates and the 1954 reduction in individual income tax rates had been enacted in 1951. 1/

In 1950, due to the modest increases in tax rates enacted that year, full-employment revenues increased $3.9 billion. In contrast, actual revenues increased $11.3 billion, an enormous rise of 29 percent. The difference between the two increases, $7.4 billion, can be ascribed to the recovery from the 1949 recession. But just as in 1949, the shift of $11.8 billion, from a $2.6 billion deficit to a $9.2 billion surplus in the actual budget, greatly overstates the effect of policy actions--changes in tax rates and spending levels--on the state of the budget and the economy. The 1950 increase of $4.2 billion in the full-employment budget surplus from $2.5 billion to $6.7 billion better indicates that effect.

Because of large spending increases associated with the Korean War, the full-employment surplus fell in 1951. In spite of this, the 1951 rise in tax rates raised full-employment revenues sufficiently to prevent a negative surplus. Since the unemployment rate was well below 4 percent, actual revenues rose some $3 billion more than full-employment revenues and the actual surplus exceeded the full-employment surplus by a like amount. The further increase of tax rates in 1952 was not sufficient

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1/Nonetheless, an unsuccessful attempt was made in Congress to change the effective date of the reduction in individual income tax rates from January 1, 1954, to some time in 1953. The stated rationale of this proposal was to assure that jobs would be available when military employment declined.

to prevent the full-employment surplus from becoming negative in 1952 and 1953 in the face of continued large increases in Korean War spending. As in 1951, however, the fact that the unemployment rate was well below 4 percent caused actual revenues to exceed full-employment revenues. Consequently, the actual deficit was $1 billion lower than the deficit in the full-employment budget.

The Recession of 1953-54

Although the end of the Korean War brought a reduction in defense spending, revenues also dropped and deficits in both the full-employment and actual budgets continued in 1954. The previously scheduled lowering of tax rates reduced full-employment revenues by only $1.2 billion and the deficit in the full-employment budget fell dramatically. In contrast, the reduction in actual revenues was $6.3 billion and the deficit in the actual budget fell little.

The difference between the two reductions, $5.1 billion, can be attributed to the lower taxes collected as the result of the recession. Thus, just as in 1949, a recession period was characterized by a much larger deficit in the actual budget than in the full-employment budget. The change in the actual budget, from a deficit of $7.1 billion to one of $6.0 billion, however, misleadingly suggests that fiscal policy was only minimally less stimulative in 1954 than in 1953. In contrast, the change in the full-employment budget, from a deficit of $8.1 billion to one of $1.0 billion, shows that the degree to which fiscal policy exerted a contractionary effect was actually much greater. Once again, rather than the recession occurring in spite of the large actual deficit, the recession caused the large actual deficit.

The recession ended in May 1954. Since 1955 and 1956 were years in which the unemployment rate was near 4 percent, the actual and full-employment budgets were in surplus, and the values of the two surpluses were very close.

The Recession of 1957-58

Because of a slower growth in actual than in full-employment revenues, 1957 was the only year in this period in which the unemployment rate was near the full-employment level (4 percent), and yet, simultaneously, the actual budget surplus was much lower than the full-employment budget surplus. A recession began in the second half of 1957, even though the unemployment rate did not rise appreciably above 4 percent until November. From the fourth quarter of 1956 to the fourth quarter of 1957, constant-dollar GNP rose only 1.1 percent. Thus, actual revenues grew much more slowly than full-employment revenues in 1957, despite an average unemployment rate near 4 percent.

This divergence in growth of revenues continued for the remainder of the decade. It was most striking in 1958, a year which perhaps most

dramatically illustrates the fallacy of accepting the state of, or change in, the actual budget as a valid indicator of the thrust of the Government's fiscal position. As Government spending rose and the recession caused incomes, profits, and tax revenues to decline, the actual budget surplus of $2.3 billion in 1957 became a deficit of $10.2 billion in 1958, a swing of $12.6 billion. No previous peacetime deficit in history had been anywhere nearly as large. And yet, the full employment budget remained in surplus, the surplus falling from $6.0 billion in 1957 to $2.6 billion in 1958, a reduction of $3.4 billion. Thus, if the unemployment rate had averaged 4 percent rather than 6.8 percent in 1958, there would have been a surplus of $2.6 billion in the actual budget rather than the record deficit that occurred. This shows that the record deficit did not reflect deliberate fiscal policy actions. It was due, rather, to the decline in tax revenues caused by the recession. The magnitude of fiscal policy actions is better measured by the $3.4 billion reduction in the full-employment surplus than by the swing of $12.6 billion in the actual budget. 1/

Tight Fiscal Policy Contributes to the Weak Recovery of 1959

A deliberately tight fiscal policy slowed the growth of expenditures in 1959 and 1960, contributing to the weak recovery from the 1957-58 recession. Government purchases of goods and services actually declined because the Eisenhower Administration and many in Congress wanted a large actual budget surplus.

Their desire, however, was not prompted by any simplistic notions that deficits are always bad and surpluses always good (and the larger the better). Rather, four complex factors came into play. First, inflation was feared and this fear intensified because, for the first time, prices had continued to rise during the just-past recession. 2/ Second,

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1/In the first 5 months of 1958 a great deal of attention and debate, both within the administration of President Eisenhower and in the Congress, was devoted to the possibility of an anti-recessionary tax cut. Although the unemployment rate remained high, the recession ended officially in April 1958, and a measure proposed by Senator Paul H. Douglas in June to reduce individual income taxes was defeated 65-23.

2/The phenomenon of prices continuing to rise during a recession represented a sharp break with the past. But it set the pattern for the future. There have been three recessions since the one of 1957-58. In all three, prices continued to rise (though at a diminished rate). Thus, today there is no longer any expectation that a recession will bring inflation to a complete halt. But in 1959 the failure of recession to end inflation was regarded as a novel and ominous development.

economic growth as a national objective received much interest and many felt that a Government budget surplus facilitates that growth by making resources available for capital formation. Third, the deficits in the nation's international balance of payments that had been occurring almost continuously since World War II became, for the first time, a matter of rather widespread concern and many believed that a surplus in Federal budget would, in ways that were never specified, alleviate the problem. Fourth, many held that fiscal parameters should be set so as to produce deficits in recession and large surpluses as recovery continued.

Because the recovery from the 1957-58 downturn was very sluggish (a new recession began in April 1960), actual revenues did not grow sufficiently to produce the hoped-for large surpluses. The increases in the full employment surplus between 1958 and 1960, and the huge surplus of $12.8 billion that would have existed in 1960 had the unemployment rate been around 4 percent (Table 5), make clear how extremely tight fiscal policy was in those years. 1/

MONETARY POLICY 1948—1960

During this period, the goal of the Federal Reserve's monetary policy was transformed from its wartime task of maintaining the price of Government securities to its current role of stabilizing the economy. This transformation was guaranteed in the Federal Reserve-Treasury Accord of 1951. By the end of 1953 the transition had taken place and the Federal Reserve was then in a position to influence the expansion or contraction of the economy. In fact, as with fiscal policy, a tight monetary policy contributed to the weak recovery of 1959.

Money Stock and Government Securities

The stock of money, for our purposes, can be defined simply as currency owned by the nonbank public and all demand deposit liabilities of commercial banks, except those due to the U.S. Government and to other commercial banks. The Federal Reserve System does not immediately or directly control the quantity of money. It can attempt to influence this quantity by varying the discount rate on loans to its member banks or by varying the reserve ratios against the deposits these banks must maintain.

1/In February 1960, Arthur F. Burns, who had served as Chairman of the Council of Economic Advisers from 1953 through 1956, advised Vice President Richard M. Nixon that another recession was imminent and urged on him the need for fiscal expansion. Nixon was unsuccessful in diverting the Administration from its drive for a huge surplus. The unemployment rate was 6.1 percent in Novemer 1960 when Nixon lost the presidential election. But when Nixon won a presidential election 8 years later, Burns was appointed a presidential counselor, and in 1970, Chairman of the Board of Governors of the Federal Reserve System.

In fact, the term "monetary policy" basically refers to the daily buying and selling activity of the Federal Reserve System in the U.S. Government securities market, so-called "open-market operations." The System both influences the money supply and affects the level of interest rates by engaging in this activity. When the System buys securities, bank reserves increase and the overwhelmingly likely consequence is that banks will use their increased reserves to make loans. If so, demand deposits will also increase. The effect is also to raise security prices and lower their interest yields. When the System sells securities, bank reserves decrease and demand deposits may fall, or more likely increase at a reduced pace. Also, bond prices will fall and interest rates will rise.

When fears of recession are dominant, expansionary monetary policy consists of Federal Reserve purchases of U.S. Government securities. When the System wishes to fight inflation, tight monetary policy consists of Federal Reserve sales of these securities.

Table 6 gives data on money stock and securities for the years in question, together with their percentage changes. It also shows one short-term interest rate (on 90 day U.S. Treasury bills) and one long-term interest rate (Moody's average rate for Aaa-rated corporate bonds).

Table 6

Monetary and Financial Variables*

	Money Stock	Percent Change	FR Holdings of Securities	Percent Change	90 Day Treasury Bill	Moody's Aaa Bonds
1946	110.0	—	23.8	—	0.375	2.53
1947	113.1	2.8	21.9	-8.5	0.594	2.61
1948	111.5	-1.4	23.0	5.0	1.040	2.82
1949	111.2	-0.3	18.3	-20.4	1.102	2.66
1950	116.2	4.5	20.3	10.9	1.218	2.62
1951	122.7	5.6	23.4	15.3	1.552	2.86
1952	127.4	3.8	24.4	4.3	1.766	2.96
1953	128.8	1.1	25.6	4.9	1.931	3.20
1954	132.3	2.7	24.9	-2.7	1.953	2.90
1955	135.2	2.2	24.6	-1.2	1.753	3.06
1956	136.9	1.3	24.8	0.8	2.658	3.36
1957	135.9	-0.7	24.0	-3.2	3.267	3.89
1958	141.1	3.8	26.3	9.6	1.839	3.79
1959	143.4	1.6	27.0	2.7	3.405	4.38
1960	144.2	0.6	27.2	0.7	2.928	4.41

*Data on money stock and Federal Reserve (FR) holdings of U.S. Government securities are in billions of dollars and are daily averages for the month of December of each year. Data on interest rates are daily averages for the entire year.

Source: *Economic Report of the President*, 1979.

Constraints on Monetary Policy
in the Aftermath of World War II

During World War II the Federal Reserve System's activities in the Government securities market were not determined by the fear of recession or the desire to fight inflation, but to maintain the prices of U.S. Government securities. In general, this market is like any auction market: as relative buyer demands and seller supplies interact, prices (and therefore effective interest rates) 1/ change daily, if not continuously. But in 1942 the U.S. Treasury and Federal Reserve had agreed that during the War interest rates on Government securities of various maturities should not be allowed to rise above certain predetermined maximums. The purpose was to minimize interest costs to the Treasury and to protect those who bought negotiable war bonds from suffering future capital losses. To implement this policy, the Federal Reserve was to buy whatever quantity of securities was necessary to prevent their price from falling below (and, thus, their interest rate from rising above) the predetermined level. Because of this policy, independent judgment had no place in the conduct of open-market operations.

The policy also perversely affected the business cycle. Banks and other businesses and individuals held billions of dollars worth of Government debt issued to finance the War. In inflationary periods when these debt holders would sell to make loans and meet expenditures, the Federal Reserve would buy the securities to keep their prices from falling. This practice increased bank reserves and meant that loans and the money stock could further expand. Thus, in an inflation, the Federal Reserve not

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1/Changes in bond prices are inversely related to changes in market interest rates. This proposition can best be explained using a numerical example. The example is simplest in the case of a perpetuity, a bond promising to pay some amount, say $X, forever. It can be verified in any mathematics of finance textbook that the current price of a perpetuity is the product of the amount X and the inverse of the current interest rate. If supply and demand interact in the securities market to produce an interest rate of 6 percent, a bond promising to pay $60 a year forever will be priced at $1000. ($60/.06) Suppose that at a later time supply and demand interact to raise the interest rate to 8 percent. In these circumstances, $1000 will buy a perpetuity promising to pay $80 a year. Obviously, no one will be willing to pay the holder of a perpetuity promising to pay only $60 a year as much as $1000 for it. No more than $750 would be offered for the latter perpetuity (since $60 x (1/.08) = $750.). The rise in the interest rate from 6 to 8 percent is thus accompanied by a fall in the price of a perpetuity paying $60 a year from $1000 to $750. This inverse relation between interest rates and bond prices holds for the case of bonds with finite maturities. Numerical examples are messier, however, since the time remaining to maturity of such a bond must be taken into account in calculating the change in its price as interest rates change.

only could not restrain the growth of the money supply but was actually forced to create new money. The reverse happened in times of economic slack.

The Early Post-War Years

While the Federal Reserve had had serious misgivings during the War, its passive open-market policy was potentially far more dangerous in the postwar period when direct controls on spending were removed. As a result, the Federal Reserve announced in July 1947 that it would no longer prevent interest rates on Treasury bills, the securities of shortest maturity, from rising. As can be seen in Table 6, total Federal Reserve holdings of Federal securities declined by $1.9 billion or 8 percent in 1947. The policy of supporting the prices of longer term securities obliged the System to add to its holdings of these securities during the year. Thus, total holdings were only reduced by selling a greater volume of bills, which was made possible by the July decision to stop supporting their price. The yield on 90 day bills, which had held at its pegged wartime rate of 0.375 percent until July 1947, began rising as soon as the Federal Reserve began to sell the bills. The yield rose to 0.95 percent by year's end and averaged 0.594 percent for the year.

Why did the money stock increase by 3 percent in 1947 while Federal Reserve System holdings of Government securities were decreasing by 8 percent? As noted earlier, the System does not immediately or completely control the behavior of the money stock. Two factors overwhelmed the reduction in System holdings of Government securities: first, Treasury gold holdings increased by $2.2 billion; and, second, the ratio of currency to demand deposits was reduced by 6.25 percent as the abnormal wartime demand for currency receded. 1/

In 1948 the quantity of money and Federal Reserve System holdings of Government securities again moved in opposite directions. This is partly a statistical quirk. Columns 1 and 3 of Table 6 give daily average

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1/The sum of currency and bank reserves constitutes a "monetary base" the source of which is accumulated purchases of U.S. Government securities by Federal Reserve Banks, loans to members by Federal Reserve Banks, official U.S. gold holdings, and several minor sources. The commercial banking system uses this monetary base to create demand deposits, and thus to expand the money supply (the textbook deposit expansion mechanism) in the process of making loans. Currency used by the public is not available to the banking system for this purpose. Thus a reduction in the proportion of the money that the public wishes to hold as currency means that more of the monetary base can be used by the banks to create demand deposits and increase the quantity of money. And an increase in Treasury gold holdings, other things held constant, increases the size of the monetary base available to the banks for this purpose.

figures for the month of December of each year. Actually, in 1948 System holdings of securities continued to decline in the early part of the year and by September were no greater than in December 1947. In the last 3 months of the year, however, these holdings rose to $23 billion. Moreover, the money supply steadily fell during 1948 because the required reserve ratio against demand deposits for member banks located in New York City and Chicago was raised in three steps, from 0.20 to 0.26, an enormous increase of 30 percent 1/, and because of a small increase in the ratio of time deposits to demand deposits 2/. This reduction in the money supply undoubtedly contributed to the recession of 1949.

In 1949, although the money stock and Federal Reserve System holdings of Government securities both decreased, the fall in the former was minuscule while the latter fell by 20 percent. The effect on the money supply of this massive reduction in System security holdings was largely offset by successive reductions in required reserve ratios at member banks in New York City and Chicago from 0.26 to 0.22, a reduction of 15 percent. 3/

In the recessionary conditions of 1949, correct anti-cyclical monetary policy would also have called for an increase in System holdings of securities. Those conditions created an excess demand for long-term Government bonds at an interest rate of 2.5 percent, demand which could only be eliminated by allowing bond prices to rise and their interest yields to fall. Nothing in its agreement with the Treasury committed the Federal Reserve to prevent this; the System was only obliged to keep long-term interest rates from rising above 2.5 percent. And yet it chose to prevent the yield from falling below 2.5 percent by reducing its holdings of securities, the very opposite of the increase the recession called for.

1/Increases in the required reserve ratio reduce the quantity of money to be produced from a given monetary base because they reduce the proportion of that base that can be used by banks to create demand deposits.

2/Since demand deposits are counted in the (narrow) measure of the money stock reported in Table 6, and time deposits are not, if banks use a greater proportion of a given monetary base to create time deposits and a smaller proportion to create demand deposits, there will be a reduction in the money supply.

3/During this period the required reserve ratios applicable to Federal Reserve System member bank deposits depended on the size of the city in which the member bank was located. Member banks in New York and Chicago were subject to the highest ratios, and there were two other size categories. Throughout this discussion, in order to avoid an endless listing of changes in required reserve ratios, only changes in the ratios for New York and Chicago member banks will be mentioned. But it should be understood that these changes were often accompanied by similar changes in the required reserve ratios for other member banks.

Table 6 suggests a question about the growth rate of the money stock from December 1949 to December 1950. One might ask why the money stock grew at a rate of only 4.5 percent in that year while Federal Reserve System holdings of Government securities rose 10.9 percent. This was due to a $1.5 billion decline in the U.S. gold stock in 1950 as imports increased rapidly. As a result, the sum of the gold stock and System holdings of securities grew by only 1.1 percent in 1950. The better question, then, is not why the money stock grew at as slow a rate as 4.5 percent, but why it grew at so fast a rate. This growth resulted from the decline of the ratios of currency to demand deposits (6 percent) and of time deposits to demand deposits (5 percent).

The Federal Reserve-Treasury Accord of 1951

The Federal Reserve-Treasury Accord of 1951 signalled a major change in American monetary policy. This accord shifted the objectives of the Federal Reserve System from supporting bond prices to economic stabilization. From a passive open-market policy, monetary policy now became an active tool in combatting inflation and recession. The outbreak of the Korean War made the reevaluation of monetary policy inevitable.

From the point of view of fighting the recession, the incorrect policy had been followed in 1949. The Federal Reserve had continued to conduct open-market operations to support bond prices and interest rates rather than to fight inflation and recession, and stabilize the business cycle. At the end of June 1949, the Federal Reserve stated that henceforth open-market operations would be conducted "with primary regard to the general business and credit situation." The Treasury did not, however, give any sign that it recognized or sanctioned any change in policy. In early 1950 a subcommittee of the Joint Economic Committee of Congress reported on the split between the Treasury and the Federal Reserve and clearly sided with the latter. Both sides preferred to avoid a confrontation and until the middle of 1950 no occasion arose to force the matter.

The outbreak of the Korean War in June, however, meant that they could no longer avoid the critical issue. The War raised the prospects of large new budget deficits and of Treasury's desire to finance those deficits by borrowing at artifically low interest rates. But it also set in motion a large wave of buying by individuals and businesses, a rapid upsurge in prices, and a Federal Reserve desire to fight inflation. At a meeting between the Secretary of the Treasury and the Chairman of the Federal Reserve Board on August 10, 1950, neither side backed down.

Shortly thereafter, the Federal Reserve took a number of actions which forced a confrontation with the Treasury. The Federal (Reserve) Open Market Committee decided to peg the interest rate on one year Treasury certificates at 1.375 percent. Soon after, the Treasury announced an issue of certificates bearing a rate of 1.25 percent. The Federal Reserve did not flinch. The rate was held at 1.375 percent although it meant that private investors would not purchase the new Treasury issue.

The Federal Reserve then bought most of the Treasury certificates and partly offset the effect of its purchases on the money supply by selling other securities out of its own portfolio at existing interest rates. This raised a furor in financial circles. It meant that the Federal Reserve had taken over management of the Federal debt. It borrowed money for the Federal Government at interests rates it determined.

After this episode the only remaining question was whether the Federal Reserve would dare to break the 2.5 percent ceiling on long-term bonds. In the autumn the System told the Treasury that under current conditions it had no such intention but it was unwilling to make an unequivocal public statement. The financial press was full of speculation about the matter. On January 18, 1951, the Secretary of the Treasury announced publicly that the Federal Reserve would honor the 2.5 percent ceiling. In the next week several members of the Federal Open Market Committee spoke out against the support policy. On January 31, the entire Committee met with President Truman at the White House at his request.

> "The meeting was a masterpiece of deliberate misunderstanding. Neither party [the President and the Chairman of the Federal Reserve] said what he really meant, yet each understood what the other meant but preferred to respond as if he didn't and so left the other free to interpret the response as he wished." 1/

On February 1, the White House stated in a press release that the Federal Reserve had pledged to support the Government bond market for the duration of the fighting in Korea. On February 2, a letter from the President to the Federal Reserve Chairman thanked him for the Committee's explicit commitment to maintain long-term bond prices. On February 3, Mariner Eccles, former Federal Reserve Chairman and still a member of the Board, released to the press the official report of the January 31 White House meeting. With the issue out in the open, public support for the Federal Reserve position was evident. Congressional reaction made it clear to the Administration that the Federal Reserve had won.

The Accord of 1951, as it came to be known, was reached in March and stands as a landmark in American monetary policy. During February the Federal Reserve and Treasury worked out the details of an arrangement providing for the latter to offer a new long-term security for which existing bonds could be exchanged at an attractive interest rate. On March 3 a brief but momentous statement announced the Accord: "The Treasury and the Federal Reserve System have reached full accord with respect to debt-management and monetary policies." While it was understood that after such a long period of supporting bond prices an abrupt change was undesirable, both parties agreed that the Federal Reserve should work toward

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1/Herbert Stein, The Fiscal Revolution in America, University of Chicago Press, 1969, p. 272.

shaping its open-market policies almost exclusively for the sake of achieving economic stability. Monetary policy thus joined fiscal policy as an active tool to be used in attaining the goals enunciated in the Employment Act of 1946.

Monetary Policy in the Korean War Years and the 1954 Recession

In the years 1951-54, the Federal Reserve undertook the transition to the policy objectives of the Accord of 1951. By the end of 1953, the System was no longer assisting in Treasury refinancing and had established its "bills-only" policy of conducting open market operations only in short-term U.S. Government securities.

Because groundwork for this transition had to be prepared, System holdings of securities increased massively in 1951. The Board sought to offset the money supply effects of this increase by raising, in two steps in January, the required reserve ratios for member banks in New York and Chicago, from 0.22 to 0.24, an increase of 9.1 percent. Thus, despite the increase of 15.3 percent in System security holdings the money stock increased only by 5.6 percent.

In early 1953 the Federal Reserve System became concerned about the threat of inflation. It increased the discount rate from 1.75 to 2 percent and urged member banks to reduce their borrowings. The monetary growth rate, which had fallen by one-third from 5.6 to 3.8 percent in 1952, plummeted to 1.1 percent in 1953, contributing to, if not precipitating, the recession that began that year. 1/

In March 1953, the Federal Open Market Committee decided that the time had come to announce that open-market operations would henceforth be used only to achieve the objectives of economic stabilization as envisioned in the 1951 Accord. In addition, the Committee announced that it would not buy newly issued securities from the Treasury or existing securities of comparable maturity, and that open-market operations would be conducted only in short term U.S. securities. In May the interest rates on mortgages insured by the Federal Housing Administration and guaranteed by the Veterans Administration were raised to 4.5 percent. Participants in the securities market interpreted these developments as signs of greater restraint to come. As a result, massive selling of government securities brought their prices to new lows and interest rates rose.

The System realized it had achieved more tightness than intended. In June it withdrew its previous announcements that it would not assist

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1/While Table 4 shows that Federal Reserve holdings of U.S. Government securities rose 4.9 percent in 1953, the sum of such holdings and U.S. official gold holdings was virtually unchanged, thus explaining the monetary growth rate of only 1.1 percent.

with Treasury refinancing operations and that it would only operate in the short-end of the Government securities market. It began purchasing securities and, in July, lowered reserve requirements. The System's purchases were not sufficient, however, to offset the negative effects on money stock growth of a recession-induced reduction of $1.2 billion in member bank borrowings, a reduction of $1.2 billion in the gold stock, and an increase of 7 percent in the ratio of time deposits to demand deposits. The consequence, as shown in Table 6, was that the money stock grew much more slowly than System holdings of securities.

In September 1953, the Open Market Committee reinstated the announcements made in March and withdrawn in June that it would asist with Treasury refinancings, and that open-market operations would be conducted only in short-term securities. The latter policy, which came to be known as "bills-only," was justified on the ground that as long as participants in the market for long-term securities expected Federal Reserve intervention, they would not perform the ordinary security market functions of taking speculative positions: buying when they thought prices were too low, selling short when they thought prices were too high, and arbitraging among the various issues to establish reasonable yield relationships. It was hoped that after the Federal Reserve withdrew from the long-term market, private operators would themselves develop a broad, deep, resilient market. With only two exceptions, the bills-only policy was followed until late 1960 when, as will be discussed in Chapter 2, international conditions forced the System to abandon it.

Monetary Policy Between Recessions

The recession ended in the second quarter of 1954 and the ensuing upswing continued through August 1957. System holdings of securities varied little and the money supply grew slowly. Interest rates rose steadily to their highest levels in 25 years. There were four one-quarter percentage point increases in the discount rate in 1955 and two in 1956. Effective January 1, 1957, the Federal Reserve Board, for the first time in 20 years, raised its Regulation Q ceiling on the interest rate payable on savings deposits at commercial banks from 2.5 to 3 percent. As a result the ratio of time deposits to demand deposits rose 12 percent in 1957, and this rise, combined with a decrease in System holdings of securities, produced an actual decrease in the money stock in that year, again contributing to, if not precipitating, a recession.

The Recession of 1957-58

Although it was later determined that the peak of the business cycle was reached in August 1957, and in hindsight, action to fight a recession was called for, the Federal Reserve raised the discount rate one-half percentage point in that month to 3.5 percent. Four months later the error was apparent and the discount rate was lowered to 3 percent. By April 1958 four more reductions brought the rate down to 1.75 percent. In this same period, required reserve ratios at member banks in New York and Chicago were reduced in four steps, from 0.20 to 0.18.

While a policy of open-market purchases was followed, the figure of $26.3 billion given in Table 6 for System holdings of securities in December 1958 is misleadingly large. The figure was $25.7 billion in November 1958, and $25.8 billion in January 1959. This represents a percentage increase of 7.0 over December 1957, rather than the increase of 9.6 percent given in Table 6. Two factors worked against the 7 percent increase in System holdings of securities and against the 10 percent reduction in required reserve ratios: (1) a reduction in Treasury gold holdings of 9.7 percent from $22.8 billion to $20.6 billion; and (2) a further increase of 8.9 percent in the ratio of time deposits to demand in the Regulation Q ceiling. The net effect was an annual increase of 3.8 percent in the money stock.

Contribution of Tight Monetary Policy to the Weak Recovery of 1959

Tight monetary policy contributed to the weakness of the 1959 recovery. Despite open-market purchases in 1959, the increase in the System's holding of securities was not enough to balance the gold outflow. In addition, the discount rate was raised and interest rates followed. A tight policy continued into 1960.

The trough of the recession had been reached in April 1958. Although System holdings of securities rose throughout the year, short- and medium-term interest rates rose very sharply between July and September, and, in the latter month the discount rate was raised.

The fact that open-market purchases continued during 1959, as evidenced by the 2.7 percent increase in System holdings of securities, might lead one to question whether a tight money policy was being followed. But declines in the Treasury's gold stock were continuing due to the balance of payments deficit. The sum of System holdings of securities and gold actually declined slightly, by $350 million. Since the increase in System security holdings was not sufficient to offset the gold outflow, it is certainly fair to say that a tight money policy was being followed. Furthermore, the discount rate was raised in November 1958, and in March, May, and September 1959, in half percentage point increments to a level of 4 percent. While Table 6 shows that the money stock in December 1959 was 1.6 percent above its December 1958 level, it actually reached a peak of $144.9 billion in July, and fell continuously during the rest of the year. By the end of 1959 interest rates had risen to their highest levels in 30 years.

The tightness in open-market operations continued in 1960. In the first quarter, a policy of substantial open-market sales was followed. System holdings of securities fell 6 percent in only 3 months. The rest of the year modest purchases were engaged in but, as shown in Table 6, System holdings in December were only 0.7 percent above their December 1959 level and, since the gold outflow continued unabated, the sum of System holdings of securities and gold declined 2.8 percent. Furthermore, the ratio of time deposits to demand deposits rose 7.5 percent and

Federal Reserve loans to member banks declined by 90 percent, from $911 million to $94 million. In light of all this, the increase in the money stock, even though very small, was surprising. Presumably it was accounted for by the reduction in required reserve ratios at New York and Chicago member banks from 0.18 to 0.165, a reduction of 8.3 percent which occurred in the fourth quarter of 1960.

As was shown earlier in this chapter, tight fiscal policy in 1959 and 1960 contributed to the weak recovery from the recession. When combined with the tight monetary policy in those years, it is little wonder that the recovery from the 1957-58 downturn was by far the shortest and weakest since World War II, and that another downturn began in April 1960.

CHAPTER TWO

THE U.S. ECONOMY FROM 1961 TO 1968

This chapter analyzes macroeconomic developments and policies in the 1961-68 period. The order of discussion of the topics is the same as in Chapter 1. Analysis of the behavior of output and unemployment, and inflation is followed by a brief description of capital formation. Next comes a discussion of the nation's international accounts. The chapter concludes with analyses of fiscal and monetary policy during this period.

Output and Unemployment

The members of President Kennedy's Council of Economic Advisers firmly believed that eliminating the GNP gap should have high priority. As Table 7 shows, the growth rate of real GNP was remarkably high and stable for the 5 years 1962-1966. However, the unemployment rate stayed far above the desired interim target of 4 percent for a long time. The GNP gap was not eliminated until the second half of 1965. Throughout the next 3 years, the unemployment rate remained below 4 percent, though in a few isolated months it rose above this point.

Table 7

Unemployment Rate and Real Gross National Product 1961—1968

	Unemployment Rate	Real GNP (billions of 1972 dollars)	Percent Change in Real GNP
1961	6.7	755.3	2.5
1962	5.5	799.1	5.8
1963	5.7	830.7	4.0
1964	5.2	874.4	5.3
1965	4.5	925.9	5.9
1966	3.8	981.0	5.9
1967	3.8	1007.0	2.7
1968	3.6	1051.8	4.4

Source: *Economic Report of the President*, 1978, pp. 291, 258-59.

Various explanations have been offered for the fact that the GNP gap was finally closed. Depending on how the facts and data are read, the closing of the gap could be attributed to a 1964 cut in Federal income tax

rates, or to the large increase in Federal expenditures in 1965 and 1966 due to the Vietnam War, or to the increases in the rates of money growth that occurred from 1963 to 1965 and again in 1967 to 68.

Teenage unemployment rates persistently above those of the mid-1950s were a major problem even in the 1966-68 period. The unemployment rate for all teenagers was 12.6 percent in 1954, a year in which the unemployment rate for all workers was a (then) high 5.5 percent. But in the years 1966 to 68, with overall unemployment rates below 4 percent, the unemployment rate for teenagers remained slightly above its 1954 level. The unemployment data from 1954 to 1968 are displayed in Table 8.

Table 8

Unemployment Rates for All Workers and Teenagers 1954—1968

			Teenaged Workers			
	All Workers	All Teens	White Males	White Females	Black Males	Black Females
1954	5.5	12.6	13.4	10.4	14.4	20.6
1955	4.4	11.0	11.3	9.1	13.4	19.2
1956	4.1	11.1	10.5	9.7	15.0	22.8
1957	4.3	11.6	11.5	9.5	18.4	20.2
1958	6.8	15.9	15.7	12.7	26.8	28.4
1959	5.5	14.6	14.0	12.0	25.2	27.7
1960	5.5	14.7	14.0	12.7	24.0	24.8
1961	6.7	16.8	15.7	14.8	26.8	29.2
1962	5.5	14.7	13.7	12.8	22.0	30.2
1963	5.7	17.2	15.9	15.1	27.3	34.7
1964	5.2	16.2	14.7	14.9	24.3	31.6
1965	4.5	14.8	12.9	14.0	23.3	31.7
1966	3.8	12.8	10.5	12.1	21.3	31.3
1967	3.8	12.8	10.7	11.5	23.9	29.6
1968	3.6	12.7	10.1	12.1	22.1	28.7

Source: *Economic Report of the President*, 1978, pp. 291-92.

The problem appeared to be concentrated among white females and teenaged blacks of both sexes. The unemployment rate for white male teens was significantly below its 1954 level in the late 1960s. But the rates for white female and black teens remained well above their 1954 levels. The black male teenage unemployment rate in 1968 was 53 percent higher than in 1954; the black female teenage unemployment rate was 40 percent higher.

Inflation

Viewed from today's perspective, inflation continued to be negligible through much of this period; the rates of price increase through 1965, as measured by all three price indexes, were truly minuscule (see Table 9). One writer has recently observed: "The fact that government at the time could be concerned with inflation at all in retrospect seems astonishing." 1/ And yet throughout the period, Government was greatly concerned with inflation.

Table 9

Consumer Price Index, Producer Price Index, and GNP Deflator 1961–1968

	CPI (1967 = 100)	Percent Change	PPI (1967 = 100)	Percent Change	Implicit GNP Deflator (1972 = 100)	Percent Change
1961	89.6	1.0	94.5	-0.4	69.28	0.9
1962	90.6	1.1	94.8	0.3	70.55	1.8
1963	91.7	1.2	94.5	-0.2	71.59	1.5
1964	92.9	1.3	94.7	0.2	72.71	1.6
1965	94.5	1.7	96.6	2.0	74.32	2.2
1966	97.2	2.9	99.8	3.3	76.76	3.3
1967	100.0	2.9	100.0	0.2	79.02	2.9
1968	104.2	4.2	102.5	2.5	82.57	4.5

Source: *Economic Report of the President*, 1978.

The 1962 Annual Report of the Council of Economic Advisers presented a set of "Guideposts for Noninflationary Wage and Price Behavior." Underlying these guideposts was the principle that if the shares of wages and profits in real GNP are to remain constant, wages should rise at the same percentage rate as productivity, and prices should remain constant. Since the Council believed that the average annual rate of productivity increase in the economy was 3.2 percent, according to their wage guidepost, wages in all industries should have increased by 3.2 percent a year. If all firms in all industries followed this rule, labor costs per unit of output would remain unchanged for firms in industries whose rate of increase in labor productivity was equal to 3.2 percent; would fall for firms in industries whose rate of increase in labor productivity was greater than 3.2 percent; and would rise for firms in industries whose rate of increase in labor productivity was less than 3.2 percent.

1/Lindley H. Clark, Jr., "The Outlook," Wall Street Journal, September 18, 1978, p. 1.

The Council's price guidepost stated that prices of firms in each industry should change by a percentage equal to the annual percentage change of unit labor costs in that industry. Thus, if the wage guidepost had been followed, and if the economy-wide average annual rate of increase in labor productivity were in fact 3.2 percent, adherence to the price guidepost would result in unchanged prices where the rise of labor productivity was equal to the national average, in rising prices where the rise was less than the national average, and in falling prices where the rise of productivity was above the national average.

Unfortunately, the Council's estimate of the annual rate of productivity increase was too low. Productivity grew at an annual rate of 4 percent. With wages rising an average 3.2 percent, average unit labor costs were not unchanged, they were falling. And yet price decreases were virtually nonexistent. Thus, the share of profits in output rose from 10.2 percent in 1961 to 13.4 percent in 1965. Compensation of employees fell from 50.5 percent of output in 1961 to 49.7 percent in 1965. 1/ The guideposts collapsed in 1966 when many labor leaders flaunted the fact that the latest contract settlements violated them.

After 1964 the rate of inflation, as measured by all three indexes, did quicken. Those who believe fiscal actions are the dominant influence on the macroeconomy explained the higher inflation rate in terms of a 1964 tax cut and a 1965-66 surge in defense spending. These raised aggregate demand above the economy's capacity to produce goods and services. Those who prefer a monetarist interpretation of economic events would argue that the higher rates of inflation were due to increases in the rate of money growth, such as occurred from 1963 through 1965 (and again in 1967-68).

Capital Formation

The rate of growth of total capital was, by historical standards, adequate in the first part of the decade and quite high in the later part, as shown by the data in Table 10. The rate of growth of capital in the manufacturing sector was as sluggish in the first 4 years of the 1960s as it had been in the last 2 years of the 1950s. With the closing of the GNP gap at the end of 1965, the rate of growth of manufacturing capital increased significantly. The higher rates of capital formation for both the total economy and the manufacturing sector, after 1964, are evidence of increased demand for physical capital. This reinforces the earlier observation that aggregate demand exceeded the economy's capacity to produce goods and services during this period.

1/*Economic Report of the President*, 1978, p. 271.

Table 10

Real Net Stock of Fixed Nonresidential Capital 1961—1968 (billions of 1972 dollars)

	Total	Percent Change	Manufacturing	Percent Change
1961	547.1	3.3	135.1	0.3
1962	565.3	3.4	135.9	0.6
1963	584.5	3.4	137.6	1.3
1964	609.5	4.3	141.1	2.5
1965	645.9	6.0	148.3	5.1
1966	689.2	6.7	158.5	6.9
1967	725.6	5.3	168.3	6.2
1968	763.2	5.2	175.3	4.2

Source: *Survey of Current Business*, April 1976, p. 49.

Balance of Payments

In the 1960s in general, the merchandise balance and the balance on current account showed very large surpluses, due both to strong export performance and to a substantial increase in income from foreign investments. Annual data on the U.S. balance of payments position are displayed in Table 11.

Table 11

U.S. International Transactions 1961—1968 (millions of dollars)

	Merchandise Exports	Merchandise Imports	Merchandise Balance	Balance on Current Account	Official Reserve Transactions Balance
1961	20,108	14,537	5,571	3,005	-1,348
1962	20,781	16,260	4,521	2,404	-2,650
1963	22,272	17,048	5,224	3,143	-1,934
1964	25,501	18,700	6,801	5,718	-1,534
1965	26,461	21,510	4,951	4,251	-1,290
1966	29,310	25,493	3,871	1,582	219
1967	30,666	26,866	3,800	1,270	-3,418
1968	33,626	32,911	635	-1,331	1,641

Source: *Economic Report of the President*, 1978, p. 368.

From the viewpoint of policymakers, however, the dominant feature of this period was not the large surplus in the trade balance and the balance on current account, but the large deficit in the overall balance of payments. Table 11 reports the balance of payments calculated on the official reserve transactions basis (the sum of changes in holdings of U.S. official reserve assets and changes in U.S. liabilities to foreign monetary authorities). Other methods of calculating the overall balance yielded different figures but these methods always showed a deficit, often larger than the one obtained using the official reserve transactions method.

In the 1950s, the U.S. balance of payments deficit had been regarded as desirable. After World War II, the United States owned an overwhelming proportion of the world's monetary gold reserves, and so the deficits were viewed as a means of evenly dispersing this gold. Not all of our deficits were financed by gold movements, however. To a large extent, foreign governments were willing to accept U.S. Government interest-bearing securities instead of gold. But this could go on only as long as these governments were absolutely confident that the securities were instantly convertible to gold at a rate of $35 per ounce. The earlier concern about a "dollar shortage" changed to concern about a "dollar glut."

While general monetary and fiscal policies were not determined primarily by their effect on the balance of payments, in the late 1960s a wide variety of measures were taken to improve the balance. Several western European governments were persuaded to prepay some of their debt to the United States, to buy military supplies in the U.S., to bear a larger part of the burden of providing foreign aid, and to allow the U.S. Treasury to issue bonds denominated in their currencies. The amount of duty-free imports tourists could bring back and the freedom of military personnel to maintain their families abroad were reduced. Preferences were given to American supplies in the Government's own purchases, and Government foreign loans were "tied" to the purchase of American products. In 1964 an interest equalization tax, an *ad hoc* tariff on imported securities adding about 1 percentage point to the annual interest rate paid by foreign borrowers, was imposed. In 1965 a "voluntary-restraint" program was introduced under which banks and other financial institutions were asked to limit their foreign loans. And in 1968 direct restrictions on American corporate investments in Europe were introduced.

FISCAL POLICY 1961—1968

In general, fiscal and monetary actions following the recession of 1957-58 were extremely restrained. The degree of fiscal tightness is hidden by the fact that the unemployment rate never came back down anywhere near 4 percent in the subsequent period. For, while the full-employment surplus was a substantial $12.8 billion in 1960, the high unemployment rate meant actual revenues were $9 billion below what they would have been at full employment; thus, the actual surplus was only $3 billion. The extreme tightness of both fiscal and monetary policy

insured that the recovery from the 1957-58 downturn was by far the shortest and weakest in the post-World War II period. As a result, another recession, which began in April 1960, may have determined the results of the presidential election in November.

Fiscal policy remained very tight through 1963. The full-employment budget surplus was large in 1961, 1962, and 1963. Of course, the extreme tightness of fiscal policy would not have been apparent to those who looked at the actual budget figures. 1/ The high rates of unemployment that prevailed, despite the absence of recession, caused actual revenues to be well below their full-employment levels. This resulted in deficits in the actual budget in 1961 and 1962, and only a tiny surplus in 1963.

Although the recession that began in April 1960, ended in February 1961, shortly after President John F. Kennedy took office, his economic advisers felt that the economy's performance had been unsatisfactory since the second half of 1955. They argued that the economy had operated well below its potential throughout this period even though recession had not prevailed during most of it. In his 1961 State of the Union Message, Kennedy said:

> "The present state of our economy is disturbing. We take office in the wake of seven months of recession, three and one-half years of slack, seven years of diminished economic growth, and nine years of falling farm prices."

It was not enough that the latest recession had ended shortly after Kennedy took office. Positive action was needed to lower the unemployment rate to 4 percent.

General tax reduction was not, initially, part of the plan of such action. Instead, the Administration envisioned a policy of substantial continuing increases in expenditures with a small budget surplus at full employment. The latter would permit a mildly expansionist monetary policy without causing inflation. Interest rates would be low, encouraging investment and assisting economic growth.

The Administration's quite modest expenditure proposals to Congress in 1961 and 1962, however, did not completely reflect this agenda. Because the Administration felt that major increases in Federal spending for education, health care, and urban redevelopment would not be approved by

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1/The members of the Council of Economic Advisers were well aware that the appropriate gauge of fiscal policy is the full-employment budget surplus. They considered educating the public to be part of their mission. "The main ingredient of [their] argument was the concept of the full employment surplus as the significant measure of the budget position." Stein, op. cit. p. 397.

Congress, it did not propose such increases. It did, however, propose a tax reform package that included an 8 percent tax credit for net business investment, taxation of income earned by U.S. corporations abroad but not repatriated, and withholding of income tax on interests and dividends. Strong opposition arose immediately to the entire plan and none of it became law in 1961. In 1962 Congress enacted the investment tax credit alone. Variations in the level of the credit were to become an occasionally used tool of fiscal policy in subsequent years.

Although the unemployment rate, stuck between 6.8 and 6.9 percent from February to October, had dropped to 6.1 percent in November 1961, the Council of Economic Advisers felt strongly that vigorous action was needed to bring the rate down to 4 percent. 1/ Despite this, in January 1962, President Kennedy proposed a balanced (actual) budget for fiscal year 1963, which would have meant an increase in the surplus in the full-employment budget. In late February 1962, Kennedy told a press conference that there was no chance for income tax reduction in the foreseeable future.

Three months later a change in economic conditions and prospects caused an abrupt reversal. Kennedy announced that his next budget would propose an across-the-board reduction in personal and corporate income tax rates. The drop in the unemployment rate had ended in March at 5.5 percent, total output in the second quarter grew at a slower rate than in the previous year, and Kennedy's economists told him that the odds for a "Kennedy recession" were no longer negligible. The political implication of a Kennedy recession would have been particularly damaging since relations between the President and the business community were, partly as a result of a noisy confrontation with steel companies over price increases, very strained. In addition, many linked this confrontation to the collapse of stock prices at the end of May 1962.

This decision to recommend tax reduction to stimulate economic growth while the actual budget was in deficit has been hailed as "a major event in the history of fiscal policy." 2/ In January 1963, the Kennedy Administration submitted a program calling for a $13.6 billion reduction in revenues and tax reforms amounting to a $3.4 billion increase in revenues. The program's net reduction of about $10 billion was the figure recommended by the Council of Economic Advisers as necessary to reduce the unemployment rate to 4 percent. The cut was to occur in stages beginning in July 1963, and would not be completed until 1966. This was the only way to hold the planned deficits in the actual budget below the $12.4 billion deficit realized in fiscal year 1959 under Eisenhower, a figure that, for political reasons, Kennedy felt could not be breached.

1/Stein, op. cit. pp. 404-405.

2/Stein, op. cit. p. 413.

The tax reduction provisions found little disagreement, but the proposed tax reforms met strong opposition and much debate. The House of Representatives passed the bill in September, with most of the reforms eliminated.

From GNP Gap to Excess Aggregate Demand: 1964-66

The years 1964-66 saw (1) a drop in both full-employment and actual revenues because of Kennedy's tax cut bill; (2) a closing in 1965 of the GNP gap; and (3) an increase in Vietnam War expenditures in 1966 without a general tax rate increase. In 1966 the economy experienced excess aggregate demand.

The tax bill, which initially reduced tax rates in 1964, reduced them further in 1965. The 1964 reduction reduced full-employment revenues. Combined with the rise in expenditures, the full-employment surplus fell by almost $7 billion, far below its level of the previous 4 years. Also, actual revenues barely rose in 1964. In fact, as a result of the tax cut, personal income tax revenues actually fell, from $49.2 billion in 1963 to $46.0 billion in 1964. Although corporate tax rates were also reduced in 1964, corporate profits tax revenues rose by $1.5 billion.

In the second half of 1965, the GNP gap was finally closed and the unemployment rate fell to 4 percent. Actual revenues grew by almost $10 billion, despite the further cut in tax rates, because real income growth and inflation combined to raise nominal incomes very rapidly. The previous year's actual deficit was eliminated and the actual budget was just about balanced. Since the economy was actually operating at the level at which the full-employment budget is calculated, the actual budget and the full-employment budget were very similar. Real income growth had raised full-employment revenue back to its 1963 level despite the cut in tax rates. 1/ Those who had argued that a tax cut would temporarily increase the deficit but would reduce unemployment, close the GNP gap, and ultimately produce a surplus appeared to be vindicated.

A large buildup of Vietnam War orders and expenditures began in the second half of 1965. Actual Federal Government expenditures, which had risen only $21.9 billion in the 4 years 1962 to 65, rose almost as much ($19.8 billion) in the single year 1966. Defense spending, which in the 1963-65 period had been slightly below the amount spent in 1962, rose $11 billion. To offset these expenditures, President Lyndon B. Johnson's advisers recommended a general tax increase early in 1966 but the President made no such request of Congress. 1/ He merely asked for and received a reversal of certain scheduled excise tax reductions, a new graduated withholding system on individual income taxes, and a speedier collection

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1/Arthur M. Okun, The Political Economy of Prosperity, New York: W.W. Norton, Inc., 1970, pp. 70-71.

of corporate profit taxes. These measures were estimated to have increased revenues by $2.5 billion. Then, in September he requested that the investment tax credit enacted in 1962 be suspended. Congress enacted the suspension in October.

Even though tax rates did not generally increase, the growth of actual revenues in 1966 almost covered the growth of actual expenditures (refer to Table 12). The rapid growth of nominal GNP at a rate of 9.4 percent produced a $10 billion increase in revenues from the personal income and corporate profits taxes. Social Security revenues grew by $8.1 billion as both the rate and the base of the Social Security tax were increased. The rate increased from 7.25 to 8.8 percent (combined employer and employee share) and the base increased from the first $4,800 of earnings to the first $6,600 of earnings. Thus, the actual budget deficit was only $1.8 billion.

The size of the 1966 full-employment deficit, $5.4 billion, is a better indicator that fiscal policy was much more expansionary than appropriate at a time when the unemployment rate was below 4 percent. Full-employment revenues were $3.2 billion below actual revenues because the unemployment rate was below 4 percent. Moreover, the actual growth rate of real GNP of 5.9 percent--much above the 4 percent growth rate of potential GNP--at a time when no GNP gap existed, meant that actual GNP was above the nation's theoretical potential GNP.

The Near Recession of 1967 and the Recovery of 1968

Since President Johnson proposed no general increase in income taxes in 1966, monetary policy bore the brunt of coping with excess aggregate demand. Federal Reserve actions did reduce aggregate demand in the second half of 1966 (but not without some trauma in credit markets). Thus, in the fourth quarter inventories built up, and in the first half of 1967 a massive liquidation of inventory occurred. A boom in capital goods spending, which had begun in 1964, came to an end as well. (Consequently, in March the Congress restored the investment tax credit.) Nonetheless, another $20 billion increase in Federal expenditures prevented any drop in real GNP. As in 1966, $11 billion of this increase represented an increase in defense spending. Transfer payments rose by $10 billion over the 2 years 1966 and 1967, about $6 billion of which was connected with the advent of Medicare.

The massive inventory liquidation and the end of the investment boom slowed growth in both real and nominal GNP in 1967. Since tax rates had not been increased, the slower growth in nominal GNP reduced the increase in tax revenues. This increase did not come close to covering the increase in Government spending, as it had in 1966. An actual deficit of $13.2 billion was realized. And since, despite the slowdown, the

Table 12

Actual Surplus and Full-employment Surplus 1960—1968 (billions of dollars)

	Actual Revenues	Actual Expenditures	Actual Surplus	Full-employment Revenues	Full-employment Expenditures	Full-employment Surplus
1960	96.1	93.1	3.0	105.1	92.3	12.8
1961	98.1	101.9	-3.9	110.5	100.3	10.2
1962	106.2	110.4	-4.2	117.5	109.6	7.9
1963	114.4	114.2	0.3	123.7	113.4	10.3
1964	114.9	118.2	-3.3	121.0	117.6	3.4
1965	124.3	123.8	0.5	123.6	123.8	-0.2
1966	141.8	143.6	-1.8	138.6	144.0	-5.4
1967	150.5	163.7	-13.2	150.6	164.0	-14.0
1968	174.7	180.6	5.8	171.5	181.1	-9.6

Sources: Data on the actual budget are on a National Income Accounts basis and are reported in *Economic Report of the President*, 1979, p. 267. Data on the full-employment budget are annual averages of quarterly data reported in Federal Reserve Bank of St. Louis, "Data Listings" (Mimeo).

economy was operating near its potential, a similar full-employment deficit of $14 billion resulted. Massive fiscal stimulus was being applied at a time when the unemployment rate was below 4 percent. 1/

Deficits for 1968 were reduced through a temporary surcharge and a limit on spending. In January 1967, President Johnson proposed a temporary 6 percent surcharge on individual income and corporate profit taxes. In August, as it became clear that the inventory liquidation had run its course, he revised the proposal and requested that Congress enact a temporary 10 percent tax surcharge. An act embodying this request was finally signed into law at the end of June 1968. This act also established specific limitations on Federal budget outlays for fiscal year 1969, which began July 1, 1968. (Spending for Vietnam and for certain other purposes was exempt from these limitations.) As a result of these fiscal actions, and also of the much stronger growth rates of real and nominal GNP in 1968 than in 1967, the actual and full-employment deficits were reduced considerably. In fact the actual deficit was at an annual level of only $1 billion in the second half of 1968.

MONETARY POLICY 1961—1968

Table 13 gives the monetary and financial variables for the years 1960 to 68. Partly because of large gold outflows associated with the continuing balance of payments deficit, which had begun to be a matter of concern in 1958, percentage growth rates of the money stock were much smaller than those of the securities holdings in 1960-63. The sum of Treasury gold holdings and Federal Reserve security holdings fell by 2.8 percent in 1960, and rose by only 1.8 percent in 1961 and 1.1 percent in 1962. In addition, the ratio of time deposits to demand deposits rose by more than 7 percent in each of those 3 years. In fact, large annual percentage growth rates in this ratio continued throughout the decade.

Fear of worsening the gold outflows was one reason why Federal Reserve holdings of government securities did not increase any more than they did in the early 1960s. The balance of payments deficit combined with a slack domestic economy posed a dilemma for policymakers. One proposal for improving both the balance of payments and domestic business was simultaneously to raise short-term interest rates to attract capital inflows from abroad and to lower long-term rates to stimulate domestic

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1/While it is true that the President's economic advisers had recommended early in 1966 that the President ask Congress for a tax increase--a recommendation that was not followed--these advisers were consistently hampered by having to give advice based on gross underestimates of the defense budget. (See Charles E. McLure, Jr., "Fiscal Failure: Lessons of the Sixties," in William Fellner, ed., Economic Policy and Inflation in the Sixties, Washington, D.C.: American Enterprise Institute for Public Policy Research, 1972, pp. 46-47.)

capital-goods spending. This was to be accomplished through Federal Reserve open-market purchases of long-term securities and open market sales of short-term securities.

Table 13

**Monetary and Financial Variables*
1960—1968**

	Money Stock	Percent Change	FR Holdings of Securities	Percent Change	Interest Rates	
					90 Day Treasury Bill	Moody's Aaa Bonds
1960	144.2	0.6	27.2	0.7	2.928	4.41
1961	148.7	3.1	29.1	7.0	2.378	4.35
1962	150.9	1.5	30.5	4.8	2.778	4.33
1963	156.5	3.7	33.7	10.5	3.157	4.26
1964	163.7	4.6	37.1	10.1	3.549	4.40
1965	171.4	4.7	40.9	10.2	3.954	4.49
1966	175.8	2.6	43.8	7.1	4.881	5.13
1967	187.4	6.6	48.9	11.6	4.321	5.51
1968	202.5	8.1	52.5	7.3	5.339	6.18

*Data on money stock and Federal Reserve (FR) holdings of U.S. Government securities are in billions of dollars and are daily averages for the month of December of each year. Data on interest rates are daily averages for the entire year.

Source: *Economic Report of the President*, 1979.

Such a proposal, of course, meant an end to the bills-only policy in effect since 1953. The Federal Open Market Committee tentatively moved in this direction in October 1960 when it bought some securities with maturities of up to 15 months. On February 20, 1961, the Federal Reserve System formally abandoned its bills-only policy:

> "The System Open-Market Account is purchasing in the open market U.S. government [sic] bonds and notes of varying maturities some of which will exceed five years."

Since such purchases turned out to be quite modest, they probably did not play an important role in widening the spread between short-term and long-term interest rates that ensued over the next 4 years.

Some members of the Open Market Committee were more concerned with the balance of payments deficit; others with the failure of unemployment to decline. As a result, throughout 1961, 1962, and the first half of 1963, they compromised by deciding that policy should be slightly expansionary. Moreover, the Committee interpreted the slight decline in long-term interest rates and the fact that free reserves (excess reserves

of member banks minus their borrowings from Federal Reserve Banks), although declining, remained substantially positive, as signs that the thrust of monetary policy was basically constant in a slightly expansionary direction.

On the contrary, monetary policy was neither constant nor expansionary. The 3.1 percent monetary growth rate of 1961 can be fairly characterized as slow. The fact that this growth rate fell by half in 1962 shows that monetary policy became much more restrictive in that year. Thus, tight money bears some of the responsibility for the lethargic recovery from the recession of 1960-61, a sluggishness to which tight fiscal policy had also contributed. In particular, the temporary end (in March 1962) to the decline in the unemployment rate that had begun 5 months earlier was almost certainly related to the halving of the monetary growth rate in early 1962.

Treasury bill rates rose sharply in the second half of 1963. After hovering around 2.9 percent from January through May, they rose steadily to 3.5 percent in December. Free reserves of member banks declined. But in fact, monetary policy had become easier. Federal Reserve holdings of securities rose by 10.5 percent in 1963. And since the decline of the gold stock slowed appreciably, the sum of Treasury gold holdings and Federal Reserve security holdings rose by 6 percent. The monetary growth rate was only 3.7 percent because the ratio of currency to demand deposits rose by 3 percent and the ratio of time deposits to demand deposits rose by 11 percent.

Monetary Policy During the Closing of the GNP Gap

Monetary ease continued through 1964 and 1965, as evidenced by the annual increases of 10 percent in the Federal Reserve's security holdings. Monetary growth rates were well above those of the first 4 years of the 1960s. Since, however, wholesale prices and the GNP deflator had risen noticeably beginning in early 1965, this conduct of policy seems to have been inappropriate. Earlier, falling long-term interest rates and a positive level of free reserves had deluded the members of the Federal Open Market Committee into thinking that monetary policy was easy. So now in 1965 rising interest rates and negative free reserves, levels of which had been positive for many years, deluded the Committee into thinking that monetary policy was exerting a contractionary influence. The rising interest rates and negative free reserves, of course, indicated a rise in the demand for credit, not a tighter monetary policy. By increasing its holdings of securities, the Federal Reserve was helping to satisfy that increased demand for credit, rather than dampening it.

At the end of 1965, the Federal Reserve decided that monetary policy clearly needed to be tightened. Federal Government spending was increasing rapidly, the nation was in the midst of a capital spending boom, inflation was quickening, and excess aggregate demand was a serious threat. Gold outflows, which had been reduced to virtual insignificance

in 1963 and 1964, had increased dramatically during 1965. 1/ Moreover, the Federal Reserve felt that at least part of the tightening needed to be publicly dramatic. Thus, early in December the Board increased the discount rate from 4 to 4.5 percent; it increased the legal maximum rate of interest banks could pay on funds deposited for a fixed period of 30 to 89 days from 4 to 5 percent and on funds deposited for a fixed period of 90 days or more from 4.5 to 5.5 percent. It was hoped that these measures would be welcomed by foreign central bankers and would give domestic banks the courage to raise their prime lending rates, which pressure from President Johnson had kept artifically low. 2/ These modest increases touched off a furor of criticism, marked by barely concealed presidential outrage and by congressional hearings on the breach between the Administration and the Federal Reserve.

Disintermediation and the Credit Crunch of 1966

Nineteen sixty-six was an important year in the history of financial markets and it witnessesd extraordinary credit demands and increases in interest rates to levels that dumbfounded observers. Since this experience was to be repeated four times in the next 12 years, it is worth describing in some detail.

The December 1965 increase in legal maximum interest rates payable on bank time deposits created severe problems for nonbank financial institutions and, in turn, affected residential construction. These rates were higher than those paid on savings and loan shares and mutual savings bank deposits. Savings and loan associations, accustomed to steady monthly growth in total shares outstanding, found this growth much curtailed. As market interest rates rose, life insurance companies found that policyholders were greatly increasing their demand for policy loans, which had to be extended at interest rates well below current market rates. These two types of institutions, the major sources of financing for the residential construction industry, had to restrict this financing. As a result, together with the rise in mortgage interest rates, residential construction dropped sharply. Housing starts fell by 50 percent from December 1965 to October 1966, and in many areas a majority of builders and subcontractors went out of business.

Most savings and loan associations and insurance companies had no trouble operating with deposits and loans growing at a reduced rate.

1/The gold stock had declined by only $0.56 billion (3.5 percent) from December 1962 to December 1964, but declined by $1.59 billion (10.3 percent) from December 1964 to December 1965.

2/Sherman J. Maisel, Managing the Dollar, New York: W.W. Norton, 1973, p. 76. Professor Maisel was one of the members of the Board of Governors of the Federal Reserve System at this time.

But some larger savings and loans in California and New York, and a few insurance companies, were losing funds at a rate that threatened their solvency. In July 1966, the Federal Reserve distinguished between single-maturity time deposits--not automatically renewable at maturity without action by the depositor--and multiple-maturity time deposits. It retained the 5.5 percent interest rate ceiling on the former, but reduced the ceiling rate on multiple-maturity deposits of 30 to 89 days to 4 percent and to 5 percent on those of 90 days or more. It was hoped that this action would stem the outflow of funds from savings and loan associations.

Open-market operations were also used to restrain the economy. For the first 4 months of 1966, Federal Reserve holdings of securities were held at a level of $40.6 billion, $0.3 billion below the December 1965 level shown in Table 13. Then, over the next 4 months, holdings rose to $42.3 billion, which meant they were rising at an annual rate of 12 percent. Although this may seem very expansive, banks were finding that the consequent increase in their reserves was nowhere near sufficient to satisfy the tremendous loan demand they faced. They could not attract funds into time deposits because interest rates on open-market securities had risen above the ceilings imposed by the Federal Reserve. To raise lendable funds they sold Federal, State, and municipal securities at large losses, and paid unprecedented interest rates to obtain reserves from other banks (the Federal funds market) and to borrow in the Euro-dollar market. Even so, many banks were unable to accommodate all who wanted to borrow at the interest rates they charged on loans. The entire episode has come to be called the "1966 credit-crunch." In these circumstances, hard as it is to believe, the 12 percent annual rate of increase in Federal Reserve holdings of securities constituted a very tight monetary policy.

The banks' method of raising lendable funds by selling securities at large losses caused concern. The Federal Reserve worried that security markets would collapse, that bondholders who might need to liquidate would find no buyers at anything but disastrously low prices, and that widespread bankruptcies might result. A September 1 letter from the Board to the member banks urged an end to the pattern of expanding business loans financed by security sales. In speeches the governors indicated that loans to member banks on unusually easy terms of repayment would be available for all purposes except expansion of business loans. Security markets felt relief. While short-term open market interest rates continued to rise for 1 more month--the rate on 90 day Treasury bills peaked at 5.54 percent the last week in September--rates on State and local bonds turned down immediately, and Moody's index of Aaa-rated corporate bonds peaked at 5.52 percent in the second week of September.

As previously mentioned, in September the investment tax credit was suspended which helped to diminish the capital goods boom. Also in September, Congress gave the Federal Reserve Board the authority to vary legal maximum interest rates on bank time deposits according to their size as well as their duration. The day the Board received this authority it reduced the ceiling on single-maturity time deposits of

under $100,000 to 5 percent. At the same time the Federal Deposit Insurance Corporation and the Federal Home Loan Bank Board instituted legal maximum rates that mutual savings banks and loan associations could pay on their deposits. The same categories of deposits as delineated by the Federal Reserve were utilized. These institutions were allowed to pay 0.25 percentage points more on each type of deposit than were commercial banks, a differential which continues to exist.

The hope was that this differential would prevent these institutions from losing funds to banks. It has become clear, however, that when open-market interest rates rise above the deposit rate ceilings, both banks and thrift institutions experience a slowdown in deposit growth at best, and a reduction in deposit levels at worst. The word "disintermediation" was coined in 1966 to describe this phenomenon which has occurred on four subsequent occasions. (See Chapter 3.)

Monetary Policy in the Near Recession of 1967 and Recovery of 1968

By October 1966 the economy was clearly facing a slowdown. Monetary policy eased. In the last 4 months of 1966, Federal Reserve holdings of Government securities rose from $42.3 billion to $43.8 billion, or at an annual rate of 14 percent. This rate of increase did not slow down much in 1967. In that year, System holdings of securities increased 11.6 percent. While monetary growth in 1967 was "only" a little more than half as rapid (owing mainly to an 8.5 percent increase in the ratio of time deposits to demand deposits, but also to a decline in member bank borrowings and to a 6 percent decline in the gold stock), the 6.6 percent rate of increase was clearly extraordinary.

Short-term interest rates, averaged overall for 1967, were below their record 1966 level while long-term rates were above. This is because short-term rates for the first half of 1967 continued to fall from their September 1966 high, before they began to climb. Long-term rates rose because the inflation rates of 1966, although very low by today's standards, represented a sharp break with the past and were regarded as disastrously high. The loosening of monetary policy gave rise to expectations of further price increases. Long-term interest rates were thus rising to compensate for anticipated inflation, and real interest rates (actual interest rates minus anticipated rates of inflation) were not particularly high and in fact, may have been falling.

In the first half of 1967 it was quite uncertain whether the economy was headed for recession. Even at midyear the strength of the recovery was not clear. Other reasons also account for the very expansionary monetary policy that continued: (1) in August President Johnson revised his January proposal for an income tax surcharge from 6 percent to 10 percent to take effect in October, (2) the high and rising level of long-term interest rates suggested that monetary policy must be tight despite the 6.6 percent increase in the money stock.

Finally, in December 1967 the Federal Reserve called for "slightly firmer" monetary conditions. It raised required reserve ratios by 0.5 percentage points for all member banks. Thus, monetary policy was restrictive in the first half of 1968. The figures on the money stock unadjusted for seasonal variations showed no growth at all in those 6 months. 1/ In June 1968 Congress finally passed the Revenue and Expenditure Control Act, which provided for a 10 percent surtax on personal and corporate incomes, and a reduction by $6 billion in originally planned Federal outlays. The nearly unanimous opinion was that this fiscal action would effectively restrict the growth of aggregate demand and inflation, and lower interest rates. Many were concerned that unless monetary policy was relaxed, these fiscal actions would lead to recession. In fact, the Federal Reserve did follow a more expansionary policy from June through November of 1968. With Treasury gold holdings absolutely unchanged, Federal Reserve holdings of Government securities rose at an annual rate of 9.8 percent. The money stock rose at an annual rate of 7.8 percent.

1/This is the only instance in this report in which the thrust of monetary policy has been judged by the behavior of the seasonally unadjusted money stock data. The data in Table 13 report the money stock on a seasonally adjusted basis, and in every instance but this one the thrust of monetary policy has been judged on the basis of the latter data. Why have seasonally unadjusted data been used here?

The first half of 1968 is generally regarded by critics of the Federal Reserve as another of those periods, several of which have been noted above, in which Federal Reserve attention to the behavior of interest rates and free reserves led it to incorrect conclusions about the thrust of current monetary policy. The Federal Reserve pointed to rising interest rates and falling free reserves as indicative of a tight monetary policy. Critics assert that the Federal Reserve was looking at the wrong variables and that the fact that the (seasonally adjusted) money stock rose from $187.3 billion in December, 1967 to $194.5 billion in June, 1968, an annual rate of 7.9 percent, shows that monetary policy was very easy. This is an appealing argument. But when one searches for the source of this $7 billion increase in the money stock, one is stymied. While Federal Reserve holdings of securities rose by $2.4 billion, Treasury gold holdings fell by $1.9 billion, so the sum of the two rose by only $0.5 billion, an annual rate of increase of only 1.6 percent. As noted in the text, required reserve ratios were raised in January. The ratios of currency to demand deposits and of time deposits to demand deposits rose. All of these work in the direction of reducing the money supply. So what is the source of the $7 billion increase? The answer is to be found in the procedure used to adjust data on the money stock for seasonal variation. The data on Federal Reserve holdings of securities, gold outflows, and the various relevant ratios, all suggest there should have been virtually no growth in the money stock. And sure enough, this is what the raw data, not adjusted for seasonal variation show. Thus, in this case the thrust of monetary policy must be judged by the unadjusted data.

CHAPTER THREE

THE U.S. ECONOMY FROM 1969 TO 1978

This chapter analyzes macroeconomic developments and policies in the period from 1969 to 1978. Topics are discussed in the same order as in the previous chapters. Sections describing the behavior of output and employment, inflation, capital formation, and the nation's international accounts are followed by more extensive descriptions of the fiscal and monetary policies that both helped to produce, and were produced by, this behavior.

The cyclical behavior of the economy in the 1970s was very different from its behavior in either of the previous two decades. The 1950s, as shown in Chapter 1, had been characterized by a pattern of mild business cycles superimposed on a weak growth trend, a trend considered much too weak by the economic advisers of Presidents Kennedy and Johnson. As discussed in Chapter 2, they advocated fiscal and monetary policies which they believed would raise the growth rate and prevent recessions.

And indeed, the period from 1961 through 1968 was one of continuous, generally strong, expansion. Although the rate of this expansion was not constant from year to year (starting slowly in 1961, and falling appreciably in 1967), not a single calendar quarter, let alone year, of negative growth was experienced in those eight years, by far the longest period without such a decline in the nation's history. From 1966 through 1968, the unemployment rate was below its previous interim target of 4 percent. Furthermore, this record was accomplished with very low rates of increase in prices through 1967 and especially through 1965. A rate of inflation above 4 percent did not occur until 1968. All in all, the economic policymakers of the era felt that there was much reason for self-congratulation. They regarded the prolonged economic expansion as the triumph of Keynesian economics. "Is the business cycle dead?" was a seriously asked question. And then the bubble burst. The period discussed in this chapter witnessed two recessions, the latter of which was the worst downturn since the 1930s. Occurring simultaneously with that latter recession, were some of the highest rates of inflation thus far in this century.

Output and Employment

Table 14 provides data on the annual rate of growth of GNP and on the unemployment rate from 1967 through 1978:

Table 14

Unemployment Rate and Real Gross National Product 1968—1978

	Unemployment Rate	Real GNP (billions of 1972 dollars)	Percent Change in Real GNP
1967	3.8	1007.7	2.7
1968	3.6	1051.8	4.4
1969	3.5	1078.8	2.6
1970	4.9	1075.3	-0.3
1971	5.9	1107.5	3.0
1972	5.6	1171.1	5.7
1973	4.9	1235.0	5.5
1974	5.6	1217.8	-1.4
1975	8.5	1202.3	-1.3
1976	7.7	1271.0	5.7
1977	7.0	1332.7	4.9
1978	6.0	1385.7	4.0

Sources: *Economic Report of the President*, 1978, pp. 291, 258-59; *Survey of Current Business*, April 1979, pp. 10, S-13.

The data in Table 14 reflect the effects of such things as the tight monetary and fiscal policies which, as will be discussed in subsequent sections, were imposed in 1969 in an attempt to reduce inflation. The last quarter of that year witnessed a decline in real GNP, the first such decline since 1960, and a mild recession occurred in 1970. The unemployment rate rose from 3.5 percent in December 1969 to 6.1 percent in December 1970. Although the recession had ended the previous month, the unemployment rate hovered very close to 6 percent throughout 1971, and averaged 5.7 percent in the first 10 months of 1972. It was only in November that it fell abruptly to 5.2 percent, responding to the strong 5.7 percent annual growth rate of real GNP.

Table 14 indicates that real GNP grew at the considerable (annual) rate of 5.5 percent in 1973. Actually, much of this growth was achieved in the first quarter of that year during which real GNP grew at an annual rate of 8.8 percent. In the following three quarters, this growth fell to annual rates of 0.2, 2.7, and 1.4 percent respectively. The slowdown in output growth was caused partly by a shift to fiscal tightness implemented to combat a worsening inflation. A second cause, new in the experience of most business cycle analysts, was a shortage of intermediate goods. This shortage reflected capacity constraints and misallocation of resources generated by the price and wage controls to be discussed in the next section. 1/ Despite the slowdown, the unemployment rate actually declined slightly to 4.6 percent in October, before returning to 4.9 percent at year's end.

1/See Alfred E. Kahn's statement before the Subcommittee on Economic Stabilization, Committee on Banking, Finance, and Urban Affairs, House of Representatives. November 22, 1978, pp. 7-8.

But while the slowing in output growth did not adversely affect the unemployment rate, it failed to halt the worsening rates of inflation. As a result, restrictive policy continued in the first half of 1974. Real GNP growth was negative in all four quarters of that year. Nevertheless, the unemployment rate continued to be sticky through the first half of 1974, rising only from 5 percent in January to 5.5 percent in August. And since inflation rates continued to worsen, President Ford unveiled his WIN (Whip Inflation Now) campaign in October of 1974. Shortly thereafter, the unemployment rate became unstuck, rising to 6.1 percent in October, 7.2 percent in December, 8 percent in February 1975, and 8.9 percent in May. It declined slightly during the remainder of the year, falling to 8.3 percent in December 1975--averaging 8.5 percent for the year. The drop in real GNP ended between the first and second quarters of 1975. Although for the year as a whole the average rate of growth of output was negative, quarterly rates were positive in the second through fourth quarters of the year.

The downturn had been, by far, the most severe since the Great Depression of the 1930s and the annual rate of growth of real GNP of 5.7 percent in 1976 did not represent a particularly strong recovery. Quarterly increases, expressed as annual growth rates, declined from 9.0 percent in the first quarter to a weak 2.4 percent in the fourth. 1/ This decline explains the behavior of the unemployment rate in 1976. It fell from 7.9 percent in January to 7.5 percent in June, but stayed at 7.7 percent throughout the second half of the year--a most disappointing performance in the first full year of an economic recovery.

The growth of output was lower in 1977 and the unemployment rate gradually fell. For the year, real GNP grew at a rate of 4.9 percent. However, differences in quarterly changes (expressed as an annual growth rate) were not as sharp as in 1976, though such changes again declined throughout the year, from 7.1 percent in the first quarter to 3.2 percent in the fourth. The unemployment rate fell steadily from 7.8 percent in December 1976 to 7.1 percent in April 1977. It remained stuck around 7 percent through November, but declined to 6.4 percent in December. During 1978, it fluctuated narrowly around 6.2 percent.

If used instead of the unemployment rate, total employment data give a somewhat more salutory view of the operation of the labor market in the post-1975 economic recovery. The cyclical decline in total employment ended in April 1975. In the subsequent 3 years and 3 months, more than 10 million new jobs were created, an increase from June 1975 to June 1978 of 12 percent in total employment. 2/ By contrast, in the 3 over-full employment years of 1967-69, average total employment grew from 72.9

1/Calculated from data in Survey of Current Business, July 1978, p. 26.

2/Monthly data are reported in the Appendix to the February 1978 issue of Employment and Earnings. Data for subsequent months are from the July 1978 issue of that publication.

million in 1966 to 77.9 million in 1969, an increase of 6.9 percent. Thus, from the perspective of total employment data, the performance of the economy from mid-1975 to mid-1978 seems historically unexcelled--yet the unemployment rate remained high by historical standards.

At least three factors contribute to this paradox. Two are the growth of, and changes in the composition of, the labor force. The third is the high rate of unemployment of blacks in general, and black teens in particular.

As shown in Figure 2, the civilian labor force grew almost as fast as total employment from 1975 through 1978 so the difference between the two, total unemployment, hardly fell. Figure 2 also shows some of the factors underlying the growth of the labor force. The 25-year trend of a declining labor force participation rate of adult males seemed to end, at least temporarily. The 25-year trend of a rising labor force participation rate of adult females seemed to accelerate slightly. The labor force participation rate of teens rose above 55 percent for the first time. Thus, on balance, the trend toward a larger proportion of women and teens in the total force seemed to accelerate. But teenagers and adult females tend to be less permanently attached to the labor force than do adult males; hence, these groups have higher unemployment rates. (A period of unemployment often accompanies new entry or reentry into the labor force.) Thus, when a larger proportion of the total labor force is composed of groups who have higher unemployment rates, the overall unemployment rate tends to be sticky.

Unemployment rates among blacks (especially teenagers), however, are a major structural problem that differing turnover rates of adult and teenage workers cannot explain. While the unemployment rate for whites rose dramatically in the 1974-75 recession, from 4.5 percent in January 1974 (12.9 percent for teenagers) to 8.4 percent in May 1975 (18.4 percent for teens), it declined steadily during the subsequent recovery falling to 5.5 percent (12.7 percent for teens) in December 1977. In contrast, the unemployment rate for blacks rose from 9.3 percent in January 1974 (29.9 percent for black teens) to 15.4 percent in September 1975 (40.1 percent for black teens). By December 1977, the unemployment rate for all blacks had fallen only to 13.7 percent and the rate for black teens stood at 40.3 percent. 1/ Since black workers constitute about 10 percent of the labor force, the failure of their unemployment rates to fall in the recovery helps to explain, in part, why the overall unemployment rate was so sticky.

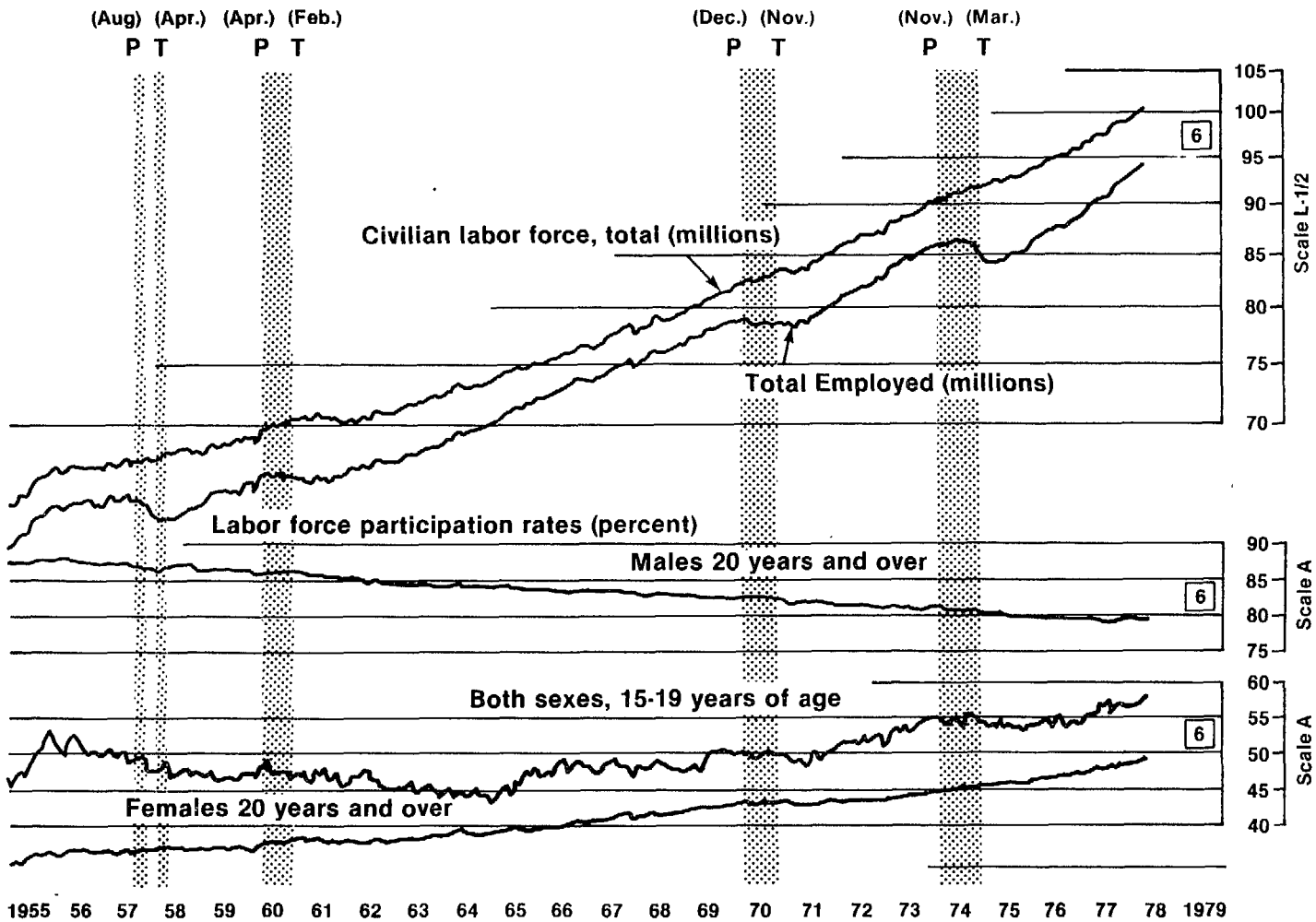
Inflation

The following table shows both price indexes and the GNP deflator for 1967-78.

1/Ibid., pp. 156, 158.

Figure 2

Civilian Labor Force, Total Employment, and Labor Force Participation Rates for Males, Females, and Teenagers 1955-1978



Source: *Business Conditions Digest*, July 1978, p. 51

Table 15

Consumer Price Index
Producer Price Index
and GNP Deflator
1967–1978

	CPI (1967 = 100)	Percent Change	PPI (1967 = 100)	Percent Change	Implicit GNP Deflator (1972 = 100)	Percent Change
1967	100.0	2.9	100.0	0.2	79.02	2.9
1968	104.2	4.2	102.5	2.5	82.57	4.5
1969	109.8	5.4	106.5	3.9	86.72	5.0
1970	116.3	5.9	110.4	3.7	91.36	5.4
1971	121.3	4.3	114.0	3.3	96.02	5.1
1972	125.3	3.3	119.1	4.5	100.00	4.1
1973	133.1	6.2	134.7	13.1	105.80	5.8
1974	147.7	11.0	160.1	18.9	116.02	9.7
1975	161.2	9.1	174.9	9.2	127.15	9.6
1976	170.5	5.8	183.0	4.6	133.71	5.2
1977	181.5	6.5	194.2	6.1	141.70	6.0
1978	195.4	7.7	209.3	7.8	152.05	7.3

Sources: *Economic Report of the President,* 1978, 1980; *Producer Prices and Price Indexes,* Supplement, 1979.

Dissatisfaction with the inflation rates of 1967 and 1968 induced tight monetary and fiscal policies in 1969. While these restrictive policies led to increased unemployment and a decline in real output, they did not reduce inflation rates. Debate was lively as to why inflation rates failed to drop as unemployment rates worsened: Was it due primarily to an attempt by wage earners both to "catch up" to previous unanticipated inflation and to protect against future expected inflation, or was it due to monopoly pricing behavior by businesses?

The stimulative policies followed in 1970 and the first half of 1971 succeeded in halting the recession, but they worsened the economy's price performance. In May and June, the CPI rose by one-half percent each month (an implied annual rate of 6.2 percent), and the PPI rose by 0.4 percent in June (an implied annual rate of 4.9 percent). Rates of inflation were clearly not falling.

At the same time, the U.S. was incurring a deficit in its balance of trade for the first time in this century. This reinforced a persistent view that the dollar was seriously overvalued in terms of other major currencies. Speculation was rife that the dollar would have to be revalued

in terms of gold. 1/ Hundreds of millions of dollars were exchanged for German, Dutch, Swiss, Austrian, and Belgian funds. In a single week in early August, 3.7 billion U.S. dollars flowed into foreign central banks.

The failure of inflation to abate and the massive dollar outflow led to a new policy that included domestic wage and price controls. On August 15, 1971, President Nixon appeared on nationwide television to announce "the most comprehensive new economic policy to be undertaken by this country in four decades." His policy included some domestic tax reductions and sweeping changes in the international sphere, but by far the most dramatic announcement was the imposition of domestic wage and price controls. A 3-month freeze, labeled Phase I, was imposed on prices and wage rates. This was followed by Phase II, a regime of selective price and wage controls. Rates of inflation did fall in 1971 and 1972. Sharp disagreement continues, however, between economists who believe this reduction was due to the controls, and those who believe that the effect on prices of the earlier tight fiscal and monetary policies made itself felt only with a long lag.

In a market economy, changes in relative prices are a signaling and market coordinating mechanism, and that mechanism is interfered with by wage and price controls. The interference is least severe when economic activity is sluggish, as in 1971, and most severe when economic activity is buoyant, as in the fourth quarter of 1972 and first quarter of 1973 when real GNP rose at an annual rate of better than 8 percent. Since the rate of inflation had dropped and since the economy was clearly in a period when wage and price controls potentially do their worst harm, Phase II of the controls program ended. It was replaced by Phase III, which generally reduced controls and relied on self-enforcement.

Policymakers did not, however, anticipate that economic activity would be as buoyant as it was, both in the U.S. and in the rest of the developed world. The result of this international surge of activity was a rapid rise in prices of industrial commodities. On world markets, prices of basic industrial commodities other than oil more than doubled between mid-1972 and mid-1974. Prices of intermediate products such as primary metals and chemicals also rose sharply in response to worldwide demand. Food prices surged in 1973 as a consequence of conditions that had been evolving slowly but were brought into prominence by a series of poor world harvests beginning in 1972. In the first five months of 1973, the overall CPI rose 3.2 percent and the food component rose 8.5 percent. Popular pressure to "do something" was rampant, so in June, President Nixon announced another 60-day freeze on prices to be followed by a new set of Phase IV controls which were stricter than the Phase II controls.

1/This situation is discussed in more detail in the section on the balance of payments that follows.

Towards the end of 1973, however, came the steep rise in crude oil prices, mandated by the Organization of Petroleum Exporting Countries (OPEC). The tax-paid f.o.b. cost of a barrel of "Saudi Arabian Light" rose from $1.62 in January 1973, to $3.15 in October 1973, to $7.11 in January 1974, better than a quadrupling of the price in a year. No price control system could be effective against that sort of shock. That 1974 would be a year of some of the worst annual rates of inflation in this country's history was assured. For the year the CPI rose 11 percent and the PPI rose 18.9 percent.

All phases of Nixon's control program derived their legal authority from the Economic Stabilization Act of 1970 as amended. This law expired April 30, 1974, and there was little sentiment in Congress, and less in the Nixon Administration, to extend it. Thus ended this country's most extensive peacetime experience with wage and price controls.

In the next 3 years, inflation moderated substantially from its 1974 rates. Prices of food, energy, and basic materials rose much less rapidly in these years than in 1974. Together with the severity of the 1974-75 recession, the slowing of price rises in these areas led to a reduction of rates of increase in other prices and in wages. The rate of increase in compensation per hour fell from 11 percent in 1974 to around 8 percent in the next 3 years. The annual rate of increase of prices of all items in the CPI, other than food and energy, was a uniform 6 to 6-1/2 percent during the period. 1/

While this represented some improvement from 1974, by historical standards these rates were still very high. It is clear that strong inflationary pressures exist in the economy even during periods of substantial economic slack. Whether these forces are due primarily to the nature and implementation of Government policies, or to actions and events occurring in the private sector, continues to be a sharply disputed matter.

In 1978 the situation worsened and once again efforts were made to moderate wages and prices. Table 15 shows that the annual average values of the three price indices for 1978 were about 7.5 percent above their 1977 levels. But the December 1978 levels of the CPI and PPI were respectively 9.0 and 9.5 percent above their December 1977 levels. In October 1978, President Carter announced a program of wage and price guidelines. Wage increases were to be held to 7 percent, and price increases to one-half percentage point below the average of such increases in 1976 and 1977. Violators were subject to adverse publicity and to loss of Government contracts.

1/Economic Report of the President, 1978, p. 142

Capital Formation

During the past decade the average annual rate of growth of real net fixed capital in the manufacturing sector was only 2.2 percent, in contrast to its long-term historical average of 3 percent. Also in the past decade, the average annual rate of growth of productivity was only 1.6 percent, down from 2.5 percent in the 1950-68 period. The two changes are not unrelated. Undoubtedly, a large part of the explanation for the slowdown in productivity growth lies in the slow growth of capital. From 1947 to 1968 the economy's capital-labor force ratio grew at an annual rate of about 3 percent. Since then it has apparently grown more slowly, by about 1 percent a year. Adjusted for the proportion of capital required to meet pollution abatement and safety regulations, the capital labor ratio would show even less growth. 1/

Table 16 shows the real net stock of fixed nonresidential capital for the period.

Table 16

Real Net Stock of Fixed Nonresidential Capital
1968—1977
(billions of dollars)

	Total	Percent Change	Manufacturing	Percent Change
1969	802.5	5.1	182.1	3.9
1970	833.7	3.9	186.5	2.4
1971	859.5	3.1	187.9	0.7
1972	889.8	3.5	190.0	1.1
1973	929.5	4.5	195.3	2.8
1974	963.7	3.8	201.6	3.2
1975	981.2	1.8	202.2	0.3
1976	999.0	1.8	206.8	2.3
1977	1,024.3	2.5	212.8	2.9

Source: *Survey of Current Business*, April and August 1976; August 1977; September 1978.

The slowdown in productivity growth, caused, in part, by the slow growth of the capital stock, helps to explain several economic developments of the past decade. First, it helps to explain why real national income grew at an annual rate of 3.9 percent from 1950 to 1968, but has

1/Economic Report of the President, 1968, pp. 147-148.

grown only at a rate of 2.3 percent since 1968. 1/ Second, slow productivity growth helps to explain why it has been so difficult to lower the rate of inflation in the past decade. Wage increases in a given industry to some extent are determined by inflationary expectations and by wage increases won in other industries. To the extent that these higher wages are not offset by increases in productivity, unit labor costs rise and prices must go up. (The substantial growth in productivity was a major factor in the stable price environment of the 1950s and 1960s.) Third, the above explanation for the difficulty in lowering inflation rates--that slow growth in productivity causes unit labor costs to rise--may also help interpret the rates of growth of output and the high unemployment rates in this decade. Higher unit labor costs may manifest themselves only partly in higher prices. Part of the effect may be lower output and higher unemployment rates.

Thus, the slow growth of capital, to the extent that it is responsible for the slowdown in the rate of productivity growth, helps to explain some of the prominent features of macroeconomic performance in this decade. And the economic outlook for the next decade depends in large measure on the growth rate of capital in the next few years. A faster rate of capital formation would improve productivity and diminish the tendencies toward slower real income growth and higher inflation and unemployment rates.

Balance of Payments

The period since 1968 has been a turbulent one, both for the world's international payment system and for the pattern of U.S. international transactions. Table 17 illustrates this pattern for the decade.

In 6 of the 10 years under consideration, the United States had a deficit of merchandise exports over merchandise imports. When this first occurred in 1971, it marked the first time in this century that the United States had incurred a deficit in its trade balance.

The deficit was generally explained by asserting that the poor wage-price-productivity performance of the U.S. economy between 1965 and 1969, compared with that of its trading partners, had significantly lowered the competitiveness of U.S. goods in domestic and foreign markets. The greatly reduced trade surpluses of 1968 and 1969 were offered as evidence of this assertion. According to this view, the improved trade balance in 1970 was purely transitory and could be ascribed to the cyclical downturn, but as soon as the domestic economy began to recover from the 1970 recession, the trade surplus inevitably turned to a deficit.

1/Based on data reported in Survey of Current Business, Jan. 1976, Part II, pp. 16-17 and July 1978, p. 29.

Table 17

Various Components of the Current Account Balance 1969—1978 (millions of dollars)

	Merchandise Exports	Merchandise Imports	Merchandise Balance	Balance on Goods and Services*	Balance on Current Account*
1969	36,414	35,807	607	1,002	-1,992
1970	42,469	39,866	2,603	2,912	-382
1971	43,319	45,579	-2,260	-340	-4,041
1972	49,381	55,797	-6,416	-6,088	-9,942
1973	71,410	70,499	911	3,518	-363
1974	98,306	103,649	-5,343	2,193	-4,993
1975	107,088	98,041	9,047	16,201	11,586
1976	114,694	124,047	-9,353	3,324	-1,698
1977	120,585	151,644	-31,059	-16,254	-20,962
1978	141,844	175,988	-34,144	-19,483	-24,559

*Excludes reinvested earnings of incorporated foreign subsidiaries of U S. firms, and reinvested earnings of incorporated U.S. subsidiaries of foreign firms.

Source: *Survey of Current Business*, June 1978, Part II, pp. 16-17, and March 1979, pp. 44-45.

The appearance of the trade deficit led to a massive speculative run on the dollar culminating in President Nixon's announcement of sweeping policy changes on August 15, 1971. A series of actions were taken to try to induce this country's major trading partners to revalue their currencies. First, and most dramatic, dollar holdings of foreign central banks would no longer be redeemable in gold by the United States. Second, a 10 percentage point tariff surcharge was imposed on imports into the U.S. An unstated implication was that the surcharge would be removed in exchange for foreign currency revaluation. Third, the foreign aid program to developing countries was reduced by 10 percent.

Following President Nixon's announcement, the group of ten major trading nations held a meeting at the Smithsonian Institution, December 17-18, 1971. A new set of exchange rates was agreed upon, and the U.S. agreed to increase the official price of gold 8.5 percent, from $35 to $38 an ounce. (As part of this agreement, the August 15 tariff surcharge was lifted.) This increase became effective March 31, 1972.

The significant worsening of the trade balance in 1972 was attributed to cyclical factors. U.S. real GNP grew faster than that of many of its major trading partners in that year. A number of factors were involved in the trade balance's reverting to surplus in 1973. Shortfalls in foreign crops played a major part in increasing agricultural exports (40

percent of the increase in exports during the first three quarters of 1973 came from agricultural products). In addition, the rise of world prices of U.S.-produced, internationally traded commodities above their domestically controlled prices helped stimulate exports. On the other hand, the quantity and value of oil imports rose dramatically, preventing the trade surplus from being larger than it was.

Another factor in the surplus was the drop in the dollar's value relative to the currencies of some of our major trading partners, encouraging exports and discouraging imports. In early 1973, there were massive flows of Italian lira to Switzerland. The Swiss authorities were obliged to float the franc. This development strengthened expectations that other exchange rate adjustments were inevitable, and led to massive purchases of German marks and Japanese yen for dollars. In mid-February, the foreign exchanges closed, and the Administration announced it would ask Congress to approve a further devaluation of the dollar, which would raise the official price of gold to $42.22. When the foreign exchange markets reopened on March 19, the Common Market countries decided to let their currencies float jointly vis-a-vis the dollar and other currencies.

Oil imports increased again in 1974, which largely explains the slide of the trade balance back into deficit that year. The balance of exports over imports of manufactured goods improved dramatically, from an approximate balance in 1973 to a $7-billion surplus in 1974; this, however, was no match for a $14 billion increase in imports of petroleum and associated products.

The large trade surplus of 1975 is yet another instance of an improvement in the trade balance linked to a cyclical downturn. Although the severe U.S. recession technically ended in the first half of 1975, most of the year was characterized by inventory decumulation. This explains the drop in the volume of imports at an annual rate of 13.8 percent between the fourth quarter of 1974 and the third quarter of 1975. The drop would have been even steeper if petroleum imports had not increased slightly during the year. U.S. export volume remained stable because agricultural exports rose and exports of capital goods to oil producing countries increased.

Our large trade deficits in 1976 through 1978 were attributable to a faster increase in oil imports, and to our more vigorous domestic inflation, and greater real growth than that of our major trading partners--conditions that stimulated imports and discouraged exports.

Nineteen seventy-eight also witnessed a crisis in the dollar's international value. The index of the dollar's weighted average exchange rate against ten major currencies (March 1973 = 100), which had been falling very gradually from a high of 107.05 in July 1976 to a level of 103.77 in September 1977, fell more sharply to 96.73 in January 1978. Still at 96.31 in May, the index then dropped steadily to 89.51 in

September. 1/ Central bankers, in Washington at the end of that month for the annual meeting of the International Monetary Fund, seemed to generally agree that inflation, economic growth, and the trade deficit would fall in the United States and rise abroad, and that the dollar would strengthen. The dollar continued to fall during October, however, and the declines were sharpest in the final week of the month, after President Carter had announced his plans for voluntary wage and price guidelines and for real wage insurance. Record lows against most major currencies were reached on October 30. In the 13 months prior to that date, the dollar had dropped 38 percent against the Swiss franc, 34 percent against the yen, and 26 percent against the mark.

The stage, then, was set for President Carter's dramatic announcement on November 1 that the U.S. would mobilize $30 billion for the purpose of intervening in foreign exchange markets to stabilize the dollar. The Federal Reserve discount rate was raised a full percentage point from 8.5 to 9.5 percent, in contrast to the usual quarter point changes, and reserve requirements on certain categories of deposits were increased. The foreign exchange markets reacted positively. Three weeks after November 1, the dollar had recouped as much as one-third of its losses against the Swiss franc, yen, and mark, but in the final weeks of 1978 half this gain was surrendered. Early in 1979, as the dollar continued to fall, doubts were voiced as to how long the policy of intervention would remain viable. Reasonable stability in foreign exchange markets will be achieved in the long run only if the U.S. rate of inflation is lowered to about that of its major trading partners.

FISCAL POLICY 1969—1978

The Nixon Administration viewed inflation as the nation's worst economic problem and sought a fiscal policy which would restrain it. This search led first to wage and price controls and eventually to a request that Congress impose a spending ceiling with presidential discretion to decide where budget cuts would be made. This interest in a spending ceiling led to two important economic developments: a new Congressional budget process, and a confrontation over presidential impoundment of funds. The decade also saw a dramatic increase in transfer payments and grants to State and local governments. The actual and full employment surplus data for this decade are displayed in Table 18.

Fiscal Policy as a Contributor to the Downturn of 1969-1970

A 10 percent income tax surcharge was the main feature of the Revenue and Expenditure Control Act of June 1968. In the ensuing months, however, many felt that the tax surcharge was not, as intended, reducing consumer demand. Although some still disagree, most economists now believe that

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1/Federal Reserve Bulletin, August 1978, p. 700; November 1978, p. A68.

Table 18

Actual Surplus and Full-employment Surplus
1967—1978
(billions of dollars)

	Actual Revenues	Actual Expenditures	Actual Surplus	Full-employment Revenues	Full-employment Expenditures	Full-employment Surplus
1967	150.5	163.7	-13.2	150 0	164 0	-14.0
1968	174.7	180.6	-5.8	171.5	181.1	-9.6
1969	197.0	188.4	8.5	196.3	189.1	7.2
1970	192 1	204.2	-12.1	205.9	203.9	2.0
1971	198 6	220.6	-22 0	211.5	219.5	-7 8
1972	227.5	244.7	-17.3	228.3	244.0	-15 7
1973	258.3	265.0	-6 7	260.4	265.1	-4 7
1974	288 6	299.3	-10.7	299.4	298.6	0 9
1975	286.2	356.8	-70.6	325.0	349.9	-24.3
1976	331.4	385.2	-53.8	361.1	380.1	-19 0
1977	374.5	422.6	-48.1	394.3	419.2	-24.9
1978	431.6	461.0	-29.4	449.8	459.6	-9.9

Sources Data on the actual budget are on a National Income Accounts basis and are reported in *Economic Report of the President* 1979, p 267 (Data for 1978 are preliminary and subject to revision) Data on the full-employment budget are annual averages of unpublished quarterly data provided by the Federal Reserve Bank of St Louis

the surcharge had only a minimal effect. Some striking evidence supports this view. In particular, disposable income saved varied between 7.0 and 7.8 percent from the first quarter of 1967 through the second quarter of 1968, but fell dramatically to 6 percent in the second half of 1968 after the surcharge took effect. Consumer spending continued unabated as did the annual rate of increase of over 4 percent in the CPI.

When President Nixon took office in 1969, the unemployment rate was only 3.4 percent. The Administration therefore decided that fiscal policy should be devoted exclusively to reducing the inflation rate. It also felt that the faster inflation was reduced, the larger the (hopefully temporary) increase in unemployment would have to be. The aim was to slowly but surely reduce the inflation rate without precipitating a recession.

As a result, fiscal policy became extremely restrictive. Although the surtax had originally been scheduled to expire on June 30, 1969, Nixon recommended in April that it be extended at a 10 percent rate for the last 6 months of 1969 and that it be levied at 5 percent for the first 6 months of 1970. Furthermore, as part of the Tax Reform Act

of 1969, 1/ Congress repealed the 1962 investment tax credit, effective April 18. Social Security tax rates (combined employer and employee rates) rose from 8.8 to 9.6 percent as a result of earlier legislation.

On the expenditure side, the increase in Federal spending was held to $7.8 billion, less than half the increase that occurred between 1967 and 1968. Government purchases of goods and services both in the defense and nondefense categories were actually lower in 1969 than in 1968. As a result of all this, the full-employment budget deficit was sharply reduced by $16.8 billion. A $9.6 billion deficit in 1968 became a $7.2 billion surplus in 1969.

This extreme fiscal restriction, along with an extreme monetary restriction, markedly reduced the growth rate of real GNP. During each of the first 3 quarters of 1968, real GNP increased between 1 and 2 percent. In the second and third quarters of 1969, however, this rate of increase fell to 0.4 percent. And in the fourth quarter of 1969, real GNP was below its level of the third quarter, the first such quarterly

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1/The Act raised individual income tax exemptions (from $600 to $650 in July, 1970, to $700 in 1972, and to $750 thereafter); raised the standard deduction (from the lesser of 10 percent of adjusted gross income (AGI) or $1,000 to the lesser of 13 percent of AGI or $1500 in 1971, to the lesser of 14 percent of AGI or $2000 in 1972, and to the lesser of 15 percent of AGI or $2,000 thereafter); created a "low-income allowance, "a kind of minimum standard deduction (with a value of $1100 in 1970, $1050 in 1971, and $1000 thereafter, the declines being offset by the increase in the value of personal exemptions); changed the tax rate schedule for single persons, effective 1971, to prevent them from paying more than 20 percent more tax than married couples with the same taxable income; drew a distinction between "earned" income (wages, salaries, professional fees, self-employment income) and "unearned" income (all other forms) and set a maximum tax rate (60 percent in 1971, 50 percent thereafter) on "earned" income; created a list of types of "tax preferred" income, applied a minimum tax (10 percent) on that portion of such income exceeding $30,000, and provided that only that portion of "earned" income exceeding a taxpayer's "tax-preferred" income could benefit from taxation at the maximum rate on "earned" income; reduced depletion allowances for mining industries; raised the rate of tax on capital gains exceeding $50,000 (from 25 percent to half the marginal rate on the taxpayer's ordinary income) and included the formerly untaxed half of capital gains in the list of types of "tax-preferred" income; changed the tax treatment of foundations; lowered depreciation rates allowable for tax purposes on residential buildings; repealed the 1962 investment tax credit retroactively to April 18, 1969; lowered the degree of annual variation in AGI required to allow income averaging; allowed certain unreimbursed moving expenses to be deducted from gross income; and increased Social Security benefits by 15 percent, effective January 1, 1970.

drop since the fourth quarter of 1960. Although the unemployment rate rose only very slightly during the year, the reduction in real GNP signaled to policymakers that they had achieved more restriction than intended and so they strove for a more expansionary fiscal policy in 1970.

If judged, inappropriately, by the change in the actual budget deficit, 1970 fiscal policy would appear to have been extremely expansionary. Federal expenditures grew by $15.8 billion, more than twice the 1969 growth. Revenue declined by $4.9 billion, producing a swing in the actual budget of $20.6 billion, from a 1969 surplus of $8.5 billion to a 1970 deficit of $12.1 billion. In fact, fiscal policy, more accurately measured by the $5.2 billion reduction in the full-employment surplus, was only about one-quarter as expansionary.

The huge swing in the actual budget resulted from a reduction in revenues caused both by tax cuts enacted earlier and by the continuing decline of the economy. The Council of Economic Advisers estimated that the drop in 1970 tax collections attributable to reduction and elimination of the surcharge was $8.3 billion, and the drop attributable to various features of the 1969 Tax Reform Act was $0.6 billion. Due to the recession, taxable income in 1970 grew only fast enough to offset less than half of this $8.9 billion reduction, and actual revenues fell by $4.9 billion. 1/

Fiscal Policy in the Recovery of 1971-73

As 1971 began, the Nixon Administration formally embraced the notion that actual expenditures should not exceed full-employment revenues. It was not able to follow this dictum, however, either for the calendar years or for the fiscal years 1971 and 1972. Although developments in the first quarter of 1971 gave grounds for optimism that inflation was abating and that real GNP would grow at a satisfactory rate, these hopes were disappointed in the months that followed. As a result, a decisive change of policy, which involved a wage and price freeze and some momentous changes in U.S. international economic and financial relations, was announced on August 15.

1/By contrast, the growth of taxable income in 1966, 1968, and 1969 was so rapid that if reductions in tax rates sufficient to reduce total revenues by the same $8.9 billion had been enacted in those years, actual revenues still would have increased. Tables 12 and 18 show that actual revenues grew by $17.5 million in 1966, $24.2 billion in 1968, and $22.3 billion in 1969. Thus, if tax reductions causing a drop in actual revenues of $8.9 billion had occurred in 1966, 1968, or 1969 revenues would still have grown by $8.6 billion, $15.3 billion, and $13.4 billion respectively.

A set of proposed fiscal changes was included in this policy package. The bill ultimately passed by Congress on December 9, 1971, made some changes in these proposals, but various provisions affected 1971 revenues.

--The personal exemption was increased from $650 to $675;

--The tax tables were changed to give somewhat more tax relief to persons just above the 1969 poverty level.

--A new deduction was introduced for day care and household help.

--A 7 percent Federal excise tax on automobiles was repealed, effective August 15.

--A 10 percent Federal excise tax on small trucks and buses was also repealed, effective September 22.

--The 7 percent investment tax credit was reinstated, effective April 1.

--More liberalized depreciation of business assets was provided for.

--Tax credits to employers using workers from the Labor Department's Work Incentive Program were extended.

Separately, the Social Security (combined employers and employees) tax rate rose from 9.6 to 10.4 percent.

As a result of these measures, full employment revenues again grew very slowly in 1971, by only $5.6 billion. And since GNP did not grow fast enough to do more than keep the unemployment rate hovering narrowly around 6 percent throughout the year, actual revenues grew only slightly faster. Fiscal policy was clearly expansionary. The $9.9 billion increase in the actual budget deficit was matched by the $9.8 billion shift in the full-employment budget from a $2 billion surplus to a $7.8 billion deficit.

In 1972 actual revenues grew by $28.9 billion. Real GNP grew at a rate of 5.7 percent, and the unemployment rate declined slightly. Also, the base on which the Social Security tax was levied rose from the first $7,800 to the first $9,000 of earnings. The actual deficit fell from $22 billion in 1971 to $17.3 billion. But fiscal policy continued to be expansionary. The full-employment deficit increased by $7.9 billion, partly because full-employment expenditures increased by $24.5 billion. But in addition certain provisions of the 1971 tax bill only became effective in 1972. These included increases in the personal exemption to $750, in the standard deduction to the lesser of 15 percent of adjusted gross income or $2,000, and in the low-income allowance to $1,300. (The first two of these increases had been scheduled to take effect in 1973 by the Tax Reform Act of 1969.) The expansionary effect of the large

deficit in the full-employment budget, however, may have been dampened to some extent because the 1971 tax bill also changed the tax withholding system in a way which resulted in significant aggregate over-withholding.

It was noted in previous sections of this chapter that early 1973 was marked by both an extremely rapid growth rate of real GNP, and a significant worsening of inflation rates. A policy of fiscal tightness was therefore followed. As shown in Table 18, the full employment budget deficit was reduced by $11 billion, and as was observed on page 3-4, the growth rate of real GNP was greatly reduced in the last three quarters of the year.

Inflation, however, increases taxable incomes just as effectively as does a change in real income. And the CPI, which had risen by 3.3 percent in 1972, rose by 6.2 percent in 1973. Taxable income, thus, rose rapidly. In addition, the social security tax (combined employer and employee) rate rose from 10.4 to 11.7 percent, and the base of the tax rose from the first $9,000 to the first $10,800 of earnings. As shown in Table 18, the effect of the rise in taxable incomes, and in the base and rate of the social security tax was to increase actual revenues by $30.8 billion, despite the slow growth of real income in the last nine months of the year.

Presidential Impoundment of Funds;
the New Congressional Budget Procedure

In 1972 President Nixon's desire to set a ceiling on Federal expenditures was the initial impetus for two major new changes in the conduct of fiscal policy. One of these was an entirely new Congressional process for determining total Federal revenue and expenditures. The other was presidential impoundments "unprecedented in their scope and severity" 1/ of funds appropriated by Congress. "Never before had congressional priorities been so altered and jeopardized." 2/

In the second half of 1972, President Nixon asked Congress to enact a ceiling of $250 billion on expenditures for fiscal year 1973, which began July 1, 1972. Nixon sought a bill that would give him unrestricted discretion about where to make cuts in the budget so as not to breach this ceiling. A House-Senate conference committee produced a bill that would have given him wide but not unrestricted discretion. The bill was acceptable to Nixon but died in the Senate.

1/Louis Fisher, Presidential Spending Power, Princeton; Princeton University Press, 1975, p. 176.

2/Ibid.

Although the Senate refused to vote a $250 billion spending ceiling for fiscal year 1973, it did agree to create a Joint Study Committee on the Budget. This committee was to explore the possibility of establishing a procedure for Congress to set budget totals and to restrict its spending to these totals. Although the Federal Government cannot raise or spend money unless Congress approves, Congress had never had any mechanism for coordinating total revenues with total expenditures. That coordination had always been the province of the executive branch. Yet various committees of Congress always made substantial changes in the budgets submitted by Presidents. They did so in an uncoordinated fashion, without considering how these changes would alter the amount of the total surplus or deficit in the President's budget. Intelligent fiscal policy requires, in contrast, that all the funds appropriated by Congress through the independent deliberations of various committees add up to a total judged to be appropriate.

To resolve this coordination problem, the Joint Study Committee on the Budget began its hearings in February 1973; in June 1974 the Congressional Budget Act was passed. The act established House and Senate Budget Committees and the following procedure for setting budget totals. Early in each session the Budget Committees independently recommend overall spending levels. By May 15, Congress must adopt a resolution stating overall spending and revenue targets, and spending targets for major program categories. To take into account changing economic conditions, a second resolution, possibly with amended budget totals, must be passed by September 15. If the sum of Government spending in the various bills passed by Congress exceeds the figure set in the second resolution, a final "reconciliation bill" must be passed which cuts spending, raises taxes, or raises the spending ceiling above the level set in the second resolution. To facilitate this procedure, the Government's fiscal year was changed to begin on October 1, rather than July 1, starting with fiscal year 1977. Although the House and Senate Budget Committees have their own staffs, the bill also created a new agency, the Congressional Budget Office, to serve the entire Congress.

Impoundment

When in October 1972, the Senate failed to pass Nixon's request for a $250 billion spending ceiling for fiscal year 1973, Nixon pocket-vetoed nine bills to hold spending below $250 billion. But his aides acknowledged that this would not be sufficient and told reporters that ways would be found to impound appropriated funds. At the end of November Nixon stated that he would spend only half of the $18 billion voted by Congress, over his veto, for water pollution control. New York City immediately mounted a legal challenge.

As 1973 began, Nixon's critics were arguing that impoundment was unconstitutional, while he was vigorously defending the practice. In February Caspar Weinberger, the outgoing head of the Office of Management and Budget, told the Congress that an amount "considerably under

$9 billion" had been impounded. Not only were funds for alleviating water pollution impounded, but so were funds for various construction, health, and environmental programs.

Obviously, a very important issue in conducting fiscal policy was at stake. A half-dozen law suits were filed to win release of the water pollution funds and the lower courts ruled against Nixon in all but one of them. Finally, in February 1975, after he was no longer in office, the U.S. Supreme Court held that the Federal Water Pollution Control Act amendments of 1972 required full allotment of the funds provided in that bill.

Congress, clearly unhappy about impoundment, dealt with the issue in the 1974 law that created its new budget procedure. That law, in fact, was named the Congressional Budget and Impoundment Control Act. The act distinguished between an impoundment that merely delays the spending of appropriated funds and one that, in effect, cancels a program. The first type of impoundment is permitted unless either house of Congress specifically votes to forbid delay. The second requires the specific approval of Congress. In either case, the Comptroller General of the United States can bring suit if the President fails to comply.

The Growth of Transfer Payments and Grants to State and Local Governments

Even though the year 1974 will best be remembered for the exceptionally difficult inflation-unemployment-energy problems it posed for policymakers, it also marked the first year in which the Federal Government's transfer payments ($117.6 billion) actually exceeded its purchases of goods and services ($111.1 billion). To understand how significant this event is, we must note the dimensions of the explosive growth in transfer payments, and also examine the growth of Federal grants to State and local governments.

In 1964, transfer payments totaled $30.1 billion, while Government purchases were $65.2 billion. By 1969, transfer payments had grown 75 percent (to $52.7 billion) while purchases had grown 50 percent (to $97.5 billion), not a stupendous disparity in growth rates. In the next 4 years, however, transfer payments grew about $10 billion a year (to $95.8 billion in 1973) while purchases grew, on average, about $1.2 billion a year (to $102.2 billion). Finally, in 1974 purchases grew $8.9 billion, transfer payments grew $21.8, and total transfers exceeded total purchases for the first time.

Various changes in programs accounted for some of the 1974 increase in transfer payments. About one-third occurred because a 7 percent increase in Social Security benefits took effect in April, a further 4 percent increase took effect in July, and the number of disabled beneficiaries rose by 9 percent. In addition, in 1972 Congress had enacted a supplemental security income (SSI) program, effective 1974, to replace

federally aided State programs of assistance to the aged, blind, and disabled. In 1974 this program increased transfer payments by $4 billion (but reduced grants to State and local governments by $1.5 billion).

While the annual growth of Federal Government purchases since 1974 has far exceeded that of the early 1970s, averaging $10.7 billion, the annual growth of transfer payments has continued to outstrip it, averaging $16.9 billion.

In 1974 Federal grants to State and local governments totaled $43.9 billion, up 1,414 percent from their 1954 level of $2.9 billion. In the same period, total Federal expenditures rose only 329 percent, from $69.8 billion to $299.3 billion. The share of total Federal spending for grants to State and local governments rose from 4.1 percent in 1954 to 14.7 percent in 1974. Since 1974 these grants have continued to grow faster than total spending, but the disparity in growth rates has been much reduced. Between 1974 and 1978 grants rose 75 percent while total Federal spending rose 54 percent. Grants totaled $76.6 billion, one-sixth of total Federal spending, in 1978. Because of this growth some members of Congress responded to numerous resolutions from State legislatures demanding a balanced Federal budget by observing that the budget could easily be balanced by eliminating the grants.

Fiscal Policy in the Severe Recession of 1974-75

At the end of 1973 the Organization of Petroleum Exporting Countries (OPEC) cartel quadrupled oil prices, and some of its members placed an embargo on oil exports. Although real GNP declined in every quarter of 1974, the unemployment rate hovered around 5 percent for the first 6 months of the year. And since the rate of increase in the CPI in 1973 was almost double the 1972 rate, and also since it became clear very early in 1974 that the rate was doubling again, policymakers aimed for restriction. There was a swing of $5.6 billion in the full-employment budget, from a $4.7 billion deficit to a $0.9 billion surplus. The declines in real GNP should have reduced actual tax revenues--and ultimately they did. However, since taxes are levied on nominal incomes, for 9 months the high inflation rate nullified the effects of the decline in real GNP, and the actual deficit showed no tendency to rise. Only in the fourth quarter, when real GNP declined at an annual rate of 5.8 percent and the unemployment rate rose precipitously, did the actual deficit begin increasing. Actual revenues for the year were reduced $10.8 billion below their full-employment level.

Although real GNP declined throughout 1974, the severity of the downturn did not become apparent until the end of the year. In his 1975 State of the Union message, President Gerald R. Ford proposed a series of tax cuts to deal with the situation. By the end of March, Congress had passed a bill that, according to later estimates of the Council of

Economic Advisers, would have reduced 1975 actual revenues by $21 billion. 1/ (Offsetting this slightly, the base on which Social Security taxes are levied, which had risen from the first $10,800 of earnings to the first $13,200 in 1974, rose further to the first $14,100 in 1975.) As a result, the full-employment budget had an unprecedented $24.3 billion deficit.

The economy, of course, was farther from full-employment in 1975 than it had been since before World War II. Thus, the actual deficit, a breathtaking $70.6 billion, was much greater than the full-employment deficit because actual revenues were $38.8 billion below full employment revenues, and massive unemployment compensation payments caused actual expenditures to exceed full-employment expenditures by $7 billion rather than by the customary $0.5 to $2 billion.

Fiscal Policy in the Recovery of 1976-78

In October 1975 President Ford proposed further tax cuts and expenditure cuts for 1976 and thereafter, but he stated on numerous occasions that he would veto any tax reduction bill that did not set a $395 billion ceiling on Federal expenditures for the 1977 fiscal year. Even many Republicans in Congress were annoyed with this disregard for the new Congressional budget procedure. A bill was passed in mid-December extending the tax cuts enacted in March, but since it did not place a ceiling on expenditures, the President, as promised, vetoed it. The Senate overrode the veto but the House did not. Both sides were eager to prevent the expiration of those tax cuts that applied only to incomes earned in 1975.

1/The bill provided for a rebate of up to $200 of 1974 individual income taxes; for 1975, only, raised the standard deduction to the lesser of 16 percent of adjusted gross income or $2,300 for single persons and $2,600 for married couples, raised the low-income allowance to $1,600 for single persons and to $1,900 for married couples, provided a negative income tax by providing that working persons earning up to $4,000 would receive a credit of 10 percent of income with the credit declining as income rose until it vanished for those with incomes of $8,000 or more; granted a tax credit of 5 percent (up to $2,000) of the cost of a new home, built or under construction as of March 25, and purchased between March 13 and December 31, 1976; extended a special payment of $50 to all recipients of Social Security, railroad retirement or SSI; granted an extra 13 weeks of unemployment pay to those who had received such benefits for 52 weeks, in states with high unemployment; ended the oil and and gas depletion allowance for large companies, raised the investment tax credit from 7 to 10 percent for 1975 and 1976; and lowered the corporate profit tax on the first $25,000 to 20 percent and on the next $25,000 to 22 percent, for 1975 only.

A quick compromise extended these cuts for the first half of 1976. 1/ Congress promised that if the cuts were extended beyond June 30, and "if economic conditions warrant," spending for fiscal year 1977 would be reduced below the level that "would otherwise occur" by the amount of the reduction in taxes from 1974 tax rate levels.

In September 1976, a massive tax bill of more than a thousand pages was passed. 2/ It made permanent and increased the changes in the minimum standard deduction and the standard deduction enacted in December 1975. It also extended the earned income credit, the general tax credit for individuals, and the reduction in corporate tax rates through 1977; and extended the increase from 7 to 10 percent in the investment tax credit through 1980.

Policymakers in 1976 intended to hold the value of the full-employment budget deficit constant at about $25 billion to maintain the recovery that had begun in the second quarter of 1975. But despite the tax reductions, full employment revenues rose by about $36.1 billion and full employment expenditures did not rise to match. The quarterly rise in the annual levels of such expenditures had ranged from $9.9 billion to $17.1 billion in 1975. But in the first quarter of 1976 the increase was only $3.4 billion and in the second quarter it was a minuscule $0.5 billion. Although the increase exceeded $10 billion in each of the third and fourth quarters, the full-employment deficit, averaged over the year, fell by $5.3 billion.

The slow growth in full-employment expenditures over the first half of the year occurred, to a large extent, despite the wishes of policymakers. For the entire year, actual spending fell short of the budgeted amount by $6.4 billion. If the budgeted amount had actually been spent, the full-employment budget would have been virtually unchanged. Though the growth rate of real GNP in the last two quarters was below 3 percent, reflecting at least in part, the slow growth in full-employment expenditures during the first half of the year, the recovery continued. As a

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1/For the first half of 1976, the bill continued the earned income credit and the corporate tax rate reductions as passed in March, further raised the minimum standard deduction to $1,700 for a single person and $2,100 for a married couple, raised the maximum standard deduction to $2,400 for a single person and to $2,800 for a couple, and changed the $30 per exemption tax credit to a credit equal to the greater of $35 per exemption or 2 percent of the first $9,000 of taxable income.

2/It is impossible to provide a short description of the contents of this bill. A good summary is contained in Chapter I of the U.S. Congress, Joint Committee on Taxation, General Explanation of the Tax Reform Act of 1976, 94th Congress, December 29, 1976.

result, given the shortfall in spending, actual revenues rose sufficiently to reduce the actual deficit by $17 billion. If the shortfall had not occurred, the growth in actual revenues would have only produced a $10 billion reduction in the deficit. (A rise in the social security tax base from the first $14,100 of earnings to the first $15,300 contributed to the growth of both actual and full-employment revenues).

The growth rate of real GNP in the third and fourth quarters of 1976 was below 3 percent. Furthermore, in those 6 months the unemployment rate hovered just under 8 percent, after having fallen to around 7.5 percent in the second quarter. So, when the Carter Administration took office in 1977, it was convinced that new stimulatory measures were needed. Among other proposals, the President recommended that individuals receive a $50 rebate of their 1976 income taxes. The House of Representatives voted to extend such a rebate to those with gross annual incomes under $25,000, and the proposal passed the Senate Finance Committee, but there was much hostility to it in the Senate. Some opposed it because they feared stimulation, while others opposed it because they felt a permanent tax cut would provide more stimulation. Meanwhile, real GNP rose 7.1 percent (at an annual rate) in the first quarter of 1977, and the CPI was rising twice as fast as in the second half of 1976. So in the middle of April, the Administration withdrew the rebate proposal. In May Congress passed a bill that set a single figure for the standard deduction for all electing to use it--$2,200 for single persons and $3,200 for married couples; extended through 1978 the general income tax credit, the 10 percent earned-income credit, and the reduction in the corporate tax rate (all of which had been enacted in 1975); and instituted for 1977 and 1978 a new employment tax credit for business. The latter was intended as a stimulus to job creation analogous to the investment tax credit.

Although Federal expenditures in 1977 fell short of budgeted spending to a much greater extent than in earlier years (by $13.7 billion or 3.3 percent), nevertheless, beginning in the second quarter, real Federal purchases of goods and services grew at their fastest rate in a decade. As a result, the full-employment deficit for the year increased to its 1975 level of $25 billion. As the recovery continued, the growth of actual revenues exceeded the growth in expenditures, and the actual deficit declined by $5.7 billion--about as much as the full-employment deficit rose. (A rise in the social security tax base from the first $15,300 of earnings to the first $16,500 contributed to the growth of both full employment revenues and actual revenues.)

In 1978 no further changes in tax rates for that year were enacted (though a bill involving a reduction in tax rates, particularly those on income from realized capital gains, in 1979 and thereafter became law). Federal spending again rose less rapidly than anticipated, but this was welcomed because it was becoming clear that fiscal restraint was needed. The early months of the year had gone by and the unemployment rate remained at just over 6 percent The acceleration in rates of

increase in the CPI showed no signs of abating. The fiscal restraint applied as the year unfolded is reflected in a $15 billion reduction in the full employment budget deficit.

MONETARY POLICY 1969—1978

Monetary Policy in the Credit Crunch of 1969 and the Downturn of 1970

Monetary policy from 1969 to 1978 was affected by volatile fluctuations in the economy. Credit crunches and disintermediation took place on at least three occasions.

In 1969 the fear of inflation shifted monetary policy from ease to tightness. Due to the expected contractionary effect of the temporary tax surcharge enacted in June 1968, monetary policy was very easy in the second half of the year. However, the hoped-for-contractionary effect of the surcharge did not materialize and, with the unemployment rate below 4 percent, policymakers in 1969 were exclusively concerned with inflation. In April required reserve ratios on all classes of deposits at member banks were raised by one-half percentage point. The annual growth rate of the money stock, as shown in Table 19, fell from 8.1 percent in 1968 to 3.2 percent in 1969.

The 9.5 percent growth rate of Federal Reserve holdings of U.S. Government securities in 1969 is very misleading because it suggests that monetary policy became more, not less expansionary. Through October 1969, however, these holdings had risen only 4.1 percent, while the money stock had risen 3 percent. Only in November and December did the Federal Reserve System purchase massive amounts of securities. Specific events (revaluation of the German mark and record high yields on Treasury bills) forced the Federal Reserve to make the purchases, despite its desire to continue a tight money policy.

In 1969 and early 1970 a credit crunch and instance of disintermediation occurred for the second time. Demand for credit was unusually strong both because of the high level of economic activity and because of widespread awareness of inflation's effect on purchasing power. There was a desire to borrow to finance the purchase of assets whose nominal value would rise with inflation, and to repay the loan with less valuable dollars. This demand interacted with the tight money policy to produce the highest interest rates in more than a century. Three-month Treasury bill rates rose from 5.1 percent in August 1968, to around 6 percent throughout the first 5 months of 1969, to 6.5 percent in June, to around 7 percent in July through most of November, and to a peak of 8.1 percent in the first week of 1970. Legal ceilings on the rates of interest financial institutions could pay on insured deposits were, of course, far below these rates, and disintermediation occurred. Net inflows of funds into savings and loan associations fell from a seasonally adjusted annual

Table 19

Monetary and Financial Variables*
1968—1978

	Money Stock	Percent Change	FR Holdings of Securities	Percent Change	Interest Rates	
					90 Day Treasury Bill	Moody's Aaa Bonds
1968	202.5	8.1	52.5	7.3	5.339	6.18
1969	209.0	3.2	57.5	9.5	6.677	7.03
1970	219.7	5.1	61.7	7.3	6.458	8.04
1971	234.0	6.5	69.2	12.2	4.348	7.39
1972	255.3	9.1	71.1	2.7	4.071	7.21
1973	270.5	6.0	79.7	12.1	7.041	7.44
1974	282.9	4.6	86.7	8.8	7.886	8.57
1975	295.2	4.3	92.1	6.2	5.838	8.83
1976	313.5	6.2	100.3	8.9	4.989	8.43
1977	338.5	8.0	107.9	7.5	5.265	8.02
1978	361.1	6.7	117.3	8.7	7.221	8.73

*Data on money stock and Federal Reserve (FR) holdings of U.S. Government securities are in billions of dollars and are daily averages for the month of December of each year. Data on interest rates are daily averages for the entire year.

Source: *Economic Report of the President*, 1979.

rate of $8 billion in the first quarter of 1969 to one of $0.5 billion in the fourth. Housing starts declined throughout the year as a consequence. 1/

Savings and loan associations were not the only financial institutions to experience disintermediation. The volume of large denomination ($100,000 or greater) negotiable certificates of deposit at commercial banks fell from $22.8 billion at the end of 1968 to $14.7 billion at the end of June 1969, and to $10.8 billion at the end of 1969. Banks tried to replace these funds by borrowing from each other and from the Federal Reserve Banks, by selling securities they held (which raised the yields of those securities and thus contributed to the general rise in interest rates), by having their subsidiaries and affiliates issue commercial paper

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1/The drop in housing starts was not as drastic as in 1966, thanks to the efforts of two federally sponsored agencies, the Federal National Association and the Federal Home Loan Banks. They tapped the open market to find the funds no longer available through private financial intermediaries, and their volume of support to the mortgage market increased from $3 billion in 1968 to a $10.3 billion annual rate in the second half of 1969.

and make the proceeds available to them, and by massive borrowing of Eurodollars (dollars held abroad) which they could engage in, unhindered by legal ceilings on the interest rate to be paid on such borrowings. Nevertheless, banks were unable to satisfy the demand for credit. Many borrowers, especially small businesses, could not be accommodated. The term "credit crunch," first used in 1966, accurately describes this 1969 experience as well. As 1970 began, credit tightness had clearly affected real economic activity, if not the rate of inflation.

In February, when Arthur F. Burns replaced William McChesney Martin as Chairman of the Board of Governors, monetary policy became less restrictive. At the second meeting of the Federal Open Market Committee under Burns' chairmanship, in March, the Committee's directive called for "moderate growth in money and bank credit." Although Federal Reserve holdings of U.S. Government securities rose 7.3 percent in 1970, they had, in fact, fallen from $57.5 billion in December 1969, to $55.8 billion in March 1970, before rising to $61.7 billion in December 1970. So in the last three quarters of the year, holdings rose at an annual rate of 14.1 percent, twice the rate shown in Table 19 for the year. The much slower rise in the money stock is presumably explained by a 6 percent rise in the ratio of time deposits to demand deposits. 1/

The rise in the time deposit ratio is, in turn, explained by the fact that, in January 1970, maximum interest rates payable on various categories of deposits at financial institutions were raised anywhere from one-quarter to three-quarters of a percentage point, and by the sharp drop in short-term market interest rates which occurred in that year. Despite the appearance of little apparent change in these rates conveyed by the annual average data on the 3-month Treasury bill rate, this rate actually fell drastically, from 8 percent at the beginning of the year to 4.75 percent at the end. At that point funds left on deposit 90 days in a financial institution earned a higher yield than did funds invested in a 3-month Treasury bill.

The behavior of long-term interest rates in 1970 was another story. Moody's Aaa-bond rate had risen steadily from 6.5 percent in January 1969 to 7.3 percent in November, and then jumped 40 basis points (four-tenths of a percentage point) in December and another 20 points in January 1970, to 7.9 percent. In contrast with short-term rates, Moody's Aaa-bond rate did not begin to decline, despite the easy money policy initiated at that point. Instead, it hovered around 8 percent through May, rose rapidly to 8.6 percent at the end of June when the bankruptcy of the Penn Central unsettled financial markets, and then by the end of August fell back to around 8 percent where it remained through November 1970.

1/See footnote 1, p. 42 for an explanation of how changes in this ratio affect the relation between the money stock and Federal Reserve holdings of Government securities.

This failure of long-term rates to fall was explained by very strong borrower demand for long-term funds, and by continuing, strong expectations of inflation. With the steep rise in interest rates in 1969, firms had relied on short-term debt, hoping to convert it into long-term debt at lower interest rates in 1970. Even though rates did not drop as hoped, to many firms this conversion became necessary due to recession-level profits.

Demand from State and local governments also manifested itself. Many of these had been forced to postpone security issues in 1969 when market rates rose above statutory ceilings. Such issues had declined from a level of $16.4 billion in 1968 to $11.5 billion in 1969. When the statutory limitations were liberalized in 1970, State and local government bond issues rose to $17.8 billion.

Monetary Policy in the Recovery of 1971-73

Monetary policy continued to be easy in 1971. Federal Reserve holdings of securities rose 12.2 percent, a rise which occurred steadily throughout the year. The money stock, however, rose "only" half as fast because the U.S. gold stock dropped by 8.8 percent while the ratio of time deposits to demand deposits rose 9.5 percent. The rise in this latter ratio was attributable to the continuing low level of short-term, market interest rates. The lowest weekly rate on 3-month Treasury bills was 3.307 percent, reached in the middle of March 1971. The highest rate was 5.554 percent at the end of July. This increase of 220 basis points in 4-1/2 months was caused by money market jitters over the U.S. international payments situation in mid-1971. By year's end the rate had again fallen below 4 percent. Interest rates on long-term securities also declined through much of 1971. After holding steady around 8 percent from September through November 1970, the rate on Moody's Aaa securities fell to 7.5 percent at the end of the year. It fell further to 7.1 percent in February 1971, rose for the next 3 months, peaking at 7.7 percent where it hovered through mid-August, then fell gradually to 7.25 percent at year's end.

The difference in 1972 growth rates of the money stock and Federal Reserve holdings of securities, 9.1 percent versus 2.7 percent, is quite misleading. These data are averages of daily figures for the month of December. Their percentage change from the previous December average does not always closely reflect the behavior of these variables over the previous 11 months. Examining their behavior over 6-month intervals is helpful in analyzing the 1972 experience.

In the first 6 months of the year money grew at an annual rate of 7.7 percent. Monthly movements in Federal Reserve securities holdings were quite erratic, but in June 1972 they were 7.1 percent (annual rate) above their value of December 1971. These two growth rates are quite close. The divergence occurred in the second half of the year when Federal Reserve securities holdings changed very little and were actually

slightly lower in December than they had been in June. The money stock, in contrast, grew at an annual rate of 10.2 percent. An unchanged volume of securities was supporting a larger money stock. This was made possible by a slight decrease in the ratios of currency, and of time deposits to demand deposits, and by a fundamental change in the classification scheme of member banks for purposes of calculating required reserves, which reduced the average required reserve ratio by 7.5 percent. 1/

Despite the lack of growth of Federal Reserve securities holdings in the second half of 1972, the money stock had grown 50 percent faster in that year than in 1971. For this and other reasons the economy was straining against capacity limitations in early 1973. With inflation taking a serious turn for the worse, the Federal Open Market Committee expressed, throughout the year, a desire for slower monetary growth. The growth rate of 12 percent in Federal Reserve holdings of securities shown in Table 19 might seem an odd way of attempting to achieve monetary restraint but, in fact, as also shown in that table, the growth rate of money did fall back to 6 percent. This divergence is explained partly by a 3 percent increase in the ratio of currency to demand deposits but mainly by an increase of 10 percent in the ratio of time deposits to demand deposits.

This latter increase, in turn, was attributed to a spectacular rise in short-term interest rates. The 90-day Treasury bill rate had risen from 3.1 percent in February 1972 to 5.1 percent at the end of that year. Due to the overheated state of the economy in the first half of 1973, the rate continued to rise steadily, reaching a record level of 9 percent in mid-September. (With short-term interest rates achieving new highs, the perception was widespread that monetary policy was extremely tight, despite the 12 percent growth rate of Federal Reserve securities holdings).

In view of the strong demand for short-term credit, the stability of long-term interest rates in 1973 was surprising. While the 90-day Treasury bill rate rose from 5.1 to 9 percent, the rate on Moody's Aaa-rated bonds rose only from 7.1 to 7.7 percent.

As it had in 1966 and 1969, the steep rise in short-term, open-market interest rates led to disintermediation. In July ceiling rates of interest payable on deposits of financial institutions were raised, and, until November, ceilings were eliminated on deposits of at least $1,000 with a maturity of at least 4 years (subject to the proviso that such deposits did not comprise more than 5 percent of an institution's total deposits). Mortgage markets also received substantial support from

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1/Ever since the passage of the National Banking Act in 1864, banks in certain cities, designated "reserve cities," had been subject to higher required reserve ratios than other banks. In November 1972 this was changed. All member banks were henceforth subject to the same ratios, which increased progressively on incremental deposits.

federally sponsored housing agencies. Nevertheless, housing starts fell from a seasonally adjusted annual rate of 2.4 million units in the first quarter of 1973 to a rate of 1.6 million units in the fourth quarter.

Monetary Policy in the 1974-75 Downturn

Even though real GNP had grown very slowly in the last 9 months of 1973, monetary policymakers strove for restriction in 1974 because inflation continued to worsen and the unemployment rate remained below 5 percent. As was the case for 1972 and 1973, the daily averages of December 1974 figures show a sharp divergence in year-to-year growth rates of money and of Federal Reserve holdings of Government securities. However, the December figure is a quirk. In the first 11 months of 1974 the growth rate of money was 4.4 percent, and that of Federal security holdings was 5.4 percent. Monetary policy was clearly tighter than in the previous 2 years.

Although they remained high throughout 1974, short-term interest rates experienced extremely volatile fluctuations. The 90-day Treasury bill rate varied from a peak of 9.9 percent at the end of August to a low of 6.4 percent in early October. Long-term rates, whose rise of only 60 basis points in 1973 had been remarkably moderate, rose steadily and more steeply through the first 10 months of 1974. The rate on Moody's Aaa-rated bonds rose from 7.7 percent at the beginning of the year to 9.4 percent in early October, and then fell to 8.9 percent by year's end.

Housing starts had fallen dramatically in 1973 to an annual rate of 1.6 million units in the fourth quarter, despite attempts to mitigate the effect of the record high interest rates reached in the summer of that year. The annual rate of starts stabilized at 1.6 million in the first half of 1974. It was hoped that the rate would turn up during the second half, but the previous summer's record levels of interest rates were shattered in the summer of 1974, stimulating substantial disintermediation. Despite an unprecedented scale of aid to mortgage markets from federally sponsored credit agencies, housing starts declined to an annual rate of just under 1 million units in the fourth quarter. Housing accounted for half the decline in real output from 1973 to 1974, and was the only major sector to decline throughout the year.

The 1975 year-to-year growth rates in the December average of daily figures on money stock, 4.3 percent, and Federal Reserve security holdings, 6.2 percent, again poorly convey the thrust of monetary policy. Month-to-month variation in both series, particularly in security holdings was volatile and erratic. But in November, the daily average figure for money had risen 4.6 percent above its December 1974 average, while the daily average figure for Federal security holdings had risen 4.9 percent. On balance then, despite the record high level of the unemployment rate in 1975, monetary policy was not particularly expansionary. However, member bank required reserve ratios on all demand deposits were reduced one-half a percentage point in February.

In 1975 short-term interest rates fell considerably below their record levels of the previous year, but remained high by historical standards. The 90-day Treasury bill rate fell steadily from 7.1 percent to 4.8 percent in mid-June, but rose to 6 percent 2 weeks later. It remained between 6 and 6.5 percent until November, falling to 5.3 percent at year's end. Long-term rates fell only very slightly during the year from their 1974 peaks. The rate on Moody's Aaa-rated bonds had reached a record high of 9.38 percent in October 1974. By year's end the rate had fallen to 8.9 percent. It continued its descent in the first 2 months of 1975, falling to 8.75 percent, but then rose to 9 percent in early May and fluctuated between 8.7 and 9 percent the rest of the year.

Monetary Policy in the Recovery of 1976-78

Monetary policy in 1976 was clearly more expansive than in 1974 or 1975. The rate of growth of money, 6.2 percent, was considerably less than that of Federal holdings of securities, 8.9 percent, due to increases of 10 percent and 4.2 percent, in the ratios of time deposits to demand deposits and of currency to demand deposits. On December 30 required reserve ratios were reduced by one-half percentage point on the first $10 million of each member bank's demand deposits, and by one-quarter percentage point on the remaining demand deposits.

The interest rate on 90-day Treasury bills fluctuated between 4.8 and 5.2 percent from January through mid-May, 1976. It then fluctuated narrowly around 5.4 percent until mid-July when it fell to 5.2 percent. By mid-October the rate had slowly fallen to 4.9 percent, where it remained for a month only to fall sharply in the next month to 4.3 percent, where it ended the year. The rate on Moody's Aaa-rated bonds fell from 8.7 percent at the beginning of the year to 8.35 percent in mid-April. It rose until the end of May, peaking at 8.65 percent, and then fell steadily reaching a level of 7.9 percent at year-end. The reduction in interest rates in the second half of 1976 was credited to both the slowdown in the rate of growth of real GNP, and to reduced inflationary expectations as inflation performance improved for the second year in a row.

Monetary policy continued to be expansive in 1977. The money stock and Federal Reserve holding of securities grew by around 8 percent, although month-to-month variation in the latter variable was extremely erratic. The interest rate on 90-day Treasury bills fluctuated between 4.5 and 4.7 percent through April. It rose to 5 percent at the end of May and stayed at that level until early August when it increased abruptly to 5.4 percent. A further steady rise ensued with a peak at 6.3 percent in early November. At year's end, the rate had fallen to 6.1 percent. The interest rate on Moody's Aaa-rated bonds varied within a range of 7.9 and 8.1 percent until December when it rose to 8.3 percent by year's end.

Interest rates continued to rise in 1978. The rate on Moody's Aaa-rated bonds climbed steadily and was at 9.3 percent as the 1978 ended.

The rate on 90-day Treasury bills fluctuated narrowly around 6.4 percent through May, rose dramatically the rest of the year, and was at 9.4 percent at years's end. If the thrust of monetary policy is judged by interest movements, this striking rise in rates signaled a much tighter monetary policy. However, this rise could have been caused by a massive increase in the demand for credit. For while the money stock showed virtually no growth in the fourth quarter of 1978, whether Federal Reserve actions were responsible is a matter of controversy. Recent important changes in corporate cash management practices have made assessing the significance of money supply changes more difficult. In addition, when adjusted for inflation, long-term interest rates actually fell in 1978, and short-term rates rose about one percentage point, not three.

In the first half of 1978 disintermediation began to appear, even with Treasury bill rates holding between 6 and 7 percent. So, effective June 1, banks and other deposit institutions were authorized to issue 6-month "money market certificates," which carried a rate of interest equal to (or, in the case of nonbank institutions, one quarter percentage point above) the rate on 6-month Treasury bills. In view of the subsequent spectacular rise in the latter, this innovation undoubtedly delayed disintermediation on a massive scale, and thus made the availability of mortgage credit less sensitive to upward movements in interest rates. However, this decreased sensitivity also meant (and means) that a given level of credit restraint now requires higher interest rates than in the past.

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