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The Tempest of the Seventies, 1970–1979

> The 1970s have been characterized by the worst of both worlds. High inflation and low levels of activity have become the norm.
>
> Alan S. Blinder[1]

> To begin making progress, we must face up to our lack of progress in the seventies. The economic record of the past decade is the second worst of the century—inferior to all but the horrible 1930s.
>
> Arthur M. Okun[2]

There is a certain morbid symmetry about our monetary experiences in the 1970s: the decade began and ended in an atmosphere of crisis, deflation, and reform of Federal Reserve methods of operation. The intervening years provided little reason for satisfaction and none for complacency. At times inflation flared to heights that were alarming and totally unexpected. Equally surprising, a comprehensive system of controls was for a time placed on the economy by a president who previously had proclaimed them to be abhorrent. The international monetary system, carefully planned at Bretton Woods in 1944 and confidently adopted in the bright days after World War II, collapsed. Supply-side "shocks," particularly the oil shortages of 1973 and 1979, required adaptive measures to contain the damage. One can imagine some of Charles Addams's ghoulish cartoon characters being nostalgic for the seventies.

From Martin to Burns

> Among the best stories of 1969–70—possibly even true—is a tale of Chairman Arthur Burns and Gaylord Freeman of the First National Bank of Chicago meeting in the men's room of the Cosmos Club and standing side by side. Freeman supposedly says out of the blue, "Arthur, would the Fed let what is essentially a well-run bank go under?" And Burns, pipe in mouth, shock of gray hair falling in his eyes, says through clenched teeth, "Maybe."
>
> Martin Mayer[3]

William McChesney Martin, Jr., holds the record for service as chairman of the Board of Governors, a period of almost nineteen years from April 1951 to January 1970. Elected as the first paid, full-time president of the New York Stock Exchange in 1938 at age 31, he was considered the boy wonder of finance. While still relatively young, in 1951 just after the accord was reached, he was chosen by fellow Missourian Harry Truman to chair the Board of Governors.[4] His tenure as chairman extended through the administrations of Eisenhower, Kennedy, and Johnson, by each of whom he was reappointed, plus one year of Nixon's.

Chairman Martin viewed money from a moral perspective. Governments had a proclivity historically to create excessive amounts of money, immoral behavior that depreciated the value of money. For two decades Martin was widely known as the symbol of monetary integrity. Personable and persuasive, he sought to strengthen the Federal Reserve System as an independent force for the public interest by promoting nonpartisan political support for it so that it would have allies when it had to take unpopular positions.[5]

Although Martin was widely perceived as generally favoring deflationary policies, the record of the Fed during the sixties does not support this contention. His position was that the system needed to provide the monetary means to accompany normal economic growth, although his approach focused first on financial markets and less directly or immediately on the performance of economy.[6] In making monetary policy Martin relied primarily on the tone and feel of financial markets—on an interpretation of events in the market and on psychological factors—more than on quantitative measurements. In common with other Federal Reserve chairmen, Martin was hard to pin down to precise goals. Since monetary policy manifestly has several major goals which often are in conflict to some degree, Federal Reserve spokesmen invariably choose not to concentrate on specifically defined goals by which their performance may be judged. This is understandable but exasperating to those trying to evaluate monetary policy. At one point Senator Proxmire, who respected Martin's ability, nevertheless compared his explanation of monetary policy to nailing a custard pie to the wall.

When Martin's tenure ended on January 31, 1970, one year into the Nixon administration, Arthur Burns became the tenth chairman of the Board of Governors of the Federal Reserve System. Dr. Burns, who had succeeded Wesley Clair Mitchell as research director at the National Bureau of Economic Research, was an authority on the business cycle and professor of economics at Columbia University, and a past president (1959) of the American Economic Association. He was also experienced as a government adviser, having served as the chairman of the Council of Economic Advisers in the first Eisenhower administration. A little later, as informal adviser to Vice-President Nixon, he warned that the policies of the Fed would bring on a

recession in 1960 and so diminish Nixon's chances for the presidency. After his election to the presidency in 1968, Nixon installed Burns as his special counselor until he could appoint him to head the Fed at the expiration of Martin's tenure. Now that Nixon had "his man" at the Federal Reserve, harmony between the Fed and the White House seemed assured, but within a year a major policy split developed.[7] At the outset of Burns's tenure at the Board of Governors he was considered to be quasi monetarist, but by no means doctrinaire, and the terms eclectic and pragmatic seem entirely appropriate to describe him.

At the Brink

> Of particular importance were the actions of the Federal Reserve in connection with the commercial paper market. . . . This market, following the announcement on Sunday, June 21, of the Penn Central's petition for relief under the Bankruptcy Act, posed a serious threat to financial stability. The firm in question had large amounts of maturing commercial paper that could not be renewed, and it could not obtain credit elsewhere. The danger existed that a wave of fear would pass through the financial community, engulf other issuers of commercial paper, and cast doubt on a wide range of other securities.
>
> Arthur F. Burns[8]

The collapse of the huge Penn Central Railroad in June 1970 sent shock waves through the financial community that was already experiencing heavy precautionary demands for liquidity. It compounded the mood of uncertainty touched off several weeks earlier by the extension of the Vietnam War into Cambodia, the shootings at Kent State University, and the protests that erupted throughout the country. The conditions for a liquidity crisis were present—the stock market dropped to its lowest level in six years and long-term interest rates were at new highs. An old-fashioned rush for liquidity was getting under way, threatening distress selling of assets. Penn Central's default on $82 million of its commercial paper placed the commercial paper market in jeopardy. Suddenly and understandably, investors became much concerned about the credit worthiness of commercial paper issuers. As a result many corporations had trouble refinancing their maturing commercial paper.

The Federal Reserve System had shifted in January toward a somewhat less restrictive policy than in 1969, although not markedly so, because it wanted to lessen inflationary expectations. But with various financial institutions being squeezed, the demand for liquidity threatened to bring on a serious monetary crisis. To relieve the squeeze the FOMC voted late in May to provide whatever reserves might be needed by the financial markets. At

the time of Penn Central's failure some $40 billion of debt was outstanding in the commercial paper market. Normally such paper is considered almost as safe as Treasury bills, but now the holders of commercial paper suddenly realized that they had assumed more risk than they had thought. With their minds thus concentrated, many withdrew from commercial paper posthaste and put the proceeds into safer securities. Would it be possible for the holders of commercial paper who did not choose to renew to be paid by the borrowers? As a rule, the borrowers have commitments from their banks for funds to pay off commercial paper not rolled over, but the demands for funds might be enormous and so raise the question of the ability and willingness of the banks to honor their commitments. Economic conditions had changed, the banks were worried about their own liquidity, and the solvency of some of the borrowers was uncertain. Borrowers unable to continue borrowing might fail and the failures might spread—a financial domino effect. Under these circumstances the Federal Reserve acted in the best central banking tradition as lender of last resort. In the words of a policy maker:

> At this point the Federal Reserve informed the major banks of the country that its discount window . . . was wide open. If they needed funds to make loans to their customers who were having difficulty in rolling over their commercial paper in the market, they were invited to borrow from the Fed. Further, to enable the banks to attract more money, the Board raised interest rates permitted to be paid on certificates of deposit (CDs).[9]

The sequel was that the banks borrowed quite heavily from the Fed in the next few weeks; over the next quarter bank CDs almost doubled, commercial paper outstanding declined significantly, and the Fed provided reserves at an annual rate of 25 percent. A slide into the abyss *à la* 1930 was averted in 1970 as the economy stabilized.

Monetarism Matters

> The monetarists are having their innings on the coat-tails of political events just as the fiscalists made hay in the first part of the 1960's.
>
> Lawrence R. Klein[10]

> In the twenty years since the initial appearance of *Studies in the Quantity Theory of Money* by Milton Friedman and associates (1956), a longstanding historical tradition of monetary theory that seemed to have been swept away into intellectual limbo by the "Keynesian Revolution" has reemerged under the description of "monetarism" to reemphasize the role of money in explaining fluctuations in economic activity and inflation.
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> A. Robert Nobay and Harry G. Johnson[11]

Probably the longest continuous controversy in the field of economics in the post–World War II period has been the "Keynesian–monetarist debate."[12] It has been conducted exhaustively at various intellectual levels by many participants. One notable occasion was the dialogue between Milton Friedman and Walter W. Heller in November 1968 in which the speakers focused on the usefulness of fiscal and monetary policies.[13]

After having gained ground in the academic world in the late 1950s and 1960s, the monetarist school began in the 1970s to have a more direct effect on policy. President Nixon's economic advisers were essentially monetarist and the Federal Reserve, while not embracing monetarism, sidled in its direction. Monetarism concerns a principle of basic importance similar to Say's Law in that it can be stated briefly, as an aphorism really,[14] but its exegesis is vast when subjected to theoretical and applied scrutiny. As a result of the Great Depression and the Keynesian revolution, monetary policy was considered relatively unimportant, even insignificant, as a cause of economic fluctuations by the mainstream economists of the early post–World War II period. The "Chicago School" quantity theorists (known as the monetarist school since about 1968) asserted that this constituted a great misunderstanding, and they stressed that the quantity of money was of strategic importance; in short, money (really) matters. By the 1970s it was clear that monetarism mattered as well, that is, had become an influential force. How this came to pass is our present topic. A point worth keeping in mind is that while monetarism means more than just the quantity theory, monetarists are latter-day quantity theorists, for monetarism grew out of the quantity theory. Monetarism without the quantity theory would be like peanut butter without peanuts or a hamburger, whatever the condiments, without the beef. The quantity theory is the essence of monetarism.

Milton Friedman is regarded as the father of monetarism, but before discussing his role it is appropriate to recognize a relatively unsung hero of the quantity theory approach who "kept the faith" when (almost) all about were losing theirs. It would be too much to claim that Clark Warburton was the only important forerunner of monetarism, but a good case has been made that his is a "unique place in the development of the quantity theory since the Depression."[15] Most of Warburton's career was devoted to research for the Federal Deposit Insurance Corporation, which he joined in 1934 and from which he retired in 1965. During the 1940s and early 1950s he presented a series of papers that drew on National Bureau of Economic Research data to demonstrate the importance of money in determining economic activity, and he discussed many of the issues that constitute the monetarist position. His approach was inductive, and it treated the money supply as a basically exogenous force that is primarily responsible for the broad, important changes in economic activity. From a policy standpoint he favored a stable growth rate of the money supply—a monetary growth rule—and

doubted that an active stabilization policy could improve economic performance. With respect to the Great Depression, Warburton blamed the Fed for the decline in the money supply in the early thirties and the subsequent decline in economic activity. He dismissed the argument of Federal Reserve officials that open-market operations were not feasible because of the "free gold" problem. The contraction of 1937 was blamed on the Federal Reserve also. Monetary policy in the 1930s was not "easy": beginning in 1928 the Fed turned to tight money and kept the tourniquet on throughout the thirties. For Warburton, the Great Depression did not demonstrate the instability of the market system but was the bitter fruit of misguided central bank policy. He criticized the Federal Reserve for relying on interest rates to denote monetary policy; setting an interest rate target resulted in an unstable money supply which in turn meant an unstable economy. Warburton clearly resisted the Keynesian tide concerning the role of money and interest rates. From the perspective of the late 1960s and later, Warburton was a man before his time, for his work was almost completely neglected.[16] Ironically his death occurred less than three weeks before the Federal Reserve System switched targets from the federal funds rate to the growth rate of reserves on October 6, 1979.[17] In their magnum opus, *A Monetary History of the United States 1867–1960,* Friedman and Schwartz acknowledge Warburton's work with great respect and pay him the high compliment that "time and again, as we came to some conclusion that seemed to us novel and original, we found that he had been there before."[18]

Milton Friedman is a "prophet of the old-time religion" in the sense that he holds fast to the (University of) "Chicago tradition of political conservatism and the ideology of laissez-faire."[19] Like Keynes before him, Friedman is a controversial figure who stands at the top of his profession; he clearly leads the monetarist forces.[20]

It is not true that once you have seen one monetarist you have seen them all. Monetarism comprises a school of economists who share certain propositions but who do not have identical positions. In a term favored by Friedman, monetarism is a counterrevolution to the Keynesian revolution, and he has provided a sequential account of its emergence and development from 1930 to 1970, a synopsis of which is presented here.[21]

1. Pre–Keynesian Orthodoxy

As of 1930 the quantity theory of money as expounded by Irving Fisher, using the quantity equation $MV = PT$, was the generally accepted doctrine. Velocity was considered to be highly stable and independent of the other terms, so that changes in M caused changes in P and/or T. Short-term fluctuations in the economy were due to changes in the quantity of money; long-term price trends reflected changes in the quantity of money. Monetary pol-

icy, consisting of changes in the discount rate and open market operations, provided the means for economic stabilization.

2. *The Keynesian Revolution*

The Great Depression was widely interpreted as demonstrating the ineffectiveness of monetary policy in coping with an economic decline, and it ended the doctrinal reign of the quantity theory of money. (This interpretation was utterly mistaken according to Friedman, for whom the depression is a testament to the effectiveness of monetary policy. The world drew the wrong conclusion from its costly experience.) The explanation for the failure of the quantity theory provided by Keynes was that velocity was not highly stable, as had been thought, but was adaptable, a will-o'-the-wisp. A rise in M is likely to be offset by a fall in V leaving PT (or PQ) unchanged. Therefore the quantity of money is not what matters. Instead the critical variable is autonomous spending on output, that is, private business investment and government spending. Thus the role of money was downgraded and largely dismissed. A further point was that prices are quite rigid and are mainly determined by labor costs which in turn are explained by institutional factors. Fiscal policy became the favored stabilization instrument, whereas monetary policy was seen as useful only in holding interest rates down to reduce the cost of financing government debt and to encourage investment spending. At the end of World War II, mainstream Keynesianism had become the new orthodoxy. An inference that came to be drawn by the 1950s was that since price increases are due to cost increases, to restrain inflation it is necessary to have an incomes policy. Friedman adds his belief that the application of Keynesian doctrine to policy reached its peak during the Kennedy administration, especially with respect to the tax cut of 1964.

3. *The Monetarist Counterrevolution*

By the 1960s Keynesian doctrine was in the process of gradually losing some of its influence. Keynesian analysis had led to the expectation of a depression after World War II, but instead of deflation the problem turned out to be persistent inflation. A reexamination of monetary policy during the Great Depression disclosed that the Federal Reserve was to blame for allowing the money stock to fall. The problem was not that monetary policy was ineffective but that the wrong policy had been carried out. The Federal Reserve System was created to provide liquidity when needed to stop a banking panic, but in 1930–1933 it failed to meet its responsibility.

Friedman's confidence in his interpretation leads him to the unequivocal statement that "if Keynes were alive today he would no doubt be at the forefront of the counter-revolution. . . . Monetary policy had not been tried

and found wanting. It had not been tried. Or, alternatively, it had been tried perversely. It had been used to force an incredible deflation on the American economy and on the rest of the world. If Keynes . . . had known the facts about the Great Depression as we now know them, he could not have interpreted that episode as he did."[22]

Another important factor contributing to a loss of confidence in the Keynesian approach and in favor of a reborn quantity approach was the extensive empirical analysis showing that movements of velocity generally were in the same direction as changes in the money stock. Thus velocity reinforces changes in the quantity of money.

In the 1966 episode in which a tight money policy was combined with an easy fiscal policy the result was a slowing down of the economy which was reversed only after monetary policy became expansionary. Then in 1968 when the surtax was enacted and Keynesians expected economic growth to be arrested, the Fed expanded the money supply and the result was a continuation of the boom. In each case the "controlled experiment" supported the monetarists' view. This experience brought about a major change in professional and lay opinion. Friedman's belief in monetary policy is based on long-run historical evidence, so he considers the episodes of the 1960s as illustrations rather than demonstrations.

From being ignored at first, over time the small band of monetarist challengers to the orthodox Keynesian position gained both a hearing and a chorus of ridicule. Eventually, however, the monetarists became intellectually respected as the counterrevolution spread.

Monetarism is defined or explained in varying degrees of detail. Thomas Mayer, in his comprehensive *The Structure of Monetarism* (1978), states that he could find no complete list of all monetarist propositions so he constructed his own list of twelve items, four of which are "basic." In 1970 Milton Friedman provided a list of eleven "key propositions" covering four pages. What follows is a subset of selected quotations from Friedman's list, a "short list" of key propositions.[23]

1. There is a consistent though not precise relation between the rate of growth of the quantity of money and the rate of growth of nominal income.
2. This relation is not obvious to the naked eye largely because it takes time for changes in monetary growth to affect income, and how long it takes is itself variable.
3. On the average a change in the rate of monetary growth produces a change in the rate of growth of nominal income about six to nine months later.

4. The changed rate of growth of nominal income typically shows up first in output and hardly at all in prices.
5. On the average, the effect on prices comes about six to nine months after the effect on income and output, so the total delay between a change in monetary growth and a change in the rate of inflation averages something like twelve–eighteen months.[24]
6. In the short run, which may be as much as five or ten years, monetary changes affect primarily output. Over decades, on the other hand, the rate of monetary growth affects primarily prices.
7. It follows . . . that *inflation is always and everywhere a monetary phenomenon* in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output. However, there are many different possible reasons for monetary growth, including gold discoveries, financing of government spending, and financing of private spending.

A final note. Some monetarists, including Friedman, advocate an automatic policy—a monetary growth rule—providing for a steady rate of growth of the money stock over time. Others would vary the rate of growth of the money stock to offset nonmonetary destabilizing forces. The disagreement stems from different views of whether or not present knowledge is sufficient to make discretionary policy helpful. The general thrust is in the direction of a fairly stable growth rate of money.

Scrapping the Game Plan

> The rules of economics are not working in quite the way they used to. The problem of cost-push inflation, in which escalating wages lead to escalating prices in a never-ending circle, is the most difficult economic issue of our time.
>
> Arthur F. Burns[25]

President Richard Nixon brought an economic strategy or "game plan" with him when he entered the White House in January 1969. The major economic problem inherited from the Johnson administration was inflation, and the challenge was to reduce inflation without causing a severe recession. The game plan, worked out by the coaching staff headed by Nixon's first chairman of the Council of Economic Advisers, Dr. Paul W. McCracken, was based on gradualism. A "Friedmanesque" monetary policy was the core of the game plan. A pragmatic application of the concept espoused by Friedman was the guiding principle, not a rigid monetary growth rule. The fiscal policy

approach which had been favored by the Kennedy–Johnson administrations was de-emphasized partly because tax rates and government spending lack flexibility of adjustment, but also because of a desire to reduce the role of government in the economy. It was thought that although higher taxes might restrain inflation, they would also tend to encourage undesirably high government expenditures; the way to an expenditure cut was through a tax cut. Direct intervention, whether wage-and-price controls or guideposts, was anathema to Nixon. He scorned the previous Democratic administrations for their intervention in the private sector and renounced the use of exhortation (jawboning) to influence labor or business leaders in their price and wage decisions. For two and a half years the game plan served as the basis for policy until suddenly one summer night, August 15, 1971, it was scrapped in a dramatic about-face.

During the first year of the game plan the Federal Reserve System was still under the leadership of Chairman Martin. It stood firm against inflation, slowing the growth of the money stock to almost nothing during the second half of 1969, following which the economy went into a contraction at the end of the year for almost a year. In 1970, with Nixon's appointee Arthur Burns now chairman of the Board of Governors, serious problems arose that prompted a rapid increase in the money supply. The recession was accompanied by very high interest rates, by the shocks of the Cambodian invasion by U.S. troops and the collapse of the Penn Central Railroad, and by the threat of a liquidity crisis, as previously discussed. By mid–1970 the unemployment rate rose to 5 percent from an average of 3.5 percent in 1969 while the rate of inflation declined slowly.[26] The stock market slumped, raising some fear of a replay of 1929. Under these circumstances the FOMC, while affirming its allegiance to a long-run policy of moderate expansion of money and credit, found it necessary temporarily to accelerate the growth of the money supply. In trying to cope more or less simultaneously with inflation, recession, and a liquidity squeeze, the Fed used the brake and accelerator to deal pragmatically with whatever problem seemed most urgent at the moment. However attractive the idea of a steady, moderate expansion of the money supply might be in theory, the monetarist medicine prescribed by Dr. Friedman was too much for the Fed to swallow. When the Republican party suffered at the polls in November 1970, further strain was placed on the game plan.[27]

The role of Arthur Burns was clearly a key element in the evolution of economic policy in 1970 and 1971. Prior to 1970 he had been severely critical of wage–price guideposts, but as events unfolded in these years his position changed. Here is the gist of some of his most noteworthy observations:[28]

> *May 18, 1970 (Conference, American Bankers Association, Hot Springs, Virginia):* Monetary policy should be moderately expansionary, fast enough to keep the economic slowdown from cumulating but slow

enough to avoid excess demand. Primary reliance in the battle against inflation requires monetary and fiscal policies working together. Incomes policies have not been very successful but should not be ruled out as a supplement to fiscal and monetary measures for the transitional period of cost-push inflation.

December 7, 1970 (Pepperdine College, Los Angeles, California): Monetary policy during 1970 has found a middle course between extreme restraint and aggressive ease. But because collective bargaining settlements have not responded to the anti-inflationary measures to date, it would be desirable to adopt an incomes policy to supplement monetary and fiscal policies.

July 23, 1971 (Joint Economic Committee): A year ago it was believed that the degree of underutilization of resources now prevailing would significantly moderate inflation. But this has not happened—"The rules of economics are not working in quite the way they used to." The problem of inflation combined with unemployment is beyond the ability of monetary and fiscal policies alone to solve as quickly as the nation demands; additional actions are needed to control wages and prices, and so allow the economy freely to use its resource potential.

In 1971 public dissatisfaction with the combination of recession and slow progress on inflation brought pressure on the government to intervene. Labor and management increasingly called for intervention of some kind in wage and price determination. In Congress, many who had previously authorized the president to impose controls under the Economic Stabilization Act of 1970—power he said he did not want—insisted on a formal incomes policy. The Nixon administration continued officially to deny that the game plan would be changed, although within the administration many joined privately with Burns who, as we have seen, publicly called for a new policy. Prices were rising in anticipation of the adoption of controls. Finally the decision was made at a weekend meeting at Camp David to adopt what President Nixon, in his address to the nation when he came down from Camp David on a Sunday night in mid–August, called "the most comprehensive New Economic Policy to be undertaken by this nation in four decades." A president whose political credo was nonintervention had come to adopt a price and wage freeze.[29] Until close to the fateful decision, loyal administration spokesmen continued staunchly to defend the game plan. In July 1971 Secretary of the Treasury John Connally denied that the president would create a wage–price review board or impose mandatory controls. For aficionados of irony, the case of Paul McCracken is a gem. His article in *The Washington Post* on July 28, 1971, excoriated John Kenneth Galbraith's testimony before the Joint Economic Committee in favor of freezing prices, saying that "the idea of a freeze is illusory." Less than three weeks later,

"during the historic meeting at Camp David, on August 14 and 15, 1971, the same Paul W. McCracken . . . was put in charge of the details of the wage–price freeze."[30] So it goes. There is a larger historical curiosity involving the United States and the Soviet Union. New Economic Policy (NEP) seems an unlikely term for the Nixon administration to adopt, for it is the wording used by V. I. Lenin in 1921 for his economic reform program in the Soviet Union. In a sense the two programs are mirror images of each other: Lenin's NEP was a deliberate but temporary step back from socialism toward free markets in order later to advance further toward socialism; Nixon's NEP was a deliberate but temporary step back from free markets toward socialism in order later to advance to a better working capitalism.

The price and wage controls began with a ninety-day freeze, referred to as Phase I, which was followed by three additional phases of various degrees of control until the whole program was abandoned in April 1974. With the adoption of the controls program came more expansionary monetary and fiscal policies.[31] The Federal Reserve System had pressed for an incomes policy in the belief that monetary policy, having carried too much of the burden of limiting inflation, needed help. The existence of an incomes policy therefore permitted a more expansionary monetary policy. Certainly the expansion of M1 during 1972 was unusually high at a 9.2 percent annual rate for the first quarter and over 8 percent for the year as a whole. The economy expanded in 1972, inflation was kept in check at a 3.4 percent increase in the Consumer Price Index—and Nixon was reelected. But then the system "blew up": a recession began at the end of 1973, and the economy did not bottom out until the first quarter of 1975, yet inflation took off at 8.8 percent for 1973 and 12.2 percent for 1974, reaching a 14 percent annual rate at its peak. The worldwide boom in commodity prices, the shock of rising oil prices, crop failures around the world, the ending of controls, the decline of the dollar on the foreign exchange market, and the expansion of the money supply in the early seventies were all contributing factors. With simultaneous double-digit inflation and severe recession the term *stagflation* was widely adopted to describe the combined misery.[32]

By 1974 Arthur Burns, supposedly the stalwart inflation fighter, was under suspicion as having contributed significantly to inflation by excessive monetary expansion, notably in 1972.[33] Between 1970 and 1973 the money stock had grown at the most rapid rate for any three-year period in the post–World War II era, providing fuel for rapid inflation in 1973 and 1974. Criticism came from Congress, the press, and academia, including Milton Friedman. It was said by some critics that for Burns to hold forth in 1974 on the evils of inflation and to charge Congress with irresponsibility for contributing to it through budget deficits was hypocritical. Some charged Burns with politicizing the Fed by excessive money expansion to stimulate the economy and so insure Nixon's reelection. With the 20–20 vision of

hindsight, it was generally held that monetary growth in 1972 was clearly excessive. In defense of the Federal Reserve, however, that agency was concerned with overcoming unemployment and stimulating growth as well as with inflation, and, as noted above, there were various causes of inflation beyond the control of the Fed. With the New Economic Policy in place the Fed might have deemed it safe to stimulate the economy substantially. Still, in the year of the Watergate break-in, was there also a Federal Reserve cave-in to political pressure from the White House? A long article in *Fortune* suggested that it was so, and alleged that Burns pressed in the FOMC for stimulus to keep interest rates from rising in the preelection period. A knowledgeable "witness for the defense" who had been a member of the Federal Open Market Committee, Andrew Brimmer, denied that the group had been influenced by politics. This nasty imbroglio seems to have had many facets. Burns had been close to Nixon, had blamed Fed policy in 1960 for Nixon's defeat that year, and so presumably would be very conscious, perhaps overly sensitive, to the possibility that economic conditions might cause his defeat for reelection. But by calling for wage and price controls in late 1970 and 1971, Burns broke with the Nixon White House; it was commonly thought that men close to Nixon—men detested by Burns—had sought to discredit and undermine Burns as leader of the Federal Reserve System. Perhaps the FOMC, trying hard to be seen as neutral, was predisposed to hold short-term interest rates steady in the months prior to the election since they are so "visible" to the press and the public.

Whatever conclusions different observers might draw, a few points seem beyond dispute. Arthur Burns is a distinguished scientific economist with great knowledge of the business cycle. As an "activist" economist and as chairman of the Board of Governors of the Federal Reserve System he significantly influenced short-term economic policy. The fact that the Federal Reserve System is an independent agency of government certainly does not mean that it is hermetically sealed off from political pressure.

One other feature of the New Economic Policy deserves mention here. The long series of U.S. balance of payments deficits had led to the accumulation of foreign debts of huge size. With the rapid depletion of our gold reserve, and the impracticality of a formal devaluation of the dollar, it became necessary to end the system of fixed exchange rates. President Nixon therefore abandoned the Bretton Woods international monetary system by ending the convertibility of the dollar into gold.[34]

Federal Reserve Operating Procedures in Transition

It is widely understood that monetarist forces in Congress hoped that forcing the FOMC regularly to frame and defend its monetary-growth

> targets relative to a one-year policy horizon would serve as therapy against recurrence of FOMC money-market myopia.
>
> Edward J. Kane[35]

New Year's resolutions are made to be broken, and Federal Reserve operating procedures are made to be revised. Broken New Year's resolutions are quickly forgotten, but the results of revisions in Fed operating procedures are meticulously tracked. The Fed has adhered consistently to a policy-making strategy of intermediate targeting ever since the Accord of 1951 was reached. Three elements are involved. There are the (ultimate) goals of low unemployment, stable prices, steady economic growth, and so forth, the stated macroeconomic objectives of the Employment Act of 1946 and the Full Employment and Balanced Growth Act of 1978. To help achieve these the Fed has its policy instruments, principally open-market operations and discount policy. Since the relationship between policy instruments and goals is indirect, the Fed employs a third element, intermediate targets, considered to be linked to the goals and capable of being hit with a reasonable degree of accuracy. "They are conceived as sighting devices that aid policymakers to take indirect aim on hard-to-track goals."[36]

In chapter 8 it was noted that in 1966 the Federal Open Market Committee adopted a proviso clause designed to alter its directive, which continued to be stated in terms of money market conditions, by requiring that secondary targets based on the growth of reserves (or bank deposits) be added. Nothing much happened as a result, but further changes were adopted in the seventies. It is to these developments that attention is now turned.

The Federal Open Market Committee took a significant step in January 1970 by adopting a directive emphasizing the monetary aggregates.[37] Monetary policy would now be measured by money and bank credit, not primarily by money market conditions as had been the case since the time of the accord. Monetary policy would not be considered to be tight or easy based upon what happened to the federal funds rate and net borrowed reserves. It is true that money market conditions, although no longer the main concern, were also to be considered. The change in targeting resulted from the work of a committee on the directive, a subcommittee of the FOMC created in October 1968 by Chairman Martin and now bearing fruit just as Chairman Burns took over the FOMC chair in February 1970.[38]

The FOMC members who promoted the shift from a target based on money market conditions to one based on the monetary aggregates had difficulty in persuading the other FOMC members to make the change, in part because the latter reacted against anything smacking of monetarism. Certain perceived weaknesses in the monetarists' position plus the monetarists' relentless criticism of the system induced a strong negative reaction on the part of some FOMC members. The most convincing arguments in favor

of the adoption of monetary aggregates as a target: in the past the money stock had expanded too much at times; the relationship between money and spending is better understood than that between interest rates and spending. Under the new arrangements the basic target was monetary aggregates with M1 emphasized, yet the manager was to operate in terms of money market conditions as before. The procedure might be described as the designation of a different intermediate target but with an unchanged operating guide. The manager of the open-market account would still receive his instructions from the FOMC in terms of money market conditions—federal funds and net borrowed reserves. The money market conditions would be chosen as appropriate to the desired path for monetary aggregates. Approximately two years later the FOMC again revised its directive. When the monetary target was chosen, an operating guide consisting of a certain amount of total reserves would follow, but with adjustments to be made if necessary to keep the federal funds rate within a stipulated range.[39]

In retrospect the decade of the seventies was a transition period for Federal Reserve operating procedures. The system that evolved from 1970 to 1979 combined monetary aggregates as intermediate targets with reserves and interest rates as operating targets. The change introduced in 1970 was prompted by rapid money growth and inflation during the late sixties. At that time monetarist critics attacked the Fed's use of interest rate targets and argued for dropping interest rates entirely and shifting completely to controlling money and bank reserves. The Fed combined the two approaches in "an uneasy compromise between the objectives of monetary control and financial market stability."[40] The problems of inflation and control of the money stock were not solved, however, but became more severe during the seventies, resulting in the next major change in Federal Reserve operating procedures in October 1979. At this time a reserve operating target was adopted (almost) without regard to interest rates. This turning point in Federal Reserve history will be dealt with a little later in the context of the emergency conditions then prevailing.

The shift in emphasis by the Fed toward a money target was a long time coming. Apparently the first explicit reference to changes in the money stock made in Federal Reserve annual reports occurred in 1948. It suggests that changes in the money stock are important per se and not only as indicative of credit market conditions. In the 1952 and subsequent annual reports, and in statements made regularly over the years by Chairman Martin, the impression was given "that providing an average rate of growth of the money stock matching or appropriate to the secular rate of growth of output, though not dominant in short-term policy, has become a background aim of the System."[41] Friedman and Schwartz view statements of this type to be almost revolutionary for the reason that their examination of published documents and the papers of Federal Reserve officials indicated that the system had

never before considered the behavior of the money stock itself as a directly relevant policy criterion. The system had been concerned almost entirely with interest rates and the cost and availability of credit; in short, it focused on the credit aspects of its operations and not on the money stock. It is true that the system was very much concerned about the expansion of the money supply during the two world wars; it certainly was not oblivious of the link between the money stock and the price level. But it had been able virtually to ignore the money supply as an explicit target because its guiding principle had been that if the money market were managed correctly in the sense of providing credit for productive use and denying it for nonproductive use, then the money stock would look after itself. Comprehensive money stock data on a monthly basis were not even published by the system until 1944. In the fifties and sixties under Chairman Martin, short-term policy was to lean against the wind, avoiding inflation and deflation, a traditional approach that was developed as early as the *Tenth Annual Report* (for 1923). The policy was stated in very general terms without explaining how to determine wind direction and force or when to start leaning.[42] So in the fifties and sixties the money supply was not ignored but was on the back burner. Money market conditions were considered primary, and the system continued to define its policies in very general terms.

In the late 1960s attempts were made by congressional committees to prod the Federal Reserve System into adopting explicit money supply targets. In 1967 the Joint Economic Committee urged the monetary authorities to aim for moderate and relatively steady increases in the money supply, and specified a range of 3–5 percent per year as desirable. The next year the same position was taken, except that a range of 2–6 percent was given, along with a request that whenever the actual rate was outside the targeted range the Federal Reserve should explain the reasons to Congress. Also in 1968 the committee "urged the Federal Reserve authorities to set forth publicly at the beginning of each year, as specifically as possible, their judgment as to the monetary policy that would be appropriate during the year, given the state of the economy."[43] Representative Henry Reuss, fed up with the Fed for creating money much faster than the Joint Economic Committee recommended without explaining why, observed:

> In recent years, dialog between the Joint Economic Committee, in its annual reports, and the Federal Reserve System, in the minutes of the Open Market Committee, might well have been conducted in Urdu on the one side and Swahili on the other. . . . Our "advice" is obviously not being followed.[44]

In the view of Federal Reserve officials it would be a serious mistake for Congress to lay down detailed rules for the Federal Reserve System; the world in which the Fed operates is too complex and changes too fast.

In the 1970s Congress forced the Fed's hand on monetary targets. In 1975 a Congressional Resolution called for semiannual consultation with Congress on "the ranges of growth . . . of monetary and credit aggregates."[45] When Congress speaks in a firm tone, the Federal Reserve listens. On May 1, 1975, the Board of Governors reported money growth targets for the next year to the Senate for the first time. The requirements were made more definite and detailed by legislation in 1977 and 1978. In November 1977 the Federal Reserve Reform Act directed the Federal Reserve System "to maintain long-run monetary and credit aggregates commensurate with the economy's long-run potential to increase production so as to promote effectively goals of maximum employment, stable prices, and moderate long-term interest rates," and it requires the board "to testify concerning the ranges of monetary and credit aggregates for the upcoming 12 months."[46] Then in 1978 the Full Employment and Balanced Growth Act ("Humphrey–Hawkins") established requirements for reporting and consultation which, while preserving Federal Reserve "independence," attempts to make the Federal Reserve System more accountable to Congress and to integrate monetary policy more deliberately than in the past with the policies of the president and Congress.

> [The Act] Provides that the Board of Governors transmit to the Congress, not later than February 20 and July 20 of each year, independent written reviews and analyses of recent developments affecting economic trends, the objectives and the plans of the Board of Governors and the Federal Open Market Committee with respect to the ranges of growth of the monetary and credit aggregates for the calendar year, and the relation of such objectives and plans to the short-term goals set forth in the most recent Economic Report of the President and to any short-term goals approved by the Congress. The July 20 report is also to include a statement of objectives and plans with respect to the ranges of growth of the monetary and credit aggregates for the next calendar year. The Board is to consult with the appropriate committees, which will then submit their views and recommendations with respect to the Board's intended policies.
>
> While nothing in the act requires the Board to fulfill its plans for the monetary and credit aggregates set out in its reports, if the Board and the Federal Open Market Committee determine that the plans cannot or should not be achieved because of changing conditions, the act does require the Board to explain any revisions of that kind in subsequent consultations.[47]

The Ongoing Struggle to Control Inflation

> The Great Stagflation, like the Great Depression, may with the passage of time prove to be *sui generis*—an unhappy episode caused by

> a rare conjunction of events. However, there is every reason to think that stagflation, which has been with us before, will be with us again.
> —Alan S. Blinder[48]

Reference has been made to the buffeting of the economy during the 1970s. It is time to examine the causes and extent of the disturbances more closely and to see what was done in response. There was a wavelike movement of the price level: first consumer prices rose from an annual rate of increase of 3.4 percent in 1972 to a crest of 12.2 percent in 1974; the recession that bottomed out in the first quarter of 1975 brought inflation down to 4.8 percent in 1976; then a new inflationary wave drove it up again to 13.3 percent in 1979. The unemployment rate hovered in the 5 percent area during 1972–1974, went to 8.5 percent in 1975, and slowly subsided to 5.8 percent in 1979. The discomfort index was double-digit after 1972. Table 9–1 provides annual data for 1972 through 1979.

In reaction to its overly stimulative monetary policy of 1972, the Fed moved to restraint early in 1973, and the growth rate of M1 then trended downward until the economy touched its recessionary low point in 1975. The inflation rate behaved much more erratically than can be explained convincingly by monetary policy alone, and caused much consternation in 1974 as it reached a level previously associated with less sophisticated economies. Temporary factors under the rubric of exogenous supply shocks struck the economy with a series of price-raising jolts. Four such shocks have been identified for 1973–1974:[49]

1. The dollar was "devalued" in 1971 and again in 1973 as a result of the collapse of the Bretton Woods system of fixed exchange rates.

Table 9–1
Comparative Price and Unemployment Data, 1972–1979
(percent)

	Change in Consumer Price Index December to December (1)	*Unemployment Rate (2)*	*Discomfort Index (1) + (2)*
1972	3.4	5.6	9.0
1973	8.8	4.9	13.7
1974	12.2	5.6	17.8
1975	7.0	8.5	15.5
1976	4.8	7.7	12.5
1977	6.8	7.1	13.9
1978	9.0	6.1	15.1
1979	13.3	5.8	19.1

Source: *Economic Report of the President, 1983,* pp. 201, 225.

2. Worldwide bad harvests began in 1972 and continued in 1973; natural scarcity brought steeply rising food prices.
3. The Organization of Petroleum Exporting Countries (OPEC) cartel reacted to the Arab–Israeli war in October 1973 with a contrived scarcity of oil and steeply rising prices for it.
4. Wage and price controls were removed in April 1974 at the very time that the food and energy prices were pressing upward strongly. After suppressing inflationary forces somewhat, their removal permitted prices rapidly to catch up to their "equilibrium" levels.[50]

The year 1974 was unusually distressing in politico–economic terms. In August Richard Nixon admitted complicity in the Watergate cover-up, took off in a helicopter from the White House grounds, and was succeeded by Gerald R. Ford as president of the United States. No longer following a game plan, policymakers were anxiously scrambling to avoid an economic rout, for not only were prices rising rapidly but real output was falling. A severe recession of sixteen months' duration ran from a cyclical peak in November 1973 to a trough in March 1975, with real GNP declining for five consecutive quarters. The unemployment rate peaked at 9 percent and recovered slowly, for it was down only to 7.8 percent in December 1976. Understandably impressed by double-digit inflation, President Ford labeled it "domestic enemy number one," and there was widespread fear that inflation was getting out of control. In these circumstances macroeconomic policy was not employed during 1974 to arrest the slump. Such forbearance, however understandable and "politically necessary" given the unsettling context of the time, may well have been overdone in view of the role of temporary exogenous supply shocks as causal factors driving inflation sharply above its then "basic" rate. This recession, the longest and steepest of the six post–World War II contractions experienced up to that time, unmistakably confirmed that the business cycle was not extinct and called in question the effectiveness of economic expertise which had a decade earlier seemed so praiseworthy.

For the five years 1975–1979 the economy expanded.[51] In each succeeding year, as real GNP grew, the unemployment rate fell and the inflation rate rose until by 1979 double-digit inflation again appeared and a climate even more panicky than that of 1974 existed. The monetary growth rate increased moderately after the first quarter of 1975—Arthur Burns said he was determined to avoid an "explosion" of money and credit—but then more rapidly. Year-to-year increases in M1 were 6.7 percent for 1976, slightly over 8 percent for 1977 and 1978, and close to 7 percent for 1979. On January 31, 1978, after eight years at the helm, Arthur Burns was replaced as chairman of the Board of Governors by President Carter's nominee, G.

William Miller.[52] As a prominent and community-minded business leader, Miller was viewed as reassuring to the business sector while understanding of social and economic problems. Arthur Burns had become a major irritant to the Carter administration in 1977 by his one-man campaign against the administration's proposal of a $50 income tax rebate, and he continued to view inflation as the paramount danger. Miller, a pragmatic businessman with a law degree to whom no ideological label was attached, did not give primacy to inflation but held that inflation and unemployment should be dealt with simultaneously. Although he had been a director of the Federal Reserve Bank of Boston for six years, Miller's education and experience in monetary affairs provided rather unimpressive preparation for the role of the nation's chief central banker. Like a relief pitcher who only throws to a few batters, Miller's tenure at the Fed was brief. A year and a half later, midway through the tumultuous year 1979, Carter chose Miller as his new secretary of the Treasury and nominated Paul Volcker as the twelfth chairman of the Board of Governors. Volcker took the oath of office on August 6, 1979. Exactly two months later the Federal Reserve took its most important decision since the Accord of 1951.

The Monetarist Flag over the Federal Reserve

> A special October 6, 1979 meeting of the FOMC reoriented the focus of subsequent policy directives as dramatically as a fateful trip to Damascus long ago altered St. Paul's attitude toward Christians.
>
> —Edward J. Kane[53]

For about a year prior to October 1979, concern over a worsening of the financial situation gradually increased until suddenly there was the fearful perception that the financial system had reached a point beyond which (in the words of W.B. Yeats) "things fall apart; the centre cannot hold; mere anarchy is loosed upon the world." The rate of inflation in the United States accelerated steadily during the expansion that began in 1975, leading to a sharp fall in the value of the dollar in the foreign exchange market late in 1978. President Carter had already appealed for voluntary wage and price restraint. Now the Administration entered the foreign exchange market to support the dollar with huge amounts of borrowed foreign currencies, and Carter openly encouraged the Federal Reserve to be more restrictive in its monetary policy. The monetary growth rate fell in the fourth quarter of 1978 and was even negative in the first quarter of 1979, but then increased again sharply during the summer. Inflation raced ahead at more than a 13 percent per annum rate by mid-1979, and although interest rates surged, the demand for credit was not dampened. The dollar plunged on the foreign exchange

market and the price of gold, which more than doubled from $250 an ounce in June to over $500 an ounce at year's end, rose by $100 an ounce in just six weeks as summer turned to fall: confidence in the dollar was fading fast. The Fed seemed unable to control the money supply—"One can make a reasonable case that the Fed faced disaster."[54]

How did this situation develop? As table 9–2 shows, between 1975 and 1979 the M1 money supply and prices rose at about the same rate. The velocity of M1 increased also, at about two-thirds of the M1 rate of increase. As noted earlier, price increases were gaining momentum with the passage of time.

It was generally thought that the U.S. economy would experience a slowdown ("growth recession") during 1979, and the first half of the year seemed to confirm this expectation, even to suggest the onset of a recession. Thus inflation would be kept at bay. But the revolution in Iran that made the Ayatollah Khomeini a household name disrupted oil production from that country and triggered a series of price increases—the second (since 1973) OPEC "oil shock"—that raised U.S. oil import prices by 87 percent between the end of 1978 and the end of 1979.[55] Prices of other primary commodities increased also as global demand strengthened. Then aggregate demand in the United States rebounded sharply in the second half of the year, confounding consensus forecasters. Under the combined circumstances of rising domestic and world demand, exogenous supply shock, and falling value of the dollar, the price level surged. Inflation psychology, the product of a decade of experience with persistent inflation, was an important factor in spending and borrowing behavior. M1 had increased by 89 percent over the decade, or about 2.5 times the 36 percent growth in real GNP. With the financial markets in turmoil, Paul Volcker rushed home from the annual meeting of the International Monetary Fund in Belgrade before its conclusion. In an extraordinary meeting of the Federal Open Market Committee

Table 9–2
Changes in Output, Prices, Money Stock, and Velocity of Money, 1975 to 1979
(percentage increase)

GNP (current dollars)	56
GNP (constant dollars)	20
Consumer price index	35
GNP price deflator	30
M1	32
Velocity of M1	18

Adapted from *Economic Report of the President, 1985,* pp. 232, 234, 238, 295, 303.

on Saturday night, October 6, 1979, quickly deemed "historic" by financial writers, the Federal Reserve adopted a new policy stance.

The Federal Reserve's October actions were traditional central bank defensive moves to halt inflation and defend the value of the national currency unit vis-à-vis other currencies. The discount rate was raised to 12 percent, and reserve requirements were increased on any increase in various bank liabilities, notably Eurodollar borrowings. What was taken to be of much greater significance was the announcement of a change in operating procedures by shifting away from the federal funds rate to controlling unborrowed bank reserves. The objective was to exercise greater control over the monetary aggregates, even though this would permit much larger fluctuations to occur in the federal funds rate. The Fed committed itself to targeting the money supply. In effect the Federal Reserve admitted that the weakness of the dollar was due to its failure to control the money supply, and it wanted the world to know that it was now determined to exercise effective control over the expansion of money and credit.

> The principal reason advanced for shifting to an operating procedure aimed at controlling the supply of bank reserves more directly was that it would provide greater assurance that the Committee's objectives for monetary growth could be achieved. In the present environment of rapid inflation, estimates of the relationship among interest rates, monetary growth, and economic activity had become less reliable than before, and monetary growth since the first quarter of 1979 had exceeded the rates expected despite substantial increases in short-term interest rates. . . .
>
> Committee members suggeted that the shift in operating techniques, along with the other actions being contemplated by the Board of Governors, would tend to increase confidence at home and abroad in the System's determination to achieve its objectives for monetary growth and to avoid further deterioration in the inflationary outlook. Partly because it would increase uncertainty about the near-term course of interest rates, the new operating technique should induce banks to exercise greater caution in extending credit and might dampen speculative behavior by increasing its risks and costs. Altogether, the System's action would tend to moderate inflationary expectations, thereby exerting a constructive influence over time on decisions affecting wages and prices in domestic markets and on the value of the dollar in foreign exchange markets.[56]

The wild behavior of financial and commodity markets in an atmosphere of grave uncertainty had called for some dramatic and definitive gesture. Since the central policy message of monetarism is control of the money stock, it clearly appeared that the Federal Reserve had committed itself to monetarism. As we have seen, the Fed had been tending in this direction for a decade. In speeches and congressional testimony, its leaders had repeatedly

voiced their belief in the necessity of adhering to money supply targets to restrain inflation, and they were required by the Humphrey–Hawkins Act of 1978 to tell Congress every six months what their target ranges were for the monetary and credit aggregates. Evidence of an unequivocal determination actually to arrest inflation was what the October 6, 1979, policy change was meant to provide. The question was: Can Volcker stand up to inflation?[57] Volcker had to do something striking to be convincing, for his predecessors at the helm of the Fed had all talked a strong anti-inflation game. His experience and expertise in government and the fact that he was known and respected by central bankers abroad are factors generally thought to have made him especially well qualified for the role he now assumed.

The quotation at the head of this section indicates how radical the policy switch of October 6, 1979, appeared when it was made. The adoption of a strategy based on narrow monetary aggregate growth rates with wide limits on the federal funds rate was a reversal of the previous strategy. Immediately following the adoption of the new monetary program, the growth of the money supply slowed, interest rates rose rapidly, and the dollar was stabilized on the foreign exchange market. Yet the inflation dragon had not yet been subdued, as the events of 1980 soon showed. To those of the monetarist persuasion the new policy gave "a lovely light," but like Edna St. Vincent Millay's candle, it did "not last the night."

A certain poignancy was added to the queasy mood of October 1979 by reminders that it was the golden jubilee of the start of the stock market collapse of 1929. At that time too the Federal Reserve raised interest rates, but with less determination than in 1979. The economy continued to grow right through to year's end, contrary to forecasts, prompting *The Economist* to observe that the U.S. economy had a boom with nine lives.[58]

Financial Innovation

Innovation in the field of banking was relatively minor for the first fifteen years following World War II, but as noted in chapters 7 and 8, there were important new developments during the 1960s. The chief catalyst was the rising rate of interest in an environment of government regulation, notably the interest rate ceilings applied to deposits in banks and thrift institutions. Banks developed the new strategy of liability management and presto, the new corporate time deposits known as negotiable CDs achieved instant success in attracting funds to banks. The banks also discovered organizational innovations in the form of one-bank holding companies and overseas branches (Eurobanks), and took a leaf from the security dealers' book by adopting repurchase agreements as yet another way of borrowing funds.

The incentive to innovate accelerated during the 1970s as interest rates

shot up to much higher levels in 1974 and 1978–1979 than they had reached in the 1960s. A graph of interest rates from the end of World War II to 1980 resembles in a rough-and-ready way a geological profile showing first a gradually rising elevation from coastal plain to piedmont and then a steep rise to towering mountain ranges in the late 1970s. (The continental divide was reached in 1980–1981.) Under these conditions, further major innovations appeared. In 1972 the money market mutual fund, a mutation of the well-established common stock mutual fund, appeared. It grew rapidly in 1974 and phenomenally at the end of the 1970s and early 1980s when short-term interest rates reached skyward. Such funds gather money from depositors who can't afford the price of money market instruments by permitting them in effect to invest in such instruments indirectly through ownership of shares in the fund itself. Thus sums were drained from accounts in banks and thrifts paying low, regulated interest rates, and loaned at high money market rates to government, corporate and bank short-term borrowers.

> They are modern-day Robin Hoods who protect the public from a coalition of government and depository institution barons; as in the days of old, they increase social welfare by taking risks. The risks do not appear to be very great. Although there is no protection corresponding to deposit insurance, monetary authorities seem reluctant to allow a major bank to default on its certificates of deposit.[59]

In the wake of money market mutual funds, and no doubt stimulated by them, came several innovations in bank and thrift liabilities. One of these, the negotiable order of withdrawal (NOW account) appeared as quite a surprise to a generation accustomed to an "East is East and West is West" distinction between demand (checking) deposits paying no interest and savings/time deposits paying interest but not subject to withdrawal by check. The fusion of them into NOW accounts began in thrift institutions in Massachusetts and New Hampshire in 1972; thereafter they were permitted to be offered by banks in those states in 1974, after which they reached out like vines through New England and the Middle Atlantic states until finally at the end of December 1980 they were sanctioned for all fifty states.

A variety of time accounts (savings certificates) bearing higher interest rates the longer the maturity were also permitted by the regulatory authorities. Then on June 1, 1978, banks and thrift institutions were allowed to offer a new type of instrument called a money market certificate. These six-month time deposits were designed to give financial institutions greater flexibility in competing for funds, thus enabling them to provide a flow of funds to industries that tend to be deprived of them in times of tight money, notably housing; in other words, to avoid the now familar problem of disintermediation. The feature that made them a true innovation was the tying

of their interest rate to the auction rate on the six-month U.S. Treasury bills. Money market certificates were enthusiastically received—within nine months the total outstanding reached $136 billion—and they helped in avoiding disintermediation. They did carry a high price to the nonbank thrift institutions, however, for the spread between their cost and the return on new mortgages was cut by 75 percent over the nine-month period. A few years later in 1982 depository institutions were given permission to offer money market accounts on which an unregulated rate of interest can be paid and which enable these institutions to compete very effectively with money market funds.

Whenever monetary policy and regulation inhibit financial institutions from the revenue-producing activities and aspirations that drive them, they can be counted on to find new ways of conducting their operations and to pursue them unless and until they are checked. "The one clear lesson from recent history is that financial institutions innovate whenever customer relationships are jeopardized by slow monetary growth."[60] The result of these changes in financial practices on the liabilities side of the combined balance sheet for all insured commercial banks is quite striking, as indicated in Table 9–3.

Attempts at Financial Reform

Two major studies of the financial system were sponsored by the federal government during the 1970s. First came the Commission on Financial Structure and Regulation appointed by President Nixon in 1970 (generally called the Hunt Commission after its chairman, Reed O. Hunt, a retired business executive). The motivation for the study was the belief that defi-

Table 9–3
Changes in Percentage Composition of the Liabilities of All Insured Commercial Banks, 1970, 1980

	Percentage of Total Liabilities and Capital			
	1970		*1980*	
Demand deposits	43	60	28	41
Passbook savings deposits	17		13	
Time deposits	19	33	21	52
Large-size negotiable CDs	5		15	
Miscellaneous liabilities[a]	9		16	

Adapted from Lawrence S. Ritter and William L. Silber, *Principles of Money, Banking, and Financial Markets,* Fourth edition. New York: Basic Books, 1983, pp. 125, 127.

[a]Includes borrowings from the Federal Reserve and in the federal funds market, borrowing from bank parent holding companies and foreign branches, and repurchase agreements.

ciencies had been revealed in the financial system during the 1960s as a result of inflation and drastic shifts in the flow of funds. There was concern over the reduced liquidity of financial institutions which led them to restrict loans to certain groups of borrowers, notably residential mortgage borrowers, small businesses, and state and local governments. Sharply fluctuating interest rates meant greater risk and uncertainty. Total savings were viewed as inadequate to meet the combined heavy demands of the public and private sectors. The attitude behind the creation of the Hunt Commission was that desirable changes in the system were being prevented by government regulation.

The Hunt Commission's report (1971) recommended many reforms based on the general position that less regulation of financial intermediaries would produce more competition among them, thereby contributing to a more stable monetary/financial structure. To achieve the goal of greater competition, the Regulation Q interest rate limits needed to be eliminated and thrift institutions given freedom to acquire a greater variety of assets and to conduct business over a wider geographic area. Legislation was proposed in 1973 to give effect to several of the Hunt commission recommendations, but failed to be adopted.

In 1975 a second study was commissioned, this one by Congress. In due course it produced the Financial Institutions and the Nation's Economy (FINE) report, and again legislation was proposed based upon the report's recommendations for the removal of regulatory constraints, including the elimination of ceilings on deposit interest rates. Congress did not adopt these recommendations either.

The two attempts to bring reform during the 1970s very likely failed because the degree of concern had not yet become acute enough to generate the political force needed to overcome the objections of interest groups opposed to change. By 1980 the sense of crisis reached the boiling point, and comprehensive legislation was adopted. While the Hunt and FINE reports failed to bring legislative results in direct response to their recommendations, they may well have performed some spadework for the reforms of the early 1980s.