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Summing Up

> No policy can be successful unless it recognizes the constant drift of evolutionary change. . . .
>
> —Kenneth E. Boulding[1]

The evolutionary perspective, as Kenneth Boulding has convincingly shown, is "extremely illuminating in explaining the ongoing processes of economic life."[2] For the segment of economic life chosen for examination in this book, the monetary system of the United States over the past ninety years, evolutionary change is obviously great. It is the role of this final chapter to highlight the striking shifts in structure, theory, and policy that have, time and again, transformed the monetary institutions of the country. To realize this, one only has to imagine studying money and banking as of any given date, say 1910, 1925, 1940, 1955, and then consider how inadequate such knowledge would have been twenty years later. Even more important is the realization that what was known as of a given date did not provide much foresight of what was to come. How well does our present wisdom prepare us for the world of 2005? After the following summation, some concluding observations will be offered on this point.

The American monetary system before World War I was structurally unsound. It was subject to periodic monetary stringency which at times resulted in collapse: bank failures, widespread bankruptcy, general economic depression. This state of affairs finally became recognized as intolerable as a result of the Panic of 1907, and led to the establishment of a "central bank," the Federal Reserve System, in 1914, an institution based on European experience adapted to American conditions.

The Federal Reserve System was designed to provide the nation with a supply of money and credit appropriate to its needs over time and to be ready, in the event of a developing liquidity shortage, to be a "lender of last resort," able to create new money quickly. The system was not intended to

manage or control the money stock on its own initiative according to its assessment of what was good for the country. Instead it was to carry out its functions by *responding* to the needs of the productive units in agriculture, commerce, and industry, and doing so within the rules of the international gold standard.

In the pre–World War I era there was a trinity of highly regarded guiding principles to govern monetary policy. One was the gold standard, to which the country was firmly committed by law—in the long run the money stock of the nation was automatically determined by the size of the monetary gold stock. The second was the quantity theory of money that inexorably linked the price level to the money stock over the long run. The dependence of the price level on the money supply was essential for the gold standard to be workable internationally by preventing an overconcentration of gold in a few nations. The third principle, of lesser stature than the other two, was the real bills doctrine, according to which banks could safely expand loans in their own interest and to the economy's benefit by concentrating on short-term loans for productive purposes. The new Federal Reserve Banks would in turn lend to the commercial banks by rediscounting eligible commercial paper for the banks, paper which had been acquired by the banks as a result of their loans to the public. Enveloping the whole system was a belief in laissez-faire, according to which the market mechanism, allowed to work its will, would automatically bring about the best possible results. The new central bank was viewed as a kind of financial gyroscope needed to prevent an otherwise successful system from veering off course for technical reasons. Once the new mechanism was put in operation, it was expected that the flawed monetary system would be "fixed."

The Federal Reserve System made a somewhat cautious and hesitant entry on the national economic stage. It faced several difficulties: its officers lacked experience as central bankers; many commercial bankers viewed it with suspicion and disapproval; authority was unclearly divided between the Federal Reserve Board and the twelve Federal Reserve Banks; appropriate lending policies needed to be worked out to give practical effect to its new money creating role. Much more important, the timing of the arrival of the central bank coincided with the outbreak of World War I, as a result of which economic conditions changed drastically. Thus the Federal Reserve System began life in an environment that precluded it from working out a modus operandi under the type of conditions that had been assumed by its founders.

Between the time when World War I began and the date of American participation in it, heavy gold inflows led to more money and higher prices. The gold-losing countries of Europe left the gold standard. After U.S. entry into the war, gold stopped flowing in, and for a time this country also suspended the gold standard. The money stock continued to rise after the

gold inflow ceased as the Federal Reserve Banks expanded the monetary base. The financial requirements of the Treasury were of paramount importance, and the Federal Reserve System contributed to the war effort by its support of the Treasury in two ways. First, it served as fiscal agent for Treasury financing operations, a role that it has continued to play to the present. Second, as the source of credit it made certain that the Treasury could sell all of the bonds necessary to meet its needs. The method by which the Fed made credit available was by lending to commercial banks with Treasury securities as collateral. Under these conditions the gold standard was inoperative and the real bills doctrine irrelevant. Wartime financing resulted in a rapid expansion of the money supply and inflation.

The immediate postwar years 1919–1921 brought an inflationary boom followed by a shattering collapse of the economy, a painful experience for which the Federal Reserve System was largely blamed. The Federal Reserve was criticized for failing to restrict monetary expansion during the boom. It claimed extenuating circumstances in the form of a continuing need to support the Treasury, as well as the fact that it was in a subservient position due to wartime legislation still in effect under which the president could transfer its powers to the Treasury. After boom turned to bust, the Fed kept interest rates high for a long time as the economy plunged into deep depression. This perverse tight money policy was explained as necessary to protect the gold stock, although the Federal Reserve could have suspended the gold reserve requirement. This excuse did not save the system from being roundly condemned for persisting in a mistaken policy. The original need for the central bank was just as urgent as before the war, however, so it was allowed to continue with the hope that in a "normal" environment it would develop the skills and judgment required for success.

From 1922 to 1929 the American economy enjoyed prosperity with price stability, a happy combination for which monetary policy could claim considerable credit. Over these years the Federal Reserve System redefined its role and operating methods. Changes in economic conditions, attitudes, and behavior resulting from World War I and its aftermath created an environment quite different from the prewar world; in responding to the new conditions the central bank contributed to the shape of the new order and seemed to have mastered the art of central banking. Early in the twenties the Federal Reserve System took upon itself the role of manager of the monetary system. The original concept of a central bank responding automatically to gold flows and legitimate credit needs was no longer tenable. The international gold standard had not been sufficiently restored. As a practical matter the Fed kept inflows and outflows of gold from changing the monetary base. The real bills doctrine lost credibility as a safe way to expand the money supply—it was now considered necessary to regulate the quantity of credit, not to rely on its quality alone. The lesson drawn from the harsh

experience of inflation followed by deflation immediately after the war was that the system should exercise control over credit to promote domestic stability. Keynes in 1923 pointed out that regulated monetary systems had become a fact. The shift from an automatic to a regulated system was clearly a significant transformation of the social organism known as central banking.

In 1922 the discovery was made that the Federal Reserve Banks possessed a powerful credit policy instrument in the form of open-market operations and led to the creation of a coordinating group, the Federal Open Market Investment Committee, under the supervision of the Federal Reserve Board. This was not the only way that authority was concentrated in the Federal Reserve Board, for in 1927 the board asserted authority over the setting of discount rates by the banks. The system used open-market operations and discount policy to steady the economy during the twenties.

In addition to economic stability, the Fed had two other important objectives. One was to help in the slow process of restoring the international gold standard. In 1927 the system adopted an easier money policy to assist foreign countries in getting on or keeping on the gold standard. Unfortunately this step conflicted with the objective of denying credit for speculative purposes just as the stock market was beginning to ascend to its dizzy 1929 peak. By the end of the decade, the Federal Reserve lost control of the situation. It wanted to deny credit for stock market speculation but provide it to keep the national economy rolling, and found itself in a dilemma. Furthermore it became apparent that a fundamental conflict existed between the goals of adherence to the gold standard and national stabilization.

During the 1920s commercial banks shifted the composition of their assets as investments rose relative to loans, and security and real estate loans rose relative to commercial loans. Money center banks, using affiliates, underwrote and distributed securities including many foreign securities of poor quality. The number of banks fell from about 30,000 to 24,000, mainly because of changes in the economic landscape that left many small banks in small towns to wither on the vine.

From 1929 to 1933 the economy descended into deep depression. Its recovery was marred by a slump in 1937–1938, after which powerful expansionary forces stemming from the onset of World War II took it to high ground. The Great Depression had drastic effects on the banking system, brought major institutional reforms, and fundamentally changed monetary theory. Over some two and a half years, from the fall of 1930 to the spring of 1933, the economy was wracked by three waves of bank failures. The money stock declined sharply, especially between March 1931 and March 1933. The Federal Reserve System, put to the test by the first liquidity crisis since 1907, failed to meet the challenge. Spending on output fell much more than the money stock as the velocity of money also fell very sharply. The Federal Reserve System reduced the discount rate from 6 percent in 1929 to

1.5 percent in mid-1931 but raised it to 3.5 percent late in 1931, after Britain left the gold standard, because of concern over gold requirements. The Federal Reserve System made little use of its power to expand the monetary base by open-market operations. It bought substantial amounts of government securities for some months in 1932 but did not persist for long. Interest rates dropped to very low levels in nominal terms but not in real terms.

In response to the traumatic experience of the early thirties, the nation adopted extensive banking and monetary reforms soon after the Roosevelt administration came into office in 1933. The Federal Reserve System was given increased powers in the belief that it had not previously been adequately equipped. The system was restructured to centralize policy control in the hands of a new Board of Governors and a new Federal Open Market Committee in Washington. The Board of Governors could vary member bank reserve requirement percentages and regulate credit for the purchase of securities, the latter a "selective" control resulting from the inability of the Fed to cut off the flow of funds to the stock market in the late twenties. The Federal Open Market Committee was given exclusive control over Federal Reserve open-market operations.

The failure of the Federal Reserve System to prevent the epidemic of bank failures led Congress to create a new institution, the Federal Deposit Insurance Corporation, to provide deposit protection and so end the contagion of runs on banks. Although the power in the Federal Reserve System shifted to the board and the FOMC in Washington, the Federal Reserve Banks were given permanent authority to lend to commercial banks on any security deemed satisfactory to them. Thus reliance on eligible commercial paper, once the key feature of the real bills doctrine, came to an end.

By the end of 1933 the number of commercial banks had fallen to about 15,000, compared with twice that number in the early twenties. Unlike the Federal Reserve System, which was given more power and freedom of action, the commercial banks were circumscribed by new controls. The payment of interest on demand deposits was prohibited, and a maximum rate of interest payable on time deposits was set for the banks by the Board of Governors. Commercial banking and investment banking were legally divorced, thereby prohibiting the commercial banks from continuing to have investment affiliates.

The conflict between domestic objectives and adherence to the international gold standard that became apparent in the years following World War I was resolved by changing the way the dollar was linked to gold. A limited international gold-bullion standard was adopted, with the dollar devalued in terms of gold by 41 percent, thereby abandoning the effort to reestablish a full-fledged international gold standard. While the money stock would not be controlled by gold, gold flows would continue for several decades to

influence the Federal Reserve System as it exercised control over the money supply.

From 1933 to 1937 the money stock rose rapidly. The Treasury's gold stock was greatly enlarged: devaluation of the dollar plus a major inflow of gold tripled the nation's gold stock. The monetary base rose at a faster rate than M1 as banks accumulated a large amount of excess reserves. The anomoly of huge excess reserves was generally taken as evidence that extremely easy money conditions existed at a time when the demand for loans was low. The strong liquidity preference of banks was apparent also in their holdings of short-term government obligations with yields of just a small fraction of 1 percent. During the economic recession of 1937–1938 the money stock fell.

From 1933 to the end of the decade, Federal Reserve credit was essentially unchanged. During this period the Federal Reserve System played a minor role, and discounting, originally considered the main link of the system to the financial system, was insignificant. In 1936 and 1937 the Federal Reserve raised reserve requirement percentages to soak up a large amount of the banks' excess reserves and so make Federal Reserve open-market operations a feasible option when needed. The banks, however, reacted to the loss of excess reserves by a more restrictive lending policy. The result was that the Federal Reserve was criticized for unintentionally bringing on monetary restriction which contributed, along with a concurrent shift toward restriction in federal fiscal policy, to the 1937–1938 recession.

Monetary theory was transformed in the thirties as John Maynard Keynes presented his income–expenditure analysis to explain changes in national income as an alternative to the quantity theory of money. His liquidity preference theory of interest was used to argue that when the rate of interest was at a very low (depression) level, the demand for money balances would be so highly elastic that an increase in *M* would have a negligible effect on interest rates and spending. Monetary policy was therefore viewed as ineffective in generating demand for output, and fiscal policy was elevated to the prime policy role. Marriner Eccles and his close associate at the Federal Reserve Board, Lauchlin Currie, were congenial to Keynes's ideas, and as a result the Federal Reserve became a medium for the transmission of Keynesian thought to Washington. Thus in response to the economic breakdown, a revolution in thought occurred that sanctioned a more interventionist role in the economy.

For decades economists have looked back on the events and policies of the thirties to interpret that momentous era of change. The monetary (monetarist) explanation makes the money stock the prime mover of shifts in aggregate demand; changes in velocity in the same direction follow. According to this view, if the Federal Reserve authorities had done their job properly by expanding the money supply, the situation would never have gotten

out of hand. An alternative approach holds nonmonetary causes responsible for the economic collapse. This interpretation makes autonomous declines in spending on output the key causal factor; velocity decreased and a fall in *M* followed. An eclectic view holds that neither the quantity theory nor the income–expenditure theory is sufficient. Whether changes in money causing changes in the economy (monetary hypothesis) or changes in the economy causing changes in money (spending hypothesis) is the more important is a question still waiting for a definitive answer.

All-out war for nearly four years (1941–1945) required the Treasury to finance an unprecedented national mobilization of resources. As in World War I, the Federal Reserve System provided reserves to the banks to insure the success of Treasury debt financing. The method chosen was open-market operations, by which the Fed supported (pegged) the market price of Treasury obligations, not, as in World War I, by discounting. By committing itself in this way, the central bank relinquished control over the money supply. Efforts were made to finance the war with already existing funds, but the money stock more than doubled during the war. Inflation was repressed by direct control over resources, rationing of scarce goods, and price and wage controls. Shortly after World War II, the nation, still preoccupied by the long depression, adopted legislation declaring that the federal government had the responsibility of managing the economy so as to achieve desired macroeconomic goals.

A pleasant surprise occurred after World War II: a severe postwar depression, such as occurred in 1920–1921 or worse, was anticipated but not realized. The large amount of money and other highly liquid assets accumulated as a result of the financing of the war, and now available for peacetime spending, fueled an inflation during 1946–1948. Although a matter of concern, inflation was less severe than might have been expected under the circumstances. Over this two-year period there was only a marginal increase in the money stock, and the increase in velocity was not very large. The relative restraint in aggregate spending was probably due to sizeable government cash surpluses and a lingering fear of hard times ahead that prompted people to spend cautiously so as not to deplete liquid assets that might be sorely needed.

Federal Reserve support of the government securities market was continued after World War II until early 1951. With the passage of time the Federal Reserve System gradually but increasingly wanted to dissolve its "partnership" with the Treasury so that it might regain its powers as an independent central bank to exercise control over the supply of credit. Treasury officials insisted that the pegging policy be continued to hold down the interest cost on the national debt and to ease its problem of rolling over the debt. The Federal Reserve tried to separate itself by tiny steps from the pegging policy: its hesitancy is explained by fear that if it withdrew support

prematurely the government securities market might fall, precipitating a financial collapse and tight credit and possibly bringing on the feared economic depression. In 1949 a lull in the economy temporarily eased the tension between the two agencies, but the outbreak of the Korean War in June 1950 set them on the path to a clean break. The Federal Reserve authorities—their duty more clearly defined by the inflationary circumstances—resolved to free themselves of the pegging policy which had so long subordinated monetary policy to the needs of the Treasury. A struggle between the two agencies that spilled into a bitter political fracas ended with a pact, the Accord of March 4, 1951, which ended the Federal Reserve System's support of the government securities market at pegged prices and restored monetary control powers to the system.

The decade and a half from 1951 to 1965 was a generally successful and relatively smooth portion of the journey through the twentieth century. Economic growth in the 1950s was interrupted by three mild recessions, and there was some concern that other countries, notably the USSR, were growing faster than the United States. Disputes over U.S. monetary policy revolved around the question of whether the Fed was providing too little or too much money for the economy to function optimally.

Following the Accord of 1951 the Federal Reserve gradually phased out its support activity in the securities market. As a result the Fed was able to operate in the market as it deemed necessary for monetary control purposes. Under William McChesney Martin, Jr., who chaired the Board of Governors for almost two decades beginning in 1951, the Federal Reserve adopted a "bills only" doctrine in 1953. The idea was that the system should exercise credit control (almost) exclusively by buying and selling Treasury bills so as to minimize its interference in the credit market. Critics maintained that "bills only" did not in fact result in an improved government bond market and had the disadvantage of making monetary policy more difficult to implement because of the need alternately to flood markets with liquidity to ease credit and then later to draw off excess liquidity to restrict credit. The policy was viewed by many as unnecessarily restrictive of central bank power. The "bills only" doctrine was laid to rest in 1961 as a result of a gold outflow while economic activity was slack. To encourage the domestic economy, the Federal Reserve decided to buy long-term Treasury securities to lower long-term interest rates, while simultaneously it kept short-term rates high to deter holders of dollars from shifting to liquid assets abroad.

As a result of the unexpected tendency of the price level to rise during recession in the 1950s, a fresh interpretation of inflation was developed. Cost-push or sellers' inflation was presented to explain inflation that could not be attributed to excess aggregate demand. A consequence of cost-push inflation was to put the monetary authorities in a dilemma: to stop inflation they had to discourage output and employment; to increase output and em-

ployment they had to accept inflation. To try to resolve the dilemma, the concept of an incomes policy was developed to supplement a sound monetary/fiscal policy mix. The central proposition of the new approach was to get labor and management to behave in the national interest, labor by accepting average wage increases in line with productivity increases for the economy (to keep labor cost per unit of output stable), and management by keeping the average price level steady. Incomes policies were applied in a variety of forms and degrees during the sixties and seventies.

In the 1950s, as a result of rising interest rates, corporate and individual depositors transferred funds from bank accounts paying zero or low rates of explicit interest to short-term securities and accounts at thrift institutions which yielded a higher return. Faster growth by nonbank competitors stimulated commercial banks into a new strategy of liability management as a way of obtaining additional funds to meet liquidity needs created by faster growing bank assets. The financial instrument adopted for this purpose was the negotiable certificate of deposit (CD), which attracted corporate deposits in huge amounts. The federal funds market became another source of lendable funds for banks.

From 1961 to 1965 the economy enjoyed rapid growth with low inflation. Economic policy was shaped by Keynesian thinking, and the glowing results strongly suggested that an excellent combination of fiscal and monetary policies had been forged. It was a time when economists in general and Keynesian economists in particular enjoyed high respect.

The escalation of U.S. military action in Vietnam in 1965 caused a serious demand-pull inflation for the first time since the Korean War in the early fifties. Federal taxes were not raised until 1968, so for several years the Federal Reserve had macroeconomic policy largely to itself. Monetary restraint in 1966 brought on a severe credit squeeze; the Federal Reserve departed from its free market philosophy by resorting to moral suasion to influence bank behavior when market pressure peaked in the summer. Tight money gripped some sectors of the economy, such as housing, much tighter than others. High market interest rates diverted funds away from savings and loan associations, a phenomenon called disintermediation that was to be repeated from time to time until the eighties. The pace of economic activity eased in late 1966 and 1967. The tax increase of 1968 was adopted in an atmosphere of concern over inflation and the danger of an outflow of gold. Higher taxes, contrary to the expectations of many, including the Federal Reserve, failed to restrain the overheated economy; the Fed therefore added its own measure of restriction. In 1969 money growth was low, interest rates high, disintermediation hurt the thrifts as market interest rates rose above legal ceiling rates, and inflation reached its highest level since the Korean War. At the end of 1969 the long economic expansion that began in 1961 came to an end.

The one-bank holding company began to be used in 1966 as a device by which banks could elude Regulation Q ceilings on negotiable CDs. In 1970 Congress responded to the proliferation of one-bank holding companies by empowering the Federal Reserve to regulate them.

During the fifties and sixties the Federal Reserve System employed a money market strategy in which the net reserve position of the banks and associated interest rate levels were targeted. In accordance with a goal for the net reserve position of the banks by the FOMC, the manager of the Open Market Desk in New York would buy or sell securities. Under these circumstances, as banks expanded their loans to the public they needed additional reserves, which drove up the federal funds rate and led to borrowing from the Federal Reserve Banks. In response, the manager of the open-market account had to buy securities to achieve the targets of the FOMC. While the Fed could control the level of net free or borrowed reserves and the federal funds rate, it could not control the total amount of reserves and the money supply. This mode of operation proved vulnerable to inflationary pressures in the latter half of the sixties, causing the Federal Open Market Committee to reevaluate its targeting procedures. Discussion within the FOMC resulted in a change designed to incorporate control over monetary aggregates in the instructions of the FOMC. Although little practical effect was felt at the time, the groundwork was laid for basic changes to come.

In January 1970 Arthur Burns succeeded William McChesney Martin, Jr., as chairman of the Board of Governors of the Federal Reserve System. In June the Penn Central Railroad collapsed, demoralizing the commercial paper market and touching off a rush for liquidity. The Federal Reserve opened its discount window wide so that banks could readily obtain funds to support lending to borrowers unable to roll over their commercial paper. By stepping in quickly as lender of last resort and providing an abundance of reserves for the banks, the Federal Reserve may have kept the financial system from going over the brink of a financial collapse.

The Nixon administration intended to avoid the use of an incomes policy of any kind when it came into office in 1969. It hoped to bring inflation under control while avoiding a rise in unemployment by relying heavily on a gradual reduction in money growth. By mid-1971 a combination of recession and slow progress on inflation led to public pressure for intervention and the imposition of a price and wage freeze. Arthur Burns contributed to this policy shift by taking the position that monetary and fiscal policies were inadequate alone to meet the nation's demand for results. The freeze was replaced by less rigid controls in several steps until the whole interventionist experiment was abandoned in April 1974.

The wage–price freeze of mid-1971 was part of President Nixon's New Economic Policy. Another major feature of the NEP was termination of the convertibility of the dollar into gold for official foreign holders of dollars.

The Treasury's gold reserve was being depleted, and the system of fixed exchange rates of the Bretton Woods international monetary system set up after World War II broke under the strain of imbalances in international accounts. Thus the departure from gold begun in 1933 was completed.

The money stock grew fairly rapidly from 1970 to 1973, especially in the election year of 1972, and raised questions concerning the Fed as a contributing factor to inflation. A severe recession set in at the end of 1973, with recovery beginning early in 1975, yet double-digit inflation was experienced in the recession year 1974. In addition to the rise in the money stock, contributing factors to the high rate of inflation included rising oil prices (the first "oil shock"), a worldwide boom in commodity prices, crop failures in various parts of the world, the end of domestic price–wage controls, and the fall of the dollar on the foreign exchange market.

What came to be called monetarism, the latter-day version of the quantity theory of money, had been nurtured under Professor Milton Friedman's tutelage in the academic community since the 1950s as a challenge to the post–World War II orthodoxy. A running intellectual battle, the "Keynesian–monetarist debate," was a leading if not the dominant feature of the economic scene in the sixties and seventies. By the 1970s monetarism began to exert an effect on policy, for it was generally accepted by President Nixon's economic advisers and to some extent it influenced the behavior of the Federal Reserve System. In 1970 the Federal Open Market Committee adopted a directive emphasizing the monetary aggregates instead of money market conditions, a step taken in reaction to the rapid money growth and inflation of the late sixties. The system that evolved from 1970 to 1979 combined monetary aggregates as intermediate targets, with reserves and interest rates as operating targets. Despite the new approach, little effects were realized and the problems of inflation and control of the money supply were not solved. In 1975 a congressional resolution called for the setting of explicit money and credit targets and the furnishing of periodic reports to Congress; legislation in 1977 and 1978 made the reporting requirements more specific.

After 1975 the economy expanded and the unemployment rate fell, but the inflation rate rose until in 1979 it exceeded 13 percent. A sense of crisis devloped as a result of a surging price level accompanied by a sharp fall in the foreign exchange value of the dollar, a steep rise in the price of gold, and the second OPEC oil shock. Inflation psychology, the product of a decade of persistent inflation, introduced a potentially dangerous factor into decision-making. Early in 1978 Arthur Burns departed as chairman of the Board of Governors of the Federal Reserve System and was replaced briefly by G. William Miller. In October 1979, shortly after succeeding Miller, Paul Volcker presided over a most significant and dramatic action by the Federal Reserve System. In order to show its determination to halt inflation, the Federal Reserve committed itself to targeting the money supply even if large

fluctuations in interest rates would have to be tolerated. 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, the culmination of a slow, decade-long trend. Following the introduction of the new program, and the adoption of a restrictive policy, the growth of the money supply slowed, interest rates rose sharply, and the dollar stabilized on the foreign exchange market.

Extraordinarily high interest rates, especially in 1974 and 1978–1979, in conjunction with regulated interest rate ceilings, spurred financial innovation. Among the newborn instruments the following were prominent: money market mutual funds, negotiable orders of withdrawal, money market certificates.

A brief recession in 1980 was followed in 1981–1982 by the most severe slump since the 1930s. Economic growth resumed in 1983 and continued through 1986.

Reaganomics, as the economic program of the right-wing Reagan administration was labeled, brought in a major federal tax cut, part of a general strategy to try to shrink the role of government in the economy. The rationale for the reduction rested on two major premises: (1) Keynesian demand management had been discredited by the high inflation/low growth record of the economy, and (2) output (the "supply side") would increase so much as a result of more work, saving, and investment that tax revenues would rise enough (despite the tax rate decrease) to reduce the budget deficit. In fact the budget deficit expanded from about $75 billion in 1980 and 1981 to some $200 billion annually from 1983 to 1986, and by mid-decade the very large deficit became the dominant economic/political issue of the day.

For about a third of a century following World War II, American banking was carried on under a regulatory framework established prior to 1940. Distinct limits were placed on the activities of banks and other financial institutions to provide a safe and sound system, to prevent excessive concentration of financial power, and to preserve the traditional separation between banking and commerce. In recent years the system has been in the process of a transformation only partly the result of deliberate public policy. New legislation has encouraged price and product competition among financial institutions. The most prominent of the areas of change and potential change is interstate banking, which is essentially prohibited de jure but running free de facto. Legal loopholes permit "nonbanks" and "nonbank banks" to engage in banking activities outside the purview of federal regulatory control, thereby raising legitimate questions concerning the future safety and stability of the banking system to weigh against the advantages of competition. Bank failures have been on the increase in the 1980s, and some major banks have been among the casualties. Instances of gross mismanagement by bank officials have come to light, undermining confidence in the stan-

dards of banking practice and raising doubts about the effectiveness of the supervisory system. Leading spokesmen of the Federal Reserve System have described the need for banking reform legislation as urgent and even desperate to prevent the banking system from evolving in a potentially dangerous way.

The 1980s, like the 1930s, have been years of financial reform, but generally in the opposite direction. As a result of the Great Depression, the theme of reform in the 1930s was regulation; as a result of inflation, high interest rates, disintermediation and general dissatisfaction with the inhibiting effects of regulation on market efficiency, the major theme of the 1980s has been deregulation. In 1980 the Depository Institutions Deregulation and Monetary Control Act eliminated interest ceilings on deposits at all depository institutions and expanded the sources and uses of funds by depository institutions to increase competition and provide greater diversification of assets. In the area of monetary control it made all commercial banks and nonbank depository institutions subject to reserve requirements administered by the Federal Reserve System, so that in this respect, as in the 1930s, regulatory control was further concentrated in the central bank in Washington. The 1982 Garn–St. Germain Depository Institutions Act was a response to the severe problems of the savings and loan associations. It authorized depository institutions to offer money market deposit accounts (to compete with money market mutual funds) and Super-NOW accounts, and it broadened the ability of thrifts to acquire assets.

By announcing its intention to control the money stock with a firm hand in October 1979, the Federal Reserve was generally perceived to have embraced monetarism. In the minds of monetarists there was less to this than met the eye, for they consider the subsequent implementation of policy to have fallen well short of what was required. In any case, after three years the Fed in 1982 found it necessary to move away from its October 1979 position due to the severe recession of 1981–1982, which was generally viewed as attributable to or at least contributed to by monetary policy.

Monetarism, which requires a clearly defined concept of the money stock, has been rendered suspect for policy purposes because of the changing definition of money. The problem arises from the fact that no clear distinction can be drawn today between money and other liquid assets, and because the narrow definition of money is not constant but varies as a result of innovations in financial assets. A further serious difficulty for monetarism arises from the behavior of the velocity of spending. The quantity theory requires an income velocity that is essentially constant or predictable, but the velocity of M1 in the eighties has departed from its earlier path and has been volatile. Much of the acceptance of monetarism at the end of the seventies and early eighties has dissipated. Neither the Keynesian revolution nor the Friedman

counterrevolution has emerged supreme; monetary theory is essentially a duopoly.

In the mid-1980s the Federal Reserve, still without a north star, set monetary targets but did not hold fast to them if economic indicators such as the price level, GNP growth, interest rates, and the foreign exchange value of the dollar seemed to justify departure. Targeting monetary growth went out of style with academic and other economists who give free advice to the Fed. By the end of 1986, mirabile dictu, there appeared to be somewhat of a consensus among Keynesians, monetarists, and rational expectationists that the Federal Reserve would do well to target nominal GNP.

There seem to be good reasons for the Federal Reserve to take an eclectic approach. In the light of experience and the persistence of institutional change, the best approach may well be one of using money growth targets as a first approximation to monetary policy, subject to and tempered by discretion as events unfold. As Boulding has observed, "One of the difficulties of evolutionary theory, both in biology and in social systems, is that it does not have very much predictive power. This is inherent in the nature of the process itself and is not simply a remediable defect of human knowledge."[3] The notion that there are scientifically derivable rules or tools to provide a "correct" solution for every economic problem may be more seductive than attainable. Perhaps a good understanding of how we got where we are plus an awareness of the ongoing changes taking place in our socioeconomic organism are just as important as abstract theory. In one of Solzhenitsyn's novels, history is likened to a river. The question of where to look for the laws to govern the flow of the river is answered with "That's the riddle. It may be that they are unknowable."[4] Economics, a current in the flow of history, is imperfectly knowable.