Current Lessons from the Past: How the Fed Repeats Its History

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> Here, then, the rulers of society have an opportunity of showing their wisdom—or folly. Monetary history reveals the fact that folly has frequently been paramount; for it describes many fateful mistakes.
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> —Knut Wicksell

The Federal Reserve System came into existence 100 years ago after lengthy debate and discussion. It seems timely to look back on its founding, its history and development, and to consider its major successes and failures. This article looks at that history and discusses how the past is reflected in the present.

The Founding of the Fed

The new institution had little scope for discretionary policy actions. None of the parties discussing the proposed Federal Reserve Act of 1913 doubted that it would continue to follow a monetary rule—the international gold standard. Actions and initiatives remained greatly restricted by the Act. Monetary, credit, and

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Cato Journal, Vol. 34, No. 3 (Fall 2014).

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interest rate actions consisted principally of setting discount rates on commercial paper and banker's acceptances. Rates influenced the amount of discounting, but the initiative for discounting remained with the banks. The Federal Reserve could purchase or sell bankers' acceptances on its own initiative, but individual Reserve Banks could decide whether to participate.

Agreement about economic issues included more than the gold standard. A series of financial disturbances in the 1890s and 1907 convinced most of Congress, the Wilson administration, and the informed public that the social cost of bank failures could be greatly reduced by creating a lender of last resort (LOLR) with power to lend on acceptable collateral in a financial crisis. The gain came from protecting the payments system, not, as now, protecting banks.

Agreement on another vital economic issue concerned the financing of government borrowing. The 1913 Act prohibited any direct loans to the Treasury. The authors understood, perhaps better than their modern counterparts, that financing government debt was likely to bring inflation.

Many economists act as if monetary policy is entirely an economic issue. Many articles analyze optimal economic policy. These articles neglect that the Federal Reserve is governed by political as well as economic concerns. That has been true since the founding, and it remains true, perhaps even truer now that discretionary actions have replaced the very restricted rules in the original design.

Article 1, Section 8 of the U.S. Constitution assigns the monetary power to Congress. The Federal Reserve is its agent. That makes political influence inescapable. Despite words about independence, it takes a very strong leader to remain independent. As former Fed chairman William McChesney Martin Jr. often remarked: "The Federal Reserve is independent within government, not independent of government" (Meltzer 2003: 713). That is not a very restrictive definition of independence.

The gold standard and discounting did not delay the 1913 legislation. The agreements that were difficult to reach were political issues.[1] Two issues stand out: (1) the issue of who would control the new agency—the Board in Washington or the 12 Reserve Banks

[1]To call them political issues does not mean that there were not major economic effects. The discussions did not dwell on the economic implications, though they were clearly important background knowledge.

spread across the country. And (2) where would the Reserve Banks be situated? The law assigned the second issue to a three-person board.

President Wilson, a former political science professor, proposed a compromise. The Reserve Banks would be semi-autonomous, with directors drawn from their region, with power to approve or dissent from purchases and authorized to set regional discount rates with Board approval. The Board in Washington had a supervisory role. The compromise satisfied the Western and Southern populists who thought that the Board would keep New York from setting interest rates at levels that would squeeze farmers and merchants. The large financial firms in New York preferred a structure like the Bank of England with no government participation. They did not get that, but they regarded the new arrangement for discounting as a very profitable opportunity to finance the annual crop movement to Europe in place of foreign banks, British especially, that could borrow from the Bank of England (Warburg 1930; Meltzer 2003: 69).

Popular discussion referred to the Board as "political representatives" and the Reserve Bank officials as "bankers." Populist concern that the bankers would run the system for their benefit continues throughout history. Most crises reduced the role of Reserve Bank directors, broadened director membership, ended their authority to decide on portfolio purchases and sales at their bank, and centralized discount rates and made them uniform. The last was as much the result of the creation of a national money market as a political decision to restrict Reserve Bank influence. The Board was subject to political pressure and influence, so a change in its relative power increased efforts at political influence. Political influence increased after the Second World War as a consequence of the Great Depression and passage of the Employment Act of 1946.

The Federal Reserve's Past Errors

The Wilson compromise got the legislation passed but did not end the struggle for control. Soon after the Federal Reserve began, the United States was at war. The Fed helped to finance wartime spending not by buying government debt as in later years, but by lending on favorable terms to banks that bought large amounts of debt. The prohibition against direct lending to the Treasury was still strong.

The prohibition was soon after circumvented. It is not correct to repeat that the Federal Reserve or Benjamin Strong discovered open market operations. The Bank of England first used open market operations about 100 years earlier. What the New York Fed learned was that open market purchases and sales could be used to change commercial bank reserve positions. The 1920–21 effort to control reserves by raising discount rates, as the Bank of England did, caused a political backlash and renewed fears of high rates dictated by New York. Raising rates, especially the selective high discount rates at several southern Reserve banks, created the need for an alternative means of control.[2] Punitive interest rates at some southern and western Reserve Banks raised political concerns. The Wilson compromise had not worked to keep interest rates low as the Act's sponsors had claimed. The conclusion was that raising rates for farmers and merchants was not a monetary control mechanism that worked in the United States. This was as much a political as an economic judgment, but it retained a controlling influence in 1928, when the board repeatedly vetoed discount rate increases above 6 percent. The political decision to avoid raising rates above 6 percent remained in effect until the Great Inflation and the anti-inflation policies of 1981–82.

In the 1920s, the Reserve Banks controlled decisions. Under the leadership of Benjamin Strong of New York, the Reserve Banks established the Open Market Committee to agree on purchases and sales of government securities and setting rates for acceptances. Open market operations circumvented the outright prohibition on financing the federal government. The Act permitted the Reserve Banks to engage in open market operations. The Reserve Banks could not directly lend to the Treasury, but they could purchase Treasury issues in the open market at rates that they influenced by their decisions. One of the main restrictions on inflationary policy was gone. The gold standard remained but not for much longer.

Strong was not an inflationist. In the 1920s, he agreed with Montague Norman of the Bank of England to allow gold flows to affect rates as long as they did not cause inflation. Other Reserve Bank governors (as they were called at the time) went along with Strong's policy because it provided income to pay reserve bank operating costs and the dividends promised on the member banks' shares.

[2]See Meltzer (2003) for details of the episode.

In the 1920s, some of the regional banks had insufficient earnings in some years.

The New York Reserve Bank managed the system's international transactions in the 1920s. Senator Carter Glass strongly opposed Strong's decision to lend to Great Britain to sustain return to the gold exchange standard. And he blamed the New York Bank for causing the Great Depression. In the 1933 and especially the 1935 legislation, Glass reduced the role of the Reserve Banks and strengthened the Board's role. Glass always opposed having a central bank. He would ask the regional governors: "Do we have a central bank?" The required answer was, no, we have an association of Reserve Banks. Yet, Glass, probably unwittingly, sponsored the Banking Acts of 1933 and 1935 that centralized control of monetary, credit, and interest rate policy in the renamed Board of Governors. Gone were the Reserve Banks' control of their portfolios and the power to refuse to participate in purchases and sales. Board members had often attended open market meetings in the 1920s, but they had no vote at the meeting. Nevertheless, they could veto an action using their supervisory responsibility. The new legislation gave them majority representation on the Open Market Committee. After 1935, New York lost the right to a permanent seat. In 1942, the Board restored New York's position on the Federal Open Market Committee (FOMC).

The next major changes came in the early to middle1950s when William McChesney Martin Jr. was chairman of the Board of Governors and the FOMC. In a series of steps, he gained support for procedural changes that transferred control of policy operations from New York to the Board. One very controversial action was to adopt a "bills only" policy that limited New York's power to intervene in long-term markets when demand for Treasury issues shifted. The Martin Fed maintained that the Federal Reserve should limit its operations entirely to the money or bill market. Martin and others saw "bills only" as a way to strengthen the market for long-term Treasuries after the wartime and postwar interest rate pegging period. The Democrats in Congress disliked bills only. After President Kennedy's election Martin and the Board made the political decision to cooperate with the new administration. One part of cooperation was an end to bills only.

The Council of Economic Advisers under Chairman Walter Heller wanted the Federal Reserve to cooperate in the administration's

effort to end the 1960–61 recession while reducing the capital outflow. To do this, they wanted the Federal Reserve to raise short-term rates and lower long-term rates. Martin was part of a small group that met with President Kennedy to coordinate economic policy. At these meetings, Heller and James Tobin encouraged the president to urge Martin to follow administrative interest rate policy.

Policy coordination sacrificed much of the Federal Reserve's independence. Martin did so willingly in some instances. One of his main reasons was his belief that the Federal Reserve was independent within government not independent of government. In practice, Martin said, Congress passed the budget and the president signed it, the Federal Reserve should not refuse to finance budget deficits even if the deficits were large.

That was a large departure from independence and especially from the founding principle of separating the Federal Reserve from responsibility for financing the federal government. Politicization of the Fed continued in the 1960s and 1970s.

In 1966, the Fed raised interest rates to slow inflation. Inflation responded quickly, but unemployment rose. The Fed reversed its actions. Markets learned a lesson about the Fed's priorities. The response of inflation and long-term interest rates was never again as rapid.

Fed Chairman Arthur Burns worked to support his friend Richard Nixon. After observing the much greater weight on unemployment and the failure to continue anti-inflation policies when unemployment rates rose, markets did not reduce long rates as much as in the past following reductions in short rates. Orphanides (2002) documents the errors in the 1970s. Most of the errors were errors of commission. The Federal Reserve was (1) slow to recognize Irving Fisher's earlier difference between real and nominal rates and (2) slow to accept that the Phillips Curve tradeoff was at most a short-term tradeoff. As Paul Volcker later reminded the Fed staff, Congress, and the public—contrary to the Phillips Curve, inflation and unemployment rose together in the 1970s and fell together in the 1980s.

In the Bernanke Fed, the Phillips Curve was again a guide to action. Prior to the credit crisis, the Board's staff relied for guidance on Woodford's (2003) model in which money is irrelevant, credit markets and asset prices are missing, and long-term rates are always at their rationally expected value. This model encouraged staff neglect

of the very markets in which problems arose. Earlier work by Friedman (1956), Tobin (1969), and Brunner and Meltzer (1993) considered some or all of the credit, monetary, and asset price variables. Absence of credit and asset markets from the Woodford model missed the source of the 2008 credit crisis. Taylor (1995) and Meltzer (1995) insist on the role of money and credit markets in the transmission process for monetary policy.

The neglect of concern for the transmission process is puzzling. No less puzzling is the staff's use of either large-scale econometric models or the bare-bones Woodford model. It is analytically elegant, but we must recognize that it is inadequate.

Monetary policy without money is a serious mistake. The reason for dismissing money, I believe, is that the staff believes that quarterly velocity movements are not predictable reliably as a function of short-term rates. Yet, when annual velocity from 1919 to 1995 is plotted against a long-term interest rate, which more adequately reflects expected inflation, the velocity relation is remarkably stable (Meltzer 2009a: 577). Moreover, the Bundesbank successfully used annual money growth to supplement and interpret policy effects. Issing and Wieland (2013) discuss the Bundesbank's use of money growth to check on the longer-term effects of short-term policy actions.

One additional flaw or missing element in the Federal Reserve's procedure is its treatment of its role as LOLR. We all know that this is a main reason for having a central bank. And we know, too, that failure to serve as LOLR was central to making the Great Depression a disastrous policy failure.

In a speech at the National Bureau of Economic Research, Bernanke (2013) recognized the Fed's responsibility to serve as LOLR. He referenced Bagehot (1873) and pointed to the massive response in 2008 that spared the United States and the world economy from a collapse of the payments system. That was necessary, courageous, and appropriate. It should remind each of us that unpredictable events occur and require responses that are not part of normal operating policy rules or judgments.

Bernanke's discussion of LOLR is deficient for two main reasons. First, in its 100-year history the Federal Reserve has never announced a LOLR policy rule. The need for announcing and following a rule is the main point of Bagehot's criticism of the Bank of England. Bagehot did not criticize the Bank for failing to act appropriately. He cited examples to show that, although the Bank delayed,

its actions eventually calmed the markets. His criticism is an early rational expectations claim—that the Bank failed to inform the markets of its LOLR policy rule. Announcing the rule that the Bank would lend on good collateral reduced uncertainty and encouraged prudent banks to hold appropriate collateral.

Second is the failure of regulators to understand that Bagehot makes them responsible for sustaining the payments system, not the troubled banks. The main reason for regulation is to close the gap between private and social cost as much as feasible. The main social cost is the collapse of the payments system. Economic activity cannot proceed. Sustaining the payments system does not require that regulators support failing banks; it requires five rules:

1. A clearly stated rule for the LOLR: Bagehot's rule—lend freely against collateral at a penalty rate—remains appropriate.
2. A rule to protect the payments system, not the troubled bank or banks.
3. A rule to prevent the problem from spreading to other banks and financial institutions by lending on good collateral.
4. A rule to require equity capital sufficient to absorb all anticipated losses: The Brown-Vitter bill requires the largest banks to hold a minimum of 15 percent equity capital against all assets.
5. A rule that banks must suspend dividend payments if equity capital falls to 10 percent of assets until they meet the 15 percent equity capital requirement.

There is considerable evidence that these rules work. Bagehot ([1873] 1962) gives a number of examples. And in the climactic years, 1929–32, no large New York bank failed because they held 15–20 percent equity capital.[3] Failures in 1929–32 were almost entirely small and medium-sized banks. Calomiris (2013) discusses the many problems in financial regulation policies. Borak (2013) reports on the difficulty of writing the many new rules proposed by the Dodd-Frank legislation. Many of the new rules transfer responsibility for risk management to the regulators. The five rules, instead, increase bankers' incentives to act prudently. Increasing banks' equity capital puts the incentives in the proper places.

[3]Some readers may wish to cite the failure of the Bank of the United States, but it was not a major bank. Regulators discussed saving the bank but did not (Meltzer 2003).

Currently, many central banks, including the Fed, have greatly increased their responsibility for financial stability. I urge them to avoid the intense pressure to take responsibility for regulating portfolios or portfolio risk that substitutes regulators' judgment for bankers' judgments. Such an approach has several drawbacks, chief among them is that it will at times require actions that are in conflict with proper monetary policy. Giving organizations multiple objectives that can conflict invites avoidance of responsibility. Also, there is little reason to believe that regulators can make better judgments than bankers if the bankers are required to hold much more equity capital. We know that in the years before 2007–08, the Federal Reserve and other regulators had many examiners in the largest banks observing portfolio decisions. I have been told by a leading examiner that they did not object to any transaction. Further, we know that regulators permitted large banks to open subsidiaries that acquired mortgage-backed securities but had little or no equity capital. Government agencies were willing to buy and hold poor-quality mortgages. It should not surprise us that markets supplied the mortgages. Some, like Countrywide, earned millions of dollars that way. In hindsight, the mistakes should be obvious. What few willingly recognize is that there was a strong, political dimension that appealed to leaders of both major parties. Presidents Clinton and Bush, and many members of Congress, welcomed the spread of home ownership down the income distribution. They neglected to wonder about what the buyers owned if they took out a no down payment loan. What they had is not equity in a house but an option to gain if prices rose and to lose if they fell. We know now how that tale ended in tears.

This experience does not give much confidence in regulator foresight or political forbearance. I believe we will do better by applying my five rules.

To summarize the historical evidence, I conclude that the Fed is no longer the much restricted agency intended to follow a rule—that institution vanished long ago. Political influence increased with the shift of power to the Board from the Reserve Banks.

How has discretionary policy under the Board's control worked? In my judgment, not well at all. It has two difficult, possibly impossible, hurdles to overcome. One is its short-term focus based on a quarterly forecast. Forecast errors are large—larger than the often large revisions to quarterly data. The other is a fundamental fact

about economics. Whether one learned economic theory using Modigliani's or Friedman's theory of consumer behavior, one learned about persistent and transitory events. Macroeconomic theory is more reliable when it concentrates on persistent effects. Transitory changes may be random, quickly reversed events. The Fed's response to monthly and quarterly data as it is announced increases uncertainty and encourages the army of financial market participants to pressure the Fed to respond.

There is some useful information in monthly and quarterly data. I have proposed that Muth's (1960) paper offers a useful procedure for extracting it. It uses the relative size of the variance of persistent and transitory components of the data to give weights to the two components. Perhaps there is a better alternative. Relatively large permanent variance implies that little weight should go on current data. More weight on current observations is appropriate if it is relatively more responsible for changes. Brunner, Cukierman and Meltzer (1980) show how Muth's procedure can be implemented to extract useful information.[4]

A simple example illustrates how monthly data can mislead. Reported monthly inflation is a mixture of the underlying rate of inflation and large relative price changes. The Federal Reserve now excludes energy and food price changes from its core inflation data. In the 1970s, it treated oil price rises as inflation. That was another error. But not all food or energy price changes are transitory. Some of the Reserve Banks use median price changes to exclude changes out in the tails of the distribution. These procedures are better than announcing large relative price changes as inflation. It is better to not respond by raising interest rates but instead letting markets adjust to relative price changes. The Fed finally adopted this change when oil prices rose early in this century.

The Fed's excessive attention to transitory events needs to end. Attention should be given to separating permanent and transitory changes. Alan Greenspan's recognition of persistent productivity growth in the 1990s is an example of proper response to a permanent change.

[4]Anderson, Chauvet, and Jones (2013) study permanent and transitory components of monetary aggregates using a more elaborate procedure.

The Fed's Persistent Errors

My reason for pointing out some of the Federal Reserve's past errors is that many are repeated now. The principal errors relevant to the present or recent past include:

1. The use of inappropriate models—from real bills, to simple Keynesian coordination, to the Woodford model—that neglect money and credit.
2. The failure to distinguish between real and nominal effects.
3. The excessive attention given to monthly and quarterly data, and the neglect of permanent or persistent changes.
4. The use of discretion instead of a rule both for monetary policy and lender-of-last-resort policy.

Since I focus on past errors that influence recent and current actions, I will start by offering some praise of some of the Fed's achievements. The Federal Reserve has never had a major scandal. A few minor problems occurred like occasional leaks of decisions, but it has a largely unblemished record. In part, this reflects another achievement—the very strong organizational structure and the loyalty of officials. At the operational level, the Fed developed from its very limited original duties to become the world's leading central bank.

From the 1920s on, it undertook research in ways that became a model for other central banks. It has not one, but several, high-quality research units.

One theme of this article is that current and recent Fed policy has had little effect on output and inflation. I, and others, predicted that the Fed would cause inflation by continuing a high rate of reserve growth after the initial crisis. My error was to expect that increased money growth would follow reserve growth. History supported that belief. There was only one exception. During the Great Depression, especially in 1932 but also after 1937, banks used only a small part of their increased reserves to expand money and bank credit. I did not expect a repeat of the 1930s, and I was wrong.

We do not have inflation because we do not have excessive money growth. As Milton Friedman (1969) noted, inflation is always and everywhere a result of money growth substantially faster than the growth of output. In October 2013, annual M2 growth was moderate at about 6 percent while bank reserves grew by 81 percent. At that

time, excess reserves held at the Fed were $2.3 trillion compared to $2 billion in 2007, while required reserves were $7.5 billion. Commercial and Industrial loans at all banks only increased by about 2 percent in 2013.

The main reason for the extraordinary increase in excess reserves is that the Fed engaged in quantitative easing (QE) to expand the Fed's balance sheet via asset purchases. More than 95 percent of the reserves supplied under QE2 and QE3 remained idle on banks' balance sheets. The Fed also incentivized banks to hold excess reserves by paying interest on those idle balances beginning in October 2008. Domestic and foreign banks receive $5.7 billion in interest payments for holding idle reserves. This policy permitted banks to rebuild capital and pay dividends and bonuses. The payments are made using money that would otherwise be paid to the Treasury. I doubt that Congress would vote for this transfer to banks, if it understood the Fed's program.

A main effect of the policy of accumulating massive amounts of idle reserves is that money and credit growth remains low. The UK and Japan now permit money and credit to expand. Output in both countries has increased.

Use of Inappropriate Models

The members of the Board and FOMC have never agreed on a model. The Board's staff has a sophisticated econometric model, but most or all of the Reserve Banks have their own models. When I refer to "the" model, I have the Board's staff model in mind. When reading my comments, the reader should remember that the principals require the staff to present forecasts at policy meetings based on models with which they disagree. An example is the Board staff's use of a Phillips Curve to forecast inflation. Paul Volcker and Alan Greenspan explicitly rejected those forecasts. Volcker publicly stated that over time inflation and unemployment rise and fall together, which is the exact opposite of forecasts relying on the Phillips Curve. Volcker added that the way to reduce unemployment is to lower expected inflation (Meltzer 2009b: 1058, 1082).

Bearing that caveat in mind, here are some examples of major policy errors based on faulty models. The real-bills doctrine was written into the Federal Reserve Act. The Board and some of the Reserve Banks believed that it was a mistake to expand reserves during the

years 1929–32. The governor of the Philadelphia Fed expressed the argument succinctly. He said that we would be putting out reserves when they were not wanted and would have to withdraw them when they were. That mistake does much to explain the mistaken policy driving the Great Depression.

Simple Keynesian models were used in the 1960s to encourage policy coordination. The economists in the Kennedy and Johnson administrations and on the Board's staff insisted that the Federal Reserve should coordinate with the administration by expanding money growth when budget deficits increased. The Federal Reserve did. However, President Johnson was reluctant to coordinate by reducing the budget deficit and slowing money growth. When he, after years of delay, agreed to raise tax rates temporarily in 1967, Arthur Okun and the Board's staff wanted lower interest rates and faster money growth (Meltzer 2009b). That error increased inflation, a major mistake. The Federal Reserve and the Nixon administration were unwilling to allow unemployment to rise for political reasons—and inflation continued.

Failure to Distinguish between Real and Nominal Effects

Milton Friedman's presidential address to the American Economic Association (Friedman 1968) carefully distinguished real and monetary effects and used that analysis to show why the Phillips Curve tradeoff had to be a temporary response of employment to inflation. The Fed continued to try to lower unemployment by inflating during most of the 1970s (Orphanides 2002).

The Fed frequently failed to distinguish between real and monetary influences. One example is the misinterpretation of low interest rates as "easy" in 1931–32. Another is the misinterpretation of interest rates during the Great Inflation. Still another is the attempt to reduce the unemployment rate by increasing inflation, an operation that continued after Friedman's 1968 article showed the error—and is still prevalent today.

I report this related error in volume 2 of my *History of the Federal Reserve.* During the Volcker disinflation, the FOMC interpreted increases in member bank borrowing as contractive because nominal interest rates initially rose. This interpretation ignores the expansive effect of the increase in reserves. This is a traditional Fed error based on the belief that banks are reluctant to borrow, so the increased borrowing would be temporary. This ignores the evidence showing that

cumulative borrowing typically continued to increase, thereby increasing money and credit (Meltzer 2009b: 1030).[5]

The current weak recovery is mainly a real problem that cannot be solved by printing reserves or making real interest rates more negative. The main real drag on growth is the uncertainty created by the Obama administration's fiscal and regulatory policies, including his insistence on increasing tax rates, costly regulations, and promoting labor unions (see Plosser 1989).

Some of the evidence that the problems are mainly real—not monetary—stares everyone in the face. Banks hold huge idle reserves. They can do anything the Fed can do to increase growth of credit and money. Corporations hold enormous idle balances. They do not choose to finance investment, so investment remains low and much of the investment is made for labor-saving robots and computer programmers. These idle balances at banks and corporations scream loudly that there is no unsatisfied demand for money.[6]

Porter and Rivkin (2012) asked 10,000 Harvard Business School alumni, officers at major corporations, about investment. They summarized the replies. The replies cited real factors, the complex U.S. tax code, an ineffective political system, a weak public education system, poor macroeconomic policies, complicated regulation, deteriorating infrastructures, and a lack of skilled labor. Many said they would move investment out of the United States.

Carlino and Inman (2013) found that many real problems result from the Obama administration's fiscal policy mistakes. They avoided permanent tax cuts and favored welfare spending that had small multiplier effects. An earlier op-ed by Cogan and Taylor (2010) made very similar criticisms. They wrote: the Obama stimulus "was a triumph of Keynesian wishful-thinking over practical experiences."[7]

Earlier I noted a recent example of the Fed's poor choice of model—the staff's reliance on Woodford's (2003) elegant model to

[5]As the statement was made, borrowing increased (Meltzer 2009a: n. 27).

[6]Some interpret the large idle balances as evidence of a liquidity trap. Brunner and Meltzer (1968) show that a liquidity trap cannot occur in a multi-asset model except, possibly, in a full equilibrium. Currently, Fed injection of reserves changes asset prices—contrary to a liquidity trap.

[7]Meltzer (2013) develops this assessment more fully.

judge the thrust of monetary policy and a possible recession. Since the Woodford model neglected asset prices and credit and money growth, it could not give correct information.

The Board staff also disregarded the Volcker and Greenspan warnings about relying on inflation forecasts generated by the Phillips Curve. That error continues.

In 1973, following months of rapid money growth during the period of price and wage controls, the economy was described as operating at 96 percent of capacity. The staff saw "clear and present danger of further overheating." Chairman Burns drew the right conclusion: "The basic reason [for rapid monetary growth] was that the System had been supplying reserves to commercial banks at a very fast rate. The rapid growth of the monetary aggregates was a most disturbing development." Despite this monetarist interpretation, members did not recognize that nominal interest rates included an expectation of continued inflation. Some members "expressed concern about the consequences of a federal funds rate above 10 percent" (Meltzer 2009a: 223).

A final example is the failure to distinguish between large positive relative price changes and rise in the general price level. Only the latter is properly called inflation. Chairman Burns urged some type of wage and price selective controls and later wage and price controls. The case for selective controls was also based on the mistaken belief that inflation was "cost-push" so that the rise in the general price level could be prevented by controlling a subset of relative prices.

The Federal Reserve and much of the profession interpreted the 1973 and 1979 increases in oil prices as inflation. By 2000, the Fed recognized that the oil price increase would increase the reported price level as a large relative price shock. Consequently, the Fed now excludes fuel and food price changes from its principal measure of inflation.[8]

Short-Term Focus

One of the most foolish decisions in the Fed's 100-year history is its current decision to make the reduction in reserve growth depend

[8]The Shadow Open Market Committee in 1974 pointed out that the Fed misinterpreted the oil price increase.

on current labor market data. First, the data is noisy and often subject to large revisions. Second, current QE policy increases idle reserves by $1 trillion dollars a year, so the problem of removing the reserves before they finance inflation increases. Third, and most important, the withdrawal of reserves to restore the Fed's balance sheet will require years of following a conditional rule. The Fed must develop a strategy.

The Fed's lack of strategy in managing the reduction of idle reserves is an example of its excessive attention and response to noisy monthly and quarterly data. This is a long-standing problem, probably reflecting political pressures and the excessive influence of the New York Federal Reserve Bank. That Bank has a permanent voice at the FOMC. Too often it is a captive of the large New York banks and financial firms.

The Federal Reserve's excessive weight on near-term events and reluctance to follow rules explains both its current mistakes and many past errors. Here are some examples from the past.

In 1976, the Fed announced targets for money growth, but it missed the M1 target often by large amounts. Stephen Axilrod, the chief of staff, explained the reason for the errors: "A large part of the Board's problem came from its short-term focus. . . . [I]f the objective was to have 6 percent M1 growth six months ahead, I could do it better by telling you what non-borrowed reserves to list than what FF [federal funds] rates to hit." Axilrod recognized that the main reason the Fed failed to come close to its monetary targets was that it put most of its efforts into managing the federal funds rate within a narrow band. He was not alone. The staff of the Philadelphia Reserve Bank found that the reason was "the constraints of modest week-to-week changes in the federal funds rate" (Meltzer 2009b: 982).

During the Volcker disinflation, some members favored more attention to unemployment. He responded to one challenge by insisting on the importance of maintaining a consistent policy and ignoring short-term deviations and criticisms. "Our credibility will be related more to making the right decision than to worrying too much about what the market says about it in the short-run" (Meltzer 2009b: 1098). And to those who proposed to tradeoff more inflation for lower unemployment, Volcker said: "More inflation has been accompanied not by less, but by more unemployment and lower-growth" (p. 1099).

Discretion at the Cost of Rules

The years when Volcker was chairman are one of the few periods in which the Federal Reserve was less influenced by short-term events. Volcker followed the successful disinflation by relying for guidance on a Taylor rule after 1985. His successor, Alan Greenspan, continued that policy until 2003. This produced the longest period in Fed history of price stability with relatively stable growth, and short, mild recessions. This period is known as the "Great Moderation." I believe that the reduction in fluctuations is mainly the result of a rule-based policy that focused more attention on the medium-term than on current data.

I believe that using the Taylor rule as a guide abetted moderation (i.e., reduced variability of output and inflation) by preventing large fluctuations in either inflation or output. The usual Fed operation focusses on one of the two variables. Expanding to reduce unemployment increases actual and expected inflation. Policy shifts to prevent inflation until unemployment rises and output falls. Variability is greater than a policy of stabilizing both.

Conclusion

The Federal Reserve's current mistakes are the third major blunder in its first 100 years. I have tried to show that the Fed repeats its history. Current errors are versions of past errors.

History has an important message for theory and policy. The two longest periods of stable growth, low inflation, and mild recessions are the years when the Federal Reserve was guided by a rule, the gold-exchange standard from 1923 to 1928 and the Taylor rule from 1985 to 2003.[9] There is no similar period of stability and low inflation when the Fed exercised discretion. The closest example is 1953–60, when budget deficits were small in nonrecession years and the budget was in surplus several times. But 1953–60 had three recessions, including a deep recession in 1957–58.

Kydland and Prescott (1977) show why rule-based policy achieves better results than discretion. Taylor (1993) proposed a rule that many central banks have used as a guide. Theory and

[9]Deep, prolonged recessions followed both rule-based periods. I believe policy errors explain what followed stability, but careful analysis should be done.

evidence strongly suggest that the Congress should enact a rule such as the Taylor rule.

No rule will work well in all circumstances. Unforeseen events may require suspension of the rule, just as Britain and others suspended the gold standard in the 19th century. Suspensions of the rule should be followed by explanations and accompanied by offers to resign. The authorities can accept the explanation or the resignation. That closes the wide gap between Fed operating authority and political responsibility for outcomes. The Fed's past major errors never resulted in dismissals.

A major advantage Congress gains from a rule is that legislators can greatly improve oversight. The rule provides a framework for judging outcomes. Congress has constitutional authority, but currently no effective means of implementing it. A rule-based policy provides a better standard by which to judge outcomes.

Markets would benefit from increased information about policy actions. Instead of the present guessing game, markets would forecast policy actions and would monitor any departures.

In addition to a monetary rule, legislation should require the Fed to announce a follow-up rule for acting as lender of last resort. That rule should recognize that protection of the payments system—not protector of troubled banks—is the public good that the LOLR should supply. In its first 100 years, the Fed has discussed its crisis policy internally, but it has never announced and followed a rule.

A rule guides banks to hold collateral and to increase equity reserves. Instead of replacing bankers' responsibility for safety and soundness with many rules and shifting regulatory responsibility to central bankers and governments, giant banks should be required to hold 15 percent equity capital.

Rules instead of discretion and regulation should guide both prudential policy and monetary policy. I believe that is the main lesson that the first century gives to make the next century much freer of policy errors than the last.

Let me end by repeating that in its first 100 years the Fed has completed many commendable actions. Like most others, I give the Bernanke Fed high praise for prompt and effective action in 2008. But it made other mistakes including frequent neglect of its responsibility as manager of the world's currency, and the failure to develop an international monetary arrangement that combines the public goods of more stable exchange rates and greater price stability.

Moreover, the Fed has sacrificed its independence repeatedly. My aim has been to highlight errors from the past that the Fed has repeated recently and is repeating now. As Knut Wicksell ([1906] 1935: 4) wrote before there was a Federal Reserve, "Folly has often been paramount."

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