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# The Greenspan Fed in Perspective

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**O**n average, Federal Reserve chairmen come and go at about the same rate as U.S. presidents. Dating from the creation of this country's central bank (1913), we have seen 16 presidents (Wilson to Bush) and 14 Fed chairmen (Hamlin to Bernanke). The Fed chairmanship, however, has seen more variation in years of service—Franklin D. Roosevelt notwithstanding. Spanning four presidencies, Alan Greenspan's reign (1987–2006) was the second longest. Greenspan was outdistanced (but only by a few months) by William McChesney Martin (1951–1970), who served five presidents.

The first half-dozen Fed chairmen belong to a different era—during which the primary locus of control on policy matters was the New York Federal Reserve Bank. It was that bank's Benjamin Strong and, following him, George Harrison who were key operatives during the late 1920s' expansion and the subsequent crash and descent into deep depression. And it was just as the economy was bottoming out that Congress passed legislation (in 1933 and 1935) that, among other things, shifted power to Washington. Though there is no Federal Reserve Bank in the nation's capital, the Eccles Building on Constitution Avenue, built in 1937 and now named for the seventh Fed chairman, houses the Board of Governors and, most importantly, the chairman of the Board.

Like Marriner Eccles, the early and middle Fed chairmen were not economists. Instead, they had backgrounds in law, banking, or finance. But starting with Arthur Burns (1970–1978) and allowing for one short gap of 17 months, an economist has been at the top of this country's banking pyramid. A nearly unbroken reign of economist-chairmen—Burns, Volcker, Greenspan, and now Bernanke—has characterized modern Fed history. Having an economist at the top does not necessarily translate into better policy, but it does make the policy regime more understandable in terms of economic theory.

The one short gap—between the Keynesian-oriented Burns and the monetarist-oriented Volcker—was bridged by the unlikely G. William Miller (March 1978–August 1979). Appointed by President Carter and somehow confirmed by the Senate, Miller was a marine engineer turned lawyer. He was a long-time executive of Textron, Inc., and, on several occasions, had served the Carter administration in an advisory capacity. Clearly

out of his element, Miller oversaw the acceleration phase of that period's double-digit inflation. Following established procedure for managing total bank reserves and

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hence deposit money, Miller and the other members of the Board (plus some Reserve Bank presidents) met about every month and a half to set short-term interest rates. They literally “set” the discount rate, the rate at which the Fed lends reserves directly to commercial banks, and they “targeted” (about which more below) the federal funds rate, the overnight rate at which commercial banks lend to one another for the purpose of meeting their reserve requirements, those requirements themselves having been imposed by the Fed.

During the 17 months of Miller’s tenure the discount rate was increased from 6½ to 10¼ percent, the fed-funds target rate from 6¾ to 11 percent. Though responding to political pressures to keep interest rates low, the Miller Fed was constrained in each policy meeting by the inflation that had resulted from decisions in earlier meetings. With prices and wages rising at double-digit rates by the end of the decade, the Fed-controlled interest rates (both set and targeted) continued to rise in nominal terms, but were actually near zero or even negative in real terms. And as was well understood in financial and academic circles, holding nominal rates of interest below the inflation rate is a policy that cannot be sustained.

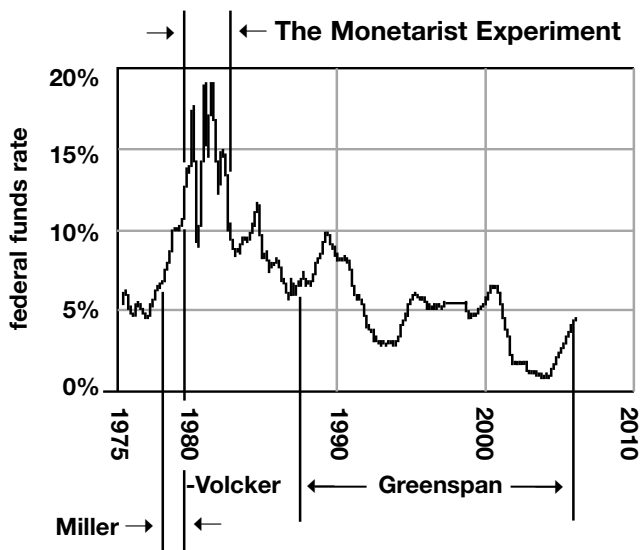
Finally, to stop the bleeding and to appease fiscal conservatives, Carter moved the chairman from the Federal Reserve to his own cabinet—where, as secretary of the treasury, Miller could borrow lots of money but couldn’t create any. Paul Volcker, then president of the New York Fed, was brought in as the new chairman of the Board. The circumstances under which Volcker assumed

the chairmanship were unique and significant: (1) interest-rate targeting as a means of limiting inflation had lost its credibility. (2) Milton Friedman’s monetarism, which focused attention on the growth rate of the money supply rather than on short-term interest rates, was gaining acceptance in academic circles and beyond. And (3) the new Fed chairman had the support of fiscal conservatives both in Washington and on Wall Street.

In early October 1979, the Federal Reserve switched its modus operandi from fed-funds targeting to money-growth targeting. It never quite adopted Friedman’s monetary rule—according to which it should increase the money supply at a constant and pre-announced low-single-digit rate. But deliberations at the policy meetings were conducted in terms of money-growth rates rather than fed-funds rates. The money-growth rate and hence the inflation rate were brought down, while the fed-funds rate found its own level at record highs—topping out twice at 19 percent in 1981 and not returning to pre-Miller levels for several years.

As an episode in money-growth targeting, the so-called monetarist experiment lasted only three years (1979–1982). The key monetary aggregate, christened M1, was made up of coins, currency, and checking-account balances. M1 provided a solid anchor for money-growth policy at the beginning of the experiment, but the experiment itself led to a complete unanchoring of monetarism at the end. The story involves a heavy dose of monetarist irony.

The 1930s’ banking reforms that restricted policymaking to Washington also restricted the behavior of banks in critical ways. A Federal Reserve statute (Regulation Q) imposed key restrictions on demand deposits and time deposits. In effect, depositors were precluded from having a single account on which they could (1) write checks and (2) earn interest. The statute also set strict limits on savings-account interest rates. Though not implemented with money-growth targeting in mind, Regulation Q gave rise to a sharp distinction between money (that is, checkable accounts) and savings (that is, interest-earning accounts). This either-or aspect of money and savings allowed for a crisp definition of the money supply. M1 was money that people could actually *spend* and hence was unquestionably the basis for policymaking. The larger monetary aggregates (M2, M3,



and still-more-encompassing M's) included heavier and heavier doses of savings and thus were not so relevant to the issue of inflation.

And herein lies the monetarist irony. According to this free-market school of thought, the Federal Reserve can keep the economy performing at its laissez-faire best by ignoring interest rates and focusing instead on the money supply. But having a money-supply magnitude worthy of the Fed's attention required this one critical departure from laissez faire called Regulation Q. Compounding the irony was the effect of the monetarist experiment on the viability of Regulation Q. As long as market interest rates hovered in the low single digits, the distortions caused by interest-rate ceilings (including a ceiling of zero percent on checkable accounts) were relatively minor. But the Miller Fed and subsequent monetarist experiment produced market rates of interest in excess of 20 percent, creating strong incentives for the banking industry to circumvent Regulation Q. The circumvention started with NOW accounts (Negotiable Order of Withdrawal), which were, in all but name, checkable savings accounts. Soon after, money-market mutual funds arose to help savers take advantage of the high treasury-bill rates. These and other such financial innovations threatened the very existence of commercial-bank savings accounts. The legislative reaction was bank deregulation, initiated during the Carter administration and accelerated in the early years of the Reagan administration. By 1982 Regulation Q was gone—and so too was the crisp distinction between checking accounts and savings accounts and the special significance of M1.

Though the Volcker Fed persistently missed its money-growth targets on the high side, it could claim to have done fairly well in dealing with inflation, at least in comparison to the Miller Fed. But in setting relatively low money-growth targets, it had destroyed (through high interest rates and bank deregulation) its ability even to identify a relevant money-supply magnitude. In 1982

the Volcker Fed reverted to targeting the fed-funds rate, not really by choice but because that was the only target left standing.

### The Greenspan Era

When Alan Greenspan became Fed chairman on August 11, 1987, the interest-rate targeting continued. There was early and continued criticism of Greenspan because of his focus on interest rates rather than on monetary aggregates. As Bob Woodward reports in *Maestro: Greenspan's Fed and the American Boom* (2000), the notion of money-supply targeting was still alive in 1989 in the person of Richard Darman, President

George H. W. Bush's budget director. Darman complained that Greenspan was mismanaging the money supply and, in particular, that the money-growth rate was too low. Greenspan responded dismissively with the claim that Darman had some sadly out-of-date notions. Without actually explaining to his readers just why those monetarist notions were out of date, Woodward remarked, "The Fed couldn't even measure the money supply accurately, let alone control it" (p. 63).

As was true before the short period of money-supply targeting, the only interest rate that the Federal Reserve could actually get in its crosshairs was the fed-funds rate. That rate comes highly recommended as a

target if the only criterion is the answer to the question "Can the Fed actually aim at—and hit—the target?" The answer is yes. The Fed can add to (or subtract from) bank reserves by buying (or selling) treasury bills. When the trading desk at the New York Fed buys a treasury bill from a commercial bank, the bank's earning assets are reduced by the value of the treasury bill and its reserves (funds not lent out) are increased by that same amount. (Key to understanding these open-market operations, as they are called, is the fact that, unlike ordinary purchasers of treasury bills, the Federal Reserve buys treasury bills with funds that were not in existence before it

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made the purchase. It spends new money into existence.) And because the fed-funds rate is the rate that governs interbank transactions made on an overnight basis (as banks with excess reserves lend to banks with reserve deficiencies), the impact of increased reserves on the fed-funds rate is immediate. The timely feedback observed by the Fed's trading desk allows it to adjust the volume of treasury bills bought or sold so as to achieve the targeted fed-funds rate. The Federal Reserve is never very far off target on any given day. On the basis of weekly averages, the Fed's aim looks even better, and on the basis of monthly averages, the Fed scores a bull's-eye every time.

Hitting the chosen fed-funds rate is not a problem. But choosing the particular fed-funds rate to target is another matter. Some choices are clearly non-viable, as was roundly demonstrated by the Miller Fed. Targeting too low a fed-funds rate requires a large infusion of reserves, which gives rise to a dramatically increasing money supply, which causes substantial inflation, which puts an inflation premium on all interest rates, which precludes the Fed's having such a low target rate. The Miller Fed persistently failed to raise its target rate enough to keep up with the rising inflation premium.

Targeting too high a fed-funds rate might require a shrinkage of reserves, which would force a monetary contraction and put the economy into recession, weakening the business community's demands for loans and hence reducing market rates of interest. The targeted fed-funds rate that was already too high is thrown even further out of line with actual market conditions.

Unfortunately for central banking, there is a wide spectrum of potential fed-funds target rates between clearly too low and clearly too high. Here, the root problem faced by the Fed is no different from the problem associated with a more general central control of economic activity. The Food Czar of a command economy can easily conceive of too many chickens or too few chickens. But the Goldilocks number of chickens—like the Goldilocks fed-funds target rate—doesn't identify itself. Of course, in a thoroughly decentralized economy, it is the market-determined price of chickens—and the market-determined interest rates—that keep the economy functioning smoothly.

In choosing a fed-funds target rate, Greenspan's thinking—at least early in his reign as Fed chairman—seemed to acknowledge the significance of having a rate that was just right. Referring to a 1989 episode, Woodward accurately captures Greenspan's view: “[T]he Fed's interest-rate policy had to be credible. A particular fed-funds rate had to be seen by markets as the best rate for the economy, not as an artificially low rate influenced by political pressure” (p. 62). Here, we see not only a bow to the market economy but a teasing hint at the Mises-Hayek theory of the business cycle: Holding interest rates artificially low sets the economy off on an unsustainable growth path. The policy-induced boom eventually ends in a bust. To avoid boom and bust, resources had to be allocated on the basis of the “natural rate of interest,” so named by Swedish economist Knut Wicksell and adopted as the market benchmark by Mises and Hayek.

Unfortunately, the very existence of a central bank precludes its knowing what the natural rate of interest is. That rate is the rate that would prevail “naturally,” that is, as the result of the give and take of decentralized forces in the absence of a central bank. Whatever theoretical understanding Greenspan retained from his early studies in Austrian economics, his practical approach to managing the monetary system was very conventional: raise the fed-funds target to counter inflationary pressures; lower the fed-funds target to counter unemployment.

### Too High for Politics

While keeping with convention, interest rates were kept too high for George H. W. Bush's political purposes in the 1992 presidential campaign. That was the claim made by the Republican leadership—and the reason for the widely perceived bad blood between Bush and Greenspan. But Greenspan was not always blind to political objectives. He signed on as a team player early in the Clinton administration and played a strong supporting role in Clinton's 1996 campaign. Clearly (in retrospect and even at the time) the Fed's lowering of the fed-funds target rate early in that election year was intended to counter the Republican Party rather than to counter unemployment.

While departing from the principles of central bank-

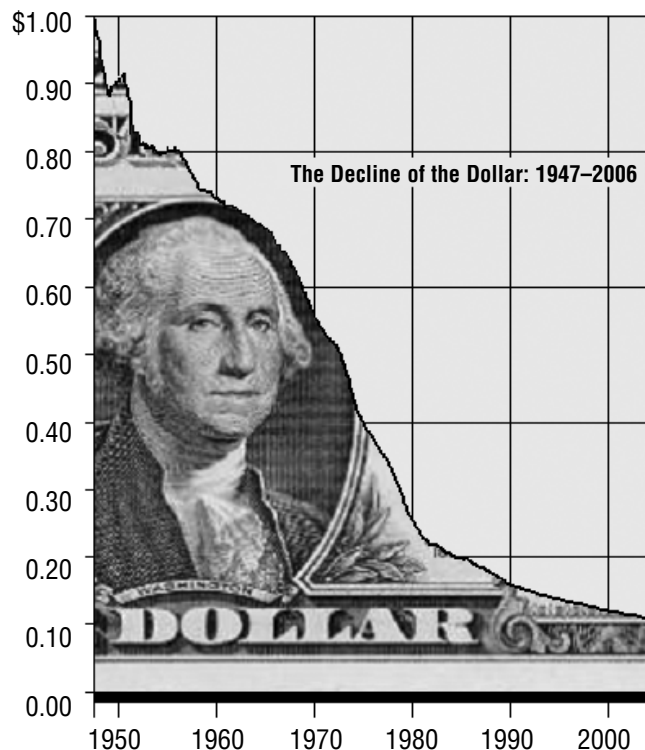
ing to give the Clinton campaign an edge, Greenspan departed from his Austrian roots in explaining the mid-to-late-1990s boom. He articulated a theory—or, at least, a belief—that ran completely counter to the Austrian theory. As reported by Woodward (pp. 171ff.), Greenspan persistently held to the belief—though a belief without proof—that productivity had increased on an economywide basis, creating what was popularly called the “New Economy.” Higher productivity would mean increasing output, which would hold price and wage inflation in check even as the Fed pursued an easy-money policy.

Greenspan’s calculations, however, are especially revealing. Inexplicably, he made his estimates of the supposed increase in productivity on the basis of the assumption that non-labor costs are constant. Surely, though, this is a peculiar assumption for the Fed chairman to make in light of the fact that non-labor costs include the cost of borrowing, which are affected rather dramatically by Fed policy. Lower borrowing costs—a.k.a. artificially low rates of interest—get reflected in increased profits for a wide variety of business firms. If non-labor costs are (counter to fact) assumed to be constant, then those increased profits will be mistakenly seen as evidence of a general increase in labor productivity. But since productivity gains are rarely across-the-board gains, it is much more likely that what Greenspan was observing was not some New Economy at all but rather the Old Economy goosed up by credit expansion.

In any case, the economywide downturn that began in late 2000 put an end to both the Clinton-Greenspan expansion and the so-called New Economy. Perhaps the only thing new about that period was the increasing irrelevance of the monetary aggregates. As already indicated, the once-all-important M1 had lost much of its significance with the 1980s monetary deregulation and in particular with the phasing out of Regulation Q. But during the increased globalization of the 1990s, this one-time key monetary magnitude lost virtually all its significance. As M1 actually declined from the mid-1990s through the turn of the century, its currency component rose dramatically. The ratio C/M1 rose from well below 30 percent at the beginning of the Greenspan years to well over 50 percent at the end—with most of that increase occurring during the last half of the 1990s.

The dramatic change reflected not the increased use of currency in the United States but the increased use of U.S. currency outside our borders. Stashes of dollars in unstable Middle Eastern countries as well as the widespread circulation of dollars in former Soviet-bloc countries and in Latin American countries that have become (officially or unofficially) dollarized help account for the high demand of U.S. currency.

Friedman’s monetarism and especially his monetary rule, as articulated with the aid of the bedrock equation of exchange ( $MV = PQ$ ), requires that the M and the P and the Q all refer to the same piece of geography. It just won’t do, for instance, to take P and Q to be the U.S. Consumer Price Index and the U.S. Gross Domestic Product and to take the corresponding M to be M1—much of which is outside the United States. But the Federal Reserve has no way of tabulating  $M1_{US}$ . That is, Greenspan knew how much M1 had been created, but he didn’t know where in the world it was. Trying to manage the money supply directly, then, that is, adopting a policy of money-supply targeting, was increasingly problematic. More so than ever, fed-funds targeting was all there was to do.




## “Neutral Interest Rate”

Fed watchers during the last years of Greenspan’s chairmanship have repeatedly encountered the term “*neutral* rate of interest” in discussions of the Fed’s choice of fed-funds target rates. That term could be taken as evidence that Greenspan had returned to his Austrian roots and wanted to target a fed-funds rate consistent with the “*natural* rate of interest,” that is, the rate of interest that would prevail in a market unhampered by a central bank. But “Greenspan-neutral” is not the same thing as “Austrian-natural.” The Fed knows that if it sets interest rates too low, there will be worries about inflation, and if it sets interest rates too high, there will be worries about unemployment. The goal, then, is to balance the worries—that is, to find the equi-worry fed-funds rate. That’s what’s meant by the neutral rate.

But just whose worries count? The worries emanating from financial markets? Traders in financial markets might worry about interest rates being too low or too high—but mainly because of the implications about future actions by the Federal Reserve. Is the Fed going to raise rates? Is it going to lower them? The neutral fed-funds rate, then, would be the rate that causes the financial markets to have no net worry about the fed-funds rate changing in one direction or the other. If *this* is the balancing act that underlies Federal Reserve policy, then both the Fed and financial markets are living in a house of mirrors.

Is there any known market mechanism that causes the neutral rate to be brought into line with the natural rate? That is, is there any reason to believe that equi-worry about inflation and unemployment translates into interest rates that are consistent with sustainable growth? Or is it quite possible that the Greenspan-neutral rate lies below the Austrian-natural rate? We have the answer to this question from Greenspan himself—as summarized by Woodward: “There was no rational way to determine that you were in a bubble when you were in it. The bubble was perceived only after it burst . . .” (p. 217). Evidently, the equi-worry rate itself is something to worry about.

On the last day that Alan Greenspan served as Fed chairman, Milton Friedman penned a commentary in the *Wall Street Journal* (January 31, 2006) titled “He Has Set a Standard.” Some readers of the *WSJ* might have been led to believe that Greenspan had somehow followed Friedman’s monetary rule. We now see, though, that there was no well-grounded rule; there was no standard. In truth, Greenspan pitted worry against worry and was lucky enough to make it to the end of his final term despite there being no standard at all.

And now, Ben Bernanke has pledged to continue the policies of the Greenspan Fed—possibly with a little less worry about inflation. We can only wonder how long his luck will hold out. 

The abandonment of the gold standard made it possible for welfare statisticians to use the banking system as a means to an unlimited credit expansion. . . . In the absence of the gold standard, there is no way to protect savings from confiscation through inflation.

—Alan Greenspan, “Gold and Economic Freedom,” 1966