

Against the Tide: Malcolm Bryan and the Introduction of Monetary Aggregate Targets

R. W. HAFER

The author is an Atlanta Fed visiting scholar and professor of economics, Southern Illinois University at Edwardsville. He thanks Stu Allen, Dave Ault, Michael Bischof, Frederick Deming, Bill Dewald, Jerry Dwyer, Milton Friedman, Gail Heyne Hafer, Joe Haslag, Bob Hetzel, Thomas Mayer, Bill Poole, Anna Schwartz, Frank Steindl, Dave Wheelock, and especially Jim Meigs for helpful comments.

MONETARY POLICY WAS FREED FROM THE STRAIGHTJACKET OF PEGGING U.S. TREASURY INTEREST RATES FOLLOWING THE TREASURY–FEDERAL RESERVE ACCORD IN 1951. THIS NEWFOUND FREEDOM LED TO A GROWING DEBATE INSIDE AND OUTSIDE THE FEDERAL RESERVE SYSTEM ABOUT THE APPROPRIATE MEASURES TO USE AS OPERATING GUIDES. AS THE 1950S PROGRESSED, THE FEDERAL RESERVE FOCUSED ON CONTROLLING MARKET INTEREST RATES TO ACHIEVE ITS POLICY GOALS. THIS POLICY, WHICH REMAINS IN USE TODAY, CAME UNDER FIRE FROM A HANDFUL OF POLICYMAKERS AND POLICY WATCHERS. AN ALTERNATIVE SUGGESTED BY SOME WAS TO PLACE GREATER EMPHASIS ON THE BEHAVIOR OF THE MONETARY AGGREGATES IN SETTING POLICY. THIS ARTICLE EXAMINES THE CONTRIBUTIONS OF MALCOLM BRYAN, PRESIDENT OF THE FEDERAL RESERVE BANK OF ATLANTA FROM 1951 THROUGH 1965, TO THIS DEBATE AND TO THE DEVELOPMENT OF MONETARY POLICY IN THE POSTACCORD ERA.

Bryan parted company with most of his colleagues on the Federal Open Market Committee (FOMC) during the late 1950s and into the 1960s. Bryan tried to steer policy away from focusing on interest rates and money market conditions to placing more weight on the monetary aggregates. A reading of the transcripts of the FOMC meetings during this time reveals that Bryan's alternative policy reflected his desire to prevent the disruptive effects on the economy from short-run fluctua-

tions in money growth and the longer-term effects of expansive Fed actions, namely, inflation.¹ Bryan and a few other committee members considered money market conditions and changes in interest rates to be inadequate indicators of policy actions. Bryan argued that monetary aggregates not only provided better feedback on policy changes than tone and feel but also afforded the FOMC a better gauge for measuring the success of achieving its desired policies.

Bryan was not a lone figure in this debate, but his contributions deserve special mention.² For example, in 1959 he became the first member of the FOMC to introduce an explicit quantitative, long-run aggregate target into postwar policy discussions. In 1960 he further separated himself from the majority opinion on the FOMC by developing and introducing short-run, monetary growth targets—growth cones, as they would become known in the 1970s—into the policy debate.³ Bryan used these quantitative indicators to help interpret and steer Fed policy during the late 1950s and early 1960s. Reviewing the debate over the usefulness of monetary aggregates as operating guides provides an informative case study of U.S. monetary policy, one that offers valuable lessons for monetary policy even today.

To provide a background for Bryan’s introduction of aggregate targeting, the article first describes the state of monetary policy and the economy during the period following the 1953–54 recession and through 1958. Of particular interest is how the FOMC interpreted economic developments as the economy emerged from the recession and the inflationary shadow of the Korean War. Against this backdrop, the article discusses Bryan’s 1959 introduction of a long-term aggregate target, one based on the postwar trend in the growth of reserves. The next section focuses on the policy debate in 1960 and Bryan’s introduction of a short-term, reserve growth cone as an operating guide. The concluding section offers some final observations.

Monetary Policy and the Economy: 1956–58

Prior to the Treasury–Federal Reserve Accord, monetary aggregates essentially were ignored as policy operated within the confines of supporting Treasury security prices. Following the accord, the policy role of monetary aggregates expanded, though the shift was more cosmetic than real (Friedman 1982). The

Federal Reserve focused on achieving desired market rates and maintaining orderly markets to hit stated policy goals, such as sustained economic growth and low inflation. Federal Reserve policy during the 1950s and into the 1960s often relied on hitting target levels of free reserves—the difference between banks’ excess reserve holdings and reserves borrowed through the discount window—in the banking system to bring about changes in financial markets. Goodfriend (1991), for example, argues that free reserves in the 1950s and 1960s, like non-borrowed reserves in the 1980s, provided a distraction to the Fed’s primary policy concern of manipulating market interest rates. Thus, even though free reserves are a “monetary” aggregate, their use in policy was conditioned on activity in the financial markets.

Changes in free reserves were brought about as the FOMC and the manager of the Open Market Desk at the Federal Reserve Bank of New York took their cues from events in both the domestic and, later, international financial markets. Monetary policy in the 1950s thus depended heavily on the subjective judgment of the FOMC and the manager of the desk.⁴ Their role was to interpret developments in the financial markets—to determine the tone and feel of the markets—and how these would influence and be influenced by policy actions.⁵ The combination of free reserves and tone and feel did give the Fed some control over short-term interest rates, essentially the three-month

Bryan’s aggregate-based approach to monetary policy was a dramatic departure for a member of the FOMC at the time.

1. *The FOMC is the policy-making arm of the Federal Reserve System. It is composed of the seven members of the Board of Governors and five of the twelve district bank presidents, four of whom vote on a rotating basis, and the New York Federal Reserve Bank president, who is a permanent voting member. For a recent use of the FOMC transcripts as the basis for analyzing Fed actions, see Edison and Marquez (1998).*
2. *Meigs (1976) chronicles the contributions of D.C. Johns, the president of the Federal Reserve Bank of St. Louis, and Homer Jones, the director of research at St. Louis. Meigs also provides a brief discussion of Bryan’s role in the developing debates that would later be centered on the Federal Reserve Bank of St. Louis.*
3. *The term cones comes from their construction. For example, supposing that the base period is the average value for the level of an aggregate in the fourth quarter of a year and assuming that this value is \$100, if a 5 percent growth path is the policy objective for the year, then the average value for money in the fourth quarter of the following year would be \$105. Allowing for a growth path somewhat higher (for instance, 7 percent) and lower (for instance, 3 percent) would give quarter-average values of \$107 and \$103, respectively. As shown below, connecting the base period value with the upper and lower ranges creates a cone of possible values.*
4. *Monetary policy is conducted through the Federal Reserve Bank of New York primarily by buying and selling government securities in the open market. This activity takes place through the Open Market Trading Desk, supervised by the manager of the desk.*
5. *Atkinson (1969) shows that the FOMC often switched between free reserves and looking to tone and feel during the 1950s and 1960s. Even though the FOMC officially used free reserves as the operating guide, Atkinson’s evidence indicates that doing so did not reduce the variance of interest rates or lead to better control over reserves than proposals that used tone and feel as guidelines. For an early analysis of the problems associated with the use of free reserves, see Brunner and Meltzer (1964).*

Treasury bill rate. But the policy had its costs. Calomiris and Wheelock (1998) assert that the Fed's reliance on free reserves as an operating guide simply recycled the policies that Benjamin Strong had advocated during the 1920s. Operating under the limited constraints of the gold standard, the Fed manipulated free reserves to achieve desired levels of short-term interest rates with one eye toward the domestic economy and the other toward the growing problems of external imbalances. Such policy choices, Wheelock (1997) suggests, help explain the upward drift in money growth and inflation that lasted for the next two decades.

Dissension among FOMC members arose over the best course for policy following the 1953–54 recession. The economy in 1955 grew quite rapidly after the recession, with real gross national product (GNP) increasing at an annual rate of more than 6 percent. Brisk real growth and the sharp run-up in prices that followed the

Korean War made inflation a primary concern at FOMC meetings throughout 1955. Hetzel notes that inflation was “the primary macroeconomic preoccupation of the political system in the 1950s” (1995, 6). By the end of 1956, however, real growth had slowed considerably, increasing at an annual rate of only 1.4 percent for the year. Even so, the members’ inflation fears now seemed justified: the price level increased at an annual rate of more than 3.5 percent during 1956, up from a 2.5 percent annual rate of change in 1955.

The FOMC reacted to the potential of higher rates of inflation with a policy of increased restraint during 1956 and into 1957. William McChesney Martin, the chairman of the Board of Governors, voiced the majority opinion that the Fed should not repeat the mistake it made coming out of the last recession, essentially that of not raising market rates fast enough to curb inflation. The increased policy restraint resulted in money growth (M1) falling from a 2.2 percent annual growth rate in 1955 to a 1.1 percent rate in 1956. This constraint persisted into 1957, with M1 decreasing at an annual rate of 0.5 percent in 1957, bank credit flat, and a three-month Treasury bill rate that rose throughout the year.

This episode intensified the committee's internal debate over the choice of policy guides. Bryan's comments at the January 28, 1957, FOMC meeting are representative of the confusion and uncertainty that using

free reserves engendered. He argued that the behavior of free reserves was not “particularly useful at the present time” (FOMC 1957, 13) and that some alternative should be discussed.⁶ Board economist Woodlief Thomas noted that using tone and feel, the companion operating guide at the time, often led to changes that unfortunately contradicted the policy desires of the committee. Governor J.L. Robertson, among others, also expressed discontent with tone and feel as an effective operating guide. The FOMC's dilemma was that neither approach seemed to provide very reliable signals about policy actions and their effects on the economy.

Chairman Martin took the position often expressed by Fed chairmen: operating guides such as tone and feel may be less than perfect, but they afforded the FOMC and the manager of the Open Market Desk the needed flexibility to respond to unforeseen changes in financial markets or the economy. Robert Roosa recalled that “the Federal Reserve has had to rely primarily on experimental probing. . . . *[U]tilizing its own qualitative concept of pressure*, it has withheld or released new bank reserves . . . the ‘feel’ arising from participation in securities markets and broader judgments of current economic trends” (1960, 262; emphasis added).⁷ Alfred Hayes, president of the New York Fed and vice chairman of the FOMC, gives another perspective on the process of using tone and feel to guide policy: “[T]he tone of the market is a very difficult thing to describe unless you are actually sitting at this trading desk, which is the nerve center of the bank and the nerve center of the System for keeping in touch with credit and banking and money market developments. But I would say that it [tone] is a compound of all kinds of impressions you get from the volume of trading, the speed of trading, what is happening to prices, what the bank's position is, whether the dealers are hard up for financing or have plenty of financing, whether funds are well distributed throughout the country or not well distributed” (Atkinson 1969, 85).⁸ Chairman Martin and others extolled the flexibility that tone and feel offered. Martin also dismissed claims that monetary aggregates could serve as credible operating guides, insisting on more than one occasion that monetary policy would not be constrained by the “dead hand of statistics,” something that he associated with reliance on the aggregates. Sentiment for a change in operating guides was not overwhelming.

By the end of 1957, a few members of the FOMC advised that the Fed's restrictive policy was having a deleterious effect on the economy and needed to be reversed. Bryan was one of the more vocal critics of current policy. At the November 12, 1957, meeting he warned that the lack of reserve and money growth was creating “a terrific drag” on the economy. Unless the FOMC moved to quickly reverse this policy, Bryan warned, the Federal Reserve would be “party to producing economic convul-

Bryan and a few other FOMC members considered money market conditions and changes in interest rates to be inadequate indicators of policy actions.

sions” (FOMC 1957, 695). This view was not new for Bryan (Bryan 1938, 1948). A decade earlier, in a speech before the Alabama Bankers Association, Bryan suggested that “the central bank must *lean against the breeze* in times of boom and inflation and likewise in times of depression and deflation” (1948; emphasis added). At the December 17, 1957, meeting Bryan reiterated his long-held view on the nature of policy effects, further stating that, “I believe [monetary policy] can play its most effective role in a downturn if monetary ease is injected *during the early stages of a downward movement* rather than after the recession is well underway. . . . [I]n the face of a now clearly perceptible economic downturn, our effective policy, whatever our intentions, has been to allow a reserve base providing for no growth whatever in the economy. I believe it is clear that the continuation of such policy must finally be an important causative factor in promoting a serious recession” (FOMC 1957, 801–2; emphasis added).

Most other members of the FOMC, however, pressed for continued restraint since their primary concern was to avoid “sloppy” financial markets. In general, committee members and the chairman believed that reversing the course of monetary policy would have little impact on curtailing any recessionary momentum that might already be under way in the economy.

Bryan’s view of monetary policy and its effect on real economic activity was not ordinary for a member of the FOMC at that time. His approach to judging policy, contrary to his colleagues and many others in the economics profession, employed ideas associated with a small number of monetary economists that were beginning to circulate through the profession. For example, compare Bryan’s comments cited above with Milton Friedman’s testimony before the Joint Economic Committee in March 1958. Friedman asserted that actions taken by the

Federal Reserve were a “causative factor” in explaining past recessions. Friedman’s analysis of recent Fed policies concluded that “the tight money policy of 1956 and 1957 which coexisted with rising prices . . . [is] with us in the current recession” (Friedman 1958, 250, quoted in Meigs 1976, 445).

Bryan was aware of and closely followed developments in monetary economics, as a correspondence between Bryan and Friedman indicates. In a letter dated April 7, 1959, Bryan wrote to Friedman asking for a copy of his paper “Some Theoretical and Empirical Aspects of the Supply of Money.”⁹

From Friedman’s response, it is clear that Bryan had sent along a copy of his paper “The Sovereign, the Central Bank, and the Monetary Standard” (1959), which he had delivered several times in speeches. Later Friedman wrote to Bryan, sending him a copy of his recently published *A Program for Monetary Stability*. This correspondence, albeit limited, suggests

that Bryan followed the developments and debates in the increasingly active area of monetary economics and sought input from one of its leading theorists and proponents for an aggregates-based policy.¹⁰

Bryan’s policy analysis was not solely the product of others’ research, however. Bryan’s views on the role and effects of monetary policy, as indicated in a series of speeches, was established as early as 1938. By 1957

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6. Although quotation marks appear, the minutes represent the FOMC Secretary’s summary of the discussion and are not necessarily verbatim. Even so, FOMC members had the opportunity to correct the minutes before they entered the permanent record.

7. This notion of flexibility can be found throughout FOMC discussions. For example, compare Roosa’s and Martin’s comments to those of Chairman Paul Volcker at the December 20–21, 1982, meeting of the FOMC: “I think we’re left with what could be termed an eclectic, pragmatic approach. It’s going to involve some judgment as to which one of these [aggregate] measures we emphasize, or we may shift from time to time. . . . [W]e’re going to have to make some judgments as to which one is more significant at any particular point in time against what nominal GNP is or what the goal is or what the real economy is doing and what prices are doing and all the rest. . . . [T]hat’s the way the Federal Reserve used to operate, less elaborately, for years when policy by present standards looked pretty good” (FOMC 1982, 41).

8. The source of the quote is Hayes’s testimony before the Joint Economic Committee in 1961.

9. It is likely that Bryan meant “Some Theoretical and Empirical Aspects of the Demand for Money” since there is no reference in the NBER list of publications to the former piece.

10. Thanks to Milton Friedman for making this correspondence available. Bryan’s views on monetary policy and the effects of money probably reflect the fact that he received postgraduate training at the University of Chicago (see Box 1). This is the school often associated with Friedman and so-called monetarist economics. To get a feel for the opinion that many economists held of such views, the remarks of Richard Davis, an economist at the Federal Reserve Bank of New York in 1969, can be considered: “[T]he view that ‘only money matters’ or, perhaps more accurately, that ‘mainly money matters’ was the province of an obscure sect with headquarters in Chicago. For the most part, economists regarded this group—when they regarded it at all—as a mildly amusing, not quite respectable collection of eccentrics” (1969, 119).

Biography of Malcolm Bryan

Bryan was born in 1902 in Wateska, Illinois, a small town of several thousand a little more than 100 miles south of Chicago. At the age of twenty-two Bryan graduated with a bachelor's degree from the University of Illinois, where he remained for an additional year to earn a master's degree. Presumably the master's degree was in economics since following graduation Bryan took a position in the economics department at the University of Georgia.

During his years at the University of Georgia (1925–36), Bryan served in several positions. In 1929 he was a member of Georgia's Special Tax Commission, and in 1934 he served on the Special Committee on Banking and Taxation under the auspices of the U.S. Treasury. From 1933 to 1937, Bryan served as editor of the *Southern Economic Journal*. Perhaps the most important aspect of this period in Bryan's life is that he spent 1927 and 1928 doing postgraduate work in economics at the University of Chicago, where it is likely that his views on the role of monetary policy and the link between monetary aggregates and the economy were influenced by economists Viner, Knight, Douglas, Mints, and Simon, all faculty members at that time.

Bryan left the University of Georgia in 1936 and began his career in the Federal Reserve System with a two-year stint as an economist at the Board of Governors. Afterward he returned to Georgia as a vice president of the Federal Reserve Bank of Atlanta, a position that he held from 1938 through 1941. In 1941 Bryan was promoted to first vice president of the Atlanta Fed, where he remained until 1946. While Bryan was at the Atlanta Fed, he was elected president of the Southern Economics Association in 1942. He also served on the American Technical Staff, part of the negotiating team at the Bretton Woods Monetary and Financial Conference in 1944.

After the end of World War II, Bryan left the Atlanta Fed to become vice chairman of the Trust Company of Georgia. He remained in this job from 1946 until 1951. During this interval away from the Fed, Bryan served as a member of the Senate Finance Committee's Advisory Committee on Social Security (1947–48) and as part of the Economic and Financial Mission to Peru in 1948. Bryan left the Trust Company of Georgia in 1951, returning to the Atlanta Fed as its president. He remained in this position for the rest of his professional career, retiring in 1965. Bryan died in 1967.

Bryan already was arguing that significant, short-run changes in money growth were likely to influence real economic activity. This date suggests that Bryan's policy stance predates the monetarist position usually associated with the Federal Reserve Bank of St. Louis. For instance, Homer Jones, a leading proponent of using monetary aggregates, did not begin as research director at St. Louis until 1958. And Meigs's observation that "[t]he new element in the St. Louis position in 1960 was a recognition that short run changes in the money stock can have adverse effects on income and employment" (1976, 447; emphasis added) was a conviction Bryan used in his policy analysis. The development suggests that the maverick views so often associated with the St. Louis bank were already operating at the Atlanta bank.¹¹

Monetary policy abruptly changed direction in 1958. The growth of M1 increased dramatically: after decreasing at an annual rate of 2.1 percent in the first quarter of the year, the growth rate of M1 jumped to more than 6 percent during the next two quarters. At the same time, real output roared out of the recession, increasing at better than a 10 percent annual rate dur-

ing the second half of the year. In contrast to the positions of his colleagues, Bryan's statements at FOMC meetings throughout 1958 reflect an evolution in his view about the economic effects of short-run fluctuations in money growth. Eschewing the common practice of measuring policy on a meeting-to-meeting basis—often a period of only weeks—Bryan began to compare the level of reserves at one meeting with that of the previous year. While others focused on measuring reserve growth on a meeting-to-meeting basis, Bryan put current policy analysis and discussion into a longer-term perspective in order to understand the current stance of policy actions. This development is reflected in his introduction of a reserve growth target in 1959.

Introducing a Reserve Growth Target: 1959

Bryan's concern about the inflationary effects associated with long-term reserve growth is consistent with his often expressed distress about the dangers of inflation and the Federal Reserve's responsibility to contain it. A popular notion at the time was that a little inflation was good for the economy. Bryan considered

this view to be economically naive and morally bankrupt. For example, he publicly argued in a speech that inflation was merely a “transfer of purchasing power from savers in money forms to other classes of society” and a process that erodes the very foundation of a market economy. He believed that “once money is destroyed as a store of value or its function therein seriously impaired . . . the judgment of the consumer, the saver, the businessman and often governments as to their best interests in the presence of inflation as against what their judgment of their best interests would be in the absence of inflation” is negatively affected (1957).

Following the expansionary policies of 1958, the threat of inflation once again pervaded FOMC meetings into 1959. For instance, as early as the January 6, 1959, meeting, the presentation to the FOMC by staff economists characterized the economic situation as a “maturing recovery” with the problems of recession replaced by “problems of sustainable growth” without igniting inflation (FOMC 1959, 5). Money growth continued strong, with M1 increasing at an annual rate of 4 percent during the second half of 1958.

A major problem facing the FOMC was that its desire to reign in potential inflation conflicted with its perceived necessity to accommodate the Treasury’s financing needs. In the spring of 1959 a few FOMC members openly expressed dissatisfaction with such policy constraints. D.C. Johns, for example, said at the February 10 meeting that the FOMC should “pay more attention to what was happening to the money supply” in its discussions (FOMC 1959, 92). Governor A.L. Mills suggested at the March 3 meeting that continued use of free reserves would likely repeat the “unhappy experience” of 1958 when Fed actions caused a “supercharged growth in the money supply” (167). Bryan continued in this vein at the April meeting, asserting that recent reserve growth was “sufficient to finance a first-rate inflation and [that] it would easily be possible to get into trouble” (288–89). He repeated this warning in May, noting that policy “had not been particularly restraining” (313).

Bryan also questioned the manner in which policy instructions were communicated to the manager of the desk: the directive. A chronic problem for the committee was that different members often had different interpretations of the directive to which they had agreed. (To provide a perspective on the problem, the directive forwarded to the desk from the May 5, 1959, meeting is reprinted in Box 2.) For example, the consensus at the May 5 meeting called for an even-keel policy, prompted by upcoming Treasury financing needs. Bryan questioned what this meant: was an even-keel policy “measured by net free reserves, net borrowed reserves, the feel of the market, or the intuition of the Account Manager”? (FOMC 1959, 340). The manager, in response, “thought it was a mixture of the things [Bryan] had mentioned” (340). Relying on free reserves to achieve interest rate targets engendered uncertainty over policy directions to the desk.

Bryan became an increasingly outspoken proponent for changing the directive from a qualitative description of policy desires—firm up the markets, achieve some ease in free reserves, and so forth—to one that established numerical targets for policy. In the summer of 1959, Bryan began to base his policy analysis on the short- and long-run growth of a reserve measure that was developed by the Atlanta bank, called total effective reserves.¹² At the August 18, 1959, meeting Bryan introduced something novel in postwar FOMC deliberations: the idea of gauging policy by tracking total effective reserves relative to their postwar trend, an annual average growth rate of 3.6 percent.¹³ Bryan argued that when

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11. In personal discussions, Jim Meigs relates that Bryan and Johns often met outside the FOMC meetings to discuss policy developments. Bryan, the professional economist, is likely to have influenced Johns, a lawyer by training, in matters of monetary policy.

12. The total-effective-reserves measure developed at Atlanta is similar to the St. Louis adjusted monetary base series less currency. Total effective reserves are measured by first calculating the average value for the ratio of required reserves to average deposits beginning in May 1958 through December 1959. May 1958 is used since it is the last time reserve requirements were changed. This ratio is 0.1152. For the period prior to May 1958, this ratio is divided by the monthly ratio of required reserves to deposits and the value of this term multiplied by actual reserves—in other words, $[0.1152 / (R_t / D)] \times R$. From May 1958 onward, actual member bank reserves are used. Both reserve measures are then seasonally adjusted. This computation is outlined in the appendix to the January 26, 1960, FOMC meeting. This measure can be replicated using the data in Appendix D of Meigs (1962). For example, this author’s trend estimate is that reserves increase, on average, \$42.7 million per month compared with Bryan’s reported estimate of \$43 million per month.

13. Meigs (1976, 445) suggests that Bryan introduced the use of total effective reserves at the November 24 meeting of the FOMC. It was at the November 24 meeting that Bryan introduced the charts upon which his policy discussions actually had been based since August.

The Directive of May 5, 1959

Thereupon, upon motion duly made and seconded, the Committee voted unanimously to direct the Federal Reserve Bank of New York, until otherwise directed by the Committee:

(1) To make such purchases, sales, or exchanges (including replacement of maturing securities, and allowing maturities to run off without replacement) for the System Open Market Account in the open market or, in the case of maturing securities, by direct exchange with the Treasury, as may be necessary in the light of current and prospective economic conditions and the general credit situation of the country, with a view (a) to relating the supply of funds in the market to the needs of commerce and business, (b) to fostering conditions in the money market conducive to sustainable economic growth and stability, and (c) to the practical administration of the Account; provided that the aggregate amount of securities held in

the System Account (including commitments for the purchase or sale of securities for the Account) at the close of this date, other than special short-term certificates of indebtedness purchased from time to time for the temporary accommodation of the Treasury, shall not be increased or decreased by more than \$1 billion;

(2) To purchase direct from the Treasury for the account of the Federal Reserve Bank of New York (with discretion, in cases where it seems desirable, to issue participations to one or more Federal Reserve Banks) such amounts of special short-term certificates of indebtedness as may be necessary from time to time for the temporary accommodation of the Treasury; provided that the total amount of such certificates held at any one time by the Federal Reserve Banks shall not exceed in the aggregate \$500 million.

Source: FOMC (1959, 341–42)

reserves go below their postwar trend, he “would be inclined to resolve any doubts [on the stance of policy] slightly on the side of ease” (FOMC 1959, 558). Bryan pushed for the adoption of his reserve measure and its trend growth as the operating guide for policy to replace financial market behavior and free reserves. Not surprisingly, little was made of his suggestion at this time.

Monetary policy by late 1959 confronted conflicting economic signals. Domestically, money growth had deteriorated sharply, with M1 decreasing at an annual rate of 3.4 percent in the fourth quarter of 1959. The steel strike that began in mid-July and ended in November disrupted the relation between policy actions and the economy. Research out of the St. Louis bank, for example, suggested that the decline in economic activity due to the strike lowered velocity and made the recent slowing in money growth less restrictive than normal. Uncertainty about the domestic economy and the correct policy response was compounded by a worsening balance-of-payments situation. As Hetzel describes it, “monetary policymakers walked a tightrope requiring them to balance internal and external objectives . . . each requiring conflicting policy responses” (1996, 23). By 1959, the currencies of the European Economic Community countries had become fully convertible into U.S. dollars.¹⁴ A persistent balance-of-payments deficit generated significant gold outflows

from the U.S. Treasury. This situation not only caused alarm among policymakers but was also politically unacceptable. With domestic interest rates below European rates, the Fed moved to raise the three-month Treasury bill rate in an attempt to quell the gold outflow. Monetary policy thus was conducted with heightened uncertainty (and disagreement) over which objective—internal or external balance—was more important.

Bryan believed that monetary policy did not cause and could do little to solve external imbalances. At the September 22 meeting he asserted that unless reserves increased fast enough to satisfy seasonal needs plus some positive growth, the “System could easily get itself into the position of bringing about greater tightness this fall than it desired” (FOMC 1959, 649). In other words, the current course of policy would, in all likelihood, cause another recession. In contrast, Chairman Martin said at the November 24 meeting that while he “shared some of the apprehension that had been expressed about the money supply and the relationship of credit to growth . . . he did not believe this was the time to correct it” (828). Martin steadfastly relied on the flexibility given by tone and feel to guide policy decisions even though Robert Rouse, manager of the desk, cautioned at the December 15 meeting that “interpretation of the signals given off by the market was by no means easy” (836). Martin simply

TABLE 1 Compounded Annual Growth Rates fo Effective Reserves^a

Base Year	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959 ^b
1947	x	1.8	1.0	2.0	2.6	3.2	3.1	3.4	3.3	3.1	2.9	3.3	3.0
1948	x	x	0.2	2.0	2.9	3.5	3.3	3.6	3.5	3.2	3.0	3.4	3.3
1949	x	x	x	3.9	4.3	4.6	4.1	4.3	4.1	3.7	3.4	3.8	3.6
1950	x	x	x	x	4.6	5.0	4.2	4.4	4.1	3.7	3.3	3.8	3.6
1951	x	x	x	x	x	5.4	4.0	4.3	4.0	3.5	3.1	3.7	3.5
1952	x	x	x	x	x	x	2.6	3.8	3.5	3.0	2.6	3.4	3.2
1953	x	x	x	x	x	x	x	5.0	4.0	3.1	2.6	3.6	3.3
1954	x	x	x	x	x	x	x	x	3.0	2.2	1.9	3.3	3.0
1955	x	x	x	x	x	x	x	x	x	1.3	1.3	3.3	3.0
1956	x	x	x	x	x	x	x	x	x	x	2.0	4.3	3.6
1957	x	x	x	x	x	x	x	x	x	x	x	6.6	4.7
1958	x	x	x	x	x	x	x	x	x	x	x	x	2.1
1959	x	x	x	x	x	x	x	x	x	x	x	x	x

^a Percentage changes, base year to terminal year. The footnote to the original table reads: "Reserve figures exhibited in [this table] and the chart on effective reserves [Chart 1] are total member bank reserves (monthly averages of daily figures) adjusted for changes in reserve requirements and for seasonal influences. No effort was made to remove the expansion potential of total reserves resulting from shifts in deposits among classes of banks and between types of deposits subject to different requirements.

"Method of computation: For May 1958–November 1959, figures used are actual member bank reserves, adjusted for seasonal influences. Monthly values of effective reserves for January 1947 through April 1958 (when reserve requirements were last changed) have been derived by (1) obtaining the ratio of average required reserves to average deposits subject to legal reserves for May 1958–April 1959; (2) multiplying actual reserves by the percentage the above ratio is of the ratio of required reserves to deposits subject to legal reserves for each specified month; and (3) adjusting the values for seasonal influences."

^b Eleven months

Source: FOMC (1959, 882)

reiterated his distrust of allowing the behavior of the monetary aggregates to guide policy: "[O]ne should not go overboard on the money supply question unless he was certain that the velocity factor was not playing a part. . . . For this reason he was less wary of restraint" (876). Martin's position, which also was the Committee's consensus view, meant that the FOMC continued to restrain money and credit growth while real economic growth was showing signs of deteriorating.

At this meeting Bryan asserted that the relevant issue had become not whether the Fed should maintain its current policy but how damaging to the economy the Fed's policy of tightening actually would be. Bryan used two analytical tools to drive home his point. One was a set of tables showing the annual growth rates of effective

reserves, real GNP, and inflation over the period from 1947 through 1959. These tables are reproduced here as Tables 1–3. The deterioration of reserve growth is evident in Table 1. After increasing at an annual rate of more than 6 percent in 1958, effect reserves were growing only at about a 2 percent rate in 1959. Bryan used the tables to illustrate the connection between fluctuations in reserve growth and economic activity. For example, it is evident from Table 1 that reserve growth in 1956 and 1957—about 1 percent and 2 percent, respectively—was well below the trend rate of growth of about 3 percent. These slow rates of reserve growth precede the downturn in 1958, when real GNP decreased at an annual rate of 2.3 percent (Table 2). Bryan also used the tables to establish the connection between the longer-term

14. The following draws on Hetzel (1996). See also the related discussions in Meltzer (1991), Schwartz (1997), and Wheelock (1997).

TABLE 2 Compounded Annual Growth of the U.S. Economy^a

Base Year	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959 ^b
1947	x	3.9	1.8	4.1	4.9	4.6	4.6	3.7	4.2	4.0	3.8	3.2	3.5
1948	x	x	-0.2	4.1	5.2	4.8	4.7	3.6	4.3	4.0	3.7	3.1	3.4
1949	x	x	x	8.7	8.1	6.5	6.0	4.4	5.0	4.6	4.3	3.5	3.8
1950	x	x	x	x	7.5	5.4	5.1	3.4	4.3	3.9	3.6	2.9	3.3
1951	x	x	x	x	x	3.4	3.9	2.0	3.5	3.2	3.0	2.2	2.8
1952	x	x	x	x	x	x	4.4	1.3	3.6	3.2	2.9	2.0	2.7
1953	x	x	x	x	x	x	x	-1.7	3.1	2.8	2.6	1.6	2.4
1954	x	x	x	x	x	x	x	x	8.2	5.1	4.0	2.4	3.2
1955	x	x	x	x	x	x	x	x	x	2.1	2.0	0.5	2.0
1956	x	x	x	x	x	x	x	x	x	x	1.8	-0.2	2.0
1957	x	x	x	x	x	x	x	x	x	x	x	-2.3	2.1
1958	x	x	x	x	x	x	x	x	x	x	x	x	6.7
1959	x	x	x	x	x	x	x	x	x	x	x	x	x

^a Percentage changes, base year to terminal year, of GNP in 1954 dollars

^b Three quarters

Source: FOMC (1959, 883)

movements in reserves and inflation, although the focus at this meeting was on the impending downturn.

The other tool was a chart showing the level of total effective reserves plotted around their postwar trend. Chart 1 reproduces Bryan's chart. Bryan used this chart for two purposes. One was to illustrate the relation between effective reserve growth and real economic activity, hence the appearance of National Bureau of Economic Research (NBER)–designated recessions. Bryan argued, on the basis of the growth triangles and the chart, that “a situation appeared to be approaching in which the matter of the growth factor in reserves should have serious consideration” (FOMC 1959, 871).

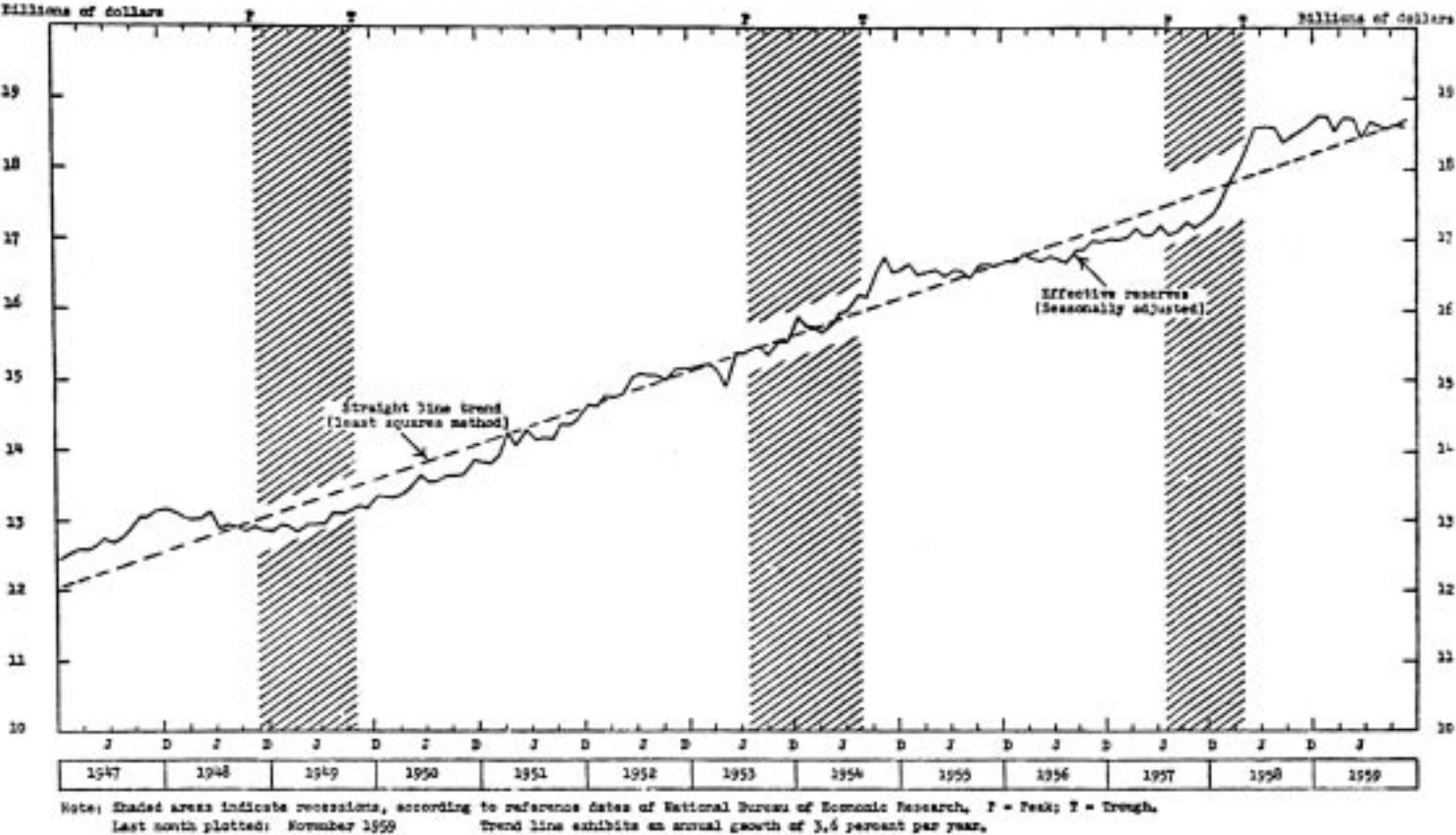
Chart 1 also served another purpose for Bryan. He used it to reiterate his misgivings about the qualitative nature of the directive. Bryan proposed that a quantitative tool like Chart 1 gave the FOMC “a means by which instruction can be given in quantitative rather than qualitative terms” (FOMC 1959, 872). By introducing this simple chart Bryan sought to transform the policy debate from money market conditions to the behavior of the monetary aggregates. This chart not only enabled Bryan to provide an explicit, quantitative analysis of past policies but also to illustrate their effects on the economy.

The next section turns to the events of 1960 as Bryan used his new framework to analyze policy and attempted to convince others of its merits. This appraisal details Bryan's introduction of short-term, aggregate growth cones for setting monetary policy as a means of achieving his longer-term targets and the opposition he faced within the FOMC.

Introducing Aggregate Growth Cones: 1960

The January 12, 1960, FOMC meeting opened with routine reports by staff economists. Guy Noyes, the Board's director of research and statistics, observed that the “customary measures of current economic activity [for example, construction activity, industrial production, and GNP] are all up, and further increases seem as certain for the near term as anything can be” (FOMC 1960, 6). As far as any economist in or out of the Federal Reserve System could predict, this view was correct. (Although not known at the time, real GNP increased at a 7.2 percent rate in the first quarter of 1960.) Robust real output growth seemed assured. Still, some FOMC members were warning that past policies, which left the growth rate of the money supply trending down over the second half of 1959, would exert significant

CHART 1 Trend Growth of Effective Reserves



Source: Reprinted from FOMC (1959, 881)

TABLE 3 Compounded Annual Growth Rates of Price Inflation^a

Base Year	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959 ^b
1947	x	7.6	3.2	2.5	3.8	3.5	3.1	2.7	2.3	2.2	2.3	2.4	2.2
1948	x	x	-1.0	0.0	2.6	2.5	2.2	2.2	1.6	1.5	1.8	1.9	1.7
1949	x	x	x	1.0	4.4	3.7	3.0	2.4	2.0	1.9	2.1	2.2	2.0
1950	x	x	x	x	8.0	5.1	3.6	2.8	2.2	2.1	2.3	2.3	2.1
1951	x	x	x	x	x	2.3	1.5	1.1	0.8	0.9	1.3	1.5	1.4
1952	x	x	x	x	x	x	0.8	0.6	0.3	0.6	1.2	1.4	1.3
1953	x	x	x	x	x	x	x	0.3	0.0	0.5	1.2	1.5	1.4
1954	x	x	x	x	x	x	x	x	-0.3	0.6	1.5	1.8	1.6
1955	x	x	x	x	x	x	x	x	x	1.5	2.5	2.6	2.1
1956	x	x	x	x	x	x	x	x	x	x	3.4	3.1	2.3
1957	x	x	x	x	x	x	x	x	x	x	x	2.7	1.7
1958	x	x	x	x	x	x	x	x	x	x	x	x	0.7
1959	x	x	x	x	x	x	x	x	x	x	x	x	x

^a Percentage changes, base year to terminal year, in consumer price index

^b Ten months

Source: FOMC (1959, 884)

downward pressure on economic growth. If the expansion were to continue, it was argued, action to ease needed to be taken immediately. Even Noyes recognized the potential for a slowing in real output growth as he puzzled over the fact that the “high and growing rate of economic activity [stands] in interesting contrast to wholesale prices and the money supply, both of which are substantially unchanged from year-ago levels” (7).

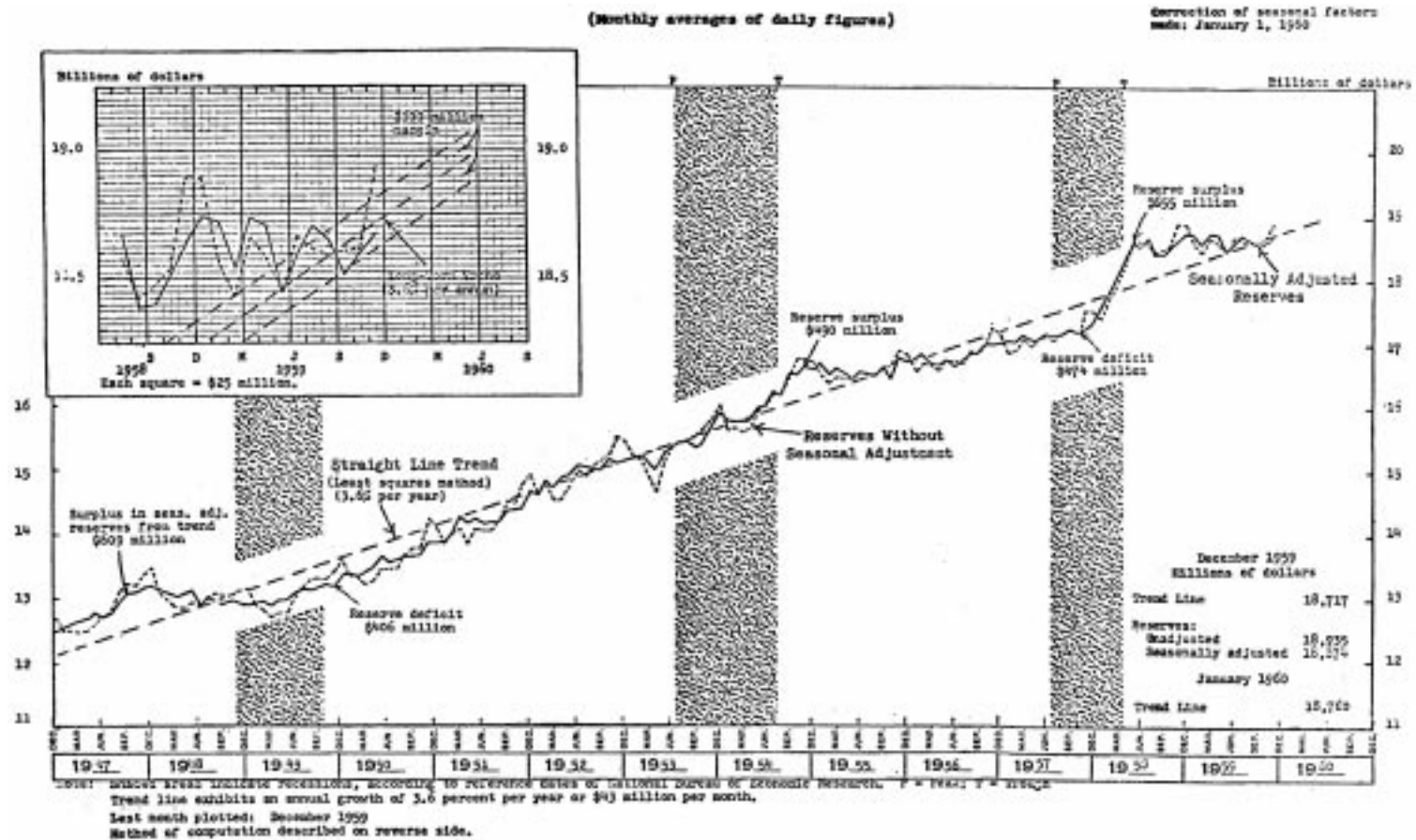
Discussion at this meeting revealed uncertainty among FOMC members over the economic impact of recent policy actions and what direction policy should take. For example, Governor J.L. Robertson thought that “at this particular stage of the business cycle, it [is] incumbent upon the system to maintain a restrictive policy” (FOMC 1960, 30). Johns of St. Louis agreed that continued restraint was needed “to avoid inflationary developments” (16). New York Federal Reserve Bank President Alfred Hayes offered the view that the current level of restraint was appropriate in the face of the apparent economic expansion.

Bryan’s evaluation of the situation separates him from his colleagues, even those who also had pressed for quantitative targets. Bryan presented the FOMC with an updated version of his chart of total effective reserves

around its trend, reproduced here as Chart 2. Chart 2 clearly is more complex than Chart 1. In Chart 2, for example, Bryan details the level of reserves relative to the trend as “surplus” or “deficit.” Chart 2 makes it clear that Bryan’s placement of these notes is not random: deficits appear before recessions (marked off in shaded bars using NBER dating), and surpluses follow. This arrangement likely reflects the impact of the recent findings of other monetary economists on Bryan’s thinking. Another item of interest in Chart 2 is that the inset box showing the behavior of effective reserves since September 1958 illustrates the restrictiveness of policy over all of 1959. This point was the basis for Bryan’s policy position at this meeting. He judged the restrictive policies of 1958–59 as a necessary “mopping-up” operation to get reserves back on trend and dampen any inflationary pressure that might have built up. But enough was enough: the “justifiable mopping-up operation seems to me to be completed” (FOMC 1960, 97). The FOMC, Bryan suggested, must focus on policies to increase total effective reserves or run the risk of inducing another recession.

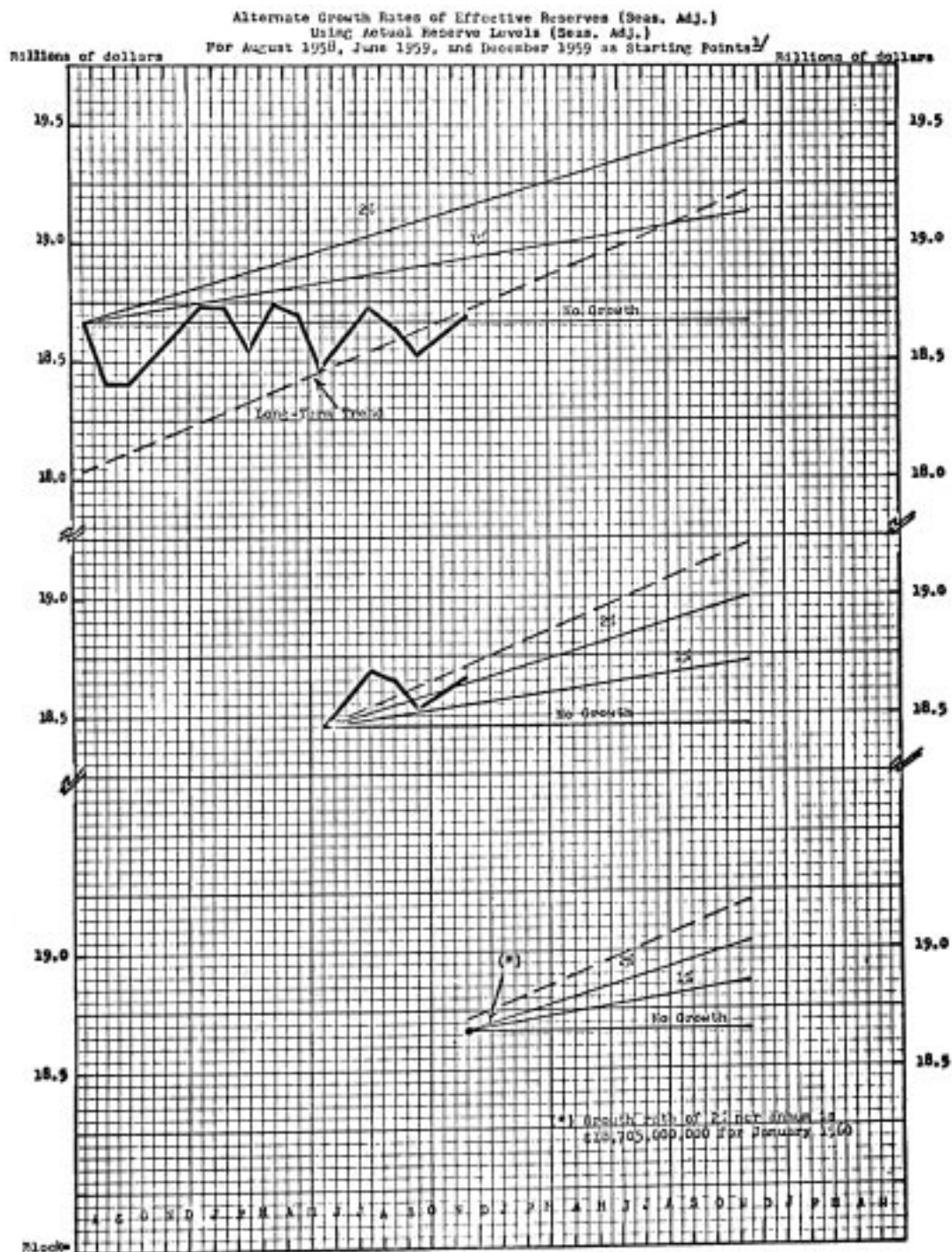
Meigs (1976) argues that even if the FOMC could have agreed on a target rate of money growth, its members would not have known how to accomplish it. Most

CHART 2 Effective Reserves



Source: Reprinted from FOMC (1960, 108)

CHART 3 Short-Run Growth Cones



Source: Reprinted from FOMC (1960, 109)

members of the FOMC believed that the Fed simply did not possess the tools to effectively influence the behavior of the monetary aggregates. At the January 12 meeting Bryan met this challenge by introducing his most novel contribution, short-run growth targets for effective reserves. This innovation squarely addressed the issue of how the FOMC could assess the desk's success in hitting short-run reserve targets. It also marks the first time aggregate growth cones were used in FOMC policy deliberations.

Bryan argued that his reserve growth cones, reproduced as Chart 3, allowed the FOMC to track the behavior of reserves relative to the path stated in the directive. Three different base periods appear in the original version. The choice of August 1958 and June 1959 was based on the fact that in those months the FOMC changed its directive. The August 1958 base period also included the postwar trend growth of reserves as a benchmark. December 1959 simply represented the last full month for which data were available.¹⁵ Bryan recognized that requiring the desk to hit a specific target for reserves would be futile. Thus his proposal was to target total reserves to fall within a range of permissible values, providing the desk with some flexibility “to conditions in the money market as they develop” (FOMC 1960, 97).

These charts and accompanying growth rate tables gave Bryan the quantifiable foundation to argue that the FOMC could in fact assess the success or failure of the desk in meeting its policy objectives as stated in the directive. Bryan's introduction of reserve growth cones served to reinforce the attack on the language and intent of the directive. Writing the directive in terms of a reserve target, the FOMC could easily “avoid qualitative terminology as represented by such indefinable terms as tone, feel, ease, tightness, and so on” (FOMC 1960, 98). The record of this meeting indicates that Chairman Martin responded to Bryan's analysis with little discussion, merely noting that Bryan's suggestion and materials “would be taken under study” (98).

A lengthy discussion about the nature of the directive and operating procedures occurred again at the February 9, 1960, meeting of the FOMC. Bryan used his reserve growth cones to propose a February target range of \$18,535 million to \$18,635 million for total effective reserves. As shown in Table 4, the midpoint of this range put reserves at a level slightly lower than the postwar trend. Bryan felt that this target level provided a needed increase in reserves while maintaining some degree of restraint: policy would provide some monetary stimulus to the economy and avoid any inflationary effect. Even

though the midpoint of Bryan's target indicated some restraint, it was appreciably less than what occurred: actual effective reserves for February was \$18,203 million, more than \$300 million below the lower bound of Bryan's target range.

In Chairman Martin's summary of the discussion at this meeting, he dismissed the usefulness of Bryan's quantitative targets. Martin maintained that such a strategy was too simplistic, a mechanistic approach that would not be wise given the variable nature of the financial markets that must take precedence in policy deliberations and action. Johns defended Bryan's experiment and hoped that “the Committee would not permit proposals such as those advanced . . . to be laughed out of court by attaching a ‘mechanistic’ approach label to them [and that] such proposals were worthy of serious study” (FOMC 1960, 167). The minutes reveal little additional support, however.

Reserve and money growth continued to decline throughout the early part of 1960. A major reason for the decline was the Fed's dilemma in trying to balance internal and external objectives. The problems stemming from the persistent balance-of-payments deficit called for one type of policy (raising interest rates) while mounting evidence of a domestic slowdown in real output growth called for another (easing). In contrast to the ebullient outlook just a month earlier, the staff report on economic conditions at the February 9, 1960, meeting now discounted the expected rebound in real growth following the end of the steel strike in November 1959. Economic indicators suggested a softening in the economy. Chairman Martin, however, believed that an economic downturn was not likely, even though “he put the possibility forward . . . as an intellectual exercise” (FOMC 1960, 149). By March, however, a recession seemed probable to most observers. For example, Arthur Burns, the chairman of the Council of Economic Advisors and a future Federal Reserve Chairman, was advising President Nixon that a recession was likely (Nixon 1962, 124–28, cited in Meigs 1976). Real output, it turned out, declined at an annual rate of 1.6 percent in the second quarter of 1960.

Bryan's introduction of short-run aggregate growth targets—growth cones—stands out as a significant and innovative development in monetary policy analysis.

15. The published record does not indicate whether Bryan preferred one base period over another. The fact that Bryan shows little affinity for selecting one base from which to measure changes in reserves causes base drift. For a discussion of this issue and how it influenced monetary policy in the 1970s, see Broadbuss and Goodfriend (1984).

TABLE 4 Effective Reserves in 1960: Bryan's Target Level, Trend Level, and Actual^a

Month	Bryan Target ^b	Trend	Actual
January	\$18,700	\$18,748	\$18,863
February	18,585	18,790	18,203
March	18,653	18,833	18,027
April	NA	18,876	18,101
May	18,240	18,918	18,236
June	18,419	18,961	18,289
July	18,449	19,004	18,515
August	18,658	19,047	18,499
September	NA	19,089	18,566
October	NA	19,132	18,723
November	18,950	19,175	18,973
December	19,450	19,218	19,270

^aFigures reported are in millions. The “target” values are midpoints of the ranges specified by Bryan. “Trend” values are determined by assuming a constant 3.6 percent increase in effective reserves. “Actual” effective reserves are based on the first reported values for the month listed.

^bBryan did not report a target value for April. Lack of values for September and October reflect his absence from the FOMC during the relevant meetings.

Source: Compiled by the author from information in FOMC 1960, various meetings.

There persisted a view among most of the FOMC members that the present course of policy and procedures was appropriate. This opinion is exemplified by statements of New York Bank President and Vice Chairman Hayes. Hayes was an ardent supporter of the status quo and an outspoken opponent of Bryan's, or any other, aggregates-based strategy. He considered the daily conference calls, the system of reports, and the frequency of information about money market conditions to be “so extensive that each member [of the FOMC] has ample opportunity to inform the manager if he sees any deviation from the committee's instructions.” Arguing that the FOMC “would be giving up a highly advantageous technique, developed over many years, if we were to attempt to couch the instructions in some very exact mathematical terms” (FOMC 1960, 211), Hayes praised the use of net borrowed reserves in conjunction with money market conditions as the best operating guides for policy. Even with evidence of a slowdown in economic activity mounting, Hayes saw no need to alter policy. As he expressed at the March 1 meeting, there simply

was “no evidence to suggest that 1960 will be other than a prosperous year, with an upward trend in the economy through most of the year” (210). Unfortunately, Hayes's outlook was shared by the chairman and a majority of the FOMC members.

Reserves in both February and March fell well below the midpoints of Bryan's target levels and below the postwar trend (see Table 4). This development led Governor A.L. Mills to warn the FOMC at the April 12 meeting that, in keeping with Bryan's views, the decline in reserves already was a serious threat to economic growth which, “if not arrested, would in due course lead to serious financial and economic consequences” (FOMC 1960, 347). Why did the FOMC allow the decline in reserves to persist? Bryan focused blame on the committee's continued reliance on free reserves and money market conditions as operating guides. He believed that these measures gave deceptive signals about the degree of ease or restraint of policy actions. If the FOMC continued down this path, Bryan foresaw “trouble ahead that would be hard to explain” (354).

Martin's consensus view at the April 12 meeting reflects some movement to ease. He stated that the FOMC "should move in the direction of slightly easing the picture as far as reserves were concerned, but with great care on the part of the desk not to do this in an *overt* way" (FOMC 1960, 363; emphasis added). This concession appears as a slightly altered directive from the May 24 meeting: Clause (b) was changed from calling for the desk to "restrain inflationary credit expansion in order to foster sustainable economic growth and expanding employment opportunities" to fostering "sustainable growth in economic activity and employment by providing reserves needed for moderate bank credit expansion" (488). Chairman Martin made it clear, however, that the desk could move to increase reserves only if it did not cause a pronounced change in short-term interest rates. This position again reflects the clash between internal and external policy objectives. While easing reserves would help alleviate the slowing in domestic economic growth, the attendant decline in rates could exacerbate the external imbalances that were becoming politically intolerable.

Table 4 shows that reserves increased slightly following this meeting. Bryan's opinion throughout the summer of 1960 was that policy should aim at increasing the level of effective reserves at a faster pace in order to put them back to the December 1959 level. By June it was clear to all that the economy was in a recession. Bryan urged the FOMC not to "push the panic button" but to undertake immediate actions to reverse the disastrous effects of previous policy. Putting domestic concerns ahead of any external problems, Bryan asserted at the July 6 meeting that it was important to increase effective reserves at a rate that, after seasonal adjustments, would meet the secular needs of the economy without raising inflation. Such a policy "is necessary because of the economic situation and because of the lagged effects of monetary policy" (FOMC 1960, 564). He also noted that his approach would improve economic growth and not "drive short-rates to the ridiculous and obviously unsustainable low levels that have characterized other easing cycles of monetary policy" (565).

Bryan's strategy for getting reserves back on track was based on two key considerations. One was the possible arousal of inflationary expectations, an overarching factor in all of Bryan's policy prescriptions. The other factor was the negative repercussion on the money market if the Fed were to increase reserves immediately and massively.¹⁶ D.C. Johns, however, argued that interest rate movements were of secondary importance. At the July 6 meeting Johns questioned "the System's taking a

position of deliberately dampening the downward adjustment of market rates of interest in a period of slack economic growth" (FOMC 1960, 567). Internal and external objectives again gave rise to divergent policy choices.

In light of the deteriorating domestic economy, the FOMC directed the desk to undertake operations that would achieve some ease in reserves by summer's end. Even though the FOMC had decided in favor of easing the reserve position of the banking system, total effective reserves in August and September of 1960 still remained far below their December 1959 level. At the September 13 meeting Bryan pointed out that the August level of effective reserves was lower than in August of the previous year despite the committee's decision to ease. His view was that "the economic situation was deteriorating" and that "[i]n these circumstances, he disagreed with the view of Mr. Hayes that no further monetary ease was required or would be appropriate" (FOMC 1960, 709). The failure of the desk to achieve the desired growth in reserves once again demonstrated the temerity of using free reserves together with money market conditions as operating guides.

Chairman Martin maintained throughout the summer and fall of 1960 that tone and feel was the best policy guide, especially in times of economic uncertainty. At the September 13 meeting he stated that "the System must not let itself be persuaded that if it had expanded the money supply exactly the right amount on a statistical basis, there would not have been any recessions . . . [I]f it got to that point, the only thing necessary would be to keep the levers moving ad infinitum" (FOMC 1960, 736). At the October 4 meeting, tone and feel prevailed over the behavior of any aggregate measure in setting policy. As Robert Rouse, the manager of the open market account, reported, "[A]s the Committee has instructed, we have been operating primarily on the feel of the market rather than on the basis of reserve statistics" (745).

Contrary to the majority opinion of the committee, Bryan advocated a policy of increasing the supply of adjusted reserves in order to provide some monetary stimulation to an economy that was in recession. (Real output decreased at a 0.4 percent rate in the third quarter and at a 3.1 percent rate in the fourth quarter.) As shown in Table 4, Bryan's short-run targets for reserves in November and December 1960 would have put reserves slightly above their postwar trend by the end of 1960. Getting effective reserves back on trend and countering the disastrous policy actions taken during the past year became the principal policy objective for Bryan. The majority of the FOMC took a very different view, however. Chairman Martin, for example, suggested that any overly

16. The notion that any attempt to make up the shortfall in one action could disrupt the market in undesirable ways was used during the 1979–82 period of monetary aggregate targeting. During that period, intermeeting deviations of the aggregates from targets were reduced gradually in order to prevent undue gyrations in interest rates. For an appraisal of policy actions during the 1979–82 period, see, among others, Hetzel (1982) and Poole (1982).

expansionary monetary policy, an umbrella under which he placed Bryan's suggestions, would be imprudent. In fact, Martin "could not get very pessimistic about the domestic picture . . . [and] continued to feel that the biggest shadow was cast by the balance-of-payments problem" (FOMC 1960, 834). Policy, Martin averred, "would have to be careful that it did not feed fuel to the fires of pessimism by appearing to embark on a cheap money policy" (834). In contrast to Bryan's warnings, at the December 15 meeting Martin voiced the opinion that there had been too much ease recently. He felt that such an easy money policy would do little to affect domestic economic activity and would only exacerbate the critical problem now confronting monetary policy: the persistent balance-of-payments deficit.¹⁷

Bryan's attempt to convince the FOMC to adopt his short-run reserve growth targets effectively ended with this meeting. Although he never abandoned his conviction that the behavior of monetary aggregates was vital in setting monetary policy, the charts and approach he favored in 1960 would not reappear during his time left on the FOMC.¹⁸ Bryan's experiment with short-term aggregate growth cones swayed a few members of the FOMC. Statements by Johns suggest that he came to appreciate the economic impact that short-run fluctuations in money growth could have, reflecting Bryan's influence and the research of his own staff. Meigs (1976, 450) suggests that Balderston and Mills also were sympathetic. In the final analysis, however, the majority of the FOMC remained unconvinced, relying instead on the dubious tradition of using free reserves and market conditions as operating guides.

Conclusion

Bryan's pioneering development and use of aggregate growth targets as a policy alternative to free reserves and money market conditions provides an instructive case study in the early development of postwar U.S. monetary policy. The minutes of the FOMC meetings reveal that money market conditions were of uppermost concern for policy. Bryan's proposals to replace money market activity as the policy operating

guide faced a hostile reception in meetings of the FOMC, just as proposals to use monetary growth targets would a decade later. His campaign to change policy challenged not only the convention of maintaining orderly domestic financial markets but also the politically pressing charge to maintain external balance.

Bryan's aggregate-based approach to monetary policy was a dramatic departure for a member of the FOMC at the time. He took new and controversial research results coming out of monetary economics and tried to implement them. Bryan's contributions went beyond merely adopting others' ideas, however. His introduction of short-run aggregate growth targets—growth cones—stands out as a significant and innovative development in monetary policy analysis. Even though his targets and procedures were not adopted by the FOMC at the time, his strategy for monetary policy would resurface as the inflation produced by the policies against which Bryan fought became unacceptable.

The role of monetary aggregates in the formation of policy is as limited today as it was forty years ago. Interest rates remain the primary instrument by which the Fed carries out policy. What then is Bryan's legacy? On an individual basis, Bryan's singular contribution is the development and use of monetary aggregate growth targets—the cones. Although recent events have once again pushed the money supply to secondary importance in its discussions, each year the FOMC must state its annual targets for the aggregates. And discussions at the FOMC during the past year indicate that some members, as in Bryan's time, remain concerned about the behavior of the money supply and its potential effects on economic activity and inflation.

Bryan's contribution also should be considered within a larger perspective. Bryan, like some other bank presidents, pursued a research agenda that resulted in policy prescriptions quite different from that of the Board.¹⁹ His willingness to advocate a controversial view within the FOMC promoted an airing of diverse views and concerns over monetary policy. In his own way, Bryan helped to foster an environment in which alternative theories and approaches to economic analysis could be used for improving monetary policy.

17. *The FOMC turned its attention increasingly toward the external balance-of-payments problem as the 1960s unfolded. Bryan believed that monetary policy was not responsible for the problem and could do little to correct it. As he stated at the October 24, 1961, meeting, "for the System to try to correct the balance of payments situation by monetary manipulation [of the Treasury bill rate] struck him as not only absurd but dangerous"* (FOMC 1961, 892). *For a discussion of how these external events influenced monetary policy during the early 1960s, see, among others, Hetzel (1996), Meltzer (1991), and Schwartz (1997).*

18. *Bryan's distrust of free reserves deepened over time. By April 1963, for instance, he recognized that the "maintenance of a constant level of free reserves would permit indefinite expansion of the money supply and the financing of inflation"* (FOMC 1963, 343). *In September 1963 Bryan observed that the "free reserve figure might be a rather dangerous one to use for target purposes, since maintaining free reserves at any selected level would mean supplying all of the reserves demanded"* (839). *By January 7, 1964, he admonished the committee that policy "had been injecting reserves into the banking system at a rate . . . greater than sustainable in the long run without inflation"* (FOMC 1964, 46). *The inflationary record of the late 1960s proved his warning to be all too correct.*

19. *For a related discussion of this issue, see Wheelock (1998).*

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