1967


Edward Burford Selby Jr
Louisiana State University and Agricultural & Mechanical College

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COMMITTEE TO ECONOMIC CHANGES 1951-1960.

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RESPONSE OF THE FEDERAL OPEN MARKET COMMITTEE TO

ECONOMIC CHANGES 1951-1960

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Economics

by

Edward Burford Selby, Jr.
B.S., Clemson University, 1962
M.B.A., University of South Carolina, 1963
May, 1967
I would like to express my deep appreciation to my major professor, Dr. Thomas R. Beard, for his many helpful suggestions and guidance in the preparation of this study. Also, Dr. William Stober was especially helpful in assisting me to narrow my dissertation topic. The other members of my committee, Dr. Lee J. Melton, Dr. Leon C. Megginson, and Dr. William F. Campbell, are to be commended for their pertinent comments and encouragement. In addition, I wish to express my gratitude to Dr. Frank Morgan, Jr., Professor of English at Northeast Louisiana State College, for his suggestions. Finally, I wish to thank my wife for her patience and assistance.
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ABSTRACT

One agency of the Federal Government holds one-eighth of the national debt, purchases and sells about a billion dollars worth of government securities monthly, and exerts a significant influence over the financial conditions of this country. Yet, the decision-making process of this agency has remained at least a partial mystery to both laymen and professional economists alike. This study is devoted to examining the guides which one portion of the Federal Reserve System—the Federal Open Market Committee—uses in decision-making as well as to examining the Committee's lag in response to economic change.

Previous analyses of the Federal Open Market Committee have had to rely on the *Annual Report of the Board of Governors of the Federal Reserve System*, testimony of the Committee members before Congressional committees, and other public statements by System officials. The publication of the minutes of the Federal Open Market Committee has made it possible for outside scholars to examine previously inaccessible segments of its decision-making process. This study draws extensively from those minutes.

At the outset it is important to distinguish between the goals, indicators, and targets which the Committee recognizes. The goals of the Federal Reserve System are the broad objectives which the System is attempting to achieve or promote, such as price stability, a high level of employment, economic growth, and a reasonable balance in our international payments. Economic indicators reveal changes in the economic situation. Variables which the System attempts to alter or to maintain
at some particular level are called targets.

This study also considers the "inside" lag of monetary policy. The inside lag is composed of (1) a recognition lag--the time between a need for a change and the recognition of that need; (2) a decision lag--the time it takes to decide on a course of action; and (3) an action lag--the time necessary to put the course of action into operation.

Chapter II of this study first surveys the general procedure followed in Federal Open Market Committee meetings. Next, it examines the various economic indicators used by the Committee as an indication of output, employment, and price levels, as well as the condition of financial markets. Chapter III is devoted to an analysis of the targets used by the Committee in policy action. Specifically, such variables as interest rates, free reserves, total reserves, the money supply, and tone and feel of the market are considered.

Chapter IV concerns itself with monetary lags. The chapter begins with an analysis of problems involved in lag determination. Next, evidence of the inside lag during upturns and downturns in the period 1951-1960 is considered. The minutes of the Federal Open Market Committee reveal that the Committee usually responded to the changes in the economic situation within three months. Finally, the evidence of lags found in this study is compared with the length of lags reported by other studies. Chapter V is devoted to answering miscellaneous questions raised by the study.
CHAPTER I

INTRODUCTION

One agency of the Federal Government holds one-eighth of the national debt, purchases and sells about a billion dollars worth of government securities monthly, and exerts a significant influence over the financial conditions of this country. Yet, the decision-making process of this agency has remained at least a partial mystery to both laymen and professional economists alike. This study is devoted to examining the guides which one portion of the Federal Reserve System—the Federal Open Market Committee (often identified in this study as FOMC)—uses in decision-making as well as to examining the Committee’s lag in response to economic change.

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1 Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, LII (June, 1966), 862.
2 Ibid., p. 839.
3 The extent of this influence is, of course, a matter of considerable controversy. Some economists, such as Milton Friedman, feel that changes in monetary policy result in significant changes in economic activity. Other economists, such as Abba Lerner, feel monetary policy to be of less importance. Perhaps the majority view is best expressed by Paul A. Samuelson: "Contrary to the opinions of many contemporary economists (and to some of my earlier views), I believe that monetary and credit policies have great potency to stimulate, stabilize, or depress a modern economy." See his "Reflections on Central Banking," The National Banking Review, I (September, 1963), 15-28.
4 "The mysterious world of the Fed is really known only to its employees and its alumni—the insiders, as it were. No amount of examination, no amount of Congressional testimony, no amount of study by scholars temporarily connected with the System can reveal the inner workings of Fed mentality. Only years of participation . . . provide
Previous analyses of the Federal Open Market Committee have had to rely on the *Annual Report of the Board of Governors of the Federal Reserve System*, testimony of the Committee members before Congressional committees, and other public statements by System officials. The publication of the minutes of the Federal Open Market Committee has made it possible for outside scholars to examine previously inaccessible segments of its decision-making process. This study draws extensively from those minutes.

At the outset it is important to distinguish between the goals, indicators, and targets which the Committee recognizes. The goals of the Federal Reserve System are the broad objectives which the System is attempting to achieve or promote, such as price stability, a high level of employment, economic growth, and a reasonable balance in our international payments. Economic indicators reveal changes in the economic situation. The current market interest rates are an example of a primary indicator used by the Committee. In addition to indicators, the sense of System motivation so essential to an interpretation of Fed dogma . . ." from Delbert C. Hastings and Ross M. Robertson, "The Mysterious World of the Fed," *Business Horizons*, V (Spring, 1962), 98.


the Committee attempts to alter the magnitude of some economic variables or to set them at some particular level. These variables are called targets. The level of free reserves is an example of such a target. The reader must be warned, however, that the FOMC members in referring to the Committee's target often call it a guide. This usage seems to occur since the Committee's target serves to "guide" the Account Manager in his operations. This study utilizes the above definitions of goals, indicators, and targets. The Committee members' terminology is altered where necessary to maintain consistency. The classification of an economic variable as either a goal, indicator, or target does not mutually exclude it from appearing in the other classifications. Indeed, this study shows that some economic variables function in more than one capacity.

Contemporary economic theory seems to recognize two general types of lags. First, there is a lag between the need for a change in economic policy and the initiation of a new course of action by proper authorities. This is termed the "inside lag." Second, there is a lag between the time authorities take action and the time when that action exerts an influence on the economy. This is termed the "outside lag." Each of these lags may be further subdivided. The inside lag is composed of (1) a recognition lag—the time between a need for a change and the recognition of that need; (2) a decision lag—the time it takes to decide on a course of action; and (3) an action lag—the time necessary to put the course of action into operation. Once action by monetary authorities has been taken, it may be a while before conditions
are changed in the banking system; this is one part of the outside lag. The remainder of the outside lag is the period from the time the banking system is faced with changed conditions to the time when the economy begins to respond.  

Chapter II of this study first surveys the general procedure followed in Federal Open Market Committee meetings. Next, it examines the various economic indicators used by the Committee as an indication of output, employment, and price levels, as well as the condition of financial markets. Chapter III is devoted to an analysis of the targets used by the Committee in policy action. Specifically, such variables as interest rates, free reserves, total reserves, the money supply, and tone and feel of the market are considered.

In 1948 Milton Friedman recognized three types of lags: "(1) the lag between the need for action and the recognition of this need; (2) the lag between recognition of the need for action and the taking of action; and (3) the lag between the action and its effects." Milton Friedman, "A Monetary and Fiscal Framework for Economic Stability," The American Economic Review, XXXVIII (June, 1948), 255. The Ando et al. study recognizes the inside lag as defined above, but their outside lag includes only the lag between the change in banking conditions and the change in real output. However, an unnamed intermediate lag which falls between the inside and outside lags is also considered. This author has included this intermediate lag as the first part of his outside lag as defined in the text above. See Albert Ando, et al., "Lags in Fiscal and Monetary Policy," Stabilization Policies: A Series of Research Studies Prepared for the Commission on Money and Credit (Englewood Cliffs: Prentice-Hall, Inc., 1963), p. 3.

In a study by Johnson and Winder the inside lag is said to consist of a recognition lag, a decision lag, and an action lag. The outside lag is defined as "... the lag between the taking of action and the realization of its effects on the economy..." See Harry G. Johnson and John W. L. Winder, Lags in the Effects of Monetary Policy in Canada, Working Paper Prepared for the Royal Commission on Banking and Finance (Ottawa: Queen's Printer, 1962), p. 6. Hence, this author's description of the lags is a combination of the elements provided by the above-noted articles.
Chapter IV concerns itself with monetary lags. The chapter begins with an analysis of the problems involved in lag determination, i.e., the difficulties involved in pinpointing lags. Next, evidence of the inside lag during upturns and downturns in the period 1951-1960 is considered. Finally, the evidence of lags found in this study is compared with the length of lags reported by other studies. Chapter V is devoted to a summary of evidence presented as well as the conclusions which have been drawn.
CHAPTER II

FOMC MEETING PROCEDURE AND ECONOMIC INDICATORS USED BY THE COMMITTEE

Chapter II first briefly surveys the history of the System's Open Market Committee. Second, it describes the general procedure followed in the FOMC meetings. This includes the approval of standard reports, the presentation of economic reports by the staff, the "go-around," the consensus, and the approval of the directive.\(^1\) Third, this chapter examines the various economic indicators used by the Committee as an indication of output, employment, and price levels as well as the condition of financial markets. Both staff reports and committee member reports are considered.

I. DEVELOPMENT OF THE FOMC

The Federal Open Market Committee has been quite malleable in its development. Open market activities evolved from a highly decentralized, profit-oriented beginning to the present-day centralized structure with economic stabilization as a prime goal. The original Federal Reserve Act of 1913 gave Reserve banks the authority to purchase or sell government securities; however, it failed to provide for a committee to coordinate these activities. The discount mechanism was regarded as the

\(^1\)The term "go-around" refers to the sequential discussion which takes place in the FOMC meetings in which the Committee members and other Federal Reserve Bank Presidents in attendance have an opportunity to express their opinion as to the present state of the economy as well as to what action, if any, should be taken.
main tool of the Federal Reserve System. With deficit financing in World War I, the national debt rapidly increased from less than one billion dollars to over twenty-five billion dollars, which provided a basis for increased open market activity. In 1922 the Federal Reserve Banks purchased approximately 400 million dollars of government securities in order to increase their earnings. The market disturbances which followed these uncoordinated purchases resulted in the formation of an ad hoc committee composed of five presidents of eastern Reserve banks to coordinate open market operations. It was now fully realized that open market operations resulted in a significant change in member bank reserves.

In 1923 the Federal Reserve Board acknowledged the five presidents by naming their organization the Open Market Investment Committee. The Committee was expanded in 1930 to include representatives from each of the Federal Reserve Banks. In addition, it was renamed the Open Market Policy Conference and an Executive Committee was established to carry

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out Conference policies. Congress, in 1933, recognized the Committee by pressing the existing arrangements into law. As authority for the execution of open market operations was still not centralized, the individual Reserve banks retained the right to refuse to participate in open market operations recommended by the Committee. The Banking Act of 1935 rectified this error by forbidding Reserve banks to participate in open market operations except as directed by the Committee, now called the Federal Open Market Committee. Also, the act of 1935 amended the organization of the Committee. The act placed the seven members of the Board of Governors on the FOMC along with five representatives from the Reserve banks. The same organization of the Committee stands today. The representatives must be presidents or first vice-presidents of Reserve banks. These members are elected annually by the boards of directors of the Reserve banks, one from each of the following groups: the Federal Reserve Bank of New York; the Federal Reserve Banks of Boston, Philadelphia, and Richmond; the Federal Reserve Banks of Cleveland and Chicago; the Federal Reserve Banks of Atlanta, Dallas, and


7Ibid., pp. 1990-1994.


St. Louis; and the Federal Reserve Banks of Minneapolis, Kansas City, and San Francisco. In practice, the presidents of the Federal Reserve Banks in the last four groups serve on a rotating basis. In addition all of the presidents attend the FOMC meetings and participate in the discussion. Of course, only the official members may cast votes. 10

The Banking Act of 1935 also made provision for an Executive Committee. Until its abandonment in 1955, the Executive Committee, which consisted of three members of the Board of Governors and two Federal Reserve Bank Presidents, usually met each two weeks. It issued directives to the Federal Reserve Bank of New York in an attempt to carry out the economic policy directive from the full Federal Open Market Committee which then met only four times a year. Following the abandonment of the Executive Committee the FOMC began meeting each three weeks. 11

For the purposes of this study, with but limited exceptions, it is not necessary to draw a clear distinction between the actions of the Executive Committee and those of the FOMC. While the Executive Committee was expected to confine its actions to within the directive from the FOMC, its closeness to the economic situation and its frequency of meeting led to more than this. The FOMC, meeting but four times a year, necessarily issued rather broadly stated directives. The Executive Committee was able, to a certain degree, to make minor shifts


in policy without exceeding the limitations of the directive. This sort of shifting led the FOMC members to question just which Committee was actually making policy. Shortly thereafter the Executive Committee was abandoned.

II. THE CONDUCT OF FOMC MEETINGS

The Federal Open Market Committee, during the years 1951-1960, followed essentially the same format in the conduct of its meetings. The major elements of the meetings are as follows:

I. Approval of Standard Reports
   A. Approval of the Minutes
   B. Approval of Executive Committee Actions
   C. Open Market Account Activities
      1. A brief statement by the account manager
      2. Approval of account transactions by Committee members

II. Economic Reports by the Staff
   A. General Economic Activity Report
   B. Credit Market Report
   C. International Economic Situation Report

III. Economic Discussion by Committee Members and Visiting Presidents
   A. Discussion by the President of the New York Reserve Bank

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12 The validity of this outline cannot be confirmed by reference to a single page or date in the minutes of the Committee. Rather, the pattern of the Committee meetings takes form only after reading through the minutes of several of the meetings. Shifts in the format of the meetings can be discerned only by sampling the minutes of various meeting dates or by reading through the minutes in chronological sequence.
B. The "Go-around"

C. Consensus of Members Stated by the Chairman

D. Discussion and Resolution

IV. Consideration of the Directive
   A. Discussion of the Wording
   B. Approval of the Directive

V. Other Business
   A. Initiation of Discussion by the Chairman or Members
   B. Discussion by Members
   C. Disposal of the Matter.

The approval of standard reports did not change significantly during the period of observation. Generally, the meetings would open with the approval of the minutes. Members of the Committee were normally sent copies prior to the meeting; therefore, an oral reading of the minutes by the secretary was not necessary. If the minutes had not been distributed prior to the meeting, then approval was postponed until the following meeting.\(^{13}\) Only rarely was there a question concerning the wording of the minutes.\(^ {14}\)

The approval of Executive Committee actions was usually without comment. One finds, however, that during critical periods, i.e., periods of economic change, or policy change, the Executive Committee

\(^{13}\) Minutes of the Federal Open Market Committee, 1936-60 and of Its Executive Committee, 1936-55. Roll No. 6, Microcopy No. 591, Record Group 82 (Washington, D. C.: The National Archives, 1965), f. 244. Henceforth, this publication will be referred to as Minutes, with the roll and frame number (f.) or frame numbers (ff.) following.

\(^{14}\) For examples of when the minutes were questioned, see Minutes, Roll 6, ff. 284-285, and Roll 9, ff. 271-272.
actions were the subject of some discussion. On January 11, 1955, Chairman Martin called a Federal Open Market Committee meeting because he felt there was a thin line between what the Executive Committee should handle and what should be done by the FOMC, especially when important economic changes were occurring. Heretofore, the Executive Committee was free to conduct open market operations within the limitations set by the FOMC in its directive to the Executive Committee. The Executive Committee was not to initiate an autonomous shift in policy. In the FOMC meeting of March 3, 1955, it was decided to maintain about the same degree of restraint until the next meeting, but it was not known whether additional reserves would have to be supplied in case reserves tightened excessively. Delos C. Johns, President of the Federal Reserve Bank of St. Louis, raised the question as to

... who would be making monetary policy if a directive, worded in the general terms stated, were given to the executive committee with the suggestion that the executive committee determine the level of free reserves on the basis of its appraisal of the needs of the economy.\(^\text{15}\)

In further discussion

Chairman Martin stated that he had not intended to bring the question up at this point but that he had contemplated suggesting later in this meeting that the full Committee consider whether the executive committee should be abolished.\(^\text{16}\)

At the June 22, 1955, meeting of the FOMC, Chairman Martin again brought up the subject of abolishing the Executive Committee. Martin felt it desirable for the FOMC to "... take the responsibility for

\(^{15}\)ibid., Roll 9, ff. 108-109.

\(^{16}\)ibid.
decisions not only of policy but also as to open market operations." ¹⁷
Chairman Martin explained that meetings of the FOMC would be held every three weeks, instead of each two weeks as for the Executive Committee, and that all the presidents of the Federal Reserve Banks would be invited. In addition,

Chairman Martin stated that he felt it important for all members of the Board and all Reserve Bank Presidents to be more abreast than they have been at times in the past of developments which might affect policy. This was the objective and purpose of his suggestion for abolishing the executive committee. There were cases in which Congressmen and others felt that "islands of responsibility" developed in the System, not only at the New York Bank but at other places. ¹⁸

The following statement by Allan Sproul, President of the Federal Reserve Bank of New York, exposes further ramifications:

I am overlooking—or at least disregarding—the reiterated charge of Congressman Patman that Congress gave this great power of directing open market operations of the Federal Reserve Banks to twelve men, the twelve men gave it to five, and the five gave it to one, and it ended up in the hands of Wall Street. I continue to cling to the belief that we shouldn't change our organizational structure in order to try to accommodate ourselves to the attacks of the Congressman. ¹⁹

President Sproul went on to say that he favored continuing the Committee in order to have a properly constituted body which could meet on short notice to refine, not to make, policy, on a temporary basis.

Governor A. L. Mills, Jr., on the other hand, was in favor of abolishing the Committee as a de facto procedure but not de jure. Thus, ¹⁷

¹⁷ Ibid., f. 322.
¹⁸ Ibid., f. 335.
¹⁹ Ibid., f. 326.
experimentation could take place. The minutes show that all of the Committee members and Federal Reserve Bank Presidents favored the change except for Sproul and Mills; they accepted it with reluctance. Malcolm Bryan, President of the Federal Reserve Bank of Atlanta, preferred not to express an opinion. The 1955 Annual Report of the Board of Governors carried the following very brief obituary notice:

Executive Committee discontinued. The Federal Open Market Committee, comprising the seven members of the Board of Governors and five of the presidents of the Federal Reserve Banks, amended its regulation relating to open market operations of Federal Reserve Banks, effective June 22, 1955, so as to discontinue its executive committee, which was a standing committee consisting of three members of the Board and two Reserve Bank presidents. The executive committee, which was established following the Banking Act of 1935, was discontinued in view of the availability of more swift and certain travel facilities that facilitate the attendance of the members of the Federal Open Market Committee at regular meetings and make it possible to gather members for special meetings on short notice when necessary.

Of course, the reports on Executive Committee action disappeared with its abolition.

The Manager of the Open Market Account generally sent a detailed summary of account activities to the Committee members prior to each meeting. He would then report in the meeting on the most recent market activities. Occasionally, clarification of open market transactions was asked for by the members. Also, the manager was quite often asked his opinion concerning the state of the market. Some outside economists

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20 Ibid., f. 337.
21 Ibid., ff. 340-341.
maintain that the Account Manager, owing to the lack of agreement among Committee members as to appropriate targets, is relatively free to pursue short-run targets as he wishes and thus cannot be reprimanded for his actions.23 Robert G. Rouse, the Account Manager during the period of this study, has stated that he was never blamed for failing to follow Committee instructions.24 Even on those rare occasions when the appropriateness of the actions of the Account Manager were questioned, his integrity was not. Certainly the most frequent complainant of the handling of the Open Market Account, if not the only objector from 1951-1960, was Governor J. L. Robertson. However, even Robertson states, ". . . Without in any way challenging the motives or intentions of the Manager of the Account, it is my belief that what was done, was done in the wrong way."25

Robertson also attacked the practice of approving, ratifying, and confirming account transactions. To Robertson, "approval" of account transactions implied approving all that the Account Manager had done. He preferred only a ratification. Chairman Martin said that

. . . he had not considered that "approval" of the transactions necessarily carried an indication of approval of the judgment used by the Manager of the System Open Market Account in carrying out the committee's directives; rather, it indicated an acceptance and ratification of the actions as being within the directives issued. He could visualize

23Karl Brunner and Allan H. Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, Subcommittee on Domestic Finance, House Committee on Banking and Currency, 88th Congress, 2nd Session, May 1964, p. 34.

24Ibid.

25Minutes, Roll 16, f. 361. For his other objections, see Ibid., Roll 8, ff. 160-161, Roll 11, ff. 81 and 180.
the committee disagreeing with the judgment of the Manager of the System Account and yet feeling that it wished to ratify the actions as having been taken in an effort to carry out the policy of the committee. Chairman Martin went on to suggest that the minutes of this meeting record the views expressed, namely, that the word "approval" in the actions ratifying open market transactions was not intended necessarily to indicate agreement with previously established policies of the Committee or with actions and judgments of the Manager of the System Account in undertaking to carry out such policies but was intended to show agreement that the actions taken by the Manager had been in accord and within the scope of the committee's policies and directives.26

The Committee members unanimously agreed, including Robertson, that Chairman Martin's statement accurately reflected their own views. They also unanimously agreed to continue the same form of action.27

Nevertheless, at the November 22, 1960, meeting of the FOMC, Robertson said,

... I find myself in a position where although I must vote to ratify and confirm the transactions of the Account during the past four weeks, because they have taken place and nothing can now be done about it, I cannot "approve" them.28

At this meeting the Account Operations were then approved, ratified, and confirmed with Robertson voting only to ratify and confirm.29

Usually economic reports by the staff followed the approval of the standard reports. It is difficult to discern the content of some of the earlier economic reports owing to the lack of complete Committee minutes.

26 Ibid., Roll 8, f. 333.
27 Ibid.
28 Ibid., Roll 16, f. 364.
29 Ibid.
Often the economic reports were only briefly mentioned with no attempt being made to summarize the presentation. This deficiency diminishes as the years progress. The minutes toward the end of the period, 1960, appear to be more complete in their elucidation of the economic reports. Generally during the entire period Ralph A. Young, staff economist, presented a report on the real factors in the economy. Woodlief Thomas, staff economist, then usually followed with a report on credit conditions. In the late 1950's when the international imbalance of payments problem appeared to be acute, a third economic report, which concerned the imbalance problem, was quite often entered in the meeting.30

Following the staff economic reports, unless the Chairman wished the Committee to consider some other topic, the President of the Federal Reserve Bank of New York usually presented his views and recommendations concerning the present economic situation. The other members of the Committee, as well as the Federal Reserve Bank presidents who were not presently members of the committee, then expressed their views and recommendations in the so-called "go-around." Informal debates on areas of disagreement usually did not begin until everyone had a chance to express his views.31

30Starting at the May 5, 1959, meeting of the FOMC, and quite frequently thereafter, Arthur W. Marget, Associate Economist, presented an economic report on the balance of payments situation. Ibid., Roll 14, ff. 311-312.

31In addition to the Minutes, several other sources may be of value to the student of Committee procedure. For example, see Hastings and Robertson, "The Mysterious World of the Fed," Business Horizons, V (Spring, 1962), 97-104; Peter M. Keir, "The Open Market Policy Process," Federal Reserve Bulletin, XLIX (October, 1963), 1359-1370; Board of Governors, The Federal Reserve System, Chapter XV; or Paul Meek, Open Market Operations (New York: Federal Reserve Bank of New York, 1964), p. 25.
At this juncture it is necessary to make a distinction between the reaching of a "consensus" as to what the Committee's future economic policy should be and altering or retaining the "policy directive" which is given either to the Executive Committee (prior to its abandonment), or to the New York Bank. Most of the time, after the "go-around," debate on the proper economic policy did not occur. The Chairman would simply state what he felt was the consensus of the Committee. Usually none of the members disagreed with his statement. This consensus statement served to guide the Account Manager in attempting to carry out the Committee's wishes. Separately and distinctly from the consensus, the Committee would vote on a formal directive. During the period under study voting on the consensus was a rare act, found in the minutes only for the year 1959.

The institution of voting on the consensus seems to have occurred after Governor Mills stated that he felt that the Record of Policy Action did not truly reflect the intention or action of the Committee. Nor did Mills believe that the statement of the consensus and lack of objection to it constituted a vote. Mills also felt that it was impossible to vote on the types of problems that the Committee faced. Only a general area of agreement could be reached. At the next meeting of the FOMC,

The Chairman . . . referred to a memorandum . . . which stated that in order to help tighten up the facts of votes on policy decisions in open market meetings, he proposed to take the following formal steps at each meeting after the go-around. First, the Chair, as at present would guide the discussion to a statement of the

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32Minutes, Roll 14, ff. 659-660.
consensus. Second, the Chair would call for a record vote on the policy indicated by the consensus. Third, the Chair would call for a vote on the directive to be issued to the Agent Bank formally instructing that Bank to execute transactions for the Open Market Account in accordance with the wording of the directive. While the substance of the suggested procedure did not differ from what had been understood to be the significance of the vote on the directive over the years, it was intended to make a more complete record and resolve any question whatever as to whether the Committee actually voted on the policy decisions as well as on the directive.33

Chairman Martin went on to say that after the consensus was stated,

". . . the absence of objection . . . would be regarded as the consensus of majority position."34

At the October 13, 1959, and November 4, 1959, meetings of the FOMC, a formal vote on the consensus, in addition to the directive, was taken. In discussion on November 4, several members of the Committee indicated they preferred the old procedure. The practice of formally voting on the consensus was evidently dropped because a vote was not taken at the following meeting.

The consideration of the directive almost always followed the reaching of an understanding. A recent study by William P. Yohe has concentrated on the record of voting on the policy directive in an attempt to discern some of the behavior patterns and other characteristics of the FOMC.35 It is interesting to note that the consensus sometimes called for a slight shift in policy action, but the members of

33Ibid., f. 700.
34Ibid., f. 701.
35"Chairman Martin commented that there had been only one suggestion for a change in the directive during today's discussion. When it came to the level of net borrowed reserves, a tally just handed to him by the
the Committee tacitly decided not to have this shift officially shown by changing the directive. If the understanding involved a decided shift from prior policy, the wording of the directive was usually changed. Of course, the nominal amounts stated in the directive were frequently changed, but this change did not reflect a change in the policy attitude of the Committee. Not all of the members of the FOMC recognized that the consensus reached often differed at least slightly from the policy directive presently in force. This was revealed in Committee discussion on whether to vote on the consensus or not. Delos C. Johns, President of the Federal Reserve Bank of St. Louis, said that

... he was a little confused by the idea that the Committee would have two policy determinations, one on the policy indicated by the consensus and the other on the directive. He inquired in what respect these two determinations were thought to be different.

In reply, Mr. Riefler said that the Committee had always assumed that the vote on the directive to be issued to the Agent Bank was the vote on the policy to be carried out and that operations must always be within that policy for the period until the next meeting. This had been challenged within the past year or two, and it had been suggested that the Committee was not really taking a vote on policy and that the minutes were not truly reflecting the Committee's decisions on policy. As a result of this question having been raised, the procedure suggested in Chairman Martin's letter of October 9, 1959 was devised as a procedure that would meet the legal requirements for a vote which would give an additional chance for any

Secretary indicated that a large majority of those who had spoken appeared to favor moving downward." Ibid., Roll 15, f. 367. This quotation answers a question raised by William P. Yohe, "Whether Martin privately keeps a scorecard and thus is able to detect a clear majority prior to the voting is not known." "A Study of Federal Open Market Committee Voting, 1955-64," The Southern Economic Journal, XXXII (April, 1966), 397.
member who wished to do so to vote against the policy as stated in the consensus. This was in addition to the vote on the directive to the Agent Bank.\footnote{Minutes, Roll 14, ff. 786-788.}

President Johns went on to state that it seemed that proposed procedure implied an admission that there was a difference between the directive and Committee policy and that the Committee was guilty of not having recorded its past policy actions correctly.\footnote{Ibid.} Alfred Hayes, President of the Federal Reserve Bank of New York, commented that such an interpretation might be possible but that an alternative interpretation was that "... the directive states policy in very broad terms and that this \begin{itemize}
\item new procedure \end{itemize} was a step to refine it more definitely within that broad policy."\footnote{Ibid.}

President Hayes' interpretation, that the consensus serves to refine the directive but acts within the directive, is interesting, but perhaps not always correct. At several turning points in System policy, the consensus reached called for a change from ease toward restriction or vice versa, but the directive was not changed. In fact, the directive was usually changed only some months after the first shift in policy. Perhaps this delay was due to the reluctance of the Committee to commit itself publicly concerning economic changes until it was positively sure of a change in the economic trend. Studies of the FOMC which have dated lags from the changes in the directive can only be in error. This point is discussed in considerable detail in Chapter IV of this study.

\footnote{Ibid.}
One may surmise that the controversy over consensus changes vs. directive changes led to the revision in the form of the directive which took place in December 1961. The present instructions for open market operations are contained in two directives. As explained by System officials,

One is a "continuing authority directive," which is reviewed at least once a year. It sets the technical limits on operations—indicating such things as the types of securities that may be bought or sold, the procedures to be followed in transactions, and the conditions under which repurchase agreements may be made with dealers. The other is the current policy directive voted at each meeting. This states the present objectives of open market policy and gives guidance, in light of the Committee's discussions, to the Account Manager in implementing Committee policy until the next meeting.

The "current economic policy directive" seems to be changed rather frequently whereas, during the period under study, the older single directive was not changed very often. One may surmise that the lethargic behavior of the older directive was due to the partial usurpation, by the consensus, of its function as a mirror of the Committee's economic thinking.

Related to this is the frequency of dissents found in voting on the directive. When the minutes of the FOMC are released for more recent years they may reveal that some of the differences of opinion which normally were expressed in the reaching of a consensus are now reflected in the voting on the "current economic policy directive." This may be


one factor which accounts for Yohe's finding that there have been an increasing number of dissents recorded in the policy decisions by the Committee. Table I in Yohe's study, which is reproduced here as Table I, indicates that there was a sharp rise in dissenting votes beginning in 1962, the first year in which the new dual directive was in operation. For example, the number of dissenting votes cast in the year 1962 is equal to the total number of dissenting votes cast in all of the prior years in the table, 1955-1961.

<table>
<thead>
<tr>
<th>Year</th>
<th>Decisions on economic policy directives</th>
<th>Split decisions</th>
<th>No. of dissenting votes Cast by Presidents</th>
<th>Cast by Governors</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1955</td>
<td>14</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1956</td>
<td>19</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1957</td>
<td>18</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1958</td>
<td>23</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1959</td>
<td>18</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>1960</td>
<td>17</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>1961</td>
<td>18</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>1962</td>
<td>18</td>
<td>12</td>
<td>6</td>
<td>17</td>
<td>23</td>
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<tr>
<td>1963</td>
<td>19</td>
<td>13</td>
<td>10</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>1964</td>
<td>18</td>
<td>8</td>
<td>4</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Totals</td>
<td>182</td>
<td>47</td>
<td>22</td>
<td>66</td>
<td>88</td>
</tr>
</tbody>
</table>

During the period of this study directive changes were typically made in the following manner. During the "go-around" one or more members of the Committee would suggest a change in the wording of the directive. Chairman Martin would then add his own feelings. The specific change in the wording of the directive would then be informally agreed upon after some discussion in which differences of opinion were usually ironed out. Finally, a motion would be made and a formal vote taken. The following passage from the minutes captures this process:

Chairman Martin also referred to the directive, stating that there seemed to be some difference of feeling on the desirability of a change. He reiterated the comment that recognition in the directive of shifts in policy had a good deal of merit, particularly at a time like this when the Committee had completed the first two years of a restrictive monetary policy during which the capital markets had been moving against that policy. Chairman Martin went on to say that he discussed with Mr. Riefler the question of the directive before this meeting and that he was prepared to suggest a change in clause (b) of the directive to delete the present wording after the word "growth" and change it so that it would read "to restraining inflationary developments in the interest of sustainable economic growth, while recognizing unsettled conditions in the money, credit, and capital markets." His inclination now was to prefer the wording Mr. Hayes had suggested, but he did not think the matter was of great importance. There followed a discussion, in the course of which Mr. Hayes expressed the view that the wording prepared by the Chairman was entirely satisfactory. Out of this discussion came agreement that clause (b) of the directive should be changed to delete the words "while recognizing additional pressures in the money, credit, and capital markets resulting from seasonal factors and international conditions," and that it should be restated to read . . . [as first stated by the Chairman].

The Manager of the Open Market Account must get his cue from the directive, the consensus, and the economic discussion which takes place

42Minutes, Roll 11, ff. 37-38.
in the Committee meeting. Robert Rouse has indicated that the consensus
is more specific than the directive but that it is still general. He
went on to say, "The views expressed in . . . the discussion during
the go-around serve as an important supplement to the more formal
statement of the directive and the consensus, and furnish a number of
additional guideposts for day-to-day operations."\(^{43}\)

III. ECONOMIC INDICATORS CONSIDERED BY THE COMMITTEE

Economic indicators serve as an aid in detecting changes which may
call for dynamic or defensive operations.\(^{44}\) The Committee's staff
presents economic reports at each meeting which review changes in
significant economic variables. In addition, Committee members, during
the go-around, may bring up specific regional or other information which
they feel to be of importance.\(^{45}\) This portion of the study briefly
surveys the indicators presented by the staff which reveal output,
employment, and price conditions as well as the condition of financial
markets. Also, indicators presented by the Committee members which
pertain to regional and national conditions are mentioned.

\(^{43}\) Robert G. Rouse, "Implementation of the Policies of the Federal

\(^{44}\) While the Federal Reserve System is attempting to achieve long-
run goals, such as stable prices, a high level of output and income, and
a reasonable balance in our international payments, it also attempts to
offset the impact of short-run disruptive forces in the monetary system.
This first responsibility, that of economic stabilization, is sometimes
referred to as the dynamic responsibility of the System. The second is
called the defensive responsibility. Robert V. Roosa, *Federal Reserve
Operations in the Money and Government Securities Market* (New York:

In reading the minutes, one is overwhelmed by the multiplicity of indicators of economic well-being which are mentioned by staff members during the ten years covered by this study. Some of the indicators are mentioned frequently, such as the Federal Reserve index of industrial production, price indices, government spending, unemployment, and inventories. Others appear less frequently, such as textile production, farm conditions, and business failures. One can surmise that the Committee is following the "exception principle" of management. That is, when operations (indicators) are continuing in a normal fashion, the Committee is not to be notified. But, when exceptions appear, the Committee is to be so informed.

Exceptions in several indicators may give notice that a turning point may be near. In such cases, most of the indicators are scrutinized. For example, at the November 12, 1957, meeting of the Committee, which took place four months after the date which the national Bureau of Economic Research pinpoints as a business cycle peak, Ralph A. Young, staff economist, delivered an economic report, a part of which follows below:

After five months of little change, output at factories and mines is expected to show a drop of as much as 2 index points from September to October. Declines in activity were widespread, although most conspicuous in durable goods lines.

Both freight car loadings and electric power generation in October were off moderately further. The decline

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46 See Appendix A for a more complete list of economic indicators mentioned by the staff which reveal output, price, and employment conditions.

in car loadings extends a decline that began in April, and that for power generation a decline that commenced in August.

While total new construction holds at a high level, industrial construction continued the decline which set in in May.

Business inventory accumulation has slowed markedly in recent months. In manufacturing, with declines occurring in new orders and sales, the inventory-sales ratio in September was at levels considerably above the average of the past two years.

Business capital spending plans for the year ahead are off significantly, with a decline in expenditures of a tenth or more from current levels indicated over the next four quarters.

Nonfarm employment receded further in October from the August peak. Reductions in both manufacturing and non-manufacturing lines, though small, were widespread. Only State |sic| and local government employment registered an increase, although service and trade employment held about even.

Unemployment in October, after allowance for seasonal factors, rose to 4.6 per cent of the labor force, after holding at 4.2 per cent for three months, and initial claims for unemployment insurance averaged 45 per cent higher than in October of last year. The average length of the work week in manufacturing, after stability over recent months, declined half an hour to 39.5 hours; reductions in hours, though accentuated by the flu epidemic, were widespread, and operated to reduce weekly earnings, the average for which fell one dollar.

Total retail sales, which declined nearly 1 per cent in September, fell further in October, possibly by 2 per cent. Personal income was apparently also down in October for the second consecutive month, with the decline concentrated in wages and salaries.

U. S. exports fell sharply in September to about 10 per cent under the average of the preceding three months. Prices of sensitive or basic industrial materials declined somewhat further in recent weeks and are now not much above the 1954 recession low.

Since July, business loans at city banks have been stable, compared with substantial growth in all other recent years except 1954. The decline in such loans during October, which was sizable, was the first October decline of the postwar period.

In Canada, recession tendencies have become fairly clear. In Europe, industrial activity by late spring had ceased expanding and through September had tapered off.
moderately. With the exchange position of many inflationary development economies tight, world trade impulses stemming from these economies seem more likely to be contractive than sustaining or expansive.  

When economic conditions are less suspect, the economic report may be quite brief.  

Staff members also present a report on the condition of financial markets. A few major indicators are mentioned quite often; these include interest rates, bank reserves, the money supply, market feel, Treasury balances, and Treasury financings. In addition, liquidity, velocity, the float, gold flows, monetary regulation changes, and market expectations are frequently considered.

The importance of the report on the condition of financial variables becomes clear when one realizes that the System attempts to reach its major goals by altering financial variables. Thus, the financial market is examined to determine the impact of System operations as well as to locate and identify autonomous changes in financial variables which may aid or hinder system policy. It would seem impractical to concurrently use a financial variable as both an indicator and a target. If a variable is being used as a target, the impact of System operations will certainly alter its magnitude. However, the target variable can still measure or indicate the gap between its present level and the desired level. Thus, in a sense the variable is serving as an indicator.

48 Minutes, Roll 11, ff. 666-668.
49 Ibid., Roll 10, f. 685.
50 See Appendix B for a more complete list of economic indicators which report the condition of financial markets as mentioned by the staff.
Woodlief Thomas, staff economist, brought this out in the following statement:

The total volume of reserves supplied presents a goal \( target \) and a measure of performance \( indicator \) that is directly related to the broader goal \( target \) of making available an adequate volume of bank credit and money. \(^{51}\)

Also, the interrelation of different financial variables may cause difficulty. Riefler, in defending the "bills only" doctrine, brought out this point,

The difficulty of deciding on the appropriate volume of reserves is magnified when the most relevant indicators of conditions in the long-term capital markets are deflected by transient or short-run responses to the System's own operations. \(^{52}\)

The major variable in the financial system which the Federal Reserve believes it can control is the total of commercial bank reserves. The importance of this variable to the System can be seen from the following statement:

Whatever broad influences may flow from their actions, the Board of Governors and the Federal Open Market Committee are fully aware that the particular economic or financial variable over which they have anything approaching full and direct control is the total of commercial bank reserves. Through this control, they exert a strong influence directly on total loans and investments and total deposits of banks and indirectly some influence on spending, investment, and saving by the public in general. At any given moment, therefore, the choice for Federal Reserve policy lies between


various degrees of restraint upon or encouragement to expansion of bank credit through altered reserve availability. 53

Hence, Committee members are interested in the current level of total bank reserves. While the appropriate level of bank reserves for a given economic situation is a subjective matter, the Committee members seem to match this "desired" level which they have in mind against the present level in determining whether additional reserves should be supplied or not. In keeping with this the staff reports consider short-run financial changes which might affect total bank reserves and thus the economy. The defensive aspects of System action are aimed at ironing out these short-run financial changes. The System is most interested in projecting the impact of future Treasury refunding operations, anticipated changes in the float, cash drain, etc., so that it may take offsetting actions if necessary. 54

One difficulty encountered in using financial indicators is that occasionally they may give conflicting signals. For example, a rising level of free reserves may indicate market ease but a concomitant decrease in total bank reserves or the money supply, which is possible, would indicate the opposite. Also, a constant free reserve level may take on different meaning depending upon its distribution between city and country banks. A constant money stock may have different meanings


54 The System may also abstain from taking offsetting action when the change in autonomous factors is in the direction desired by the System for policy purposes.
depending upon the behavior of velocity. The minutes reveal that the Committee members are aware of many such limitations.

It appears that a great deal of confusion exists among economists as to the extent of forecasting used by the System. Hastings and Robertson indicate that there is an unwritten rule against forecasting of business conditions in the System while Allan H. Meltzer indicates the Federal Reserve has been quite successful in predicting or observing economic changes. Conflicting statements by System officials have only added to the confusion.\(^5^5\) In reading the minutes, one cannot but note that financial projections are the rule rather than the exception.\(^5^6\) In a confidential memorandum to members of the Executive Committee titled "Guides for Open Market Operations, September–December 1952," Woodlief Thomas, in addition to suggesting several targets which the Committee might use, included a table partially prefaced by these statements:

The following table shows a set of projected figures of credit and monetary expansion for 1952 as a whole and for the last four months of the year, compared with similar figures for 1951. While it is not possible to know precisely whether the projected figures are larger or smaller than reasonable needs without inflation or undue restraint, they are believed to be moderate.\(^5^7\)


\(^5^6\)For evidence of financial projections, see the minutes of the following Committee meetings: August 8, 1951; July 22, 1952; October 22, 1952; September 8, 1953; April 13, 1954; April 26, 1955; September 1, 1956; and May 5, 1959.

These projections are presented not as forecasts but as an indication of credit demands that might reasonably be met without contributing to inflation.\(^{58}\)

The following excerpt from the minutes is evidence that the Executive Committee considered the memorandum and recognized that the Account Manager should consider this information along with the policy directive of the Committee:

As an outgrowth of the discussion, it was the consensus that a long-term projection of the demand for bank reserves such as the assumption of a $2 billion increase in privately-held demand deposits during the year 1952, could be useful as a general guide to open market operations. It was also the consensus that, having in mind this general projection for credit demand, it would be helpful to relate open market purchases to the amount of member bank borrowings. However, it was not possible to forecast on the basis of projections the exact amount of reserves that should be put into the market over a given period or to use such forecasts as a basis for determining rigidly in advance the volume of transactions in the System open market account, since it was necessary that the management of the account have day-to-day administrative discretion in carrying out the directions of the executive committee in the light of the general policies determined by the Open Market Committee.\(^{59}\)

Evidence is also present in the minutes that GNP forecasts are made and presented to the Committee.\(^{60}\) However, the Committee, during the period of this study, remained wary of changing its economic policy purely on the basis of economic forecasts. The usual course, as will be shown in Chapter IV, was for the Committee to act on the basis of statistical evidence of a change in economic indicators which the Committee considered to be relevant. Strictly speaking, this latter

\(^{58}\) Ibid., p. 7.

\(^{59}\) Minutes, Roll 6, f. 491.

\(^{60}\) Ibid., ff. 508-509.
approach is a form of economic forecasting. The "barometric" method of economic forecasting utilizes economic indicators, such as those examined by the Federal Reserve and the National Bureau of Economic Research. This barometric method is based on the premise that since things have happened in the past in a certain way they will probably behave similarly in the future. While the Committee examines leading indicators, such as building contracts, business failures, and new orders for durable goods, it seems to act more on the changes in the coincident indicators. Chapter IV of this study, in its examination of the Committee's response to economic changes, verifies this point. One innovation in the staff reports which occurs late in the period under study is the appearance of diffusion indexes. The following passage is a sample of such use:

One way to summarize the widespread nature of the shifts from March to April is in terms of diffusion indexes for leading and coincident indicators, virtually all of which increased in April . . . On a month-to-month basis, a diffusion index for five groups of leading series was above 50 per cent in April, after hovering in the low 30's in February and March. Similarly, the index for the three roughly coincident groups was up above 70 per cent, from the 40's in the preceding months. 61

The Committee seems to have eschewed alternative approaches to forecasting—such as the analytical or econometric approaches. In the future, however, the Federal Reserve may well attempt to use these means. In a recent address Governor Mitchell stated that an econometric model is under construction which will incorporate the causal chains which respond to system actions. Governor Mitchell said, "The main purposes

61 Minutes, Roll 15, f. 446.
of such a model are to aid in short-term forecasting and to establish
the likely effects of alternate monetary policies on major economic
aggregates. It will be used to supplement, and in conjunction with, the
judgmental models we currently use in our policy formation." 62

During the "go-around," the Committee members spoke of credit
demand, farm prices and conditions, consumer buying, construction, and
other indicators for their districts. 63 However, this information
seemed, for the most part, only to confirm the general statistics
presented by the staff. The one indicator presented by the members but
generally omitted by the staff was the optimism of businessmen. By
virtue of their position, the Reserve Bank Presidents have the
opportunity to learn the views of the directors of their respective
banks as well as the views of the leading bankers and businessmen in
their region. Some observers have argued that this information could
just as well be presented via written report. 64

This chapter of the study, by tracing the development of the
Federal Open Market Committee and briefly surveying the economic

Remarks of George W. Mitchell, Member, Board of Governors of the Federal
Reserve System at the Joint Luncheon Meeting of the Southern Economic
Association and Southern Finance Association, Atlanta, Georgia, November

63For example, see the minutes of the following Committee meetings:
December 8, 1952; March 4, 1953; June 11, 1953; March 3, 1954; December

64For example, see Michael D. Reagan, "The Political Structure of
the Federal Reserve System," American Political Science Review, LV
(March, 1961), 64-76. Reagan argues for abolishing the Committee,
placing open market operations in the hands of the Chairman, and making
the Chairman accountable to the President of the United States.
indicators used by it, paves the way for Chapter III, which gives a detailed examination of the development and use of some of the major targets used by the Committee. Chapter IV examines monetary lags.
CHAPTER III

TARGETS USED BY THE FOMC IN POLICY ACTION

Chapter III is devoted to examining the major targets which have been used by the Committee during the period under study. Specifically, interest rates, free reserves, total reserves, the money supply, and tone and feel of the market will be considered. This chapter indicates the degree of importance which the Committee places upon each of the indicator-targets as well as changes in Committee attitude toward and confidence in them. These targets are most frequently revealed in the discussion by the Committee members during the "go-around." Also, the targets may be mentioned in the consensus statement. The directive is usually stated in terms too broad to include them.

I. INTEREST RATES AS A TARGET

The Federal Reserve has long recognized that interest rates not only may function as an indicator of the condition of financial markets but also may be used as a target.¹ The degree to which interest rates have been used as a target, however, has varied considerably over the last twenty-five years.

During the Second World War, the Federal Reserve began pegging the interest rates on government securities in order to help the Treasury finance the War. At the end of hostilities, Treasury officials were reluctant to permit the Federal Reserve to stop supporting the price of government securities. This reluctance was due to the rapid increase in the size of the debt during the War and to the uncertainty as to what destabilizing influences unpegging the debt would have.2

With the economy beset by inflationary pressures, the Federal Reserve was anxious to pursue independent monetary policy. The outbreak of Korean hostilities added to the difficulty as the President of the United States sided with the Treasury in wanting support of the government bond market. Finally, in 1951, after a series of meetings with Treasury officials and the President, the Treasury and the Federal Reserve System reached an accord.3 The joint announcement stated:

The Treasury and the Federal Reserve System have reached full accord with respect to debt management and monetary policies to be pursued in furthering their common purpose to assure the successful financing of the Government's requirements and, at the same time, to minimize monetization of the public debt.4

The accord truly signaled the end of continual support of government securities prices by the System. At the Federal Open Market Committee meeting of March 8, 1951, Allan Sproul, President of the Federal Reserve Bank of New York, announced that the Federal Reserve would no longer agree to buy government securities in order to support their prices.

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Federal Reserve Bank of New York, announced that for the first time in ten years the market had been completely without support that day. The movement to free markets and the de-emphasis of interest rates as a target was facilitated by the development of a new theory of credit control. Roosa's theory stressed the importance of lenders and the availability of credit rather than the traditional approach which measured the responsiveness of borrowers to interest rate changes. Thus, the Federal Reserve felt that it could be an effective stabilizing force on the economy by altering the availability of credit with only minor changes in the interest rate. The minutes of the Committee during 1951-1952 provide evidence of the movement from the maintenance of a peg to free markets. For example, at the September 25, 1952, meeting of the FOMC, Chairman Martin stated that sooner or later the Committee must decide to either "... give up the underwriting of Treasury offerings or . . . proceed in more or less the manner that has been followed in the past." During this meeting, both Martin and Sproul mentioned that a transition from pegged to free markets was taking place. The current policy decision made in this meeting was to continue restraint on undue credit expansion. In practical terms, it

5Minutes, Roll 6, f. 199.


8Minutes, Roll 6, f. 510.
meant that the Treasury would suffer some attrition during its refinancing. However, the System did continue to assist the Treasury during periods of refunding until the end of 1952.  

On May 17, 1951, the same meeting in which William McChesney Martin was elected Chairman of the Federal Open Market Committee, he recommended the formation of an ad hoc subcommittee to study the government securities market. The recommendations of the ad hoc subcommittee, when approved in March of 1953, ushered in the era in Federal Reserve

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10 Minutes, Roll 6, ff. 243-244. The minutes of the FOMC reveal that Martin first conceived the idea of the study while he was associated with the Treasury. Ibid., Roll 7, f. 58. At the FOMC meeting on May 17, 1951, he was authorized to appoint an ad hoc subcommittee. On April 21, 1952, Martin mentioned the distribution of an outline of the suggested ad hoc subcommittee. Also, the Committee members accepted his recommendation that Mr. Robert H. Craft, Vice President and Treasurer of Guaranty Trust Company of New York, be on the ad hoc subcommittee. Ibid., ff. 414-416. At the May 9, 1952, meeting of the Executive Committee, Martin announced that arrangements had been made to hire Craft as Technical Consultant to the FOMC for four months. Martin also appointed Malcolm Bryan, Abbot L. Mills, Jr., and himself to the ad hoc subcommittee. Discussion of the ad hoc subcommittee's progress and procedure is found in the minutes of the May 23, June 6, and July 22, 1952, meetings of the Executive Committee. Also, the FOMC received a report on the ad hoc subcommittee's progress on June 19, 1952. On August 29, 1952, Chairman Martin asked the Executive Committee to approve a letter to the Federal Reserve Bank Presidents explaining the significance of the report. Some of the discussion in the October 8, 1952, meeting of the Executive Committee was a forerunner of the coming ad hoc subcommittee report. The minutes of that meeting record the following statement:

"The Chairman went on to say that, as a general proposition, he felt operations for the System account should be in terms of bills whenever the decision was to supply reserves to the market." Ibid., f. 528.

At the December 23, 1952, Executive Committee meeting, Chairman Martin announced that the ad hoc subcommittee had completed its report and that copies were being distributed.
history known as "bills only." There were several major areas of
importance in the ad hoc subcommittee report: (A) Relations with the
Market; (B) Relations with Dealers; (C) Operating Techniques; and (D)
Federal Reserve Reports. Under section A the ad hoc subcommittee
recommended that the Committee confine its market transactions to the
short-term end of the government securities market in order to reduce
government security dealers' uncertainty as to the impact of System
action. The ad hoc subcommittee felt that this uncertainty had hampered
the development of depth, breadth, and resiliency in the market. Mr.
Craft, as special consultant on the ad hoc subcommittee, stated that he
felt the advantage to dealing in Treasury bills would be in permitting
flexibility of open market operations without disturbing the long-term
market. As recorded in the minutes,

He said that would permit the market (a) to reflect
the natural forces of demand and supply and (b) to
furnish a signal of the effectiveness of credit
policy aimed primarily at the volume and availability
of bank reserves.

In addition,

... The Subcommittee recommends that the Federal
Open Market Committee mend its present directive to
the executive committee by eliminating the phrase
to maintain orderly conditions in the Government
securities market, and by substituting therefor an

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11. The market is said to have depth when government securities
dealers have received orders both above and below market prices. Breadth
occurs when these orders are in volume and from divergent investor
groups. The market has resiliency when new orders quickly appear to
take advantage of unexpected changes in prices.

12. Ibid., Roll 7, f. 66.
authorization to intervene when necessary to correct a disorderly situation in the Government securities market.\(^{13}\)

The ideas presented by the \textit{ad hoc} subcommittee did not go unchallenged. Allan Sproul felt that simply confining operations to the short end of the market would not increase the market's depth, breadth, and resiliency. He maintained that the lack of depth, breadth, and resiliency was due to the uncertainties from general credit policy and Treasury financing, not from concern that the Federal Reserve might intervene in the market. Sproul's observations seem to have been confirmed by later studies. An empirical study by Dudley Luckett found that indeed "bills only" did not give the market increased depth, breadth, and resiliency.\(^{14}\) However, these findings are in sharp contrast to those of Ira O. Scott. Scott maintains that System operations in the long-term market cause fluctuations in that market. Government securities dealers find these fluctuations intolerable. Scott concludes that, given interest rate expectations, dealers will be more likely to enter the long-term bond market under a "bills only" policy than not.\(^{15}\)

Allan Sproul also suggested that there might be times when the FOMC would wish to act in other areas of the market "... to get direct effects on the availability and cost of credit in the capital or the

\(^{13}\)Ibid., p. 65.


mortgage market. . . . "\textsuperscript{16} Sproul went along with the adoption of "bills only" because he felt the Committee was voting in a policy only for the current market situation and not a permanent philosophy.\textsuperscript{17} After considerable discussion the Committee unanimously agreed to the following points:

1. Under present conditions, operations for the System account should be confined to the short end of the market (not including correction of disorderly markets.)

2. It is not now the policy of the Committee to support any pattern of prices and yields in the Government securities market and intervention in the Government securities market is solely to effectuate the objectives of monetary and credit policy (including the correction of disorderly markets).

3. Further study should be given by the ad hoc subcommittee to the suggestion that the Committee adopt a continuing policy of confining its intervention in the market to the short-term area, and to the questions whether some type of assurance regarding the Committee's procedure in this respect should be given and, if so, how such assurance should be made available.\textsuperscript{18}

Point four concerned changing the directive as mentioned above. Point five included the approval of the ad hoc subcommittee recommendation that,

\textquote...

\textsuperscript{16}Minutes, Roll 7, ff. 68-69.

\textsuperscript{17}Ibid., f. 74.

\textsuperscript{18}Ibid.
outstanding issues of comparable maturity to those being offered for exchange.\textsuperscript{19}

The adoption of these points completed the transition from pegged markets and support of Treasury financing to free markets.\textsuperscript{20}

The continuation of the "bills only" policy did not go uncontested. Allan Sproul remained a continual foe of the doctrine until his retirement in 1956. In the FOMC meeting of June 11, 1953, Sproul made a strong case for abandonment of "bills only":

\begin{quote}
Ibid., f. 65.
\end{quote}

\textsuperscript{19}Deane Carson states that the main motivation for the Committee's shift to "bills only" was the desire to regain or solidify control over the System Account in New York. He sees the initiation of "bills only" as the culmination of a long struggle for authority between the New York Bank and the Committee in Washington. Deane Carson, "The Bills Only Doctrine in Retrospect," Patterns of Market Behavior: Essays in Honor of Phillip Taft, Edited by Michael J. Brennan (Providence, Rhode Island: Brown University Press, 1965), pp. 155-156. This approach is an interesting contrast to Warren Smith's. One reason that Smith feels the "bills only" doctrine was encouraged was because of the large number of people attending the Committee meetings. It tended to simplify the decision-making process. Warren L. Smith, Debt Management in the United States, Study Paper No. 19 for the Joint Economic Committee (Washington, D. C.: Government Printing Office, 1960), Chapter V.

While some of the ad hoc subcommittee recommendations were undoubtedly aimed at diminishing the power of the Account Manager, it seems presumptuous to state that the entire "bills only" policy was aimed at usurping New York authority. Additional control over the Account Manager could have been gained by placing him directly under the control of the Committee, in the organizational structure, rather than leaving him under the control of the New York Bank. This was one of the points made in the ad hoc subcommittee study. Minutes, Roll 7, ff. 62-63.

Warren Smith's point likewise has weaknesses. When the "bills only" doctrine was initiated, the full Federal Open Market Committee, with its thirty or forty members, met only four or five times a year. Most of the decisions concerning routine activity were made by the Executive Committee, which was composed of five members. This body was surely not too large for effective decision making. Even in the FOMC meetings, the vast majority of the conversation was carried on by a relatively few members.
On what grounds would we continue to deprive ourselves of freedom of action? With respect to the prohibitions we adopted at our last meeting, (a) we were told that the market should be relieved of the threat of our intervention in the longer term areas so that it might develop breadth, depth, and resiliency. (b) We have not intervened in these areas for some months and, in one way or another, the market has acquired the idea that we are not going to intervene. Yet seldom has the market shown less breadth and depth while quotations have shown, if anything, too much resiliency.

We have been told that operations in bills would have prompt and pervasive effect through the market. That was the theory of perfect fluidity—perfect arbitrage. I think historical records and current observation indicate that a prompt and invariable response between short and long markets can not always be expected.

It seems to me that we must either still be reacting violently against market pegging or embracing a somewhat doctrinaire attitude on free markets.

Mr. Sproul's arguments were thoroughly discussed by the Committee members. His logic evidently triumphed, as the "bills only" policy was rescinded. However, his victory was short-lived. In the Executive Committee meeting of the same day, the majority voted to direct the New

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21 Ibid., f. 207.

22 Ibid., ff. 207-208. In this passage Sproul seems to anticipate some of the arguments of Warren Smith in his attack on the doctrine of "bills only." See Smith, Debt Management in the United States, Chapter V.

23 Minutes, Roll 7, f. 208.

24 Ibid., f. 245. For an interesting discussion of this occurrence, see Clifford, The Independence of the Federal Reserve System, pp. 287-290. This episode seems to destroy the cliche that "Martin is never on the losing side." For example, see William P. Yohe, "A Study of Federal Open Market Committee Voting, 1955-1964," Southern Economic Journal, XXXII (April, 1966), 399. Martin was also on the losing side of a Committee vote in the September 25, 1951, meeting, which concerned Committee recommendations to the Treasury.
York Reserve Bank to deal in bills only.\textsuperscript{25} Also, at the next FOMC meeting, members voted to reinstate the rescinded "bills only" policy.\textsuperscript{26}

Thereafter, the System was fairly successful in maintaining its policy of "bills only," with but minor exceptions.\textsuperscript{27} During most of the "bills only" period interest rates served as a guide to the condition of

\textsuperscript{25}Minutes, Roll 7, ff. 251-252.

\textsuperscript{26}Ibid., f. 356-370. As a continuation of the battle by Sproul, the following meetings may be of interest: June 23, 1953; September 24, 1953; December 15, 1953; and March 3, 1954.

\textsuperscript{27}At the March 2, 1955, meeting of the Executive Committee, owing to a shortage of Treasury bills, the System Account Manager was given authority to deal in short-term Treasury securities, but preferably bills. Minutes, Roll 9, f. 169. In practice, the Account Manager adhered to the "bills only" policy. Ibid., Roll 10, f. 235.

The Committee's first major departure from "bills only" was made when two obligations of the System, a primary one to supply reserves and a secondary one to assist the Treasury, overlapped. After considerable discussion, the Committee authorized the Account Manager to purchase $400 million of when-issued securities from the Treasury. Ibid., Roll 9, ff. 643-645. The System actually purchased $167 million of new Treasury certificates. Board of Governors, Annual Report, 1955, p. 8.

At the October 16, 1956, meeting, the Account Manager was authorized to purchase new special Treasury bills which were maturing January 16, 1957. Purchases such as this violated the March, 1953, agreement that the Committee would not deal with recently issued Treasury securities. Minutes, Roll 10, ff. 604-605.

The minutes of the January 28, 1957, meeting disclose that the Treasury wanted the System to accept some 3-year certificates in exchange for maturing bills. The System was not in favor of such a transaction. Ibid., Roll 11, f. 87.

On July 9, 1957, the Committee also turned down a proposal to buy some long-term securities directly from the Treasury and then sell some short-term securities on the market. Ibid., f. 447.

At the February 18, 1957, meeting, the Account Manager notified the Committee that due to a shortage of System holdings of bills he had sold some certificates of indebtedness and Treasury notes. Ibid., ff. 90-92.

The second major departure from "bills only" occurred from July 18
financial markets, but were not an end unto themselves. Generally, the System placed domestic credit responsibilities above the financing needs of the Treasury. Occasionally the two goals coincided.

By 1959 the country's persistent balance of payments deficit with its concurrent gold outflow made the Federal Reserve sharply aware of the international aspects of its actions. At the January 6, 1959, meeting of the FOMC, several members commented that the Committee does have international financial responsibilities. Governor Mills mentioned that an increase in the discount rate might be regarded by the international community as a signal that the System recognized the gold

to July 23, 1958. Because of the increasing disorder in the government securities market, the Account Manager, on July 18, 1958, was authorized to deal in other than short-term securities. Ibid., Roll 13, f. 30. This authority was terminated July 24, 1958. Ibid., f. 60. During this period, the System purchased $1.2 billion of securities, mainly "when-issued" ones, plus a few other notes and bonds. Board of Governors, Annual Report, 1958, p. 7.

However, suggestions were made for combining a range of interest rates with a range of free reserves. Governor Balderston commented that he "would like to see a target or goal expressed in terms of a bill rate of from 2.10 to 2.15 combined with negative free reserves ranging from $300 to $400 million." Minutes, Roll 9, f. 512. Also, see ibid., Roll 11, f. 246. This suggestion did not seem to appeal to the other members. Generally when a choice had to be made between disturbing interest rates or letting some target level such as the "feel" of the market or free reserves change, the Committee chose to maintain the target and to allow interest rates to move as they might. For example, see ibid., Roll 10, ff. 575-605.

For example, see ibid., ff. 555-605.

Such an example was examined in footnote 27 of this chapter. This coincidence occurred when the System made its first major departure from "bills only." The departure seems to be in line with Deane Carson's position, i.e., the System should take a case-by-case approach to supporting Treasury refunding. See Deane Carson, "Federal Reserve Support of Treasury Refunding Operations," Journal of Finance, XII (March, 1957), 51-63.
outflow and intended to subject the domestic economy to the rigors necessary to halt it. At the FOMC meeting on January 27, 1959, the Committee members seemed to favor an increase in the discount rate but the reasons cited were not international ones. The members felt that the discount rate should be increased for technical reasons (it was out of line with the bill rate) as well as to tighten down on an expanding domestic economy. Fortunately, at this time the domestic economy was expanding and the monetary goal of stemming inflationary pressures coincided with the steps necessary on the international scene.

Most of the following Committee meetings devoted some time to the international problem. Also, growing pressure outside of the System demanded a retreat from the "bills only" policy. Within the System, Alfred Hayes, President of the Federal Reserve Bank of New York, led the fight to repeal "bills only." Members gradually became aware that if

31 Minutes, Roll 14, f. 21.

32 One indication of the elevation of the balance of payments situation in the hierarchy of System problems was the appearance of a staff economist at the meetings to review the international situation. For example, see ibid., ff. 311-312.


34 For example, see Minutes, Roll 15, ff. 175-176.
a domestic recession were to occur additional problems in coping with
the balance of payments deficit would arise.\textsuperscript{35}

Chairman Martin, in the January 12, 1960, meeting, mentioned that
the Committee might consider changing operating techniques, including
the "bills only" policy.\textsuperscript{36} On March 22, he stated that he felt the
Committee should not tie itself to a rigid policy.\textsuperscript{37} A memorandum, dis-
distributed on March 18 by Rouse, Thomas, and Young, called for engaging in
swap operations with the Treasury.\textsuperscript{38} A majority of the Committee members
felt that the swap suggestions would bring about frequent exceptions to
the Committee's policy.\textsuperscript{39} The swaps were not approved until the follow-
ing meeting.\textsuperscript{40}

At the May 24, 1960, meeting of the Committee, Arthur Marget, staff

\textsuperscript{35}\textit{Ibid.}, ff. 89-90, 210-213.
\textsuperscript{36}\textit{Ibid.}, ff. 60-61.
\textsuperscript{37}\textit{Ibid.}, f. 307. The minutes also show that Martin had circulated
a revised draft of the pertinent statements.

\textsuperscript{38}"The specific suggestion discussed in the memorandum was that the
Federal Open Market Committee cooperate in smoothing the refinancings of
one-year Treasury bills and November 1961 bonds by acquiring blocks of
those issues prior to maturity and then rolling them over at the time of

\textsuperscript{39}\textit{Ibid.}, ff. 324-325.
\textsuperscript{40}The following suggestion was approved, Robertson dissenting:

"Chairman Martin then suggested that the Committee act
on the basis that had been outlined: namely, to
authorize the Management of the Account to acquire up
to $150 million of the one-year bills maturing July 15, 1960, between now and the next Committee meeting,
either through swaps or outright purchases, with the
understanding that the matter would be called up again
for review at the next meeting of the Committee." \textit{Ibid.}, f. 385.
economist, in his international report, pointed out that the future balance of payments does not depend solely on short-term capital movements. The matter of trade must be considered. President Hayes pointed out that a reduction in the discount rate would increase the flow of short-term capital abroad. At the next Committee meeting, Governor Mills stated that there was increasing evidence that the domestic economy was slowing and that he did not believe that increasing bank reserves would solve the problem. He maintained that additional reserves would drive down market rates, but he doubted that it would contribute to increased long-term investment owing to the present industrial excess capacity. Also, he felt the lowering of short-term rates would lead to further capital and gold outflows.

On October 4, 1960, Marget confessed that the deterioration in the balance of payments situation was caused mainly by capital outflows which had been responding to the interest rate differential between the United States and foreign nations. Also, Guy Noyes, staff economist, stated that economic activity was declining and would probably continue to decline. In the October 25, 1960, meeting of the Committee, Thomas, in his financial report presented the following statement:

The suggestion has been made that the System, by purchasing longer-term securities, could aid in

41Ibid., ff. 452-456, 457.
42Also in this meeting, "Mr. Rouse commented on the 1-1/4 per cent rate differential in favor of United Kingdom bills, after forward exchange cover, that existed before the auction yesterday and said that money was beginning to move to that market." Ibid., Roll 16, ff. 20-22, 39.
43Ibid., ff. 258-267.
bringing about a desirable downward adjustment in
long-term interest rates and stimulate borrowing in
that area, and at the same time avoid reducing short-
term rates and encouraging the flow of funds abroad.\textsuperscript{44}

Thomas went on to state that he did not feel that such an operation
would be effective. Following considerable discussion, the Committee
members generally agreed with Thomas's position and decided not to
change their policy, i.e., not to deal in long-term securities.\textsuperscript{45}

Owing to the increasing urgency of the international balance of
payments problem, the Committee, at the November 22, 1960, meeting,
began to look more deeply into the suggestion of "twisting" the interest
rate structure. Evidence was presented that it was possible to achieve
some differential effects on interest rates, at least briefly.\textsuperscript{46} Also,
it was suggested that the ceiling on time and savings deposit rates be
raised in an effort to stem the outflow.\textsuperscript{47} President Hayes urged opera-
tion in long-term securities. He also suggested that the Committee
consider whether it was going to establish a long-term rate or just
acquire long-term bonds. Martin felt that the Committee would be
supplying reserves, not setting a short-term interest rate.

From reading the minutes of the FOMC it is clearly evident that the
Committee members were against a strict peg but they did not want short-
term interest rates to fall below two per cent. Some of the members
expressed the thought that the Account Manager could and would use

\textsuperscript{44}\textit{Ibid.}, f. 310.
\textsuperscript{45}\textit{Ibid.}, ff. 310-347.
\textsuperscript{46}\textit{Ibid.}, f. 374.
\textsuperscript{47}\textit{Ibid.}, ff. 390-391.
interest rates in determining the "feel" of the market. The consensus statement made by Chairman Martin at the November 13, 1960, FOMC meeting follows.

The Chairman then stated that the results of the poll indicated that the majority was clearly in favor of continuing the present degree of ease, with the feel of the market constituting the guiding factor. A clear majority would like to have the bill rate stay as high as possible.48

The "bills only" policy was abandoned in February, 1961.49 System policies and actions during the remainder of the year were formulated with two objectives in mind—the encouragement of domestic economic expansion and a mitigation of the outflow of short-term liquid funds.

In summary, the Committee was obligated to use interest rates as a target during World War II and up until the Treasury-Federal Reserve accord. Following the accord, the System's immediate action was to retreat from the use of interest rates as a target. Even consistent support of Treasury refundings was dropped with the initiation of "bills only." However, international considerations coupled with a slowing domestic economy impelled the System to return to a consideration of interest rate levels and the definite use of interest rates in determining the "feel" of the market. By late 1960 the implication was that if bill rates approached the two per cent level, the "feel" of the market

48 Ibid., f. 449.

49 Board of Governors, Annual Report, 1961, p. 43. For additional information on the "bills only" period, see Milton Friedman and Anna Jacobson Schwartz, A Monetary History of the United States, pp. 632-636, or Ahearn, pp. 64-120.
would indicate that action should be taken.  

II. FREE RESERVES AS A TARGET

The concept of free reserves is of considerable importance to the Federal Reserve System. This importance seems to stem from the alleged role of free reserves in the causal process of monetary policy. The concept of free reserves seems to have had its origin with the initiation of System open market operations. Early contributors to the concept include W. W. Riefler, W. R. Burgess, and E. A. Goldenweiser. For a succinct survey of the history of the free reserve concept, see Karl Brunner and Allan H. Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, Subcommittee on Domestic Finance, House Committee on Banking and Currency, 88th Congress, 2nd Session, May 1964, pp. 2-10.

50 Though it is beyond the scope of this study, not all economists agree that "Operation Twist" was a success. For recent comments, see Myron H. Ross, "Operation Twist: A Mistaken Policy?" The Journal of Political Economy, LXXIV (April, 1966), 195-199, or Franco Modigliani and Richard Sutch, "Innovations in Interest Rate Policy," American Economic Review, LVI (May, 1966), 178-197.

Ross concludes that "Operation Twist" was unsuccessful because inventory demand fell more than the demand for fixed investment increased, resulting in a lowering of GNP. Also, he feels that the inflow of funds was quite small. Modigliani and Sutch conclude that any success which flowed from "Operation Twist" was due to an increase in the ceiling rate of Regulation Q which allowed CD's to exert a significant influence. Also, they feel that the twist in the interest rate structure was moderate at best.


51 "Free reserves" is defined as excess reserves minus member bank borrowing. If member bank borrowing from the System exceeds excess reserves, the resulting figure is termed net borrowed reserves.

52 The concept of free reserves seems to have had its origin with the initiative of System open market operations. Early contributors to the concept include W. W. Riefler, W. R. Burgess, and E. A. Goldenweiser. For a succinct survey of the history of the free reserve concept, see Karl Brunner and Allan H. Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, Subcommittee on Domestic Finance, House Committee on Banking and Currency, 88th Congress, 2nd Session, May 1964, pp. 2-10.
following statements illustrate this point:

The Federal Reserve exerts its influence upon the availability of bank credit, upon the money supply, and upon interest rates, almost wholly by influencing bank liquidity.

Measurement of the primary liquidity position of banks requires consideration of both positive and negative elements. Positive primary liquidity assets consist of balances held by banks with Federal Reserve banks. For liquidity purposes, i.e., for meeting drains on deposits and reserves, reserve balances held in excess of requirements are generally a more significant and useful measure than total reserves.

The negative element of primary liquidity for banks arises from member bank borrowings from the Federal Reserve.

The Federal Reserve restrains (or encourages) bank credit expansion by reducing (or increasing) the banks' primary liquidity. This is ordinarily accomplished through open market operations. The effect of these actions, after allowance for the various other factors that influence the availability and use of reserves, may be reflected either in excess reserves or in member bank borrowings at the Reserve Banks. The over-all result for bank liquidity is commonly measured by the figure of "free reserves" or "net borrowed reserves."  

The causal position of free reserves invites its use as both an indicator and a target by the Federal Open Market Committee. Until after the accord, use of free reserves as a target was proscribed. In fact, the term "free reserves" may not have been coined until sometime

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in 1952. However, the Committee, in 1952, was using the position of member bank borrowing and excess reserves separately as an indicator. In a memorandum to the Executive Committee for the meeting of August 29, 1952, Woodlief Thomas outlined several possible "guides" (targets) for open market operations: (1) member bank borrowing, (2) interest rates, (3) Treasury financing needs, and (4) normal credit and currency demands. The presentation of this memorandum and the Executive Committee's response to it shed some light upon the targets being used. The fact that free reserves was not mentioned seems to indicate that the concept was not yet in use by the Committee. However, the Executive Committee did determine that it would be helpful to relate open market purchases to member bank borrowing. The FOMC rejected the idea of pegging interest rates during Treasury financing.

Subsequent meetings show that the Committee was consciously or unconsciously struggling to develop a specific target. Shortly after the initiation of "bills only," the Committee further considered using a

54 The first mention of free reserves which this author noticed in the minutes was on October 8, 1952, at the Executive Committee meeting of that date. Rouse, Account Manager, mentioned free reserves in one of his statements. Brunner and Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, p. 10, mention that Irving Auerbach of the New York Federal Reserve Bank is often credited with the development of the free reserve concept.

55 For example, see Minutes, Roll 6, ff. 419-420.


57 Minutes, Roll 6, f. 505.
"member bank borrowing" target. However, early disenchantment with this target limited its usage. Some of the Committee members appeared to be at a loss as to how to instruct the Account Manager without some quantitative measure. Nevertheless, Rouse, the Account Manager, felt that he could understand the Committee's intent without specific figures being mentioned in the consensus statement. The concept of free reserves seemed to creep into the meetings a bit more beginning with the September 24, 1953, meeting. A temporary regression was made to interest rates on November 6, 1953, and then at the November 23, 1953, meeting, open market purchases, excess reserves, and member bank borrowing were related. The December 15, 1953, meeting seemed to certify the acceptance of the free reserve concept as being a useful one. In that FOMC meeting Thomas mentioned free reserve levels. In the Executive Committee meeting which followed, Rouse mentioned that the Committee had not given him a free reserve target but that he felt he had been adhering to the essence of the Committee's instructions. Rouse seemed to indicate that he had been operating around the free reserve level which Thomas mentioned at the November 23 meeting, but that he had not been able to be precise in sticking to it. Henceforth, the minutes reveal

58 Ibid., Roll 7, ff. 134-140.
59 Ibid., f. 177.
60 For example, see the following statement: "It was Mr. Riefler's thought that it might be desirable to have excess reserves above borrowings. . . ." Ibid., f. 351. Also, see ibid., f. 380.
61 See ibid., ff. 400, 403-409.
62 Ibid., ff. 441, 451.
increasing usage of the concept of free reserves, with discussions of an appropriate free reserve level or range becoming commonplace. The minutes reveal that the free reserve goal was not just an arithmetic figure, but an indication of the feelings of the Committee as to what the economic policy should be.

The Committee's honeymoon with free reserves was short-lived as the imperfections of such a target become apparent. Malcolm Bryan, President of the Federal Reserve Bank of Atlanta, questioned whether free reserves was a better "guide" (target) than total reserves. An immediate answer was not forthcoming. A. L. Mills, Jr., Member of the Board of Governors, emphasized that in judging the effectiveness of a level of free reserves their distribution between city and country banks must be considered. Chairman Martin noted that when the Account Manager operated according to the feel of the market rather than some set

63 For example, see ibid., Roll 8, f. 133.

64 The following statement by Sproul illustrates this point:

"... He would assume that the committee would agree that while it would set up a goal of around $600 million it was seeking an objective rather than an arithmetical figure, and that if in the opinion of the Manager of the Account the situation in the money market was such that an attempt to maintain a $600 million level of free reserves would be undesirable in terms of general policy he would be free to act accordingly." Ibid., ff. 256.

Also, the Account Manager must look to the "tone" of the market in applying Committee policy. Ibid., f. 321.

65 Ibid., f. 192.

66 Ibid., f. 216. Also, see ibid., ff. 248-250.
projection he often achieved better results. At the June 22, 1955, meeting of the Committee, several members stated that they felt that free reserves should not be used as the sole "guide" (target). At the July 12, 1955, meeting, it was noted that the significance of a level of free reserves changed as borrowings changed. This accumulation of evidence and growth of sentiment against using free reserves as the sole target led to a gradual de-emphasis of its use. At the August 2, 1955, meeting, several Committee members called for using interest rates and member bank borrowing as the major "guides" (targets) as to whether to supply additional reserves to the market or not. On June 26, 1956, Chairman Martin stated that he too would like to get away from using net borrowed reserves, but he went on to give an estimate of what level would be desirable. However, in the following meetings in 1956, the Committee members usually managed to reach a consensus without much use of free reserves.

In early 1957 there was a movement back toward the use of free

67 Ibid., f. 321.
68 Ibid., Roll 9, ff. 365-369.
69 Ibid., f. 406.
70 Ibid., ff. 434, 444-445. Also, see ibid., ff. 512, 518. The de-emphasis of free reserves continued, as may be seen from the following minutes: ibid., ff. 551-552, 590-594; ibid., Roll 10, f. 69.
71 Ibid., f. 345. Again on August 21, 1956, Chairman Martin stated that he was happy that the Committee members were moving away from using net borrowed reserves as a target. (Martin actually used the word "guide" instead of "target," but from the context of the statement, it is obvious he was speaking of a target.) Ibid., ff. 471-472.
reserves. At the April 16, 1957, meeting of the Committee, two members rallied to the defense of free reserves. Alfred Hayes, President of the Federal Reserve Bank of New York, stated that he felt that "... net borrowed (or free) reserves constitute the best single statistical measure of credit restraint..." 73 Hugh Leach, President of the Richmond Federal Reserve Bank and not a Committee member at that time, made a statement which the minutes record as follows:

It was Mr. Leach's belief that if the Committee were to focus on any single indicator as a benchmark of Committee thinking, net borrowed reserves was preferable to the bill rate or the Federal funds rate. The reasons had been set forth clearly in Governor Balderston's memorandum of April 3, 1957. Mr. Leach said that he recognized fully the limitations of any single indicator, but he was inclined to think that it might be useful for the Committee at each meeting to agree upon a figure of net borrowed reserves as an indicator of Committee thinking... Such a figure of net borrowed reserves would serve as a benchmark, but Mr. Leach emphasized that he did not have in mind that it should be a fixed goal. 74

Thus, free reserves became a symbol rather than a target, though observers, including this one, may have difficulty in discerning the difference. With the increased use of a free reserve target, the Account Manager was not expected to use the "feel" of the market quite

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72 For example, see ibid., Roll 11, ff. 98-125, 215-217.

73 Ibid., f. 235.

74 Ibid., f. 246.

75 Apparently the Committee members too had difficulty grasping this subtle distinction. For example, see the following dialogue which took place in August, 1957:

"Mr. Mills asked ... what was the present goal for net borrowed reserves. Mr. Rouse replied that in his view net borrowed reserves were a symbol, not a
so much in carrying out Committee policy. 76

A renewed attack began on free reserves as a target in early 1958. Malcolm Bryan, President of the Federal Reserve Bank of Atlanta, expressed great concern that little attention was being paid to total bank reserves and that the total reserve level was not above what it had been a year ago. In addition, he said,

If allowance be made, as I believe it must be made, for a growth factor in the economy, then the reserve situation is in my judgment quite unsatisfactory.

Accordingly, it would seem to me to be wise policy not to attempt an entire offset of seasonal factors tending to ease bank reserve positions. On the contrary, I would like to see the Open Market instrument operated in such a fashion as would give us positive total reserve comparisons when measured against year ago dates. Such a policy would mean that we would not be primarily concerned with security market yields—certainly not be frightened by "sloppy money"—and pay little or no attention to free reserves. I would like to see the situation allowed naturally to ease itself, even if, just for a figure, the bill rate drifted to 2.50 or below. At such a figure, I would be inclined to make sales and to review, in another few weeks, what our total reserve position on the year-to-year figures may prove to be in the light of our actions. 77

Thus, President Bryan wished to move away from using free reserves as a target. His approach implied that more attention should be paid to

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76Ibid., f. 496.

Ibid., f. 496.

77Ibid., Roll 12, ff. 29-30.

76Ibid., ff. 635-658.

Really, this concept of free reserves is not too different from the one originally stated. See n. 64, supra.
long-run factors and short-run fluctuations should not cause so much alarm. Bryan went on to outline the specific dangers which his approach would avoid,

(a) It brings us back to a basis of action compatible with our continuing Statements of Operating Policy, which must shortly be reviewed again;

(b) It avoids what I consider the grave danger that an increase in free reserves may occur, not because the credit situation has bettered but because the economic situation has worsened;

(c) It avoids the hazard of sales based on estimated magnitudes at a time when, aside from our usual difficulties of estimation, the measuring and extent of market factors seasonally affecting bank reserves are both especially elusive;

(d) It will avoid what I regard as the greatest of all dangers, namely, that we will underestimate the effects of the present illiquid position of the American banking system and thus cause us ourselves to be satisfied with a policy inadequate to the task of making the banking system a dynamic factor in economic recovery.\[78\]

Bryan's attack evidently impressed some of the Committee members. At the next meeting President Hayes, in supporting Bryan's suggestion that a new type of "guide" (target) be found, stated that the use of a free reserve target may involve a kind of circular reasoning. That is, a particular free reserve level may be successfully maintained but total reserves and the money supply may be shrinking.\[79\]

Also, the Committee was not certain that it could maintain a certain level of free reserves. It was recognized that bankers might lend out any excess reserves which accumulated, thus driving down the

\[78\] Ibid.
\[79\] Ibid., f. 68.
free reserve figure while credit expansion was occurring. Chairman
Martin commented that this was one of the difficulties of using a free
reserve target. These comments seem to anticipate some of the outside
criticisms of free reserves as a target. With the movement away from
free reserves came an increasing emphasis upon the "feel" of the
market. With the collapse of the government bond market, in the
summer of 1958, a brief return to interest rates as a target was
necessary. The System, however, continued to use free reserves, in con-
junction with feel, through the end of 1958.

In 1959, Committee members continued to discuss the value of free
reserves as a target while using it in conjunction with other targets.
Some members were clearly unhappy with the results of maintaining a
particular free reserve level for a long period of time. The following
comments made by Governor Mills underscore this concern:

In setting objectives and appraising the effects of
monetary and credit policy, the time has come to give
prime consideration to the results of sighting policy
actions at sustaining some predetermined level of
negative free reserves over a lengthy period of time.
The unhappy experience of last year, when $500 million
of positive free reserves were set as a continuing
goal of policy actions, was reflected in a supercharged
growth in the money supply. Similar results may occur
in reverse if some level of negative free reserves is
consciously maintained by policy actions for a con-
tinuous period of time, in that the ultimate effect on

80 Ibid., ff. 374-375.
81 For example, see A. J. Meigs, Free Reserves and the Money Supply
(Chicago: University of Chicago Press, 1962). Also, see William G.
Dewald, "Free Reserves, Total Reserves, and Monetary Control," Journal
of Political Economy, LXXI (April, 1963), 141-153.
82 For example, see Minutes, Roll 12, ff. 418, 466, and 520.
the money supply of maintaining any fixed level of reserves seems to be comparable to the results obtained from compounding interest. 83

President Bryan continued to be concerned about the growth of bank reserves. 84

In early 1960, Bryan further urged examination of total reserves as a target. 85 C. Canby Balderston, member of the Board of Governors, introduced a money supply target to replace free reserves. Balderston stated,

... He would recommend that policy be implemented by adding about $20 million a week to the reserve base, after allowance for seasonal and other transitory factors, which would permit a rate of growth in the money supply of about 2 per cent a year. 86

However, the Committee seemed reluctant to endorse a mechanistic approach. On March 1, 1960, President Hayes came to the defense of free reserves:

I think we 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. Of all the tested statistical guides we have available, net borrowed reserves are still probably the best, but this guide is certainly a long way from being sufficient by itself. 87

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83 Ibid., Roll 14, f. 169.
84 Ibid., ff. 877-878.
85 Bryan's proposals will be discussed in some detail later in this chapter. For examples of his efforts, see ibid., Roll 15, ff. 100, 129, 158-161.
86 Ibid., ff. 137-169. Mills had been encouraging consideration of an increase in the money supply for some time.
87 Ibid., ff. 214-215. Also at this time studies were in progress to test other possible targets. See ibid., f. 428, and ibid., Roll 16,
In addition, the Board's staff studied the possibility of using total reserves and/or the money supply as short-run targets. At the conclusion of this study both were found to be unsuitable for short-run purposes. Free reserves was vindicated as being a useful and helpful target in achieving Committee objectives if it were used in conjunction with other financial measures.

The conclusion reached by the FOMC in 1960 was that free reserves was a useful target but that it had many limitations. The Committee was aware that the level of free reserves could not be taken per se as the indicator of financial conditions nor should it be used as the sole target for System operations. Brunner and Meltzer have called this free reserve doctrine which recognizes some of the limitations of the concept the "modified free reserve doctrine." A list of these qualifications is found in the System's response to the Commission on Money and Credit f. 113.

From previous quotations of statements by Hayes, it may appear that Hayes is capricious first for, then against, and now again for free reserves. (See nn. 73, 79, supra.) This apparent capriciousness is explained when one realizes that Hayes is consistently for free reserves only if it is used in conjunction with other measures. His above statement, which is taken out of context, is both a defense of free reserves and the use of "feel" as targets for System policy, and a reaction against the adoption of a mechanical rule.

88 See the statements of Guy Noyes, staff economist, ibid., ff. 150-152.

89 Ibid., f. 211.

90 While Brunner and Meltzer feel that the modified free reserve approach is more realistic than the "naive" version, their major criticism of the System, that it has failed to develop a systematic understanding of the monetary process, still stands. Brunner and Meltzer,
questionnaire. System officials stated,

The significance at any given time of net borrowed reserves (or free reserves) as a factor tending to restrain (or encourage) bank credit expansion depends on at least five things: (1) the magnitude of the free reserves (or net borrowed reserves); (2) the level of short-term money rates relative to Federal Reserve discount rates; (3) the vigor of actual current demands for bank credit; (4) the existing level of total bank liquidity; and (5) the variations among different classes and groups of banks with respect to the conditions just named.  

As most of the above qualifications have been discussed in FOMC meetings, it is obvious that the passage was not written as a hollow rationalization of the use of free reserves. The passage stems from the long struggle within the FOMC over the meaning and use of free reserves. At the same time, Brunner and Meltzer, as well as others, appear justified in concluding that free reserves was the major target used by the FOMC. Of course, it was not the only target used, and the Committee members certainly seemed aware of the limitations of its usage.

Thus, to summarize this section, the FOMC and Executive Committee began using the concept of free reserves earnestly in late 1953. Criticism of free reserves led to gradual de-emphasis of its use in 1954,


1955, and 1956. In 1957 the FOMC returned to the use of free reserves but with the understanding that the earlier criticisms of the target were valid qualifications which must be kept in mind. While the free reserves target was in use in 1958 and 1959, an attack was launched to abandon it for a total reserve or money supply target. In 1960 the Committee concluded that free reserves was a useful target and indicator but that it must be used in conjunction with other financial measures.

III. THE TOTAL RESERVE TARGET

As mentioned in the previous sections of this chapter, the Federal Open Market Committee considered increasing total bank reserves by some increment per week as a short-run target. Most of the suggestions for the use of a total reserve "guide" (target) came from Malcolm Bryan, President of the Federal Reserve Bank of Atlanta. As early as June 3, 1954, he questioned whether free reserves was a better target than total reserves. Actually, the Committee quite frequently considered total bank reserves as a financial market indicator. However, the Committee was not using a short-run total bank reserve level target.

Guy Noyes, in explaining some of the System's responses to the CMC questionnaire, stated that the volume of bank reserves was one of the short-run policy objectives. However, the big problem with bank reserves had been to place it under effective statistical control. Short-run recurrent and random variations in reserves complicated its

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92Minutes, Roll 8, f. 192. Committee members generally failed to distinguish between "guides" and "targets." Bryan was advocating the use of a total reserve target, though he often used the term "guide."
use as a target. It was practically impossible to distinguish fundamental changes in bank reserves from random or seasonal ones in the very short-run. Refinements in reserve data, in an attempt to deal with these variations, led to the usage of the concepts "available reserves" and "nonborrowed reserves." Noyes indicated that the FOMC was using "available reserves" as one of its short-run targets in 1961. Though the term "available reserves" appears in the minutes of the FOMC it apparently had not developed, in late 1960, to the point where it replaced or rivaled free reserves in importance as a target. A glance at recent issues of the Federal Reserve Bulletin seems to indicate that the concept of "nonborrowed reserves" has grown in importance.

The use of free reserves and interest rates as targets implies a short-run approach to monetary policy, i.e., it views almost daily and hourly changes. Because of this short-run approach and emphasis on "defensive" operations, the Federal Reserve has come under considerable attack. President Bryan's approach, even though it called for a weekly increase in total reserves, would have envisioned a longer time

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94For example, see Board of Governors, "Recent Bank Credit and Monetary Developments," Federal Reserve Bulletin, LIII (February, 1967), 189-190.

95For example, see Karl Brunner and Allan H. Meltzer, Some General Features of the Federal Reserve's Approach to Policy, Subcommittee on Domestic Finance, House Committee on Banking and Currency, 88th Congress, 2nd Session, February 10, 1964, pp. 9-16.
span. 96 In early 1960, Bryan stated his reasons for introducing a total reserve target: He wanted to experiment

... to determine whether the total reserve concept represents a practicable foundation on which the Committee would base instructions (a) in quantitative and thus, in measurable terms; (b) in terms of a phenomenon, namely total reserves, that are determinable by the System; (c) avoid qualitative terminology as represented by such indefinable terms as tone, feel, ease, tightness, and so on; and, at the same time, (d) to leave the Desk with sufficient latitude to accommodate itself to the practical administration of the Account and to conditions as they unfold from meeting to meeting. 97

Concern about the lack of growth in both the reserve base and the money supply evidently encouraged consideration of a total reserve target. 98 The reluctance of Committee members to accept a mechanistic approach to monetary policy and an unfavorable staff report on total reserves, which is discussed in the following section, condemned its use as a short-run target. 99

IV. THE MONEY SUPPLY TARGET

There are several areas of controversy surrounding the money supply and its use as a target. While economists outside of the FOMC have been concerned with selecting the most viable definition of the money supply, the FOMC seems to have largely ignored the dispute. At least the

96 Minutes, Roll 15, ff. 123-129. Bryan, in this reference, was seeking a 2 per cent annual increase in total reserves.
97 Ibid., f. 100.
98 For example, see ibid., ff. 243-253.
99 Ibid., ff. 168-169, and Roll 16, ff. 150-152.
minutes do not reveal undue concern by the committee members as to the proper definition. The Committee evidently used the same definition of the money supply which appears in the Federal Reserve Bulletin—demand deposits plus currency, with the appropriate adjustments.

Economists both within and without the Federal Open Market Committee have been concerned with growth in the money supply. Milton Friedman has been persistent in proposing a 4 per cent increase in the money supply per year. Also, Committee members have been concerned with the seasonal needs for monetary expansion as well as a monetary base for long-run economic growth. At the March 5, 1957, meeting of the Committee, Governor Mills expressed concern with the seemingly incompatible goals of meeting the monetary growth needs of an expanding economy and yet retarding inflation. He wondered whether deposit turnover could, within limits, prevent economic stagnation with a relatively static money supply. Woodlief Thomas stated that System experience had shown that the money supply did not have to increase at a constant rate in order for the economy to grow at a constant rate. He noted that certain measures could increase money flows without increasing the stock


101 At the August 24, 1954, meeting of the Executive Committee, Sproul made the following comment regarding seasonal needs:

"An increase in the money supply of about the usual seasonal proportions during the remainder of the year will be needed to meet private and Treasury needs, and will require an expansion of Federal Reserve credit to offset the resultant increase in required reserves and currency circulation." Minutes, Roll 8, f. 248.
of money; but, he also noted, these measures may limit the effectiveness of monetary policy. The Committee members ended the discussion by saying that it all seemed to be a matter of judgment and that further study was needed.

As previously noted, the Committee members became concerned about the slippage between free reserves and changes in the money supply. The experience of 1958 proved that the money supply could increase quite rapidly while the free reserve level was held constant. Then, in 1959, the Committee became concerned that a constant net borrowed reserve level would precipitate a too rapid contraction of the money supply.

By 1960 money was felt to be too tight. Governor Mills became quite concerned as the Committee recognized the need for an increase in the money supply, but did nothing about it. Also, in early 1960, Governor Balderston presented a proposal to increase the money supply at a constant rate each year. Balderston's proposal was similar to Atlanta Bank President Bryan's, but Balderston wanted to increase reserves by twenty million dollars a week in order to increase the money supply each year.

New York Bank President Hayes stated that he would like to see the

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102 Ibid., Roll 11, ff. 143-146.
103 See n. 83, supra.
104 Minutes, Roll 14, f. 100. For further discussion on the money supply during 1959, see ibid., ff. 324-325, 882.
105 Ibid., Roll 15, ff. 86-87.
106 Ibid., ff. 138-150.
money supply expand, but that as a short term target such an increase in
the money supply would be meaningless. Hayes continued:

The Desk could hardly see $20 million a week in
relation to the kind of factors that it was off-
setting all the time and would scarcely be able to
tell whether such an objective was being accom-
plished or not. Of course, the Account Manager
could look after and see whether, in a general way,
he had gotten toward that goal, but in day-to-day
operations the Desk could not be guided by such an
instruction.  

Hayes went on to state that such an increase could be built into the
projections and used that way. But, it would be impossible for the Desk
to tell whether it had accomplished any growth over a very short
period.  

The Committee members were reluctant to adopt a "rule" type
approach, but decided they would study Balderston's proposal.  

The Committee members, in 1960, continued to be concerned with the
lack of growth in the money supply, but they eschewed it as the primary
target. Finally, at the August 16, 1960, meeting of the Committee,
Guy Noyes delivered the coup de grace to the proposal that total
reserves be increased at a certain rate so as to increase the money
supply. Noyes did not feel that it was possible to anticipate the
specific amount by which total reserves should be changed in order to
maintain the existing level of the money supply or to increase or
decrease it by a certain amount. Yet, the idea of using the money

107 Ibid., ff. 155-156.
108 Ibid.
109 Ibid., ff. 161-169.
110 Ibid., ff. 233-253, 361.
supply as some sort of long-range target-guide was retained.

Thus, as pointed out above, the Committee, while using free reserves as a target, became concerned on several occasions when the money supply began to grow either too rapidly or too slowly. Subsequent discussion pointed out the importance of velocity as well as other factors in determining whether the money supply is growing at the proper pace. Proposals for a constant increase in the money supply target were

Noyes stated:

". . . It is literally impossible to quantify in advance either the change in total reserves or the volume of System operations which would be necessary to maintain the existing level of the seasonally adjusted money supply or to increase or decrease it by a specified amount.

"On the other hand, it does appear possible, in retrospect, to determine with reasonable accuracy whether the net effect of all factors affecting member bank reserves, including System operations, was such as to provide more or less reserves than were needed to support the level of the seasonally adjusted money supply which prevailed at the beginning of the period. However, whether such an analysis adds substantially to the insight which can be gained from observation of the movements of the money supply itself on a semimonthly basis is at least open to question. After spending considerable time working over the data, my own judgment is that an appraisal of the impact on the money supply of levels of reserve availability that have prevailed in the recent past can be made best in terms of the behavior of the money supply itself, rather than the reserve base available to support it. If the level of free or net borrowed reserves which has prevailed has produced changes in the money supply other than those intended by the Committee, then it should be adjusted in the direction indicated. While the level of total reserves is a logical link between the two, it does not seem practical to use it directly as a guide for current operations; on the other hand, nor does it seem to
defeated owing to their short-run inadequacies. However, the Committee did seem to decide that allowance for an annual increase in the money supply can be built into free reserve projections. This conclusion is contained in the following statement by System officials:

Broader guides to policy operations are provided by the consequences of changes in reserve availability on the amount of total loans and investments of banks and on the money supply. Assumptions or estimates as to these elements underlie the current and projected figures for total reserves and free reserves. The Open Market Committee in its deliberations has in mind what conditions with respect to the availability of bank credit and growth in the money supply would be an appropriate end of policy at the time.  

V. FEEL AS A TARGET

An understanding of the "feel" of the market and its position in the Committee-Account Manager relationship is difficult to discern and compose. "Feel" seems to bridge the gap between the free reserve target and the degree of ease or tightness indicated by the Committee during its discussion. That is, though the Committee sets a level of free reserves in its discussion, and oftentimes in its consensus statement, it is really indicating a feeling which it has. Since market conditions may change, the numerical target which the Committee has set may be invalidated. The Account Manager, however, will attempt to adhere to

shed light on the impact of past policy actions which is not revealed by an examination of the course of the money supply itself."  

the "spirit" of the free reserve target while not following the target to the "letter." In practice, the Committee may set a range of free reserves as a target. The Account Manager then will vary the free reserve level within that range according to his feel of the market in adhering to the spirit of the Committee's wishes.\footnote{113}

Evidence of the Account Manager's initiative in this respect is found in the minutes of August 24, 1954. The Account Manager allowed some bills to be "run off" to avoid having a "sloppy" market.\footnote{114} Even before the general use of free reserves as a target, the Account Manager felt that he could carry out the Committee's intent without the use of a specific numerical target.\footnote{115} Even Chairman Martin indicated that on occasion the Account Manager's use of "feel" of the market as a target was superior to a fixed free reserve level.\footnote{116} During much of the decade of Committee action under study, the Committee, while using a free reserve target, commented that it wished to maintain about the same degree of "ease," "restraint," etc. That is, the free reserve level, while acting as a symbolic target, was also accompanied by a verbal expression of the same thing.

Not all of the Committee members put faith in the "feel" of the market. Governor Robertson, already noted for his criticism of Desk action, made the following statement:

\footnote{113}[Minutes, Roll 14, f. 306.}
\footnote{114}[Ibid., Roll 8, ff. 249-252.}
\footnote{115}[See n. 59, supra.]
\footnote{116}[See n. 67, supra.]
He also believed that too much reliance on "feel of the market" as seen in New York could be disastrous in the conduct of operations to carry out Committee policy. He felt that pressures in New York were much greater and much more difficult to withstand than they were outside New York. Feel of the market could not be disregarded but it should not be given full sway.

Likewise, the System has been criticized from outside for placing such decision making power in the hands of the Desk.

A new flare was added to the instructions to the Account Manager when Martin stated that he would like to see the same "feel, tone, and color" of the market continued. The reliance of the Committee on the discretion of the Account Manager is clearly seen during the government securities market crisis of 1958. The Manager was called upon to indicate when the market became disorderly as well as how to smooth it out and scale it down.

In general, it seems that when the Committee became disenchanted with free reserves it increased its use of "feel" as a target. In 1960 President Hayes made a statement concerning how to give instructions to the Account Manager. This statement seems to summarize the procedure used by the Committee during much of the period of this study and up until operation twist:

117 Minutes, Roll 11, f. 635.


119 Minutes, Roll 12, f. 466.

120 Ibid., Roll 13, ff. 12-60.
... I believe that our usual instructions couched in terms of "the same degree of restraint" or "more" or "less" are sufficiently precise to make it possible for the Manager to react to changing developments flexibly and in such a way as to carry out fully the spirit of the Committee's instructions. As we have often noted, our system of reports including the daily conference call, is so extensive that each member has ample opportunity to inform the Manager if he sees any deviation from the Committee's instructions. I think we 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. Of all the tested statistical guides we have available, net borrowed reserves are still probably the best, but this guide is certainly a long way from being sufficient by itself.121

Thus the Manager of the Open Market Account "feels" not only the intent of the Committee by its verbal and quantitative instructions, but also the market in attempting to apply them.

VI. SUMMARY

As the previous discussion has pointed out, the Federal Open Market Committee has used and considered using a host of economic targets. Beginning with the Treasury-Federal Reserve Accord in March, 1951, the System moved away from using interest rates as a target. During this time, the Account Manager operated largely according to the feel of the market, the Committee giving him limited quantitative instructions through discussion and the consensus statement. The adoption of "bills only" was followed quite soon by the adoption of free reserves as a target. The Committee quickly discovered that free reserves was not a panacea for its directional ills. During vacillations in the popularity

121 Ibid., Roll 15, ff. 214-215.
of free reserves, "feel" of the market was often relied upon. Concern
with the behavior of the money supply and total bank reserves led to	heir consideration as targets and a diminution in the use of free
reserves. In 1960 free reserves, modified by many qualifications and
assisted by feel, returned as the single most workable target, with
money supply and total reserve increases tucked into its projections.
Concern over the international balance of payments problem led to the
return of interest rates as an important target. With the initiation
of operation twist, the bill rate was not to fall below two per cent.

This chapter, by examining the various targets which have been
used by the Committee, leads the way to a consideration of their use
during specific business cycles. Chapter IV examines the economic
indicators which the Committee reacted to, the length of time it took
the Committee to react, and the target instructions which the Committee
gave.
CHAPTER IV

MONETARY LAGS

This chapter begins with an examination of some of the problems involved in lag determination, i.e., the difficulties involved in pinpointing lags. Next, evidence of the inside lag during upturns and downturns in the period 1951-1958 is considered. Finally, the evidence of lags found in this study is summarized and compared with the length of lags reported in other studies.

I. PROBLEMS INVOLVED IN LAG DETERMINATION

The initial problem in lag determination is to define the lags which are to be studied. Economic literature, while abounding with lag definitions, lacks the uniformity necessary to avoid semantical difficulties. To avoid this pitfall, this chapter will present below in tabular form the lag definitions which were introduced in the first chapter of this study:

At first glance, it would appear that the above definitions solve the problem of semantics. This appearance, however, is misleading because the precise meaning of the dating points is subject to question. Each of the above descriptions of dating points, therefore, will be examined in turn to expose their weaknesses and to clarify their meaning for use in this study.

The first problem is to determine when an economic change occurred. Several indices may be used to make this determination *ex post*. The

<table>
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<th>Lag</th>
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<tr>
<td>1</td>
<td>An Economic Change Occurs</td>
<td>The Recognition Lag</td>
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<td>2</td>
<td>Recognition of the Need for a Change in Policy</td>
<td>The Administrative or Decision Lag</td>
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<tr>
<td>3</td>
<td>A Policy Decision Is Made</td>
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<tr>
<td>4</td>
<td>The Authorities Commence Action</td>
<td>Part I of the Outside Lag</td>
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<tr>
<td>5</td>
<td>The Banking System Is Affected</td>
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</tr>
<tr>
<td></td>
<td>The Economy Begins to Respond</td>
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</tbody>
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most popular appear to be the National Bureau of Economic Research (NBER) turning points, the Federal Reserve Index of Industrial Production, and unemployment statistics.² Kareken and Solow's study, while using all three, does not seem to indicate a significant difference in results between using the NBER turning points and those indicated by the Federal Reserve Index of Industrial Production. The use of unemployment statistics yielded longer lags after peaks and shorter lags after troughs. The use of a consumer price index provided mixed results.³ Even though these indices have been used by economists outside the System, it would seem to be more relevant to date the need for a change from variations in economic indicators used by the FOMC. This approach, however, would suffer the weakness of judging the System by using the System's own criteria.

What is needed is to judge the System against independent measures of when action should have been taken. Even this point may be questioned. For example, when does the need for a change in System policy


³Kareken and Solow, pp. 68-71.
occur? Is it precisely at the moment some economic variable, such as an index of industrial production, changes; or, granted that monetary policy takes some time to work, is it before economic activity turns up or down? The turmoil over measuring the outside lag of monetary policy only adds to the confusion. The answers to these questions appear, owing to the imperfect state of our knowledge, to be a matter of judgment. While recognizing the shortcomings of the measure, this study uses the NBER turning points in dating the time when an economic change occurred.

The next question is this: Who must recognize the need for a change? Does the recognition lag end when a staff member or Committee member recognizes the need for a change? Since detailed records are not available to show when individual Committee members or staff members first recognized the need for a change, some other dating point must be found. Because this study is attempting to discover the response of the FOMC or Executive Committee to economic changes, it will use as that dating point the time when the Committee as a whole reached a new

While many economists have been attempting to purge economics of value judgments, others seem anxious to prove that we cannot escape them. Hence, they should be made explicit. By selecting the NBER turning points as indicative of an economic change and the need for some response to it, this author is assuming that his choice is the most appropriate one, whether value judgments are involved or not. For a brief survey of the literature on value judgments in economics, see George J. Stigler, *The Theory of Price* (New York: The MacMillan Company, 1946), pp. 6-9; Milton Friedman, *Essays in Positive Economics* (Chicago: The University of Chicago Press, 1953), pp. 9-10; Fritz Machlup, "The Problem of Verification in Economics," *Southern Economic Journal*, XXII (July, 1955), 1-21; Gunnar Myrdal, *The Political Element in the Development of Economic Theory* (London: Routledge & Paul, 1953), p. 20; and Royall Brandis, "Value Judgments and Economic Science," *Quarterly Review of Economics and Business*, III (Summer, 1963), 41-45.
consensus as the result of changed economic conditions. This approach has two disadvantages. First, it may overstate the length of the recognition lag. Second, it assumes that the administrative lag is zero.

The administrative lag is traditionally measured from the time when the need for policy change is recognized to the time when a policy decision is made. The reaching of a consensus is certainly a policy decision. If the recognition of the need for a change is acknowledged by using the consensus as a dating point, then the administrative lag is assumed to be zero, thus perhaps overstating the recognition lag by the length of the true administrative lag. There are several reasons which justify this approach, however. First, as seen above, it is difficult if not impossible, owing to the lack of data, to date the end of the recognition lag when an individual staff or Committee member perceives the need for a change in policy. Also, some selection must be made as to who must perceive the need for a change. Second, as a matter of practice, the administrative lag must be quite short for monetary policy since the FOMC meets every three weeks and can meet more frequently if necessary. The Committee can also assemble on short notice or even make policy decisions using a telephone hookup.\(^5\) Third, other studies which have encountered this difficulty have taken an approach similar to the one which this author is following.

For example, in the Kareken and Solow study, the administrative lag is considered to be of zero length.\(^6\) Kareken and Solow, however, date

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\(^5\) Minutes, Roll 13, ff. 12-30.

\(^6\) Kareken and Solow, p. 65.
the end of the combined recognition-administrative lag by the change in the directive issued by the FOMC and in the earning assets which may be held by commercial banks. This practice is questionable. As mentioned in Chapter II of this study, there is no reason to believe that consensus changes and policy directive changes must always occur at the same time. In fact, several cases examined in this study show that consensus changes often precede directive changes. For this reason it would seem more appropriate to date the end of the recognition-administrative lag with consensus changes, not with directive changes. Kareken and Solow also claim that the directive is changed almost simultaneously with a change in the volume of maximum earning assets (MaxE) which may be held by commercial banks. Owing to this fact, they date the end of their recognition-administrative lag as the time when MaxE changes. Their approach seems to be dating a combination of lags 1-4 as defined in Table II above. This technique has the shortcoming of overstating the length of the inside lag by the length of the first part of the outside lag. This partially accounts for the difference in the findings of this study and those by Kareken and Solow.

Kareken and Solow in their search for an adequate numerical description of Federal Reserve policy adopted and developed the variable "maximum earning assets which the commercial banking system may hold," or simply MaxE. The final product of their work was the development of the variables MaxE*, MaxE**, and MaxE*. These are defined as follows.

7Ibid.
\[
\text{MaxE}_1^* = \frac{1 - k^*}{k^*} R - V + B + N
\]

\[
\text{MaxE}_{1}^{**} = \frac{1 - k^*}{k^*} R + \frac{1}{k^*} V^* - V + B + N
\]

\[
\text{MaxE}_{2}^{*} = \frac{1 - k^*}{k^*} (R + V) + B + N
\]

\[k^* = \text{the weighted average of legal reserve ratios}\]
\[R = \text{the total deposits of member banks with the System}\]
\[B = \text{total member bank borrowings}\]
\[V = \text{total vault cash}\]
\[N = \text{total net worth}\]
\[V^* = \text{that portion of total vault cash allowed as legal reserves}\]

\text{MaxE}_{1}^{**} \text{ differs from MaxE}_1^* \text{ in that the former considers and allows for the 1959 legal change which permits commercial banks to count vault cash as legal reserves whereas the latter does not. MaxE}_1^* \text{ and MaxE}_{1}^{**} \text{ both assume that all vault cash is necessary, in some way, for conducting business whereas MaxE}_{2}^{*} \text{ assumes that vault cash is unnecessary, i.e., excess reserves.}\]

\text{The concept of MaxE is important in that Kareken and Solow date the response of the Federal Reserve to economic changes from the time when significant changes in MaxE occur. Also, this study examines the same MaxE data for peaks and troughs as well as upturns and downturns in MaxE.}\]

\text{Another lag which may be assumed to be zero for monetary policy is the action lag. The Open Market Account Manager in practice immediately effectuates policy decisions made by the Committee. In the case of}\]

\(\text{\footnote{For a complete description of MaxE see \textit{ibid.}, pp. 76-87.}}\)
fiscal policy, the action lag may take some time, especially if new organizations must be formed or plans drawn up. In the case of monetary policy, however, the Account Manager has but to buy or sell government securities. This is practically an instantaneous process.

Thus, for the purposes of this study, the inside lag, composed of the recognition, administrative, and action lags, is said to be the time between the occurrence of an economic change, as measured by the NBER turning points, and the Committee's reaching a new consensus in response to the economic change.

Consideration of the outside lag, while important, is largely beyond the scope of this study. The first part of the outside lag ends when the banking system is affected by monetary policy action. But how can one determine whether the banking system has been affected? Several measures have been used. Brunner and Meltzer seemed to watch for variations in a moving average of free reserves. Kareken and Solow dated the lag from changes in MaxE. Eugene Lerner watched for alterations in the rate of change in loans and investments. Perhaps other indications would be alterations in the money stock or variations in its rate of growth.

The second part of the outside lag, when the economy begins to respond, also suffers dating problems. Milton Friedman maintains that this lag is long and variable; hence, discretionary monetary policy is

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9Brunner and Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, pp. 42-43.
10Kareken and Solow, pp. 64-67.
destabilizing. Other economists take issue with this point. Kareken and Solow recognize a cumulative impact shortly following monetary action. Other investigations reveal the impact which monetary policy has on selected industries. A detailed investigation of this lag is beyond the scope of this study.

II. EVIDENCE OF THE INSIDE LAG DURING DOWNTURNS

Two downturns, which took place during the period under study, are examined in this section. The NBER dates the relevant cyclical peaks as occurring in July, 1953, and July, 1957.

In the economic literature, considerable diversity of opinion exists as to when the FOMC responded to the economic downturn of 1953. Using MAXER as a guide, Kareken and Solow say that the System did not respond until May, 1954, ten months after the cyclical peak of July, 1953. Friedman and Schwartz state that the FOMC reversed its policy in the week ending May 13, 1953, when the account began purchasing Treasury bills. This was two months prior to the turning point.

\[\text{\cite{Friedman1961}}\]
\[\text{\cite{Friedman1963}}\]
\[\text{\cite{Culbertson1960}}\]
\[\text{\cite{Lerner1962}}\]
\[\text{\cite{Smith1956}}\]
\[\text{\cite{Kareken1957}}\]
\[\text{\cite{Friedman1962}}\]

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\[\text{\cite{Friedman1961}}\]
\[\text{\cite{Friedman1963}}\]
\[\text{\cite{Culbertson1960}}\]
\[\text{\cite{Lerner1962}}\]
\[\text{\cite{Smith1956}}\]
\[\text{\cite{Kareken1957}}\]
\[\text{\cite{Friedman1962}}\]
Brunner and Meltzer notice that the Record of Policy Action showed a change on June 11, 1953, one month prior to the peak, but that free reserves began increasing on May 27, 1953, about a month and a half prior to the peak. Thus, economists date the System's response from two months prior to the cyclical turning point to ten months after the turning point occurred.

An examination of the minutes of the FOMC, a source not available to the above authors, sheds some light upon the matter. The minutes reveal that in early 1953 the staff and Committee members felt that the economy was characterized by a high level of production, optimism, and tightness in the money market. At the March 4, 1953, FOMC meeting, Chairman Martin said, "... It appeared to be the consensus that there was more reason to feel concern about the possibility of inflationary developments than of a deflationary movement." At the March 24 Executive Committee meeting, however, some of the members expressed concern about the future path of economic activity:

The Chairman expressed concern that there might be a bullish movement during the spring months of this year followed by a sharp drop... He felt that the problem should be considered in terms of whether the System by acting now could minimize additional boom during the next three months.

President Sproul indicated that he would like to see the same policy

17 Brunner and Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, p. 42.
18 Minutes, Roll 7, f. 27.
19 Ibid., f. 55.
20 Ibid., f. 99.
maintained, but that he would be alert to signs of a slowdown in economic activity.  

Additional warning signs of an imminent economic downturn were mentioned at the April 24, 1953, meeting of the Executive Committee. Young's economic report, while mentioning that income, production, and employment were high, included the following statement:

... There is greater caution about longer range prospects than at the beginning of this year. Much of the concern about economic prospects relates to possible developments later this year or next year, the main question appearing to be whether existing levels of economic activity will be sustained in the latter part of 1953 and early 1954.

President Sproul felt that unless some new stimulant appeared to replace rising government spending and expansion in consumer and mortgage credit or to offset declining farm income, a period of readjustment would appear. But, to avoid a period of rising credit expansion which often occurs at the end of a boom, Sproul recommended continuation of the same policy. It was during this period, immediately after the adoption of "bills only" and prior to the adoption of free reserves as a target, that the FOMC was experimenting with member bank borrowing as a target:

Chairman Martin stated that he felt that a fair interpretation of the understanding at the April 8 meeting of the executive committee was that, if member bank borrowings rose above $1-1/2 billion, the presumption would be that the System account would have a tendency to acquire some securities; if member bank borrowings were below $1-1/2 billion, the presumption would be against such outright purchases.

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21 Ibid., f. 102.
22 Ibid., f. 129.
23 Ibid., ff. 134-135.
Thus, as of April 24, the Executive Committee was maintaining about the same degree of restraint as it had been for some months, but was alert for signs of economic change.

The May 6, 1953, Executive Committee meeting proved to be a significant one. Concern that the money market was becoming too tight and awareness that an economic downturn might be in the making led to a mitigation of monetary pressures by supplying reserves. The comments of Committee members during the meeting bear out these concerns. Governor Mills felt that some funds were needed in the short-term market to tone it up and to prevent attrition in the coming Treasury financing. President Sproul made a rather lengthy statement in which he generally agreed with Mills' conclusions. The points which Sproul made are mentioned below:

1. While productivity has been at capacity for some time, costs are rising, prices are stable, and future profits uncertain. Also, investment funds seem to be lacking, even with higher interest rates.

2. Installment buying is up.

3. Banks have been feeling monetary pressure for some time.

4. It is increasingly felt that economic change is coming. The stock market reflects this feeling.

5. Treasury receipts are below and will remain below what is needed.

6. Banks will be put under additional strain to meet the coming Treasury offering.

7. If banks are forced into liquidating loans, a chain reaction may result.

\(^{24}\text{Ibid.}, \text{ff. 145-157.}\)
Sproul concluded:

1. Our policy of neutrality has gradually shifted to one of tightness; even with rates which appear low, money can be tight.

2. As monetary policy takes time to be effective, this is not the time to increase pressure in the money market.

3. Treasury borrowing will press reserves; buying securities will help.

4. The risk of easing market tightness is that it may give a final boost to unwholesome credit and business developments. This would increase our later difficulties. If we do not act an economic downturn may occur and the Treasury will have financing difficulties. Presently, the latter risks are the greater.

5. Buy securities now to put reserves into the market.\(^{25}\)

Chairman Martin also expressed interest in the situation. He said that the question was not whether the Treasury should be helped, but that it was a matter of whether "... the rubber band was at the breaking point in the matter of tightness."\(^{26}\) The staff indicated that additional reserves of about $100 million per week would have to be supplied to keep the market from becoming tighter.\(^{27}\) The following statement by Sproul aptly summarizes the consensus reached in the meeting:

Mr. Sproul stated that his understanding was that our policy is not for the purpose of helping the Treasury to float any issue or to fix any rates. Treasury financing will have an impact on the reserve position of banks, however, and the question the committee had

\(^{25}\) Ibid., ff. 147-149.

\(^{26}\) Ibid., f. 152.

\(^{27}\) Ibid., f. 158.
been discussing, Mr. Sproul said, relates to whether there should be further tightening in the money market because of this; it was on the basis of avoiding a further tightening that he understood reserves would be placed in the market.

Thus, on May 6, the Committee decided to keep pressures on the money market from increasing by supplying reserves.

This analysis corresponds closely with the recognition lag cited by Friedman. After reviewing the uncertainty which characterized the bond market in this period, Friedman and Schwartz say,

There was a quick change in monetary policy, when the System was confronted with more tightness than it had intended. The reversal in monetary policy began in the week ending May 13, when the System began buying Treasury bills.

Friedman and Schwartz, however, seem to view the bond market crisis as the only reason for the shift in System policy:

The bond market crisis was in one respect a blessing in disguise. For the first time in its history, the Reserve System was led to undertake easing action before or coincidentally with a peak in general business.

As has been shown, the Committee, while primarily concerned with market tightness, was not attempting to support bond prices and was aware of the possibility of a downturn in economic activity. Also, the Committee acted to stop further tightening in the money market, not to ease conditions.

For a shift to ease, one must wait until the meeting of June 11.

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28 Ibid., ff. 160-161.
29 Friedman and Schwartz, *A Monetary History*, pp. 613-614.
30 Ibid., p. 614.
In the May 13, 1953, meeting of the Executive Committee, Ralph Young, in his economic report, mentioned that the economy continued strong but with faint weaknesses. He also stated that a number of outside observers were predicting a downturn but that he did not feel one would occur in the immediate future.\textsuperscript{31} The Executive Committee members agreed to continue the same policy. Also, at the May 26, 1953, meeting of the Executive Committee, the same policy was renewed.\textsuperscript{32} But, the June 11, 1953, meeting of the FOMC produced a major change. The continuing tightness in the money market had resulted in near disorder in the government securities market. The economic report showed that prices were stable and that economic activity was high, but that worry about a downturn in the economy continued to be present. Concern about the money market led to the suggestion by Sproul that the FOMC untie itself from the restraints of "bills only" so that a more flexible policy could be pursued if it were needed. Sproul's logic carried the day and the "bills only" policy was rescinded—\textsuperscript{33} but only for a short time. While the FOMC members were sharply divided on the "bills only" policy, they were uniform in their agreement that more reserves needed to be supplied to the market.\textsuperscript{34} The consensus statement was as follows:

Following further discussion, Chairman Martin stated that it appeared to be the consensus of the Federal Open Market Committee that there should be an aggressive supplying of reserves to the market during the near future, on a sharply rising basis.\textsuperscript{34}

\textsuperscript{31}Minutes, Roll 7, ff. 164-165.
\textsuperscript{32}Ibid., ff. 177-178.
\textsuperscript{33}Ibid., ff. 195-248.
\textsuperscript{34}Ibid., f. 243.
Also, a change in the wording of the directive was approved. Thus, as this author interprets the Committee's action, the easing was in response to an unduly tightening money market, a tightening which the Committee felt was the result of heavy credit demands, Treasury and private, at the end of a boom period.

Studies which date the end of the recognition lag as occurring when the Committee's directive changed or when the Record of Policy Action in the Annual Report indicated a shift in policy thus show June 11 as the dating point. Brunner and Meltzer's study is such a case. The disadvantages of such an approach, however, leave it open to criticism. Brunner and Meltzer, by showing that the free reserve level changed prior to the directive change, conclude that the Account Manager was acting independently and outside of the directive issued by the Committee. This is clearly an erroneous conclusion resulting from interpreting FOMC changes as being coincident with Executive Committee consensus. The Annual Reports did not contain summaries of the Executive Committee meetings. The consensus change of May 6 in the Executive Committee led to the free reserve change which Brunner and Meltzer noted on May 27. Thus, the Account Manager was acting within the wishes of the Committee. Brunner and Meltzer, however, did recognize that consensus changes may occur without corresponding directive

35 Ibid., f. 246.
37 Ibid., pp. 47-49.
38 Ibid., p. 42.
changes. This fact is illustrated in the following statement found in their study:

... It was possible [for the Committee] to change ... [its] policy without changing the directive. The converse was also true. At times, the directive would be changed, but it would be noted in the Record of Policy Actions that there was no change in policy.39

The Kareken and Solow study seems to have missed the proper dating point completely. By reviewing the statistics used by Kareken and Solow, this author concludes that the use of MaxE does indeed show the shift in System policy but that the shift occurred much sooner than the date indicated by Kareken and Solow. Indeed, the shift appears to have occurred during May, 1953, the same period in which Friedman noted a shift in System policy and in which Brunner and Meltzer noted an increase in free reserves.40 Whereas Kareken and Solow date the shift to easy money as being in May, 1954, Table III clearly shows that MaxE began to increase long before this. This divergence of opinion as to when MaxE changed can be explained. Kareken and Solow dated changes in MaxE from the time when it showed a "sharp change in trend." This author dated changes in MaxE from the time when it first began to shift

39Ibid., p. 33.

40Brunner and Meltzer attribute the difference in the recognition lag between their study and that of Kareken and Solow to be the result of the System's misunderstanding of the monetary process. Brunner and Meltzer feel that the System sees the upsurge in free reserves prior to recession as the result of System action, not outside forces. Then the System's failure to increase total reserves until some months later results in a delay. Thus, MaxE will not change until significantly later than the date of FOMC recognition. Brunner and Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, pp. 45-46.
after a peak or trough.

<table>
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<tr>
<th>Date</th>
<th>MaxE₁, MaxE₁⁺⁺</th>
<th>MaxE₂⁺⁺</th>
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<td>134,101</td>
</tr>
<tr>
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<td>134,188</td>
</tr>
<tr>
<td>Apr. 1953</td>
<td>120,147</td>
<td>T 132,912</td>
</tr>
<tr>
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<td>120,217</td>
<td>I 133,299</td>
</tr>
<tr>
<td>June 1953</td>
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<td>July 1953</td>
<td>123,133</td>
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<tr>
<td>Aug. 1953</td>
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<tr>
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<tr>
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</tr>
<tr>
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</tr>
<tr>
<td>Dec. 1953</td>
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<tr>
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<tr>
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</tr>
<tr>
<td>June 1954</td>
<td>128,584</td>
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</tr>
</tbody>
</table>


The following symbols are utilized in Table III to indicate this author's dating of MaxE and consensus changes:

- Δ = a change in the consensus
- T = a trough in MaxE
- I = the first month in which MaxE increased following a trough
Thus, for the downturn of 1953, this author concludes that the policy decision made on May 6, 1953, led to the easing of reserves which was continued and confirmed by the June 11 meeting. The inside lag, therefore, was negative since it preceded the NBER turning point by two months. Friedman and Schwartz's examination of open market operations confirms this finding. Also, Brunner and Meltzer's examination of free reserve level changes confirms it. Kareken and Solow's study confirms it, too, when MaxE changes are examined for their first date of change.

Economists seem to be in closer agreement as to when the System responded to the economic downturn which began in July, 1957. Friedman and Schwartz, by basing their reasoning on directive and discount rate changes, state that in November 1957, four months after the cyclical peak, the Federal Reserve System reversed its policy. Brunner and Meltzer give August 20, 1957, as the first date of a minor policy change. They base this dating upon the Record of Policy Actions and feel that a major change occurred October 22, whereas free reserves changed October 23. Kareken and Solow feel that MaxE changed in February, 1958, indicating a change in FOMC policy. Thus, economists feel that the System responded to the economic change from one to seven months after the turning point.

An examination of the statistics of industrial production preceding

41 Friedman and Schwartz, A Monetary History, p. 616.

42 Brunner and Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, p. 42.

43 Kareken and Solow, p. 69.
the 1957 downturn indicates that the economy was characterized by what
had been termed a "sidewise movement" for almost eighteen months.44 The
minutes reveal that the Committee members were aware of this movement.
In addition to output considerations, they were concerned with cost-push
inflation as well as Treasury financings.

An examination of the FOMC meeting of April 16, 1957, finds the
Committee members mildly divided as to what economic policy should be
followed. President Hayes questioned whether the FOMC was keeping
things too "tight" in terms of present economic conditions. The
economic indicators which he was watching suggested a sideways movement
in the economy at best. A healthy concern about inflation was also
expressed:

I am in full agreement with the thesis put forward
by Mr. Young at the last meeting, that we would do
well to continue a general policy of restraint until
it is quite clear that a real downward turn has come,
i.e., to encourage competitive factors to bring some
offset to the inflationary price trend of the past
eighteen months. But I think we would be asking too
much of monetary policy if we should expect it to
bring about, by itself, a complete reversal of price
increases already in effect and reflecting past wage
rises well in excess of productivity gains.45

He also suggested that some reserves be supplied to the market for the
coming Treasury financing, not to support the financing, but to keep it
from making credit conditions tighter than they presently were:

Perhaps the System's minimum responsibility to the
Treasury is to apply the same standards in deter-
moving System response to Treasury financing needs

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44 Board of Governors of the Federal Reserve System, Historical
45 Minutes, Roll 11, ff. 232-233.
that are applied to other borrowers. Seasonal needs are generally not viewed as inflationary and the System does, in fact, supply reserves through open market purchases to prevent these needs from generating additional credit pressures. For the System to fail to provide reserves in support of a temporary Treasury need, in the absence of a budget deficit, means that the System has allowed the Treasury's financial needs to impose additional restraint on the credit markets at a time when it would be difficult to justify such a course on the basis of economic and credit developments.46

The other members seemed to agree that the same amount of restraint was called for.47

On April 24, 1957, a telephone meeting was held to discuss the poor reception the Treasury's offering was having. The FOMC members agreed that credit policy was more important than the Treasury's financing. An unexpected rise in the float, which the Committee decided not to offset, eased the situation.48

The staff's economic report on May 7, 1957, indicated that the economy had strength but was undergoing a rolling adjustment. Treiber, of the New York Bank, noted that the coincident indicators remained strong but that those which anticipate future trends were exhibiting weakness.49 At least one member showed concern about a downturn. Vardaman, a member of the Board of Governors, said that in spite of what current statistics show, individuals feel that the "bloom was off the

46 Ibid., f. 235.
47 Ibid., ff. 246-258.
48 Ibid., ff. 261-274.
49 Ibid., f. 286.
rose." He felt that this was a very touchy period and that the boom was not likely to continue. Nevertheless, the consensus of this meeting was to continue the same policy.

At the June 18, 1957, meeting, President Hayes, continuing to show concern about the course of economic events, made the following statement:

The business situation has changed very little since our last meeting. While it continues basically strong, especially in the area of demand for final products, most measures of physical activity suggest either a sideways or a slight downward movement. I have in mind such items as the Federal Reserve index of industrial production, total manufacturing employment, and average hours worked per week. There has been no significant progress in the country's real output now for more than six months; and most statistical data foreshadowing future levels of business activity are less favorable than those reflecting current activity. Hence the trend of physical activity seems more likely to be downward than upward for at least the next two or three months.

Hayes was also concerned that the investment boom was cresting out. Not all of the members were so greatly concerned. Malcolm Bryan, President of the Federal Reserve Bank of Atlanta, wanted to rely on fact rather than expectation, and Governor Mills wanted to increase the discount rate. The consensus was to continue the same policy.

The first FOMC meeting in July, the month of the downturn, was about the same. The staff recognized that downward adjustments were

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50 Ibid., f. 300.
51 Ibid., f. 373.
52 Ibid.
53 Ibid., f. 406.
continuing in several lines but that upward adjustments were occurring in others. Woodlief Thomas, staff economist, making a financial report, was concerned with inflationary developments:

Notwithstanding adjustments in various areas, views as to the future generally continue more confident than cautious. Inflationary pressures are being felt. The cost-price push, which is a manifestation of inflation as well as a contributor to the spiral, is still in evidence. At the same time the cost-price-profit squeeze, which might be relied upon to check the inflationary spiral, does not appear to be developing.

Discussion by the Committee members indicates that they too were seriously concerned about inflation. They agreed that the inflationary situation clearly called for a continuation of restraint. This would seem to indicate that the Committee was responding more to changes in the price level than to changes in, or rather to the lack of a change in, the index of industrial production. If prices as well as the index of industrial production had been constant, perhaps the System would have reacted differently.

The July 30, 1957, meeting was similar to that of July 9. The production indicators were mixed, but prices were still rising. It was informally decided that the discount rate could be increased, an action which would help to bring it into line, without risking any more criticism than would occur in the event of an economic downturn.

54 Ibid., ff. 416-417.
55 Ibid., f. 421.
56 Ibid., ff. 422-447.
57 Ibid., ff. 455-485.
At the August 20, 1957, FOMC meeting, one month after the downturn, the economic report still did not contain hints of the presence of the downturn. Some of the statements in the report are found below:

In this country, overall economic activity remains at high levels, with GNP in constant dollars still showing a modest upward tilt.

The important economic news domestically relates to a strengthening of consumer markets. Improvement in consumer demand since April and some liquidation of distributor stocks has been reflected in significant improvement of the output of consumer goods, especially durables. This has largely offset the influence of decreases in output in business equipment, ordnance, and crude petroleum, and stabilized the index of industrial production for June and July at 144, compared with 143 for April and May.\(^{58}\)

Rouse, the Account Manager, indicated that a lower level of net borrowed reserves would allow the same degree of restraint to be continued. The Committee members seemed to go along with lowering it some. A considerable amount of discussion concerning the August discount rate increase took place. It was evident that some of the Federal Reserve Bank Directors were reluctant to vote in the discount rate increase, but did so even though they did not feel that it was justified. The Committee members were divided on the issue. Governor Vardaman felt that the tightening was uncalled for, whereas Governor Robertson and others thought that it was necessary. The consensus reached in the meeting was to continue the same policy, recognizing that this action might require a lower level of net borrowed reserves.\(^{59}\)

\(^{58}\) Ibid., f. 497.

\(^{59}\) Ibid., ff. 496-530.
decision as indicating a minor change in System policy. 60

The staff's economic report of September 10 was generally optimis- 

tic, darkened only by acknowledgment that some cutbacks in defense 
spending had been announced and that more sizable ones were anticipated. 
The report was qualified by the following statement:

There are competent business observers, especially 
in the financial community, who are inclined to the 
belief that major economic forces are shaping toward 
a downward drift ahead of general activity. These 
observers emphasize: (1) the cumulative inhibiting 
effects of monetary restraints on credit-financed 
investment; (2) a high and inflexible industrial 
cost structure; (3) a cumulating pressure of excess 
capacity on markets for industrial materials and 
fabricated commodities resulting from the swollen 
volume of business investment of recent years; (4) 
the prospect of a significant reduction in national 
defense expenditures during the current fiscal year; 
and (5) a developing psychology of gloom in high 
business places. 61

But, Young added:

This prognosis, which underlies some current pessimism 
in "informed financial circles," seems far out of focus 
in terms of the recently developing situation. 62

Governor Vardaman showed concern about the defense cutbacks. Hayes 
also urged caution. Delos C. Johns, President of the Federal Reserve 
Bank of St. Louis, felt that restraint would perhaps have to be eased 
soon. Alfred H. Williams, President of the Federal Reserve Bank of 
Philadelphia, and Wilbur D. Fulton, President of the Federal Reserve 
Bank of Cleveland, were for continuing the same policy. Governor

60 Brunner and Meltzer, The Federal Reserve's Attachment to the Free 
Reserve Concept, p. 42.

61 Minutes, Roll 11, f. 550.

62 Ibid.
Robertson felt that the FOMC had allowed too much ease. Governor Mills, taking a different approach, felt that Labor Day had signaled not only a change of seasons but also an economic downturn. His intuition was his guide. The other members seemed to want to continue the same policy. This feeling is reflected in the following comments by Chairman Martin:

Chairman Martin stated that it seemed clear that the consensus at today's meeting was that there should be no change in the Committee's policy and no change in the wording of the directive at this time. 64

In concluding his remarks, the Chairman said that he believed the fish was hooked and that it would be a mistake to pull the line so taut that it might break. He would cast his lot on the side of net borrowed reserves of around $400 million, using that as a rough target, rather than the $500-$600 million range, until after the current Treasury financing was out of the way. He did not think such a procedure would cause any comment about a change in the System policy. 65

Again, Brunner and Meltzer took this as indicating a minor change toward ease. 66

At the October 1, 1957, meeting of the FOMC, the staff still did not recognize that a downturn was underway. The economic report stated, "While it is possible that prices and activity generally are at a crest and that the next broad movement of prices and activity will be downward, the recent figures are far from clear that such a development is...

63 Ibid., ff. 550-574.
64 Ibid., f. 575.
65 Ibid., f. 578.
becoming an actuality." Each of the Committee members indicated that the same policy should be followed; none seemed to express concern that a recession was occurring. Governor Vardaman, however, did say, "... that even if he had contrary ideas he would hesitate to express them in the face of the views expressed by Messrs. Young and Thomas and the eight Presidents of the Reserve Banks who had reported thus far." Martin indicated that the consensus was to continue the same policy. Chairman Martin was quite clearly concerned with inflationary pressures, nationally and internationally:

He observed that he had visited with seven Ministers of Finance and six Governors of central banks at the annual meeting of the Boards of Governors of the International Monetary Fund and the International Bank for Reconstruction and Development during the past week. He was impressed with the unanimity of their views that inflation in each instance had gotten ahead of them, that it was the primary problem in their countries, and that there would be no way of coping with the inflation other than a little decline in business.

Martin felt that pressure would be placed on the System to reverse its policies in order to avoid adjustments in the economy. Martin also felt that the System did not have the means to avoid the adjustments. Thus, as of October 1, the FOMC felt that a downturn might occur in the future but that for the present the best course was to continue restraint in order to avoid increasing inflationary difficulties.

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67 Minutes, Roll 11, f. 591.
68 Ibid., f. 604.
69 Ibid., f. 611.
70 Ibid., ff. 611-612.
The minutes of the October 22, 1957, meeting reveal a marked change in the attitude of staff and Committee members. The economic review stated that

... Recent developments at home and abroad called for searching re-examination of the economic situation. In this country the latest declines in market values of common stocks and sensitive industrial commodities had been of sufficient magnitude to bring into question continued dominance of inflationary forces.\(^{71}\)

Within the United States, the latest quarterly and monthly figures showed continuation through the third quarter of 1957 of many features prevailing earlier in the year, with production steady at a high level, price movements in wholesale markets mixed but the average up, and consumer prices generally continuing upward. September industrial production was at 144, down a point from August but within the narrow 143-146 range prevailing so far this year. ... The short-run abatement in inflationary pressures ... raised questions about potential declines in important sectors of activity.\(^{72}\)

Hayes cited several indicators which added to the doubts of business outlook. Even retail sales had fallen. Other Committee members such as Governors Shepardson and Robertson felt that pessimism was being overdone. After a lengthy discussion, Hayes, acting chairman in the absence of Martin, is reported to have made the following summary statement:

With respect to credit policy ... it seemed to him the Committee had an easier time finding a consensus on the policy to be followed in the next few weeks than it would have on an appraisal of the economic outlook. There was a fairly even division between those who appraised the outlook with the view that statistics and developments that had been observed held a considerable threat of recession and those

\(^{71}\)Ibid., ff. 621-622.

\(^{72}\)Ibid., ff. 622-623.
who felt that basically such a possibility was still to be demonstrated and that recent developments were largely psychological with the basic factors remaining strong.\textsuperscript{73}

Hayes went on to say that the Committee, at this time, did not want to make any overt moves or to give a signal that it was changing policy, but that it wished to supply seasonal needs freely and did not wish to increase restraint. While the average net borrowed reserves target mentioned at the previous meeting was $500 million, this time it was about $350.\textsuperscript{74} Thus, even though the Committee was divided, the uncertainty of the situation led to a reduction in the net borrowed reserves target. This author thinks that this point is significant and that this is the date of the change in FOMC policy, i.e., that this is the end of the inside lag. Brunner and Meltzer also cite this date as the time when a major policy shift took place.\textsuperscript{75}

The policy shift was definitely confirmed on November 12, 1957. A staff memorandum sent to Committee members on November 8 stated that the economic climate had changed considerably and that contradictory forces had become more prominent. The economic report given in the FOMC meeting by Ralph Young confirmed that a decline had set in. The indicators cited in that report have been examined in Chapter II of this study. Chairman Martin stated that the Board of Governors, on the preceding Friday, had recognized that a downturn was occurring. The Committee

\textsuperscript{73}Ibid., ff. 656-657.
\textsuperscript{74}Ibid., ff. 657-660.
\textsuperscript{75}Brunner and Meltzer, \textit{The Federal Reserve's Attachment to the Free Reserve Concept}, p. 39.
members agreed that the net borrowed reserve level should be lowered further and that the discount rate should be lowered. In addition, the directive was altered to show the change in Committee policy. Robertson was the only member dissenting; he felt that inflation was a serious threat and that continued restraint was necessary. 76 As mentioned above, this date, when the directive was changed, is the one which Friedman selected to mark the end of the recognition lag.

While both Brunner and Meltzer and Friedman and Schwartz date this change in System policy (using Brunner and Meltzer's dating of the major policy change) within a month of each other, the Kareken and Solow study does not indicate a policy change until three months later. 77 Once again, this author feels that the late dating of the turning point by Kareken and Solow was due not to the use of MaxE, but to a difference of interpretation. The data found in Table IV indicates that following the economic peak which occurred in July, 1957, MaxE began climbing in December, 1957. On the other hand, Kareken and Solow feel that MaxE began to increase at a "substantially rapid rate" in February, 1958.

The data reproduced in Table IV clearly indicates that MaxE reached a trough in November, 1957, and then began to rise in the following month, thus supporting this author's conclusion that MaxE changed direction in December, 1957, five months after the cyclical peak in economic activity.

76 Minutes, Roll 11, ff. 665-714.

77 See Brunner and Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, p. 39; Friedman and Schwartz, A Monetary History, pp. 616-617; and Kareken and Solow, p. 66.
### TABLE IV
SEASONALLY ADJUSTED
MONTHLY VALUES OF MaxE\(_1^\), MaxE\(_1^{**}\)
AND MaxE\(_2^\), JULY, 1957–JUNE, 1958\(^a\)
(in millions of dollars)

<table>
<thead>
<tr>
<th>Date</th>
<th>MaxE(_1^)</th>
<th>MaxE(_1^{**})</th>
<th>MaxE(_2^)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1957</td>
<td>142,912</td>
<td></td>
<td>160,317</td>
</tr>
<tr>
<td>Aug. 1957</td>
<td>141,855</td>
<td></td>
<td>159,602</td>
</tr>
<tr>
<td>Sept. 1957</td>
<td>142,319</td>
<td></td>
<td>160,204</td>
</tr>
<tr>
<td>Oct. 1957</td>
<td>142,348</td>
<td></td>
<td>159,834</td>
</tr>
<tr>
<td>Nov. 1957</td>
<td>141,992</td>
<td>T</td>
<td>159,834</td>
</tr>
<tr>
<td>Dec. 1957</td>
<td>142,981</td>
<td>I</td>
<td>160,745</td>
</tr>
<tr>
<td>Feb. 1958</td>
<td>144,921</td>
<td></td>
<td>163,091</td>
</tr>
<tr>
<td>Mar. 1958</td>
<td>148,277</td>
<td></td>
<td>166,717</td>
</tr>
<tr>
<td>Apr. 1958</td>
<td>151,180</td>
<td></td>
<td>169,591</td>
</tr>
<tr>
<td>May 1958</td>
<td>153,678</td>
<td></td>
<td>172,916</td>
</tr>
<tr>
<td>June 1958</td>
<td>154,527</td>
<td></td>
<td>174,089</td>
</tr>
</tbody>
</table>


\(^b\)The following symbols are utilized in Table IV to indicate this author's dating of MaxE and consensus changes:

\[\begin{align*}
\Delta &= \text{a change in the consensus} \\
T &= \text{a trough in MaxE} \\
I &= \text{the first month in which MaxE increased following a trough}
\end{align*}\]

The December date for the MaxE change is one month after the turning point date selected by Friedman and Schwartz and two months after the date selected by Brunner and Meltzer. As indicated above, this author agrees with the dating of the policy change as found by Brunner and Meltzer, i.e., October 22, three months after the cyclical turning point. The earlier minor changes found by Brunner and Meltzer, August
20 and September 10, were, in fact, only adjustments to maintain the same degree of tightness, not a change in policy. Perhaps, as in 1953, the Committee would have responded more quickly had not inflationary fears been of prime concern.

III. EVIDENCE OF THE INSIDE LAG DURING UPTURNS

In this section two upturns in economic activity are examined. The NBER dates the cyclical troughs as occurring August, 1954, and April, 1958.

Economists seem to be fairly well agreed upon the date at which the System responded to the economic upturn of August, 1954. Brunner and Meltzer, by scrutinizing the Record of Policy Action in the Annual Report, conclude that the FOMC changed its policy in December, 1954, four months after the cyclical turning point.\textsuperscript{78} Kareken and Solow, by watching changes in MaxE, reached the same conclusion.\textsuperscript{79} Friedman and Schwartz, unfortunately for the continuity of this study, do not give a specific date for the time when they think the System changed policy.

The Committee's staff recognized as early as April 13, 1954, that the recession, which had begun in July, 1953, showed signs of slowing.\textsuperscript{80} During this period the Executive Committee was pursuing a policy of active ease and setting as a free reserve target a range of $400-$700

\begin{footnote}{78}Brunner and Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, p. 38.\end{footnote}

\begin{footnote}{79}Kareken and Solow, p. 66.\end{footnote}

\begin{footnote}{80}Minutes, Roll 8, f. 126.\end{footnote}
At the May 11, 1954, meeting of the Executive Committee, Ralph Young, in presenting the economic report, stated that the economy was still drifting downward but that the negative factors appeared to be losing their strength. He felt that the economy was approaching a balanced position but that the forces for revival were not yet clear. Some of the Executive Committee members added to the report encouraging signs which they saw.

For several months a heated discussion was carried on as to the appropriateness of free reserves as a target as well as to what level of free reserves should be maintained. Some of the members were concerned over the possibility that the existing free reserve level was not high enough because country banks usually hold a substantial amount of excess reserves. Other members were concerned over the possibility that supplying more reserves to the market would merely result in a change in bond prices without having an increase in bank lending or capital investment:

In response to Chairman Martin's question as to how he arrived at the conclusion that the recent level of free reserves was about right, Mr. Sproul stated that in his opinion the performance of the money market and of the economy generally seemed to indicate that monetary policy was doing all that it could do to foster whatever tendencies there were toward recovery and to combat whatever downward tendencies existed in the economy, without at the same time piling reserves on reserves and thus merely bring down the level of rates on short-term credit instruments.

81 Ibid., ff. 133, 139, 146, and 153-154.
82 Ibid., ff. 149-150.
83 Ibid., f. 151.
84 Ibid., f. 214. Also, see ibid., ff. 163-171.
At the June 8, 1954, meeting of the Executive Committee, Young reported an improved economic situation. The Board's index of industrial production had remained constant for March and April. Young said that it might have increased in May. However, "Mr. Young felt that it was not clear at this time whether the economy had reached a turning point or whether the decline represented a leveling off, to be followed by further decline later on."\(^{85}\) Beginning with this meeting and continuing through later ones, Chairman Martin urged a reconsideration of the active ease policy. Nevertheless, the Committee members wished to continue the same policy and expressed concern about the coming Treasury financing. Some of the members expressed the desire to see reserve requirements lowered so as to provide some funds to the market.\(^{86}\)

There were two Executive Committee meetings during August, the month of the upturn. The economic reports presented in those meetings were similar. They recognized that cyclical adjustments had taken place, but they did not yet recognize the business forces which would promote a cumulative revival. Such favorable features as higher retail sales, strength in the auto market, construction, and the stability of industrial output were mentioned. But unfavorable factors such as cutbacks in defense spending, low hiring rates, and business failures were mentioned. The Committee members decided to continue the same policy.\(^{87}\)

At the September 22, 1954, meeting of the FOMC, President Sproul

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\(^{85}\) Ibid., f. 175.

\(^{86}\) Ibid., ff. 177-182.

\(^{87}\) Ibid., ff. 233-257.
made a statement which seemed to summarize the actions and outlook of
the Committee.

All during 1954, in the face of a declining or side-
wise movement of the general economy, we have
followed a credit policy of "active ease." It has
involved the use of all of the three main instru-
ments of credit management—open market opera-
tions, dis-
count rates, and reserve requirements. Its objective
has been to encourage the free use of credit and an
active capital and mortgage market. Its main tech-
nical guide has been the maintenance of a substantial
volume of "free reserves" in the banking system.

While the use of such a guide has raised problems of
central banking technique, which have been discussed
here, the general policy has served the economy well.
The ready availability and low cost of bank credit
and of capital funds have maintained a monetary climate
favorable to business expansion and high employment,
recognizing that credit policy is only one part of the
whole complex. The present economic outlook suggests
to me a continuance of existing credit policy, relying
on open market operations to make it effective.88

Even as late as October 20, 1954, the economic report did not hint
of the upturn which had been running for two months. Young stated that
"... the general economic situation continued to be one of offsetting
changes with the broad aggregates still showing few signs of moving
upward or downward by significant amounts."89 He did say that some
business economists who were recently in Washington felt that "... there was a disposition to project activity for the near-term future on
the up side."90 The Committee members again decided to continue the
same policy of active ease.

88 Ibid., ff. 281-282.
89 Ibid., f. 314.
90 Ibid.
Finally, at the November 9, 1954, Executive Committee meeting, a distinct change in opinion occurred. While the staff's economic report remained conservative in opinion, Young did state that "... the current strengthening in activity and financial markets was being widely interpreted as foreshadowing sustained, though possibly moderate, cyclical expansion." Chairman Martin called for a full discussion of economic policy. He suggested that perhaps the directive issued by the FOMC was out of date and that the full Committee should be called into session.

Chairman Martin then made the following statement:

"... The committee would always be confronted with the problem of leads and lags between credit policy and economic activity but that at the present time he felt that, instead of there being a "bubble on top of a boom," as the situation had been described at previous times, there was now a "bubble on top of the foundation" which had been laid for a solid business recovery. Chairman Martin felt it just as important to keep such a bubble from forming on the floor of recovery as it had been to keep such a bubble from forming on a boom. For the first time, he said, he had begun to feel that the easy money policy of the Committee was furthering a speculative psychology in a great many directions in a way that could lead to undesirable developments at a critical point. He thought the committee should consider this psychological factor which had been highlighted recently in a statement to the effect that those who were waiting for evidence that recovery is here should cease looking; they could expect to see the evidence after it had gone past."

Martin suggested the problem was a difficult one in light of the coming Treasury financing. He suggested that the Executive Committee

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91 Ibid., f. 334.
92 Ibid., f. 335. The directive at that time called for "actively maintaining a condition of ease."
93 Ibid., f. 336.
discuss whether it should direct free reserves toward the lower end of the $400-$700 million range or not. Sproul did not feel that an immediate change in policy was needed, but he did feel that if recovery were to develop more fully, then it should be considered. He did not object to lowering free reserves somewhat. Sproul did not feel that inflationary psychology was firmly established. Martin differed:

... He felt the committee may already have lost control; there were indications of an exuberance of spirit among intelligent businessmen with respect to 1955 business prospects that seemed to him to be dangerous. He disliked having the System's easy money policy associated with this situation; if permitted to develop, it might bring a demand for action on the part of the Federal Reserve to do something at a time when the actions the System might take would have lost their effectiveness.

Chairman Martin went on to say that flexible monetary policy could not always wait until all of the evidence was in. He cited the May, 1953, reversal in monetary policy as an example. Sproul agreed that the Executive Committee could not always wait and that it should be alert. Governors Robertson and Balderston seemed to go along with Martin that free reserves should be lowered. Governor Szymczak was more inclined to wait. Governor Mills was concerned that the Committee, in attempting to destroy speculation, might destroy recovery. The general consensus reached was that the Account Manager should gradually move free reserves toward the lower level of the $400-$700 million free reserve range. This date, November 9, is indeed the turning point in System policy.

94 Ibid., ff. 339-340. Governors Balderston and Mills were visitors at this meeting.

95 Ibid., ff. 340-345.
It marks the end of the inside lag—three months after the cyclical
turning points.

At the November 23, 1954, meeting of the Executive Committee, the
members confirmed their previous desire to lower the free reserve level.
Questions were raised as to how far the Executive Committee could go and
still remain within the limits of the FOMC directive. The members
seemed to indicate that they wished to remain within the limits of the
directive but that the directive should be reconsidered at the next FOMC
meeting.96

The FOMC met on December 7, 1954. The minutes show that while most
of the Committee members were not concerned that the economy would
recover too rapidly and promote inflation, they did feel that the
changes in economic conditions should be recognized at least by a change
in the directive. Chairman Martin continued his strong stand against
the evils of inflation:

The System had an obligation not to perpetuate waste and
inefficiency in the economy, Chairman Martin said, and he
did not believe that inflation provided jobs for people
on a sustained basis although it might temporarily promote
jobs. He felt the Committee should be very careful about
leaning too far on the side of easy money, and he expressed
the view that on the basis of comments made at this meet-
ing, it appeared to be the majority view that some change
in the directive to the executive committee would be
desirable at this time.97

The Committee also understood that by changing the directive it was
endorsing a gradual reduction in the amount of market ease.98

96Ibid., ff. 352-362.
97Ibid., f. 387.
98Ibid., f. 389.
Brunner and Meltzer evidently date their change in System policy from this point. Since the Annual Report did not carry the earlier actions of the Executive Committee, Brunner and Meltzer's dating of the lag was one month in error. After examining the data for MaxE presented by Kareken and Solow, this author agrees with their dating of the change in MaxE as being in December. Table V reproduces the relevant data.

<table>
<thead>
<tr>
<th>Date</th>
<th>MaxE₁, MaxE₁**</th>
<th>MaxE₂*</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1954</td>
<td>129,330</td>
<td>144,210</td>
</tr>
<tr>
<td>Aug. 1954</td>
<td>131,714</td>
<td>147,539</td>
</tr>
<tr>
<td>Sept. 1954</td>
<td>131,166</td>
<td>147,115</td>
</tr>
<tr>
<td>Oct. 1954</td>
<td>133,116</td>
<td>149,460</td>
</tr>
<tr>
<td>Nov. 1954</td>
<td>135,074</td>
<td>151,182</td>
</tr>
<tr>
<td>Dec. 1954</td>
<td>134,102</td>
<td>150,357</td>
</tr>
<tr>
<td>Jan. 1955</td>
<td>134,022</td>
<td>150,445</td>
</tr>
<tr>
<td>Feb. 1955</td>
<td>135,054</td>
<td>151,218</td>
</tr>
<tr>
<td>Mar. 1955</td>
<td>134,454</td>
<td>150,720</td>
</tr>
<tr>
<td>Apr. 1955</td>
<td>135,601</td>
<td>151,769</td>
</tr>
<tr>
<td>May 1955</td>
<td>136,001</td>
<td>152,111</td>
</tr>
<tr>
<td>June 1955</td>
<td>134,837</td>
<td>150,956</td>
</tr>
</tbody>
</table>


The following symbols are utilized in Table V to indicate this author's dating of MaxE and consensus changes:

- A = a change in the consensus
- P = a peak in MaxE
- D = the first month in which MaxE decreased following a peak

Thus, this study finds that the Committee altered its policy in response to changed economic conditions and the fear of inflation on November 9, 1954, three months after the cyclical upturn. Other studies, based on changes in MaxE and the FOMC directive, date this change one month later.

Economists disagree as to the date when the economic upturn, which began in April of 1958, was recognized by the FOMC. Brunner and Meltzer, basing their opinion on the Record of Policy Action, feel that the FOMC recognized the economic change on August 19, by making a major policy change. They feel, however, that minor changes in policy took place prior to that date on May 27 and July 29.100 Kareken and Solow, by watching MaxE, determined that the System responded in June, 1958.101 Friedman and Schwartz do not seem to give a definite time for the shift in System policy, but say only that it occurred months after the change in economic activity.102 Thus, the estimates range from one month, using minor changes, to four months.

100 Brunner and Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, pp. 39-40.

101 Kareken and Solow, p. 66.

102 Friedman and Schwartz, A Monetary History, p. 617.
Two months prior to the trough, staff economists did not see signs of a slowing in the recession. Young, in making the staff report, stated:

... We can say that recession is continuing. Downward adjustment has gained in momentum and signs of leveling out, or saucering out, are not yet at hand. That point may not be far off ...

After five months of rapid decline, the economy should be nearing the phase of gradualness.103

The March 25, 1958, economic report indicated that the decline in business activity and employment was continuing. It was reported that because this recession had extended as far as the previous two post-war recessions, some individuals were concerned that it might become cumulative. Also, "realistic" adjustments in prices and costs had not yet occurred. One favorable sign, however, was that inventory accumulation had about run its course.104 At least two of the Committee members felt that a bottom might not be too far off. During this period, as in earlier ones, the adequacy of free reserves as an indicator and target was discussed. Also, the appropriateness of "bills only" occasionally came to be discussed.105 The consensus reached in this meeting was to continue essentially the same policy:

Chairman Martin then said it seemed to him that there was a fairly clear majority in favor of maintaining the present directive, postponing any change in the

103 Minutes, Roll 12, f. 109.
104 Ibid., f. 221.
105 Ibid., f. 236.
106 Ibid., ff. 204-218, 262.
discount rate for the time being, and maintaining a degree of ease signified by free reserves of $500 million to slightly more than that. 107

The economic report presented in April showed concern with the rising price level. It also contained a hint that the recession might be slowing.

The anomaly of recession in output, employment, and trade at high and even still advancing price levels has continued to be one of the striking features of the economic panorama. Most recent data on recession are suggestive of some slowing down in the pace of decline for total output and employment, some leveling out in trade, and some developments of an expansive character in finance. With construction activity being maintained, the overall picture domestically appears as one of more diversity or crosscurrent than earlier in the year. 108

In summarizing the meeting, Chairman Martin said that no one wanted to see free reserves drastically reduced and that lowering reserve requirements was one possible way of supplying reserves to the market to maintain the present free reserve level. He also stated that the members favored a reduction in the discount rate. 109

A foretelling of the imminent bond market crisis is found in the minutes of the FOMC meeting held May 27, 1958. Larkin, an assistant vice-president of the New York Bank, made the following statement:

... There has been a continuing wave of speculation in the Government securities market since the change in credit policy last fall. With the approach of the forthcoming Treasury refunding operation, there had now been a wholesale speculative movement

107 Ibid., f. 258.
108 Ibid., f. 274.
109 Ibid., ff. 314-315.
into Treasury rights maturing in June. Some estimates placed the magnitude of this speculation in the vicinity of one-half billion dollars, but yesterday, Mr. Larkin said, he heard a figure mentioned in the area of $1 billion. If the refunding went smoothly, this would not cause trouble. However, if the terms were not acceptable to the speculators and if they unloaded at one time when the subscription books were opened, there could be trouble in the market place.110

Young, in his economic report, said that it seemed that a bottom to the economic decline was in the making. Thomas said the economic situation had been called an "inflationary recession." Some of the Committee members felt that a bottom was approaching, but the consensus was to continue the same policy.111 Brunner and Meltzer felt that a minor change in policy took place at this meeting.112 As stated above, the minutes indicate that the consensus was to continue the same policy.

The economic report presented at the June 17, 1958, meeting confirmed that a bottom to the recession was occurring. Young said:

The stock market is still saying, with even stronger emphasis, that economic recovery, possibly inflationary recovery, is either under way or just around the corner. The further economic information available for this meeting is confirming our report at the last meeting that bottoming out of recession is in fact occurring. While the information is generally on the encouraging side, some of it is black and is a counterweight to the white.113

110 Ibid., f. 380.
111 Ibid., ff. 383-410.
112 Brunner and Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, p. 39.
113 Minutes, Roll 12, f. 433.
The encouraging parts included a rise in industrial production in May and possibly for June, a rise in electric power output, freight car loadings, housing construction and personal income, further liquidation of inventories, a reduced fall in manufacturers' sales, strengthening in the labor market, strength in retail sales, etc. The black side included reductions in new plant and equipment spending, speculation in steel, a slow auto market, a fall in consumer installment credit, and some prices up.  

Hayes did not feel that it was clear that a low point had been reached. The Federal Reserve Bank Presidents, in their regional reports, ranged from optimistic to pessimistic. Chairman Martin concluded the discussion by stating

\[\text{... that it was his own view, and he believed, the majority view—with some variations in degree—that there should be no change at this time in the policy directive, the discount rate, or reserve requirements.}\]

Also, the same tone, color, and feel of the market should be maintained.

The economic report presented July 8, 1958, was more optimistic than earlier reports. The rise in industrial production and numerous small gains in various segments of the economy highlighted the report. The financial report stressed the severe pressure on the Treasury bond market. The speculative aspects seemed to be playing a large role in the difficulty. Thomas ended his report by stating:

\[\text{114 Ibid., ff. 434-435.}\]
\[\text{115 Ibid., f. 466.}\]
\[\text{116 Ibid., ff. 476-477.}\]
\[\text{117 Ibid., f. 479.}\]
The experience of June is an example of the pitfalls that may be encountered in following a path of forcing down interest rates and stimulating credit commitments regardless of current needs. Resulting speculative excesses may lead to crises that in turn raise demands for relief measures. Is economic recovery aided by such false and temporary movements? Finally, isn't the liquidity of the economy already more than adequate to support recovery for a long time ahead?

Other members showed concern over the dilemma of trying to stimulate recovery without creating too much liquidity. From the discussion, it was evident that views were mixed: at least one person wanted to lower the discount rate; others who were concerned with the liquidity position wanted to try to lower the free reserve level a bit; while others wanted to continue the same degree of ease. No one seemed to think that policy should be changed drastically. Some recognized a leveling in the economy, but no one seemed to indicate a feeling that a definite upturn had occurred. At least one member was worried that this was a false bottom. Concern was expressed by a few about the incompatibility of Treasury and System policy. There was considerable discussion about changing the directive, but such a suggestion was defeated by a show of hands. The discussion ended with many in attendance feeling that a free reserve level of about $500 million would be good, but recognizing the many difficulties of using a free reserve target and admitting that tone, feel, and color of the market must be an element.

Eight telephone conferences were held before the next regular FOMC

118 Ibid., f. 484.
119 Ibid., ff. 486-521.
meeting in July. The collapse of the government bond market, as discussed in Chapter III, resulted in a reversion to interest rates as a target.

On July 29, 1958, the economic report was glowing. Young stated that the economy had sprung back and that April would probably mark the recessionary trough. The economy looked stronger than had been reported earlier. Thomas recognized that the recent actions aimed at market manipulation had been made at the sacrifice of the System's major objectives and felt that the two forces of economic recovery and Treasury needs would shape future System actions. The present task was to adjust FOMC policies to deal with these forces. As might be expected, the Committee members differed in their opinions as to what the policy should be. After considerable discussion, the consensus reached was to reduce the level of free reserves as much as possible without creating disorder in the government securities market. While Brunner and Meltzer felt this was a minor change in System policy, this author thinks it was a major one. It is evident that the Committee was not just acting to mop up excess reserves, but was taking its first steps toward less ease now that the bottom of the recession was clearly past and mild recovery was under way. Thus, the Committee acted in July, three months after the upturn.

Brunner and Meltzer date the major policy change as having taken place at the August 19, 1958, meeting. This author, however, finds

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120 Ibid., ff. 69-72.


122 Ibid.
the meeting important only in that it confirms the earlier consensus decision reached by ordering a change in the directive.

Once again, a difference is found between the dating point selected by Kareken and Solow and that of this study. Kareken and Solow examined the MaxE data for changes in the month-to-month increase in MaxE whereas this author examined the data for peaks and downturns. Kareken and Solow found that after June, 1958, month-to-month increases in MaxE slowed considerably. This author, by examining peaks and downturns, concluded that MaxE changed in September, five months after the NBER turning point. The following table confirms this.

**TABLE VI**

**SEASONALLY ADJUSTED MONTHLY VALUES**
**OF MaxE*, MaxE**, AND MaxE, 1958
(in millions of dollars)

<table>
<thead>
<tr>
<th>Date</th>
<th>MaxE*</th>
<th>MaxE**</th>
<th>MaxE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb.  1958</td>
<td>144,921</td>
<td></td>
<td>163,091</td>
</tr>
<tr>
<td>Mar.  1958</td>
<td>148,377</td>
<td></td>
<td>166,717</td>
</tr>
<tr>
<td>Apr.  1958</td>
<td>151,180</td>
<td></td>
<td>169,591</td>
</tr>
<tr>
<td>May   1958</td>
<td>153,678</td>
<td></td>
<td>172,916</td>
</tr>
<tr>
<td>June  1958</td>
<td>154,527</td>
<td></td>
<td>174,089</td>
</tr>
<tr>
<td>July  1958</td>
<td>155,152</td>
<td></td>
<td>174,908</td>
</tr>
<tr>
<td>Aug.  1958</td>
<td>155,434</td>
<td></td>
<td>P 175,500</td>
</tr>
<tr>
<td>Sept. 1958</td>
<td>154,688</td>
<td>D 175,009</td>
<td></td>
</tr>
<tr>
<td>Oct.  1958</td>
<td>154,407</td>
<td></td>
<td>174,973</td>
</tr>
<tr>
<td>Nov.  1958</td>
<td>154,703</td>
<td></td>
<td>175,000</td>
</tr>
<tr>
<td>Dec.  1958</td>
<td>155,312</td>
<td></td>
<td>175,518</td>
</tr>
</tbody>
</table>


^bThe following symbols are utilized in Table VI to indicate this author's dating of MaxE and consensus changes:

\[ \Delta = \text{a change in the consensus} \]
\[ P = \text{a peak in MaxE} \]
\[ D = \text{the first month in which MaxE decreased following a peak} \]
IV. SUMMARY AND CONCLUSIONS OF CHAPTER IV

Thus, it appears, in this author's opinion, that the FOMC has been fairly prompt in recognizing economic changes. The following table, which summarizes the lags found in this study, reflects this point:

TABLE VII
RESPONSE OF THE FOMC TO ECONOMIC CHANGES—THE INSIDE LAG

<table>
<thead>
<tr>
<th>NBER Turning Points</th>
<th>The Committee’s Response As Noted in the Minutes</th>
<th>Time Lag (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July, 1953 (peak)</td>
<td>May 6, 1953</td>
<td>-2</td>
</tr>
<tr>
<td>August, 1954 (trough)</td>
<td>November 9, 1954</td>
<td>+3</td>
</tr>
<tr>
<td>July, 1957 (peak)</td>
<td>October 22, 1957</td>
<td>+3</td>
</tr>
<tr>
<td>April, 1958 (trough)</td>
<td>July 29, 1958</td>
<td>+3</td>
</tr>
</tbody>
</table>

Thus, it appears that with the exception of the May, 1953, response (which occurred two months prior to the cyclical peak), the Committee responded to economic changes three months after they occurred. A reexamination of this 1953 lag reveals that the Committee, at that time,
was responding mainly to a tightening money market and suspicion of a pending economic downturn. An examination of the minutes for 1953 reveals that the Committee members did not recognize that the downturn had actually occurred until September, 1953, two months after the cyclical peak had passed. For example, at the September 8, 1953, Executive Committee meeting Riefler, Committee secretary, stated:

... Developments in the last two weeks had resolved any doubts he had had as to whether the System should be shifting to a policy of "active ease." He noted that the System had maintained technical ease in the money market from late June or early July, that there were no signs that banks had expanded credit unduly on the basis of reserves available.

... Mr. Riefler thought the System should be trying to build factors which would offset any down-turn in the economy or in Federal Government expenditures.

The Executive Committee then adopted a policy of "active ease" at this meeting.

The staff economic reports during this period were rather vague. Clear mention was not made until the November 23, 1953, meeting of the Executive Committee that an economic downturn had taken place, though Ralph Young mentioned the rise in business failures in the November 6, 1953, Executive Committee meeting. Owing to this incompleteness of the minutes and to the fact that the policy of "active ease" was adopted

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123 See nn. 16-40, supra.
125 Ibid., f. 340.
126 Ibid., ff. 395, 402.
at that time, this study dates the Executive Committee's recognition of the economic downturn as being in September. This "adjusted" estimate of the inside lag of two months for 1953 is clearly more in line with the other results. The following table summarizes the average inside lag found in this study:

TABLE VIII

<table>
<thead>
<tr>
<th>Average Inside Lag--Peaks</th>
<th>0.5 mos.</th>
<th>(adjusted 2.5 mos.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Inside Lag--Troughs</td>
<td>3.0 mos.</td>
<td></td>
</tr>
<tr>
<td>Average Inside Lag--Peaks &amp; Troughs</td>
<td>1.75 mos.</td>
<td>(adjusted 2.75)</td>
</tr>
</tbody>
</table>

Thus, it would appear that the FOMC responded as soon as statistical data were available which confirmed that either a peak or a trough had been reached. Treasury financings, inflationary pressures, and other factors were considered. These factors seem to have affected the FOMC actions in varying ways. For example, the 1953 shift occurred when money market pressures became too great and the Committee seemed to expect a cyclical downturn. Thus, two forces urged the Committee to ease pressure. The 1954 trough was unencumbered. The 1957 peak had been preceded by a long period of sidewise movement. Perhaps, owing to the inflationary pressures at hand, the Committee did not take action before concrete evidence was presented. Thus, conflicting forces were present preceding the Committee's action in 1957. The upturn of 1958, much to the dismay of the FOMC, was preceded by sticky and rising prices. This factor was also complicated by the heavy Treasury
financing of the period and the collapse of the government bond market. With the inflationary threat and Treasury needs being offsetting forces, the Committee moved to tighten credit conditions as soon as evidence was in that an upturn had started. From these actions it is clear that a high and rising level of industrial activity was a prime objective of the Committee. If inflationary forces set in, however, the Committee sacrificed some economic growth. Also, Treasury needs were met if they coincided with other System objectives. When they conflicted, the System maintained an "even-keel" policy until the financings were over unless inflationary pressures were quite strong. In that case the System allowed the government securities market to approach disorder while it pursued a tight-money policy.

The findings of this study also allow the author to draw some conclusions about the first part of the outside lag. The following table relates peaks, troughs, and changes in MaxE to the consensus changes found in the minutes:
### TABLE IX

**PART I OF THE OUTSIDE LAG AS REVEALED BY PEAKS, TROUGHS, AND CHANGES IN MaxE**

<table>
<thead>
<tr>
<th>Date of the Committee's Response</th>
<th>MaxE Peaks (P) and Troughs (T)</th>
<th>Lag (months)</th>
<th>MaxE Changes</th>
<th>Lag (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>May, 1953</td>
<td>(T) April, 1953</td>
<td>-1</td>
<td>May, 1953</td>
<td>0</td>
</tr>
<tr>
<td>November, 1954</td>
<td>(P) November, 1954</td>
<td>0</td>
<td>December, 1954</td>
<td>1</td>
</tr>
<tr>
<td>October, 1957</td>
<td>(T) November, 1957</td>
<td>+1</td>
<td>December, 1957</td>
<td>2</td>
</tr>
<tr>
<td>July, 1958</td>
<td>(P) August, 1958</td>
<td>+1</td>
<td>September, 1958</td>
<td>2</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>.25</td>
<td>Average</td>
<td>1.25</td>
</tr>
</tbody>
</table>

*Source: Derived from Tables III-VI.*

Thus, from changes in MaxE, the first part of the outside lag appears to be an average of five weeks in length.

The changes which Brunner and Meltzer noted in their moving average of free reserves are summarized in the following table:
### TABLE X

PART I OF THE OUTSIDE LAG AS REVEALED BY CHANGES IN FREE RESERVES

<table>
<thead>
<tr>
<th>Date of the Committee's Response</th>
<th>Free Reserve Changes</th>
<th>Lag</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 6, 1953</td>
<td>May 27</td>
<td>21 days</td>
</tr>
<tr>
<td>November 9, 1954</td>
<td>December 1</td>
<td>22 days</td>
</tr>
<tr>
<td>October 22, 1957</td>
<td>October 23</td>
<td>1 day</td>
</tr>
<tr>
<td>July 29, 1958</td>
<td>August 13</td>
<td>15 days</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td><strong>17 days</strong></td>
</tr>
</tbody>
</table>

*aSource: The dates of the Committee's response were discerned from an analysis of the Minutes of the Federal Open Market Committee, 1936-60 and of Its Executive Committee, 1936-55. Rolls No. 6-16, Microcopy No. 591, Record Group 82 (Washington, D. C.: The National Archives, 1965). Free reserve changes are from the following article: Karl Brunner and Allan H. Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, Subcommittee on Domestic Finance, House Committee on Banking and Currency, 88th Congress, 2nd Session, May, 1964, p. 42.*

The above results suggest that the first part of the outside lag averages two to five weeks in length. That is, the banking system begins to respond to System actions a few weeks after the initiation of new System policy. Of course, one must be wary of the post hoc ergo propter hoc fallacy in interpreting such data.

This study also suggests that the conclusion reached by Brunner and Meltzer that the Open Market Account Manager acts in advance of policy decisions, and therefore autonomously, is erroneous. Brunner and Meltzer based their case on the questionable finding that free reserves changed prior to decision changes:
The timing of responses of free reserves . . . and the discussion in the text about the movement of free reserves at or near cyclical turning points, suggested quite strongly that the free reserves levels often change in advance of meetings of the FOMC.  

We have now found that there is a strong indication that his "the Account Manager's" actions are more than a reflection of the policy views of the Committee. Often the reserve is true; the Manager permits or encourages changes in the level of free reserves, and the Committee often ratifies his prior decision.

This study shows, however, that free reserves changed after, not prior to, consensus changes. Thus the Account Manager was acting within Committee instructions.

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127 Brunner and Meltzer, The Federal Reserve's Attachment to the Free Reserve Concept, p. 47.

128 Ibid., p. 49.
CHAPTER V

POTPOURRI AND CONCLUSIONS

While this study set out to answer certain questions it has undoubtedly raised many others. Chapter V is devoted to examining some of these questions as well as to relating this author's conception of the FOMC's decision-making process to that of other writers in the field.

I. TARGETS VS. INDICATORS

It is obvious from the material in this study that the FOMC has failed to distinguish clearly between the targets and indicators which it uses. The FOMC seems to rely upon the "catch all" term "guides" to indicate both. For example, as stated in its response to the CMC, the System feels that the major variable which it can control is the total of member bank reserves. However, the minutes reveal that total bank reserves was rejected for use as a short-run target. First, Committee members were not willing to use a "rules" approach and adopt a specific increase in total reserves per week. Second, they did not think the Open Market Account Manager could effectively increase total reserves by some minute, incremental amount per week due to the transitive forces in the market. Third, even if a "discretionary" approach were followed, transitive forces would hide significant shifts in the variable making it practically impossible for the Open Market Account Manager to carry out the appropriate action on a daily basis. The result seems to be
that the Committee relied upon "guides" to indicate the degree of tightness in total bank reserves, i.e., the Committee utilized such concepts as free reserves and nonborrowed reserves to indicate the condition of total bank reserves. In "Federelese," the Committee is steering the car by looking at the rear-view mirror since the windshield is fogged up.

Clearly the Committee is not only using these "guides" to indicate the condition of bank reserves but is also using them as targets. If one of the "guides," such as free reserves, varies from the level which the Committee thinks is appropriate, open market action will be taken to restore it. How sound is this practice? According to Friedman the only relevant test of an economic hypothesis is how well it works. The "guide" approach, no matter how confusing to the outsider, seems to be working.\(^1\) The Committee appears to have anticipated many of the criticisms of its targets by academic economists and, in some way, has compensated for the targets' shortcomings.

II. THE FOMC'S DECISION MAKING PROCESS

In recent months a number of laudable attempts have been made to duplicate, in model form, the decision making process of the FOMC. John H. Wood, formerly of the staff of the Board of Governors, developed a quantitative model which demonstrates

that the Federal Reserve, in its conduct of open market operations, responds in a systematic fashion to recent movements in such target variables as GNP, the balance of payments, unemployment, and prices, and to changes in GNP and balance-of-payments targets.

Wood notes that most of the System's actions are "defensive." However, a small but statistically significant portion of its actions are in direct response to the variables mentioned in the Employment Act of 1946. Wood reached his conclusions after studying empirical data and then using regression analysis.

A distinctly different approach was taken by William P. Yohe. Yohe was concerned with specific Committee decisions and how they were reached rather than with the implementation of the decisions by the Account Manager. Yohe succinctly states his conception of Committee behavior as follows:

My basic conception of a policy-making committee like the FOMC is that of a heuristic problem solver whose coalitions systematically shift in response to changes in information and whose deliberate actions are both infrequent and incremental.

This author, while disagreeing with certain "heuristics" used in the model, believes that Yohe has captured the essence of the FOMC decision making process. The Committee does respond to inputs of data.

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3Ibid.

While some coalitions seem to remain relatively constant, for example the "hard money men," new coalitions are formed as the economic situation changes. The Committee's deliberate actions, i.e., "dynamic" responses, are relatively infrequent and are carried out in an incremental manner. Yohe concludes his paper with a computer flow chart and a list of heuristics which incorporate his interpretation of FOMC behavior.

While a complete analysis of Yohe's presentation is beyond the scope of this study, this author takes issue with two specific parts of the model. First, as Yohe describes it, the initial decision made by the FOMC is whether to maintain an "even-keel" policy because of a major Treasury financing, defined as one being over $4 billion, or to proceed with an analysis of the general economic situation. It is obvious from the minutes that even though the Committee may decide to maintain an "even-keel" this decision is made only after the Committee reviews a considerable amount of economic data. The Committee does not just automatically proceed, as indicated in the Yohe paper, to renew the previous directive.

Second, Yohe seems to miss the importance of the consensus to the Committee members and the fact that the consensus may be changed in cases where the policy directive is not. To be more accurate in his model, Yohe should incorporate allowances for this.

This author has attempted, in Figure I, to diagram his own interpretation of the Committee's decision making process. The diagram

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5Ibid., Table I, Notes on Subroutines of FOMC Model II.
incorporates this author's above criticisms of the Yohe model. First, decisions to maintain an "even keel" are not automatic during refundings but come only after an analysis of economic data. Second, consensus and directive changes may be made independently of each other.
FIGURE I
A MODEL OF THE FOMC DECISION MAKING PROCESS

Start

Read Reports of Open Market Account Activities (feel, expectations, etc.)

Assess

Read Reports on Real Sectors of the Economy (output, prices, employment)

Assess

Read Reports on the Monetary Sector of the Economy (interest, free reserves, Treasury financing, money supply, total reserves)

Assess

Read Reports on the International Situation (balance of payments, interest differentials)

Assess

Has the consensus changed?

Yes

State the new consensus

Set New Targets

No

Continue the same policy

Change the directive?

Yes

Reword the directive

No

Exit
III. STRUCTURE VS. FUNCTION

Some economists have been concerned with the structural and functional evolution of the Federal Reserve System. Some observers, such as Michael D. Regan, feel that the "regional" structure of the System is outmoded and should be abandoned. Other observers feel that the System has become too centralized and that a return to "regionalism" should be made. The minutes shed some light upon specific parts of the controversy—the influence of the Federal Advisory Council (FAC) on the FOMC and the "nodes of power" within the System.

First, aside from the question of which groups should be represented on the FAC, there is the matter of the extent of the FAC's influence. While the FAC is to advise the Board of Governors, much of the "dynamic" decision making performed in the System is conducted in the FOMC meetings. Regan has stated that it is presumptuous to assume that the FAC can provide information which the Federal Reserve Bank presidents or the System's staff economists have not already gleaned. Hastings and Robertson place the FAC last in their hierarchy of the "nodes of power" in the System. Confirming the above statements, the minutes of the FOMC reveal that the Committee members

rarely mention the FAC at Committee meetings. The recommendations of
the FAC are either ignored or they are simply mentioned in passing
without much attention being paid to them.

Second, observers realize that the power structure within the
System is different from that which was originally created by the
Federal Reserve Act. Hastings and Robertson have formalized this aware­
ness by setting forth the "nodes of power" as they see them in the
Federal Reserve System. The descending order of power is as follows:10

1. Chairman of the Board of Governors
2. Other Governors
3. The Board's staff, especially senior advisors
4. The FOMC
5. The trading desk at the New York Bank
6. The New York Federal Reserve Bank President
7. Other Federal Reserve Bank Presidents
8. Directors of the Federal Reserve Banks
9. System-wide standing and ad hoc committees
10. The FAC

While this study is not concerned with the System as a whole it can shed
some light on the "nodes of power" within the FOMC. This author
believes that two "node" structures exist within the FOMC, one for
routine "defensive" operations and another for "dynamic" decisions.
These structures are listed below:

98-99.
"Defensive Nodes"
1. The trading desk at the New York Bank
2. The FOMC's staff
3. The Chairman of the FOMC
4. The President of the New York Bank
5. Other FOMC members

"Dynamic Nodes"
1. The Chairman of the FOMC
2. The President of the New York Bank
3. The FOMC's staff
4. Other FOMC members
5. The trading desk at the New York Bank

Of course the ordering of these structures is a subjective task. However, in the case of "defensive" operations it is clear that daily operations of the Open Market Account are handled by and subject to the discretion of the Account Manager. Hence his primary importance. The FOMC staff, as well as the staff of the New York Bank, prepares reserves projections in an attempt to anticipate disruptive factors. The minutes indicate that these projections are accepted by the Committee as valid and are incorporated in "defensive" operations. The Chairman of the FOMC and the President of the Federal Reserve Bank of New York seem to have close to equal influence in "defensive" operations. The New York Bank president is "on the scene" but the Chairman of the FOMC seems to have more political weight on the Committee. Clearly, the other FOMC members participate less in "defensive" decisions.
The "dynamic" nodes are perhaps more clear cut. Unquestionably the Chairman wields the greatest power. The President of the Federal Reserve Bank of New York usually "leads off" the "go-around." The minutes reveal that the President is almost without exception fully prepared for discussion and in fact usually makes a lengthy economic statement which is often quoted verbatim in the minutes. Both his speaking position and his status within the System undoubtedly add weight to his influence. At first glance the FOMC's staff seems to but cautiously inform the Committee members of recent economic activity. However, when viewing the Committee meetings over a longer period of time it becomes apparent that the staff plays an important role in not only selecting appropriate targets but also target levels. The other FOMC members, with notable exceptions, seem to side with the Chairman, staff, and New York Bank President once a strong case for changing policy is made. Chairman Martin, though he usually is the last to speak during the "go-around," will quite often indicate his economic views before the "go-around" by suggesting that a change in policy should be considered by the members. Or, he may make some comment about "the threat of renewed inflationary pressures" or "we should avoid letting a bubble form on the top of the boom." Such comments cue the members into his views. The Account Manager, while of extreme importance in maintaining and planning "defensive" operations, plays a much lesser role in "dynamic" operations. The Manager carries out the operations assigned by the Committee—he does not initiate them.

An additional measure of the influence, though admittedly a weak
one, of the individual Committee members is the average number of times which the member's name is recorded in the minutes of the FOMC per meeting. The minutes record the members' names both when the members speak and when they are mentioned by others. Such an account for the year 1956 is presented in Table XI.

**TABLE XI**

THE AVERAGE NUMBER OF TIMES PER MEETING WHICH THE VARIOUS PARTICIPANTS IN THE 1956 FOMC MEETINGS HAD THEIR NAME RECORDED IN THE MINUTES\(^a\)

<table>
<thead>
<tr>
<th>Board of Governors</th>
<th>Bank Presidents</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Martin</td>
<td>Sproul</td>
<td>Rouse</td>
</tr>
<tr>
<td>22.6</td>
<td>16.3</td>
<td>9.7</td>
</tr>
<tr>
<td>Robertson</td>
<td>Hayes</td>
<td>Thomas</td>
</tr>
<tr>
<td>8.2</td>
<td>11.5</td>
<td>5.8</td>
</tr>
<tr>
<td>Mills</td>
<td>Johns</td>
<td>Young</td>
</tr>
<tr>
<td>6.6</td>
<td>5.9</td>
<td>3.0</td>
</tr>
<tr>
<td>Vardaman</td>
<td>Mangels</td>
<td></td>
</tr>
<tr>
<td>4.4</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>Balderston</td>
<td>Leach</td>
<td></td>
</tr>
<tr>
<td>4.3</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>Shepardson</td>
<td>Williams</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>Szymczak</td>
<td>Allen</td>
<td></td>
</tr>
<tr>
<td>2.8</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bryan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Erickson</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leedy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Irons</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Powell</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fulton</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barhart</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Young</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td></td>
</tr>
</tbody>
</table>

The year 1956 was selected since it records the presence of two Presidents of the Federal Reserve Bank of New York. This author, of course, recognizes that frequency of speech, quality, and influence are not always directly related. This table obviously relies upon the ceteris paribus assumption as well as the assumption that negative marginal utility from speaking too much does not occur. Hence, ceteris paribus, the more one speaks the more influence he has. Granted these assumptions, Table XI seems to confirm the relative importance of the Chairman of the Committee, the President of the New York Bank, and the Open Market Account Manager.\footnote{During 1956 Martin was Chairman of the Committee, Sproul and Hayes served consecutively as Presidents of the New York Bank, and Rouse was the Manager of the Open Market Account.}

IV. CONCLUSIONS

In reading the minutes of the FOMC one discovers that the "Fed" is not so mysterious as some scholars would have us believe. The System, as any other organization, is composed of people, people each with his own private eccentricities as well as knowledge, skills, and beliefs. If the System pursues "tight money" too often, one may question whether it is the Committee members who are to blame or whether it is the person who appoints or approves the selection of those who are to serve on the Committee. Surely individual propensities are known prior to appointment.
As long as there are advances in economic theory there most certainly will be attacks on the System for not having thought of the advances first or for not having incorporated them sooner. The FOMC can only be as progressive and as skillful as the persons who compose it.

If powerful dynamic individuals are placed in the System, it is reasonable to expect that these individuals will become nodes of power and influence. Surely the most knowledgable and skillful individuals will be selected for the most important positions, thus adding to their influence.

Each discipline as well as specific fields within disciplines develop their own special terminology. The Federal Reserve should not be expected to be any different. The existence of "Federales" is to be expected. The capable scholar of monetary policy should encounter no difficulty in mastering it.

During the period of this study the FOMC seemed to respond to economic changes as promptly as the indicators which it was using signaled a change. The Committee used the targets which it felt were the best for the task at hand. Most important, the Committee showed willingness to change its indicators, targets, and procedures when superior ones were developed. This trait and heritage of flexibility which the System, even today, possesses is undoubtedly its greatest asset.
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BOOKS


**PUBLICATIONS OF GOVERNMENT**


Operation of the Monetary System in the U. S. A.
Memorandum Submitted at the Request of the Royal Commission on Banking and Finance, Ottawa, Canada, May, 1962.


PERIODICALS


ESSAYS AND ARTICLES IN COLLECTIONS


UNPUBLISHED MATERIALS

APPENDIX A

The minutes of the Federal Open Market Committee reveal that the staff presented a host of economic indicators to the Committee. The following list is certainly not a complete one, but it does contain the indicators which seemed to be mentioned most frequently in staff reports. This author has provided one date for each indicator as a source of reference, even though the indicators are, for the most part, certainly mentioned in more than one staff report.

Economic Indicators Mentioned by the Staff which Reveal Output, Employment, and Price Conditions

<table>
<thead>
<tr>
<th>Production:</th>
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</thead>
<tbody>
<tr>
<td>Industrial capacity</td>
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<tr>
<td>Output</td>
</tr>
<tr>
<td>Index of Industrial Production</td>
</tr>
<tr>
<td>Durable goods production</td>
</tr>
<tr>
<td>Nondurable goods production</td>
</tr>
<tr>
<td>General construction activity</td>
</tr>
<tr>
<td>Housing starts</td>
</tr>
<tr>
<td>Housing contracts</td>
</tr>
<tr>
<td>Production gap</td>
</tr>
<tr>
<td>General auto production</td>
</tr>
<tr>
<td>New manufacturing orders</td>
</tr>
<tr>
<td>Textile production</td>
</tr>
<tr>
<td>Steel production</td>
</tr>
<tr>
<td>Electric Power output</td>
</tr>
<tr>
<td>Freight car loadings</td>
</tr>
<tr>
<td>Exports</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Activity:</th>
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</thead>
<tbody>
<tr>
<td>General business activity</td>
</tr>
<tr>
<td>Construction activity</td>
</tr>
<tr>
<td>Department store activity</td>
</tr>
<tr>
<td>Durable goods purchases</td>
</tr>
<tr>
<td>Nondurable goods purchases</td>
</tr>
<tr>
<td>New car sales</td>
</tr>
</tbody>
</table>
Used car sales
Truck sales
Retail trade
Backlog demands for freezers, refrigerators, etc.
Business failures

Government Activity:
General government activity
Defense spending
Budget deficit
Budget surplus
State and local government outlays
Transfer payments

Prices:
General prices
Industrial materials
Building materials
Wholesale goods
Commodity markets
Farm prices
Auto prices
Stock prices
Construction costs
Wages
Cost-push

Investment:
Investment
Private capital expenditures
Outlays for plant and equipment
The McGraw-Hill Plant and Equipment Survey
The Department of Commerce Plant and Equipment Survey
Inventories
New car inventories
Used car inventories
Stock-sales ratios
Capital floating

Employment:
Employment
Unemployment
Hiring rates
Lay-offs
<table>
<thead>
<tr>
<th>Category</th>
<th>Event Details</th>
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<tbody>
<tr>
<td>Man hours worked</td>
<td>February 18, 1957</td>
</tr>
<tr>
<td>Labor market strength</td>
<td>February 18, 1957</td>
</tr>
<tr>
<td>Potential strikes</td>
<td>January 11, 1955</td>
</tr>
<tr>
<td>Actual strikes</td>
<td>August 29, 1952</td>
</tr>
<tr>
<td><strong>Foreign Activity:</strong></td>
<td></td>
</tr>
<tr>
<td>Middle East War Crisis</td>
<td>November 13, 1954</td>
</tr>
<tr>
<td>Foreign industrial output</td>
<td>January 25, 1955</td>
</tr>
<tr>
<td>European expansion</td>
<td>April 12, 1955</td>
</tr>
<tr>
<td>World trade</td>
<td>April 26, 1955</td>
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<td>European inflation</td>
<td>January 8, 1957</td>
</tr>
<tr>
<td><strong>Other:</strong></td>
<td></td>
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<tr>
<td>Public psychology</td>
<td>April 8, 1953</td>
</tr>
<tr>
<td>Leading cycle indicators</td>
<td>September 13, 1960</td>
</tr>
<tr>
<td>Farm income</td>
<td>August 3, 1954</td>
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<tr>
<td>Farm conditions (dry weather)</td>
<td>August 3, 1954</td>
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<tr>
<td>Business expectations</td>
<td>April 24, 1953</td>
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<td>Economists' expectations</td>
<td>June 23, 1953</td>
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<tr>
<td>Consumer credit</td>
<td>January 6, 1953</td>
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<tr>
<td>Income</td>
<td>November 14, 1951</td>
</tr>
<tr>
<td>Savings</td>
<td>November 14, 1951</td>
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<tr>
<td>Private demand</td>
<td>November 25, 1952</td>
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<tr>
<td>Construction expectations</td>
<td>November 14, 1951</td>
</tr>
<tr>
<td>Inflationary psychology</td>
<td>August 19, 1958</td>
</tr>
<tr>
<td>Real estate credit</td>
<td>January 6, 1953</td>
</tr>
<tr>
<td>Corporate earnings</td>
<td>May 6, 1958</td>
</tr>
<tr>
<td>Consumer confidence</td>
<td>January 19, 1954</td>
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<tr>
<td>Profit squeeze</td>
<td>November 13, 1956</td>
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<tr>
<td>Stock credit</td>
<td>March 27, 1956</td>
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<tr>
<td>The Dun and Bradstreet survey</td>
<td>July 17, 1956</td>
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<td>of business expectations</td>
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</table>
APPENDIX B

Numerous economic indicators were mentioned in the staff reports on the conditions of financial markets. The following list, while not exhaustive, does seem to include the indicators which were most frequently mentioned. This author has provided one date for each indicator as a source of reference, even though the indicators are, for the most part, certainly mentioned in more than one staff report.

Economic Indicators Mentioned by the Staff which Reveal the Condition of Financial Markets

**Commercial Bank Assets:**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Date</th>
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<tr>
<td>Bank currency holdings</td>
<td>January 11, 1955</td>
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<tr>
<td>Bank liquidity</td>
<td>August 4, 1953</td>
</tr>
<tr>
<td>Bank loans (general)</td>
<td>November 5, 1952</td>
</tr>
<tr>
<td>Total loans and investments</td>
<td>October 4, 1951</td>
</tr>
<tr>
<td>Ratio of total loans to total loans and investments</td>
<td>August 2, 1956</td>
</tr>
<tr>
<td>City bank loans</td>
<td>July 19, 1956</td>
</tr>
<tr>
<td>Liquidation of bank loans</td>
<td>February 11, 1958</td>
</tr>
<tr>
<td>Seasonal demand for loans</td>
<td>August 21, 1953</td>
</tr>
<tr>
<td>Total reserves</td>
<td>June 19, 1952</td>
</tr>
<tr>
<td>Required reserves</td>
<td>November 5, 1952</td>
</tr>
<tr>
<td>Excess reserves</td>
<td>July 21, 1953</td>
</tr>
<tr>
<td>Free reserves</td>
<td>October 6, 1953</td>
</tr>
<tr>
<td>Nonborrowed reserves</td>
<td>November 22, 1960</td>
</tr>
<tr>
<td>Effective reserves</td>
<td>December 15, 1959</td>
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<td>Available reserves</td>
<td>November 22, 1960</td>
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**Commercial Bank Liabilities:**

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<tr>
<th>Indicator</th>
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<tr>
<td>Total bank deposits</td>
<td>October 4, 1951</td>
</tr>
<tr>
<td>Private deposits</td>
<td>November 6, 1951</td>
</tr>
<tr>
<td>Tax and loan accounts</td>
<td>August 21, 1953</td>
</tr>
<tr>
<td>Member bank borrowing</td>
<td>June 19, 1952</td>
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<tr>
<td>Bank borrowing to decrease excess profits liability</td>
<td>November 5, 1952</td>
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</table>
Treasury Financing, etc.:

<table>
<thead>
<tr>
<th>Treasury refunding (general)</th>
<th>October 4, 1951</th>
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<td>Types of securities in refunding</td>
<td>January 29, 1952</td>
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<tr>
<td>Cash balances</td>
<td>October 4, 1951</td>
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<tr>
<td>Cash requirements</td>
<td>May 17, 1951</td>
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</table>

Government Securities:

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<thead>
<tr>
<th>Interest and prices</th>
<th>April 24, 1953</th>
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<tr>
<td>Disorderly market</td>
<td>July 18, 1958</td>
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<tr>
<td>Repurchase agreements</td>
<td>June 19, 1952</td>
</tr>
<tr>
<td>Purchase and sale of government securities by lending institutions</td>
<td>April 17, 1951</td>
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<tr>
<td>Purchase and sale of government securities by nonbank investors</td>
<td>December 15, 1951</td>
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<tr>
<td>Tone of the market</td>
<td>January 15, 1953</td>
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<tr>
<td>Money market pressures</td>
<td>January 27, 1953</td>
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<tr>
<td>Market uncertainty as to whether the System was going to supply reserves</td>
<td>August 25, 1953</td>
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Other:

<table>
<thead>
<tr>
<th>Money supply</th>
<th>October 4, 1951</th>
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<td>Liquidity (general)</td>
<td>January 6, 1953</td>
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<td>Liquidity needs</td>
<td>January 8, 1957</td>
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<tr>
<td>Velocity</td>
<td>May 17, 1951</td>
</tr>
<tr>
<td>Credit demands</td>
<td>May 17, 1951</td>
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<tr>
<td>Reserve bank credit</td>
<td>May 17, 1951</td>
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<tr>
<td>Currency expansion</td>
<td>November 6, 1953</td>
</tr>
<tr>
<td>Seasonal currency drain</td>
<td>May 17, 1951</td>
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<tr>
<td>Currency inflow</td>
<td>January 19, 1954</td>
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<tr>
<td>Business loans</td>
<td>February 10, 1953</td>
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<tr>
<td>Real estate loans and credit</td>
<td>February 10, 1953</td>
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<tr>
<td>Credit liquidation</td>
<td>May 27, 1958</td>
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<tr>
<td>Float</td>
<td>January 19, 1954</td>
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<tr>
<td>Corporate bonds</td>
<td>March 24, 1953</td>
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<tr>
<td>Municipal bonds</td>
<td>March 24, 1953</td>
</tr>
<tr>
<td>Demands of corporate tax and dividend period</td>
<td>March 24, 1959</td>
</tr>
<tr>
<td>Gold withdrawals</td>
<td>April 15, 1958</td>
</tr>
<tr>
<td>Mortgages</td>
<td>November 14, 1951</td>
</tr>
<tr>
<td>Federal funds</td>
<td>May 27, 1958</td>
</tr>
</tbody>
</table>
VITA

Edward B. Selby, Jr., was born on November 12, 1938, in Baltimore, Maryland. He attended school in Fort Lauderdale, Florida, and graduated from Fort Lauderdale High School in 1956. He entered Clemson University as a freshman in the fall of 1956. In the summer of 1957 he enlisted in the U. S. Army for a period of two years. Upon completion of active duty Edward Selby returned to Clemson in 1959 where he completed his Bachelor of Science degree in Industrial Management in the spring of 1962. He enrolled in the Graduate School of the University of South Carolina in the fall of 1962 and received the Master of Business Administration degree in the Spring of 1963. He entered the Louisiana State University Graduate School in the summer of 1963, one day after his marriage to Mary Long Gilbert of West Palm Beach, Florida, whom he had met while a student at the University of South Carolina. During his graduate studies in Economics at Louisiana State University his marriage was blessed with the birth of two daughters, Ashley Duke and Courtenay Anne. Edward Selby and family moved to Monroe, Louisiana, in the fall of 1966 where he was employed by Northeast Louisiana State College as an Assistant Professor of Economics. He completed the research and writing of his dissertation while a professor at Northeast.
EXAMINATION AND THESIS REPORT

Candidate: Edward Burford Selby, Jr.

Major Field: Economics

Title of Thesis: RESPONSE OF THE FEDERAL OPEN MARKET COMMITTEE TO ECONOMIC CHANGES 1951-1960

Approved:

Thomas R. Beard
Major Professor and Chairman

Max Goodrich
Dean of the Graduate School

EXAMINING COMMITTEE:

William F. Campbell

Jack Meltzer

William J. Stowe

Len C. Megginson

Date of Examination: May 11, 1967