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RICE UNIVERSITY

The Proximate Impact of Monetary Policy
on Flows of Funds Through Financial Intermediaries

by

William George Nelson IV

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

Doctor of Philosophy

Thesis Director's signature:

Dwight S. Brantley

Houston, Texas

March, 1965

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CHAPTER I

INTRODUCTION

Recently there has been increased interest in the economic significance of financial intermediaries at the theoretical, empirical, and policy levels. The major stimulus for this interest at the theoretical level has been the novel theory of the role of financial intermediaries contained in the recent work of John G. Gurley and Edward S. Shaw.¹ In their work Gurley and Shaw have

¹John G. Gurley and Edward S. Shaw, "Financial Aspects of Economic Development," American Economic Review, Vol. XLV, No. 4 (1955), pages 515-538.

John G. Gurley and Edward S. Shaw, "Financial Intermediaries and the Saving-Investment Process," Journal of Finance, Vol. XI, No. 2 (1956), pages 257-276.

John G. Gurley and Edward S. Shaw, "Financial Growth and Monetary Controls," Paper presented to the Southern Economic Association, (November, 1956).

John G. Gurley and Edward S. Shaw, "The Growth of Debt and Money in the United States, 1800-1950: A Suggested Interpretation," Review of Economics and Statistics, Vol. XXXIX, No. 3 (1957), pages 250-262.

John G. Gurley and Edward S. Shaw, "Reply" (to J. M. Culbertson), American Economic Review, Vol. XLVIII, No. 1 (1958), pages 132-138.

John G. Gurley, "Monetary Theory and Financial Institutions," (Hearings, May 28, 1959) and "Study Paper Number 14, Liquidity and Financial Institutions in the Postwar Economy," (January, 1960), prepared in connection with the Study of Employment, Growth, and Price Levels for consideration by the Joint Economic Committee of the Congress of the United States.

John G. Gurley and Edward S. Shaw, Money in a Theory of

attempted to broaden the concept of money, suggesting that claims against all types of financial intermediaries possess the character of money in varying degree. In effect they have questioned the orthodox theoretical practice of confining the concept of money to non-interest bearing claims against government and commercial banks. They have introduced a general financial theory in which there is no essential distinction between so-called "monetary" claims and other claims against financial intermediaries. In short, they argue that a comprehensive financial theory is necessary to account for all the significant factors that may contribute to liquidity in an economy. In discussing American experience, the two authors emphasize the increasing role of non-bank financial intermediaries in determining the economy's total liquidity.

The major stimulus for increased interest in financial intermediaries at the policy level was provided by the Radcliffe Report (Report of the Committee on the Working of the Monetary System) in Britain and the studies of the Commission on Money and Credit in the United States. These studies, coupled with the theoretical work of Gurley and Shaw referred to above, have stimulated searching

Finance, (Washington: The Brookings Institution, 1960).

John G. Gurley, "The Radcliffe Report and Evidence, A Review Article," *American Economic Review*, Vol. L, No. 4 (1960), pages 672-700.

empirical investigations of the American financial system. An additional, but somewhat independent, stimulus for interest in the financial system at all levels has been the pioneering study of money flows conducted by the National Bureau of Economic Research.¹

There is under way, then, a reformulation of conventional theory regarding financial intermediaries and the economic significance of their activity. In addition, policy makers have an immediate concern in the clear definition of the economic function of each of the several financial intermediary sub-sectors. They must decide whether controls should apply to only specific financial

¹Morris Albert Copeland, A Study of Moneyflows in the United States, (New York: National Bureau of Economic Research, 1952).

Raymond W. Goldsmith, A Study of Saving in the United States, (Princeton: Princeton University Press for the National Bureau of Economic Research, 1955).

Raymond W. Goldsmith, The Share of Financial Intermediaries in National Wealth and National Assets 1900-1949, (N.B.E.R. Occasional Paper # 42; New York: National Bureau of Economic Research, 1954).

Raymond W. Goldsmith, Financial Intermediaries in the American Economy Since 1900, (Princeton: Princeton University Press for the National Bureau of Economic Research, 1958).

Simon S. Kuznets, Capital in the American Economy: Its Formation and Financing, (Princeton: Princeton University Press for National Bureau of Economic Research, 1961).

National Bureau of Economic Research, The Flow-of-Funds Approach to Social Accounting, (Princeton: Princeton University Press, 1962).

Also see the other volumes in the National Bureau of Economic Research's Series of Studies in Capital Formation and Financing, (Princeton: Princeton University Press for National Bureau of Economic Research, 1956 on).

intermediaries, such as commercial banks, or apply to all financial intermediaries. If they decide that only some sub-sectors of financial intermediaries should be directly subject to controls, they must decide which sub-sectors. They must also decide the appropriate methods of control. This means that decisions with respect to control must be made about the various assets and liabilities of each sub-sector of financial intermediaries.¹

Therefore, evaluation of the important Gurley-Shaw theory and solution of the problem of devising appropriate monetary and financial policies require a better understanding of the behavior of financial intermediaries. Gurley and Shaw, as well as other authors, have suggested that the effectiveness of monetary policy has been vitiated by the activities of non-bank financial intermediaries. It has been suggested that the activities of non-commercial-bank financial intermediaries induce changes in velocity of circulation (whether of the income or transactions variety) that offset monetary policy, or at least that result in a "slippage" in monetary effective-

¹For example, credit unions, mutual savings banks, and savings and loan associations are sub-sectors of the savings institution sector. The terms "sector" and "sub-sector" result from Federal Reserve usage. See Board of Governors of the Federal Reserve System, "A Quarterly Presentation of Flow-of-Funds, Saving and Investment," Federal Reserve Bulletin, Vol. XLV, No. 8 (1959), pages 828-859.

ness.^{1, 2} In addition there have been all sorts of monetary reform proposed ranging from an addition of a few words in a national declaration of purpose (e. g. Burns' proposal) to sweeping structural changes in the financial system (e. g. Friedman's proposal).³ Even though financial intermediary activities are crucially important to this novel approach to monetary and financial theory and policy, there has been no satisfactory demonstration of the relationship between monetary policy and short-term behavior of financial intermediaries.

SCOPE OF STUDY

This study attempts to determine the impact of Federal Reserve monetary policy on financial intermediaries. Primarily, it

¹That is, when credit conditions are tightened and the creation of new money through the banking system is restricted, non-monetary financial intermediaries mobilize the existing supply of money more effectively (partly by complimenting it with near-monies), thus permitting it to do most of the work that would have been done by newly created money had credit conditions been easier.

²James Angell discusses the growth of financial intermediaries and the rise in the velocity of money (which he defines as "... GNP divided by adjusted demand deposits plus outside currency") in "The Monetary Standard: Objectives and Limitations," American Economic Review, Vol. XLVIII, No. 2 (1958), pages 76-87. In this discussion Angell is quite sympathetic to Gurley and Shaw.

³Burns', Friedman's, and several other proposals for monetary reform are discussed in Chapters IX and X.

is concerned with the characteristic impact of monetary ease and the characteristic impact of monetary restraint on each of the several types of financial intermediaries. The study is limited to the responses of financial intermediaries. It is not addressed directly to the much more comprehensive issue of the impact of monetary policy on prices and real income. The effectiveness of monetary policy as a counter-cyclical device to promote full utilization of the productive resources of the economy within a framework of stable prices is not considered in this study. Nor is the effectiveness of monetary policy in stimulating growth by affecting the amount of savings and the composition of investment considered in this study.

However, this study is quite pertinent to the above considerations. In initiating and continuing monetary policies (e. g. ease or restraint) the Federal Reserve attempts to influence the cost and availability of credit in order to promote full utilization of resources and stimulate growth. At least in the orthodox interpretation, the commercial banks are the means through which the Federal Reserve attempts to affect the supply of money (and therefore the cost and availability of credit) in its efforts to influence prices and real income. To the extent that interest rate movements and availability of commercial bank credit transmits the impact of monetary policy to non-commercial bank (hereafter called non-monetary) financial intermediaries, all financial intermediaries serve to bring monetary policy

to bear on prices and real income. However, to the extent that non-monetary financial intermediaries are independent of the Federal Reserve System (in the sense that their sources and uses of loanable funds are not subject to influence from activities of the Federal Reserve) and can compete with the commercial banks as outlets for credit, then non-monetary financial intermediaries can then partially or entirely offset monetary policy. In addition even though total credit extensions by commercial banks react in harmony with monetary policy, some particular type of credit, such as consumer credit, may react in a manner that partially frustrates the results desired from Federal Reserve efforts.

Commercial banks are supposed to be the channels for the transmission of general monetary policy from the Federal Reserve to the economy at large. Some non-monetary financial intermediaries may also appropriately transmit monetary policy to the economy at large, while others may serve as sources of funds that offset monetary policy. For example, during monetary restraint one group of non-monetary financial intermediaries may decrease their willingness to extend credit (by increasing interest charges or raising acceptable credit standards) thus appropriately transmitting monetary restraint to the economy at large. A second group of non-monetary financial intermediaries may increase their credit extensions by serving customers whose regular lines of credit have been closed as a result

of the impact of monetary restraint on commercial banks and on the first group of non-monetary financial intermediaries. The second group of non-monetary financial intermediaries thus may serve as a source of funds that offset monetary restraint.¹ In any case, the behavior of all these financial intermediaries does directly influence prices and real income. Therefore, knowledge of the characteristic behavior of financial intermediaries associated with particular monetary policies (e.g. ease or restraint) should contribute to understanding of the impact of monetary policy on the economy at large.

For example, savings institutions are a major source of funds (via mortgages) for the construction and ownership of residential housing. If the monetary authorities wish to achieve a certain level of housing starts within the context of some particular general monetary policy, it would be at least helpful, if not absolutely necessary, for them to understand the impact of the particular policy being followed on those financial intermediaries that serve the housing market. More specifically, they need to be able to anticipate how

¹It is possible (and in some cases quite correct) to argue that just because a financial intermediary increases credit extension during monetary restraint does not mean that the intermediary necessarily offsets monetary restraint. However, this argument would not alter the point being made in the text. What is and what is not compatible with the aims of monetary policy is discussed at length in Chapter II, "Financial Intermediaries and Monetary Policy."

application of the instruments of general monetary policy affect savings institutions and in turn how any individual changes in the behavior of savings institutions would affect housing starts.

This study, then, is concerned with the characteristic behavior of financial intermediaries during monetary ease and during monetary restraint. The impact of monetary policy beyond financial intermediaries (i. e. the impact on prices and real income) is not a primary concern of this study and is therefore beyond the limits of this study. What is and what is not included in this study is illustrated in Figure 1, "Part of Economy Included in Study." However, the major

FIGURE 1

(Dotted line encloses area covered by this study.)

reason for undertaking this study is the realization that: 1) the behavior of financial intermediaries during particular monetary policy periods is not well understood, 2) most importantly, this behavior has fundamental implications for the larger issue of the impact of monetary policy on prices and real income, and in addition 3) this behavior (as the introductory remarks indicated) bears on an important contemporary theory and policy controversy.

This study intends to discover the direction of responses of the flows of funds associated with the principal types of assets and liabilities of several financial intermediaries to specified monetary policies. This may seem to be a small order, however, the direction of these responses has yet to be demonstrated. For instance, a large measure of the controversy over whether some non-monetary financial intermediaries do or do not tend to offset monetary policy could be resolved if only the direction of the characteristic response was known (e.g. lending activity is restrained, stimulated or unaffected by monetary policy). For that matter even the knowledge that there was a characteristic response would be an addition to current knowledge.

The Federal Reserve should be aware of the direction of responses by the various financial intermediaries to monetary policy. If the direction of response is compatible with the aims of a particular monetary policy, then continuation of that policy will be moving the economy towards the desired goals. On the other hand, if the direction

of response of some activity of some financial intermediary is contrary to the aims of a particular monetary policy, then continuation of that policy may move the level of this activity further from that which is preferred. Perhaps this indicates that the policy should be discontinued. More probably it indicates that the policy should be continued because of other overriding favorable responses but complemented in some manner to correct for the contrary behavior of some intermediaries.

What the Federal Reserve would really like to know is not merely the direction of characteristic responses, but the quantitative extent of each response to a particular monetary policy action. For example, if the Open Market Committee sold \$ 100 million of U.S. Government securities in a week, by how much would mutual savings banks change their mortgage portfolios from what the portfolios would have been if the Open Market Committee had not sold any U.S. Government securities? Knowledge of this sort would indeed be extremely useful to the Federal Reserve. However, quantitative knowledge of this kind is just not feasible within the foreseeable future. As stated earlier, the mere direction of responses is sometimes unknown and a matter of controversy. This study will not attempt to quantify responses. On occasion the study will note a particularly vigorous or marked response, but its real task is to discover the responses, and then indicate the direction of the discovered responses. This is

only a first step. However, given the current state of knowledge about the detailed responses of financial intermediaries to monetary policy - as indicated for example by the Gurley-Shaw controversies - it is at least a significant first step.

In addition to the main task of determining what happens, the study will be concerned with why it happens. Whenever a response to a particular monetary policy is discovered whose direction is compatible with the aims of that policy, this study will assume that the actions of the Federal Reserve are the reasons for the favorable response.¹ However, when financial intermediary behavior associated with a particular monetary policy is discovered that is contrary to the aims of that policy, other explanations for such behavior will be suggested provided other available evidence makes such suggestions plausible. On occasion it will only be feasible to point out that a particular activity behaves in a manner that is not compatible with the aims of monetary policy (however, determination of what happens is the main objective of this study). Similarly, when an activity shows

¹Additional studies may well discover evidence that does not always support such an assumption. Despite this possibility, the assumption is still useful for its policy implications. Favorable responses are not as much a matter of concern for Federal Reserve authorities as are responses whose directions are incompatible with policy aims.

no response, explanations for the lack of response will be suggested provided other available evidence makes such suggestions plausible.

Where available evidence indicates how a particular response occurs, or even sheds some light on the link between cause (i. e. Federal Reserve action) and effect (i. e. financial intermediary response), this too will be pointed out and discussed as fully as the evidence permits. However, it is not the intention of this study to demonstrate or explain precisely the mechanisms by which a Federal Reserve action affects financial markets and institutions. Rather it is hoped that the discovery and description of responses will help lead some other scholar to a definite determination of some of the mechanisms.

The what, why, and how of monetary policy impact on financial intermediaries then are all concerns of this study. Partly as a matter of priority and partly because of suitable data, they are not all of equal concern. As discussed above the first step is to determine what happens. This study addresses itself primarily to that task. Most probably substantial additional effort by many other scholars will be necessary to establish more precisely what happens, to say nothing of the additional effort required to determine why and how it happens.

Further, the available data, which will be discussed

presently, are most suitable for the determination of what happens.

In this study to determine the impact of monetary policy the actual behavior of financial intermediaries during the eleven years 1952-1962 is correlated with Federal Reserve action. At least two reasons make this time period particularly suitable. Until the Treasury-Federal Reserve "Accord" of 1951, the Federal Reserve was involved in pegging U.S. Government securities' prices at a high level in order to aid Treasury financing associated with the war effort. This pegging operation prevented the Federal Reserve from carrying on effective counter-cyclical monetary policy. However, the Federal Reserve has had a relatively free hand with monetary policy since 1951 (at least until the balance of payment problems in the early 1960's).

The second reason is the availability of suitable data. In March of 1964, the Federal Reserve made available quarterly flow of funds data detailed by financial intermediaries and covering only the eleven years 1952-1962.¹ These data are comprehensive in that they cover most major activities of most financial intermediaries. Because the data were determined quarterly, they can be used to study short-

¹Board of Governors of the Federal Reserve System, Flow of Funds Accounts, 1945-62, (Washington: Board of Governors of the Federal Reserve System, 1963 Supplement). Quarterly data contained in this publication covers only 1952-1962. This data will be discussed more fully further on in this chapter.

term behavior such as is anticipated with financial intermediary responses to monetary policy. No other data, available at this time, are nearly as suitable to the task of this study. The fact that these unique data became available only recently may be part of the reason for so little familiarity (as discussed earlier) with the actual responses of financial intermediaries to particular monetary policies.

This study is essentially confined to what can be learned from the Federal Reserve flow of funds accounts because these accounts are uniquely suited to the study and also in order to impose a practical limit on the size of the study. This in turn limits the activities of financial intermediaries, as well as the types of financial intermediaries included in this study to those included in the Federal Reserve flow of funds accounts. However, the Federal Reserve excluded activities or intermediaries only when insufficient detail from primary sources was available to them.¹ The financial intermediaries included in this study are: commercial banks, mutual savings banks, credit unions, savings and loan associations, life insurance companies, noninsured pension plans, other insurance companies, finance companies, security brokers and dealers, and open-end investment companies.

¹See letter from Stephen P. Taylor, Chief, Flow of Funds and Savings Section, Board of Governors of the Federal Reserve System, Washington, D.C., April 10, 1964, contained in Appendix D.

RELATED TO CURRENT KNOWLEDGE

For the most part the effort to relate detailed findings of this study to current knowledge is done with footnotes. The discoveries about a particular activity's responses are discussed in the text, and then pertinent points from other recent literature are reviewed in footnotes. Similarities or differences between findings of this study and recent literature are also discussed in these footnotes.

The eighteen volumes prepared for the Commission on Money and Credit have been heavily relied on for information about current knowledge when comparing individual responses, as determined by this study, with current knowledge.¹ After a unanimous vote of the Board of Trustees of the Committee for Economic Development, the Commission on Money and Credit came into being in May of 1958. The Commission's bylaws state that "It shall be the responsibility of the Commission to initiate studies into the United States monetary and financial system." The objectives of this study are right in line with the CMC objective.

Actually the "research studies" contained in the CMC volumes frequently do not indicate much research.² However, many

¹More than 100 research studies were prepared for the Commission by trade organizations, individual scholars, the Federal Reserve System, and the Treasury of the United States.

²See bibliography for listing of all available CMC volumes.

of these studies are either good summaries by experts of what is contained in other recent literature pertinent to financial markets and institutions or are reflections of the thinking behind the actual behavior of financial institutions (such reflections are usually contained in trade monographs prepared for the Commission). In fact when soliciting many of the studies, the Commission explicitly requested that the impact of monetary policy be considered.¹ As a result, within this extensive effort for the CMC there is a comprehensive review of current thinking and research pertinent to the impact of monetary policy. As stated above, one way in which this study intends to indicate where it has increased the current fund of knowledge about monetary policy is to compare results as they are discovered with information contained in the available CMC volumes. The pertinent information from the CMC effort is related, then, to the findings of this study.

¹For example, "In soliciting the monograph, the Commission indicated the desirability of having it provide information on the following six topics:" One of these topics was the following, "4. The effects of monetary-debt management policy upon the industry and the role of consumer finance companies in transmitting these policies throughout the economy." National Consumer Finance Association for the Commission on Money and Credit, The Consumer Finance Industry, (Englewood Cliffs, N.J.: Prentice-Hall, 1962), page ix of the Foreward.

APPROPRIATENESS OF CURRENT THEORIES AND PROPOSALS

An effort is made to indicate the extent to which various theories about financial intermediaries and various proposals for monetary reform are consistent with findings of this study. For example, as indicated in the introductory remarks, differences between Gurley-Shaw theory and more orthodox theory are of considerable current interest, and for good reason. Different assumptions about responses of financial intermediaries to monetary policy can lead to different theories. Different theories about financial intermediaries can lead in turn to different, and even opposing, suggestions for policy innovations. If findings of this study do clarify the degree to which assumptions underlying various theories comply to actual financial intermediary behavior, this in turn will be useful for evaluation of proposals concerning policy innovations. Correspondingly, selected policy proposals will be discussed in light of the findings of this study.

MATERIAL AND METHODS

With the task of the study defined, this chapter now discusses in some detail the major material and methods used. First the source of information for determining the character of monetary policy (e.g. ease or restraint) is discussed. Then monetary policy

for the period is summarized. Next flow-of-funds data are discussed. Finally the statistical technique used to discover responses and to determine their direction is discussed.

This chapter closes with a brief preview of the organization of the remainder of the study.

MONETARY POLICY

The character of monetary policy throughout the years 1952-62 was determined from records of policy actions of the Federal Open Market Committee and the Board of Governors of the Federal Reserve System.¹ These records are published in the Annual Reports

¹I considered other more quantitative methods for determining the character of monetary policy. However, I finally decided that the only appropriate method is the one discussed in the text and supported by Appendix A.

The Federal Reserve indicated in a letter to me just how difficult this problem is.

"I do not feel that there is any single appropriate indicator of the posture of monetary policy. Many indicators are taken into account by the Federal Reserve in the administration of monetary policy and are used in various combinations and with different emphasis at different times. These indicators do not always move in a precisely parallel manner, thus complicating the question of selecting transition points in the evolution of policy, and at times, they may even give contradictory readings.

"Thus the problem of characterizing Federal Reserve policy at any given time is most difficult, and one that does not always yield clear-cut answers. In large measure, any characterization is conditioned by judgmental considerations, and the results in any particular case will inevitably reflect the views of the individual analyst."

Letter from Albert R. Koch, Associate Director, Division

of the Board of Governors pursuant to the requirements of Section 10 of the Federal Reserve Act. Appendix A, "Determination of Federal Reserve Policy for the Years 1952-1962," contains a detailed digest in chronological order of these records of policy actions.

The purpose and nature of these records is summarized in the following quotation from the Forty-Seventh Annual Report.

of Research and Statistics, Board of Governors of the Federal Reserve System, Washington, D.C., October 28, 1964.

Koch sent me two enclosures with his letter.

One, a paper by Frederick L. Deming, pointed out many reasons why various quantitative measures can not be used for such purposes. He made one suggestion in his paper, however, "Both the record of policy action and the broad economic record are there to read." Frederick L. Deming, President, Federal Reserve Bank of Minneapolis, "Monetary Policy Objectives and Guides" (Commercial and Central Banking Seminar, University of North Carolina, August, 1963), page 9.

The second enclosure, Central Banking and Economic Growth, (American Statistical Association, September 9, 1962), used the same method as I used in Appendix A. That is, the Records of Policy Actions are quoted and the corresponding conclusions about monetary policies are drawn.

Chart B-11, "Possible Indicators of Monetary Policy," contained in Appendix B indicates the behavior during the eleven years 1952-1962 of total reserves, non-borrowed reserves, free reserves, discount rate, long term government bond rate, and the treasury bill rate. These possible indicators are shown along with the character of monetary policy as determined by open market operations (as explained in the next several pages in the above text).

For an outside-of-the-Federal-Reserve-System point of view about this same problem see Milton Friedman, A Program for Monetary Stability, (New York: Fordham University Press, 1960), pages 39-42. He discusses the inappropriateness of using either the discount rate or measures of "free reserves" as criteria for determining the ease or tightness of monetary policy.

That section [Section 10 of the Federal Reserve Act] provides that the Board shall keep a complete record of the actions taken by the Board and by the Federal Open Market Committee upon all questions of policy relating to open market operations, that it shall record therein the votes taken in connection with the determination of open market policies, and the reasons underlying each such action, and that it shall include in its Annual Report to the Congress a full account of such actions.¹

Open market operations are the major tool for implementing monetary policy. Assuming that open market operations are directed with the faithful intent to reflect policy decisions, then knowledge of open market policy decisions should indicate the character of monetary policy at least from the Federal Reserve point of view. Some may not agree that open market policy decisions by the Open Market Committee and the Board of Governors do in fact indicate the character of monetary policy. Nonetheless such policy decisions do indicate the intent of monetary policy and do it with no ambiguity about timing since the records of such policy decisions are dated.

The Federal Reserve Bank of New York is charged with responsibility for implementing open market operations. The actual buying and selling of securities is supervised by the Manager of the System Open Market Account. His opportunity to faithfully carry out

¹Forty-Seventh Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1960, (Washington: Board of Governors of the Federal Reserve System, 1960), page 34.

policy decisions is evident in the following quotation.

The manager of the System Open Market Account attends the meetings of the Committee [Federal Open Market Committee] and the shades of opinion expressed at those meetings provide him with guides to be used in the conduct of open market operations, within the framework of the policy directive adopted by the Committee.¹

A period of monetary ease exists when the standing policy directive of the Federal Open Market Committee (including the "shades of opinion expressed at those meetings") to the manager of the System Open Market Account indicates that he, on behalf of the system, should pursue monetary ease. A period of monetary restraint exists when the standing policy directive of the Federal Open Market Committee to the manager of the System Open Market Account indicates that he should pursue monetary restraint. If the standing policy directive indicates neither ease nor restraint then a neutral monetary policy exists.

There were three periods of monetary ease, two periods of monetary restraint, and five periods of monetary neutrality included in the eleven years 1952-1962. The first period of monetary ease extended from June, 1953, to January, 1955. The second period of monetary ease was short, lasting from February, 1958, through July, 1958. The third period began in August, 1960, and

¹Ibid.

extended into 1963. The first period of monetary restraint extended from August, 1955 to December, 1957. The second period extended from August, 1958 to May, 1960. The periods of neutrality occurred during the remainder of the eleven years. These periods are plotted accurately on Chart 1, "Major Federal Reserve Policy".

A more detailed summary of monetary policy for these years is included in Appendix A along with the above mentioned detailed digest.

FLOW OF FUNDS ACCOUNTS

The Federal Reserve Board flow-of-funds data used in this study are contained in Flow of Funds Accounts, 1945-62. This publication contains all flow-of-funds data that have appeared in the Federal Reserve Bulletin through August 1963.¹ In addition separate accounts for sectors and transaction categories not shown separately in the Bulletin are included. The Preface to Flow of Funds Accounts, 1945-62 contains a discussion of these data.² However, the basic document for discussion of the quarterly data contained in Flow of

¹Flow of Funds Accounts, 1945-62, page iii of the Preface.

²For a good, brief, yet comprehensive discussion of flow-of-funds accounts by an economist who has taught accounting and who appraises the accounts from an outside-the-Federal-Reserve point of view, see Wilson L. Farman, "National Flow-of-Funds: An Accounting Analysis," Accounting Review, Vol. XXXIX, No. 2(1964), pages 392-404.

Funds Accounts, 1945-62 and used in this study is "A Quarterly Presentation of Flow of Funds, Saving, and Investment," published in the August 1959 Bulletin.¹ A less intensive discussion of quarterly flow-of-funds data is presented here. The discussion, however, is thorough enough to enable readers to follow and understand the detailed discussions of findings contained in Chapters III through VIII of this study.

Quarterly flow-of-funds data are available from the Federal Reserve for the years 1952-1962. These data are seasonally adjusted and presented as annual rates.²

The sources and uses of funds for each financial intermediary sector are recorded on a net transactions basis for each of the major types of assets and liabilities.³ That is, for each sector

¹"A Quarterly Presentation of Flow of Funds, Saving, and Investment," Federal Reserve Bulletin, XLV, No. 8, pages 828-859.

²For a description of the seasonal adjustment procedure, see Board of Governors of the Federal Reserve System, "Flow of Funds Seasonally Adjusted," Federal Reserve Bulletin, XLVIII, No. 11 (1962), page 1393.

³To simplify terminology and table form, the term "liability" is used by the Federal Reserve in flow-of-funds presentations to cover both equity and debt claims. See "A Quarterly Presentation of Flow of Funds, Saving, and Investment," Federal Reserve Bulletin, XLV, No. 8, page 852.

the entry under each type of asset for any given quarter represents funds used to acquire assets of that type during the given quarter less funds realized from the disposition of assets of that type during the given quarter. Likewise, the entry under each liability represents funds raised by borrowing during the given quarter less funds used in repayment during the quarter. In the flow-of-funds accounts, then, each financial intermediary sector's net acquisitions of each of the major financial assets are shown under uses of funds with appropriate signs to indicate increases or decreases. In similar fashion net changes in liabilities are shown under sources of funds with appropriate signs to indicate increases or decreases.

The flow-of-fund accounts are gross in two respects. First, liabilities (assets) of one type are not netted against assets (liabilities) of any particular type. For example, savings deposits used by mutual savings banks to acquire mortgages are not netted against mortgages; both are shown. Second, for any one sector asset and liability entries of the same type are not netted against each other. For example, credit and equity market instruments owned by savings institutions are not netted against credit and equity market instruments issued by savings institutions to raise funds; both are shown. Sources and uses of funds for any financial intermediary sector as recorded in the flow-of-funds accounts thus are neither on an entirely net nor gross basis. Fortunately, this particular break

down of accounts is well suited for analysis of financial intermediary response to monetary policy.¹

The behavior of total sources of funds for a financial intermediary sector can be analyzed on a gross basis by considering that the total flow of funds into such a sector is equal to the sum of positive entries on the sources side (net increases in liabilities) and negative entries on the uses side (net decreases in assets). A decrease in assets provides funds for other objectives in the same way as an increase in liabilities (e. g. a financial intermediary may sell U. S. Government securities to purchase more preferred assets).

FLOW OF FUNDS PRESENTATION

In the detailed analysis contained in Chapters III through

¹At this time it may be helpful to quickly summarize the approach of this study from a different viewpoint (this viewpoint is quite consistent with the discussion of scope and method contained in the text):

The effects of monetary policy on financial intermediaries should be reflected in short-term changes in their balance sheets. This effort is an empirical study of the behavior of the major asset and liability accounts in the balance sheets of selected financial intermediaries during the years 1952-1962 in order to determine the monetary significance (for theory and policy) of the operations of these financial intermediaries. Flow-of-fund accounts suit this effort well because they are detailed by the pertinent major asset and liability accounts and are determined quarterly.

VIII of this study flow-of-funds data are plotted against time. More specifically, the horizontal axis in each of these many charts represents the eleven years 1952-1962 detailed by quarter. The vertical axis represents the seasonally adjusted annual rate of flow of funds expressed in billions of dollars. The plotted lines show the behavior of annual rates of flow of funds of various types of assets or liabilities during the eleven years.

These are net annual rates of flow because (as pointed out above) they represent the net transactions for a major type of asset or liability. This means, for example, that during some quarter there could be a tremendous amount of activity associated with a particular type of asset, resulting in a zero rate of flow recorded in the flow-of funds accounts. In such a case the acquisitions of the asset just offset the dispositions of the asset. More importantly (for the analysis contained in this study), when a positive net rate of acquisition of some asset turns down (as indicated by a forward falling line), it does not mean that total holdings of that asset are decreasing. As long as a rate remains positive (line remains above zero dollars), then holdings of the asset in question are increasing, even though the net rate of acquisition is decreasing. When the rate becomes negative, then the absolute holdings of the asset in question are decreasing.

Chart 2, "Finance Companies - Consumer Credit", is included here as an example to clarify the above discussion. The line

on this chart shows the level of the net annual rate of flow of funds used by finance companies (a financial intermediary sector) to extend consumer credit (a major type of asset) during each quarter for the years 1952-1962. As indicated on the chart, when the line is above zero dollars the absolute amount of consumer credit extended by finance companies and still outstanding (i. e. amount consumers still owe finance companies) is increasing. While the absolute amount of credit is increasing, the net rate of consumer credit extension may be increasing or decreasing.

By definition for the remainder of this study a "decrease in flow of funds" will mean a decrease in the net annual rate of flow of funds. Thus a decrease in flow of funds from a financial intermediary sector into some type of asset can occur while the absolute amount of that type of asset held by the financial intermediary sector is increasing, and vice versa. Of course a decrease (increase) in flow of funds into some type of asset can occur while the absolute amount of that type of asset held by the financial intermediary sector decreases (increases).

Also by definition for the remainder of this study an "increase in flow of funds" will mean an increase in the net annual rate of flow of funds. Correspondingly an increase in flow of funds from a financial intermediary sector into some type of asset can occur while the absolute amount of that type of asset held by the financial

intermediary sector is decreasing, and vice versa.

These definitions apply in an analogous fashion to liabilities.

On occasion absolute amounts of assets or liabilities will be discussed in this study. On such an occasion, or for that matter on any occasion where the above definitions of flow of funds do not strictly apply, the particular meaning will be made clear in the text.

ANALYSIS OF DATA

The flow-of-fund lines reflecting the behavior of major types of assets and liabilities are analyzed in three successive steps in order to determine the existence and direction of response to monetary policy.¹

The slope of the flow-of-funds line is used in the first step of the analysis. The object of this step is to see if the slope of the line during periods of monetary ease is distinctly different than the slope during periods of monetary restraint. The dates associated with the three periods of monetary ease and the two periods of

¹Appendix E, "Contingency Coefficient C Analysis on Flow-of-Funds Data," contains a nonparametric statistical analysis of some of these flow-of-funds data.

monetary restraint are known precisely (see Chart 1). The slope of a flow-of-funds line during a particular monetary policy period is determined by comparing flow-of-funds datum for the quarter immediately preceding the particular monetary policy period with the datum for the final quarter contained in the particular period. In Table 1, "Quarters Used for Slope Analysis," the base and final quarters used with each of the five periods of monetary ease or restraint are listed. In the detailed discussions of results which center on flow-of-funds lines shown on charts and contained in Chapters III through VIII, slopes are not expressed as numerical quotients resulting from dividing rises by runs. Rather, they are expressed as dollar increases or decreases in flow of funds during particular monetary policy periods. Only the rise, then, is explicitly discussed. This is done to clarify the discussion

TABLE 1
QUARTERS USED FOR SLOPE ANALYSIS

Monetary Policy Period ¹	base quarter	final quarter
first ease	2nd quarter, 1953	4th quarter, 1954
second ease	4th quarter, 1957	2nd quarter, 1958
third ease	2nd quarter, 1960	4th quarter, 1962
first restraint	3rd quarter, 1955	4th quarter, 1957
second restraint	3rd quarter, 1958	2nd quarter, 1960

¹See Chart 1, "Major Federal Reserve Monetary Policy," page 20, and Appendix A for details of monetary policy periods.

of results. This can be done because there are only the five runs (i. e. five periods of monetary ease or restraint). In addition it can be done (as will become apparent in Chapters III through VIII) because characteristic rises (i. e. dollar increases or decreases) associated with monetary ease for the most part do differ substantially from characteristic rises associated with monetary restraint.

The second step is to inspect the flow-of-funds line to ascertain the nature of the above determined slopes. The dollar increase or decrease during a particular monetary policy period as determined in the first step is only an average slope. In between base quarter and final quarter the flow of funds may have peaked or dipped significantly. For example, in a quarter by quarter comparison a flow of funds may steadily increase for nine quarters and then decrease enough during the tenth quarter to indicate a decrease for the period as determined in step one. Characteristics like these are occasionally associated with slopes determined in step one; step two identifies them.

Step three is an effort to get some indication about the timing of responses. If the determined response (i. e. increase or decrease in activity in question) associated with a particular monetary policy period is evident from the datum for the first quarter of that particular period, then the response is "quick". If the response is not evident in the first quarter, it is not "quick". In this step, then,

the direction of flow (i. e. increase or decrease) from the quarter immediately preceding the base quarter to the base quarter is compared with the direction of flow from the base quarter to the immediately succeeding quarter.

Chart 3, "Commercial Banks - Net Acquisition of 1- to 4-Family Mortgages," is included here to illustrate the analysis technique. The green and red, representing of course monetary ease and restraint, are superimposed on the flow-of-funds line to make the characteristic response to a particular type of monetary policy (i. e. ease or restraint) more apparent. Flow of funds used by banks to acquire 1- to 4-family mortgages increased substantially during each of the three periods of monetary ease and decreased substantially during both periods of monetary restraint. The flow of funds moved from \$ 0.8 billion to \$ 2.0 billion, an increase amounting to \$ 1.2 billion, during the first period of ease; from \$ 0.2 billion to \$ 0.9 billion, an increase amounting to \$ 0.7 billion during the short second period of ease; and from -\$ 0.2 billion (indicating net liquidation) to \$ 2.3 billion, an increase amounting to \$ 2.5 billion during the third period of ease. During the first period of monetary restraint the flow of funds fell from \$ 1.4 billion to \$ 0.2 billion, a decrease amounting to \$ 1.2 billion; during the second period of monetary restraint the rate fell from \$ 1.6 billion to -\$ 0.2 billion, a decrease amounting to \$ 1.8 billion. The increases and decreases are the rises explained in step

Billions of Dollars

Year	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Net Acquisition (billions of dollars)	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3

COMMERCIAL BANKS
NET ACQUISITION OF 1- TO 4-FAMILY MORTGAGES
(seasonally adjusted annual rates)

one above. The use of step one demonstrates the existence and direction of characteristic responses associated with monetary ease and the existence and opposite direction of characteristic responses associated with monetary restraint.

These responses were not quick. However, the response during the third period of monetary ease was quick. (i. e. A response in the characteristic direction is evident from the datum for the first quarter in the period. This datum in conjunction with data for the two preceeding quarters indicates that the flow of funds has switched from decreasing to increasing.)

More sophisticated statistical techniques such as regression analysis could have been used in this study. The success with the method used was the primary reason for not using other techniques. More sophisticated statistical techniques simply were not necessary to satisfactorily determine the direction of responses. In addition by including all the data concerning each flow of funds, no part of the empirical history has been glossed over or moved into the background (something that does occur when certain more sophisticated technique is used to determine correlations), and at this early stage in the understanding of financial intermediary response to monetary policy it is well to keep all the facts in view for other scholars.¹

¹This is not meant to imply that some other scholar could

Regression analysis on quarterly flow-of-funds data was used in an effort by Irwin Friend to determine the impact of monetary policy on financial intermediaries.¹ Friend was limited by data availability to studying the years 1952-1959. His results and conclusions are compared to the results of this study in great detail.² For the most part the results of the two studies are similar where the same responses have been studied. On occasion, however, this study contains conclusions about responses that are significantly different from Friend's conclusions about the same responses. Such instances are discussed in footnotes. The different conclusions may result from different analytical technique or from the different amounts of data

not beneficially apply another technique to the data used in this study. Rather it is hoped that this study will encourage the use of other techniques with flow-of-funds data by scholars interested in the impact of monetary policy on financial intermediaries.

¹Irwin Friend, "Effects of Monetary Policies on Non-monetary Financial Institutions and Capital Markets," Private Capital Markets, (Englewood Cliffs, N.J.: Prentice-Hall, 1964). This is one of the CMC papers discussed above and as such is thoroughly drawn into this study.

²This study is considerably more comprehensive than Friend's study. More responses are determined, and data from an additional three years are included in this study. In addition the findings of this study are related to several current theories and proposals. However, Friend does use flow-of-funds data to study the impact of monetary policy on financial intermediaries. Although he uses different techniques, his study is the only one that has come to my attention that deals with much of the same subject matter included in this study. It is therefore particularly interesting to compare, where comparable, the findings of the two studies in detail. As indicated in the text, the findings do not always agree.

available for the two studies.¹

PREVIEW

There are nine chapters and four appendices in the remainder of this study. Chapter II summarizes the findings detailed in Chapters III through VIII. Chapter IX discusses the extent to which the writings of Gurley and Shaw about financial intermediation are consistent with the findings of this study as summarized in Chapter II. Chapter X discusses selected proposals for monetary reform in light of these findings.

Appendix A supports the conclusions about monetary policy periods. Appendix B contains charts of flows of funds for types of assets and liabilities detailed by the financial intermediary sectors owning them. This is the market way of looking at flow of funds rather than the institutional way. Since Chapters III through VIII are arranged institutionally (i. e. each chapter deals with a different financial intermediary sector) an appendix was used to present the other view. Appendix C contains letters from the Federal Reserve. Appendix D contains the specific references for each of the charts used in the study. Appendix E contains a nonparametric statistical analysis of some of these flow-of-funds data.

¹In addition different conclusions may result from differences in the form of the data. The Federal Reserve had not seasonally adjusted flow-of-funds data at the time Friend used them. Friend therefore had to seasonally adjust these data for his purposes. "Rough seasonal factors have been estimated and applied to the unadjusted flow-of-funds data on financial intermediaries." Friend, page 38.

CHAPTER II

FINANCIAL INTERMEDIARIES AND MONETARY POLICY

The findings regarding characteristic responses of financial intermediaries to monetary policy are summarized in this chapter. This summary is based on the detailed examination of these responses contained in Chapters III through VIII. In addition to summarizing the findings, the chapter serves to prepare the reader for Chapters IX and X. These two chapters contain discussions of various theories and proposals about financial intermediaries and of the extent to which such theories and proposals are consistent with findings of this study. The summary also prologizes the supporting detailed analysis that follows in the next six chapters.

AIMS OF MONETARY POLICY

In describing and evaluating responses to monetary policy it is necessary to have some norm in mind for these responses. Knowledge of the directions of responses (i. e. increase or decrease in flow of funds) that are compatible with the aims of monetary policy would serve most suitably as a basis of discussion and comparison

throughout this study. Unfortunately, no listing (i. e. a list indicating which responses should increase and which should decrease during specified monetary policies) or thorough discussion (i. e. thorough enough to explicitly indicate in which direction each flow of funds included in this study should respond to particular monetary policies) of financial intermediary responses that might serve as such a norm has come to the attention of this author.

There is, however, a policy objective norm implicit in discussions about the characteristic impact of monetary policy on financial intermediaries contained in the literature. In these discussions it is the assumed objective of monetary ease to increase all major flows of funds through financial intermediaries over what these flows would have been without monetary ease.¹ Similarly, it is the assumed objective of monetary restraint to decrease all major flows of funds through financial intermediaries below what they would have been without monetary restraint.^{1, 2}

¹Unless there is some statement to the contrary concerning some particular flow of funds. However, in discussions about the impact of general monetary policy such statements indicating that one or more flows of funds should be excepted (e. g. flow into mortgages should increase while flows into other forms of credit decrease) are rare.

²In some recent writings on this subject there are explicit statements along these lines.

In the report of the Commission on Money and Credit the Commission defines monetary ease and monetary restraint by referring to whether the flows are encouraged to increase or are retarded. "Monetary restraint reduces the availability of credit and increases

its interest cost, thus retarding the flow of expenditures, output, employment, and income. Monetary ease makes credit more available and reduces its cost, and thus encourages an expansion in these flows." Commission on Money and Credit (Report), Money and Credit: Their Influence on Jobs, Prices, and Growth, (Englewood Cliffs, N.J.: Prentice-Hall, 1961), page 47.

Arthur Burns discusses the impact of restrictive credit policy and concludes that it may have some undesirable effects. This discussion reflects Burns' implicit assumption that all flows of funds turn down during monetary restraint. For example, "But not only do general credit restrictions have selective effects, it also appears that these effects may interfere with some key objectives of national economic policy - such as the extension of home ownership, the promotion of sound neighborhoods, and the maintenance of an environment in which small and new businesses, which are a vital source of innovation in our economy, have a reasonable opportunity to survive, prosper, and grow." Arthur F. Burns, Prosperity Without Inflation, (New York: Fordham University Press, 1957), page 64.

In another recent example, Tobin and Brainard discuss monetary controls: "Nor does the presence of nonbank intermediaries mean that monetary control through commercial banks is an empty gesture. Even if increases in the assets and liabilities of uncontrolled intermediaries wholly offset enforced reductions in the supplies of controlled monetary assets, even if monetary expansion means equivalent contraction by uncontrolled intermediaries, monetary controls can still be effective. However, substitutions of this kind do diminish the effectiveness of these controls." James Tobin and William C. Brainard, "Financial Intermediaries and the Effectiveness of Monetary Controls," American Economic Review, Papers and Proceedings, LIII, No. 2 (1963), page 384.

Tobin and Brainard's discussion states that monetary policy can be effective "even if increases in the assets and liabilities of uncontrolled intermediaries" - which reflects increased flows of funds into these assets and liabilities - "wholly offset enforced reductions" - which results from decreased flows of funds. Because the former flows of funds do not decrease with the latter enforced decreases in flows of funds, the former "offset" the latter. Therefore Tobin and Brainard conclude that "substitutions of this kind do diminish the effectiveness of these controls", because in my words these offsetting flows of funds are not compatible with the aims of such controls. If some flows of funds are not compatible with the aims of a particular monetary policy, these flows diminish the effectiveness of such monetary policy.

The literature from the Federal Reserve itself supports such an interpretation of monetary policy objectives. The Federal Reserve describes how monetary policy is supposed to maintain economic stability in the Federal Reserve System - Purposes and Functions.^{1, 2} The description unquestionably corresponds to the

¹Board of Governors of the Federal Reserve System, The Federal Reserve System - Purposes and Functions, (3rd ed.; Washington: Board of Governors of the Federal Reserve System, 1954). This is one of four editions, each somewhat different. The four editions were published in 1939, 1947, 1954, and 1961 respectively. The edition used as a basis for the discussion in the text (i. e. the 1954 edition) represented the latest statement of "Purposes and Functions" during most of the eleven years included in this study. See the next footnote.

²Lawrence S. Ritter discusses the Federal Reserve's statement about the aims of monetary policy in his article entitled "Official Central Banking Theory in the United States 1939-61: Four Editions of the Federal Reserve System: Purposes and Functions," Journal of Political Economy, LXX, No. 1 (1962), pages 14-29. His discussion points out that the Federal Reserve describes its own intent "as to regulate the flow of credit and money". (page 18) He never explicitly states just how the Federal Reserve intends "the flow" to react to particular monetary policies. However, everything he does say is consistent with my interpretation of the aims of monetary policy. At one point he discusses a flow of credit from nonmonetary financial intermediaries that increases during restraint. He then quotes the 1961 Federal Reserve publication where it states that such an increase in flow offsets the restraining effort. "'Such an addition to the flow of available credit tends to offset somewhat the credit-restraining effects of antiinflationary monetary policy.'" (page 27).

This quotation is completely consistent with my interpretation of the aims of monetary policy. Because such a flow increases during monetary restraint the Federal Reserve states that such a flow "tends to offset somewhat credit-restraining effects", and I would say that such a flow is incompatible with the aims of monetary restraint.

Ritter's main objective in this article is not to determine the aims of monetary policy but rather to discuss the changes in the Federal Reserve's statements of its own "Purposes and Functions" through the course of the four editions of The Federal Reserve System.

above interpretation.¹ The following two quotations are examples of this description that contain pertinent corresponding reasoning.

A tightening in credit and the accompanying increase in interest rate significantly affect lenders and investors...including life insurance companies, mutual savings banks, savings and loan associations, and pension plans. They become less willing to make any but the best grade loans and investments, and they generally exercise greater caution in accepting credit applications from marginal risks.²

But nonbank institutional lenders will hesitate to commit themselves beyond the funds they expect to have coming in, if they fear that interest rates may rise in the near future and that they may therefore have to sell securities at a loss to meet future commitments. As a result, when credit is tightening, some proposed projects requiring long-term credit may be deferred because financing commitments cannot be arranged.

...Moreover, if institutional lenders are quite certain that interest rates will fall and that prices of high-grade securities will rise, they will be willing to commit themselves to future lending that will require the sale of high-grade securities in order to make loans with a more attractive interest return.³

These quotations describe responses of nonmonetary financial intermediaries. The responses are in the same direction as commercial bank responses described earlier in the above quoted book.

¹See particularly Chapter IX, "Influence of Reserve Banking on Economic Stability," Federal Reserve System - Purposes and Functions, pages 120 through 141.

²Ibid., page 128.

³Ibid., page 130.

Thus the Federal Reserve expects credit extension by nonmonetary financial intermediaries to respond in the same manner as credit extension by commercial banks (e. g. during monetary restraint credit extension by both should decrease).

In addition reviews of particular monetary policies in the Annual Reports of the Board of Governors of the Federal Reserve System discuss flows of funds in a manner that leads to the same conclusion. For example, the introductory sentence to a nineteen page review of the success associated with monetary ease in 1962 is as follows:

FLOW OF FINANCING

Continued ease in monetary conditions, large inflows of funds to commercial banks and other savings institutions, and rather heavy credit demands stand out as major features of financial markets in 1962.¹

The significant point for this discussion, illustrated by the above quotation, is the complete conjunction of commercial banks and savings institutions with respect to flow of funds in a Federal Reserve review of monetary policy. The entire nineteen page review is phrased

¹Forty-Ninth Annual Report of the Board of Governors of the Federal Reserve System - Covering Operations for the Year 1962, (Washington: Board of Governors of the Federal Reserve System, 1963), page 13. The term "other savings institutions" includes insurance companies and pension funds as well as the more usually included savings institutions (e. g. mutual savings banks, etc.).

in such a manner that the reader is left with the impression that one should expect flows of funds to move in the same direction through savings institutions as they do through banks. Because this review concerned monetary ease all flows were increasing.

The above evidence is offered to indicate the authoritative support - albeit by implication - for suggesting that the above interpretation is an acceptable statement of the proximate objectives of monetary policy.¹

In addition, such an interpretation can serve as a particularly useful statement of objectives for the purposes of this study because it is easy to work with and provides a clearly defined basis of comparison. This study is not really concerned with what should happen but rather with what does happen. A statement of policy aims (i. e. what should happen) is used as a reference base to help the reader gain awareness of the significance of each of the many individual responses discussed. Thus if the statement of aims with respect to financial intermediaries is nearly correct, it is helpful but not logically necessary, because a statement of aims at this point won't change what happened during 1952-1962.

¹"Proximate objectives" refer to the impact on financial intermediaries in contrast to ultimate objectives which refer to the impact on prices and real income.

This interpretation is intuitively appealing. However, it is easy to conceive of plausible situations where this interpretation does not apply. For example, imagine that:

- 1) prices are rising rapidly,
- 2) resources are fully employed, except in the construction industry,
- 3) in the construction industry there are idle resources,
- 4) Federal Reserve desires to stop the price rise, while increasing housing starts.

In such a situation the proximate aims of monetary policy would not be to decrease all major flows of funds through financial intermediaries. Rather the proximate aims of monetary policy would be to decrease all major flows of funds through financial intermediaries except those supporting construction activity (e.g. mutual savings banks' acquisitions of mortgages) where increases would be desirable.

Many other situations where all flows should not move in the same direction could be discussed. In fact, it is extremely difficult to imagine an economy whose productive resources are so perfectly allocated among competing end uses that all changes should be in the same direction; that is, provided one assumes anything like current rates of technological advance and general social change, which are both rapid and unevenly distributed throughout the economy.

Statements of the proximate aims of monetary policy can

be general enough to include all situations. For example, the proximate aims of monetary policy are to cause flows of funds in financial intermediaries to respond in directions which best promote full employment with optimum utilization of resources. Unfortunately, such a statement is too indefinite about particular responses. It is not easily used as a generalized basis of comparison to aid in appraising the significance of particular responses.

The following, then, will serve as a statement of assumed aims of monetary policy for the purposes of this study. As a basis of comparison it is both easy to work with and has authoritative support.

The proximate objective of monetary ease is to stimulate all major flows of funds through financial intermediaries. The proximate objective of monetary restraint is to depress all major flows of funds through financial intermediaries.¹

SUMMARY OF FINDINGS

The following description, then, indicates those flows of funds that respond in a manner compatible with the aims of general

¹This is merely a more concise statement of the interpretation on page 41.

monetary policy (as set forth in the above statement). It indicates those flows of funds that are unaffected by monetary policy. And it indicates those flows of funds that behave in a manner that offset, and are therefore contrary to the aims of, monetary policy.

First the behavior associated with monetary ease is discussed, then the behavior associated with monetary restraint is discussed. Table 2, "Characteristic Responses to Monetary Policy," is included here to help the reader follow the summary discussion. It is a summary in table form of the findings contained in Chapters III through VII.

MONETARY EASE

COMMERCIAL BANKS

Commercial banks respond quickly to monetary policy. Most of the flows of funds through them begin increasing within three months after the Federal Reserve initiates monetary ease.

Demand deposits increase quickly and markedly. Funds shifted from time deposits are not the source of this increase.

Total loans and investments increase quickly and sharply. Specifically, within three months after the initiation of monetary ease, commercial banks begin to increase their purchases of U.S. Government securities, state and local obligations, 1- to 4-family mortgages,

CHARACTERISTIC RESPONSES TO MONETARY POLICY

<u>Flow of Funds</u>	<u>Monetary Ease</u>	<u>Monetary Restraint</u>	<u>Timing</u>
Commercial Banks			
Demand Deposits	increase	decrease	quick
Time Deposits	(little evidence of shifting between these and demand deposits; affected by Reg. Q)		
U.S. Government securities	increase	decrease (net liquidation)	quick
Total Loans and Investments	increase	decrease (but increase at first because of consumer credit and bank loans n.e.c.)	quick
Consumer Credit	eventually increase	eventually decrease	
	(accommodate business cycle)		
Bank Loans N.E.C.	eventually increase	eventually decrease	
	(accommodate business cycle)		
State and Local Obligations	increase	decrease	quick
1- to 4-Family Mortgages	increase	decrease	
Other Mortgages	increase	decrease	
Corporate Bonds	no characteristic response		
Total Loans Excluding Mortgages	increase	increase (accommodating business cycle)	
Security Credit		then decrease	
	no characteristic response; also not affected by Reg. U		
Savings Institutions			
Deposits	increase	increase only slowly or decrease	
	(affected by Reg. Q)		
Credit and Equity Market Inst.	increase	decrease or increase	
Mortgages	increase	decrease or increase	
Consumer Credit	decrease	increase	
	(accommodate business cycle)		
Corporate Bonds	decrease	increase	
U.S. Government Securities	increase	decrease	
	(used as liquidity reservoir)		

<u>Flow of Funds</u>	<u>Monetary Ease</u>	<u>Monetary Restraint</u>	<u>Timing</u>
Mutual Savings Banks			
Savings Deposits	increase	decrease	occasionally lead M. P.
1- to 4-Family Mortgages	increase	decrease	occasionally lead M. P.
Other Mortgages	increase	decrease	occasionally lead M. P.
U.S. Government Securities	increase (used as liquidity reservoir)	decrease	
Corporate Bonds	decrease	increase	
Savings and Loan Associations			
Savings Shares	increase	increase, but only slowly	3 to 6 months
1- to 4-Family Mortgages	increase (move with demand)	may use FHLB to increase	quick
Other Mortgages	increase (move with demand)	may use FHLB to increase	quick
U.S. Government Securities	(used as liquidity reservoir)		
Credit Unions			
Assets and Liabilities	increase	decrease	
Insurance Companies			
Life Insurance Reserves	increase	decrease	
Pension Funds Reserves	decrease or remain about even	increase	
1- to 4-Family Mortgages	increase	decrease	sluggish
Other Mortgages	increase	decrease	sluggish
U.S. Government Securities	increase (net liquidation most of time)	decrease	quick
Corporate Bonds	increase (during last five years)	decrease	
Other Assets	no characteristic response		

<u>Flow of Funds</u>	<u>Monetary Ease</u>	<u>Monetary Restraint</u>	<u>Timing</u>
Noninsured Pension Plans	no characteristic responses		
Other Insurance Companies			
Nonlife Policy Claims	decrease	increase	
Financial Investments	increase	decrease	
State and Local Obligations	no characteristic response		
U.S. Government Securities	no characteristic response (used as liquidity reservoir)		
Finance Companies			within 3 quarters
1- to 4-Family Mortgages	increase	decrease	
Consumer Credit	accommodates the business cycle		
Other Loans	accommodates the business cycle		
Sources - From Banks	accommodates credit extensions		
- From Corporate Bonds	accommodates credit extensions		
- From Open Market Paper	accommodates credit extensions		
Security Brokers and Dealers			
Customer Credit Balances	increase	decrease (but this increases velocity of money)	
Security Credit	increase	decrease	
Other Flows	no characteristic response		
Loans From Banks	accommodates credit extensions		
Open-End Investment Companies			
Acquisition of Corporate Stock	increase	increase, but only slowly	
Acquisition of Corporate Bonds	no characteristic response		
Acquisition of U.S. Gov't. Securities	no characteristic response		

and other mortgages.

However, contrary to the aims of monetary policy, bank extension of consumer credit and bank loans n.e.c. (e.g. short- and intermediate-term loans to business usually associated with commercial banking) do not increase. They are usually decreasing when monetary ease is initiated, and after the period of ease gets underway they continue to decrease. In extending these two forms of credit, commercial banks accomodate their customers in spite of monetary policy. Many customers need short-term financing during cyclical peaks and are able to reduce such debt during cyclical troughs. By accomodating such customers, commercial banks move with the business cycle in their extension of consumer credit and loans n.e.c. Monetary ease is usually initiated near or during cyclical troughs and so these credit extensions are decreasing when ease is initiated. Eventually when the business cycle moves out of its trough, consumer credit and bank loans n.e.c. again increase.

Bank purchases of corporate bonds are not affected by monetary policy.

Bank extensions of security credit (i.e. bank credit extended to customers for the purpose of buying securities) are not affected by monetary ease. Further changes in the margin requirements by the Federal Reserve do not affect bank extensions of security credit.

SAVINGS INSTITUTIONS

The aggregate flow of funds into deposit liabilities of savings institutions (i. e. mutual savings banks, saving and loan associations, and credit unions) increases rather steadily during periods of monetary ease. The flow of funds out of savings institutions into credit and equity market instruments increases along with the increasing deposit liabilities.

Most funds from saving institutions are used to acquire mortgages, particularly 1- to 4-family mortgages. The flows of funds into 1- to 4-family mortgages, as well as into other mortgages, increase substantially during monetary ease.

The flow of funds into consumer credit from savings institutions reflects consumer demand and decreases during monetary ease. This demand-accomodating behavior of savings institutions is similar to that associated with commercial banks and discussed above.

The flow of funds into corporate bonds decreases contrary to the aims of monetary ease. Among savings institutions, mutual savings banks are the only significant holders of corporate bonds and for this reason the response of funds flow into corporate bonds is discussed below under the section titled "Mutual Savings Banks".

The flow of funds into U. S. Government securities increases during monetary ease. This flow is very volatile, however,

- it can change from acquisition to liquidation and back to acquisition within three consecutive quarters. Part of this volatility results from the use of these securities as liquidity reservoirs until an opportune time occurs to buy more preferred assets.

The responses of savings institutions are the sum of the responses of mutual savings banks, savings and loan associations, and credit unions. The specific responses of each of these types of institutions are detailed below.

MUTUAL SAVINGS BANKS

Mutual savings banks respond in a manner that is compatible with the aims of monetary ease. The flow of funds into savings deposits as well as the flow of funds from mutual savings banks into mortgages increase during monetary ease.

However, the acquisition of corporate bonds responds in the opposite direction. The flow of funds into corporate bonds decreases during monetary ease. Mutual savings banks acquire corporate bonds at times when mortgages are not so desirable. That is, during monetary restraint there is a shift in mutual savings banks' portfolios from mortgages to corporate bonds to take advantage of higher yields on corporate bonds. Then during monetary ease mutual savings banks shift their portfolios back towards their main

investment interest - mortgages. The response associated with corporate bonds, which is contrary to the aims of monetary policy, is not large enough to offset the response associated with mortgages.

SAVINGS AND LOAN ASSOCIATIONS

The flow of funds into savings shares at savings and loan associations increases substantially during monetary ease. Further, the response of savings shares to monetary policy is quick. That is, a significant increase in flow of funds occurs in the first quarter of a period of monetary ease. Savings and loan associations use their funds primarily to acquire 1- to 4-family mortgages and the flow of funds into these mortgages increases sharply during monetary ease. The timing associated with this sharp response is also quick. Although the flow of funds into other mortgages is much smaller, it also responds quickly and increases during monetary ease.

Savings and loan associations liquidate U.S. Government securities on balance during monetary ease. The funds are used to help finance the sharply rising mortgage lending activity. U.S. Government securities are used as liquidity reservoirs by savings and loan associations.

CREDIT UNIONS

The flow of funds through credit unions responds in a manner that is compatible with the aims of monetary policy. It increases during monetary ease.

LIFE INSURANCE COMPANIES

The aggregate flow of funds into life insurance and accordingly into life insurance reserves increases during monetary ease. However, the flow of funds into life insurance companies associated with insured pension funds (which are sold by and administered by life insurance companies) reserves responds in a manner that is not consistent with the aims of monetary policy. This flow of funds either remains at about the same level or decreases during monetary ease. Therefore this response tends to partially offset the compatible response of the substantially larger flow of funds into life insurance reserves.

The only flows of funds used to acquire financial assets that respond to monetary policy in a fashion similar to life insurance reserves are the flow into mortgages and, to a considerably lesser extent, the flow into U.S. Government securities. The flow of funds into mortgages increases. However, this response is sluggish, sometimes requiring more than a year to change in the appropriate

direction. The flow of funds into U.S. Government securities increases, and this response is quick. (However, throughout most of the years included in this study, life insurance companies were liquidating U.S. Government securities.) Unlike banks and savings institutions, life insurance companies do not use U.S. Government securities as liquidity reservoirs to any significant extent.

Life insurance companies are the largest investors in corporate bonds. None the less, the flow of funds from life insurance companies into corporate bonds does not respond in any characteristic manner to monetary policy. The flow of funds into state and local obligations, corporate stock, and other loans also do not respond in any characteristic manner to monetary policy.

NONINSURED PENSION PLANS

The flows of funds through noninsured pension plans do not respond in any characteristic fashion to monetary policy. Non-insured pension plans are growing rapidly and are major purchasers of both corporate bonds and corporate stock.

OTHER INSURANCE COMPANIES

Other insurance companies include fire and casualty

companies, fraternal orders, and nonprofit medical plans.

The flow of funds into nonlife policy claims, the major liabilities against other insurance companies, decreases during monetary ease. In contrast the flow of funds into financial investment increases. Net financial investment and net funds set aside to meet nonlife policy claims are the major sources of funds used for the net acquisition of financial assets. The contrasting responses of the two major sources of funds for the net acquisition of financial assets do not offset each other in any characteristic fashion during particular monetary policy periods.

None of the flows of funds into specific types of assets respond in a characteristic fashion to monetary policy. U.S. Government securities are used by other insurance companies as liquidity reservoirs.

FINANCE COMPANIES

Finance companies include sales finance companies, consumer finance companies, factors and other commercial lenders, mortgage companies and miscellaneous short-term lenders.

Finance companies experience their lowest levels of activity during monetary ease. In fact, during part of a period of monetary ease there is an actual decrease in finance companies¹

holdings of financial assets. Of course the flow of funds used to acquire financial assets decreases during monetary ease.

The flow of funds into 1- to 4-family mortgages, one of the main types of credit extended by finance companies, increases and this response occurs within three quarters. The flow of funds into 1- to 4-family mortgages, then, is favorable responsive to monetary ease. However, the response is not enough to offset the responses associated with consumer credit and other loans extended by finance companies.

The flow of funds into other loans (which are to businesses) and into consumer credit do not respond in a manner that is compatible with the aims of monetary policy. Both of these flows of funds decrease during monetary ease. In extending other loans and consumer credit, finance companies tend to accommodate their customers. These customers need short-term financing during cyclical peaks and are able to reduce this debt during cyclical troughs. Monetary ease is usually initiated near or during business cycle troughs.

The flows of funds into finance companies from bank loans, from corporate bond issues, and from issues of open market paper decrease during monetary ease.

SECURITY BROKERS AND DEALERS

With the exception of security credit and customer balances discussed below, the flows of funds through security brokers and dealers are not influenced by monetary policy.

The flow of funds into security credit (i. e. money borrowed by customers of security brokers and dealers to purchase and carry stocks in margin accounts) increases during monetary ease - a response that is compatible with the aims of monetary ease. Customer credit balances also increase during monetary ease.

OPEN-END INVESTMENT COMPANIES

The flow of funds used by open-end investment companies to acquire corporate stocks increases during monetary ease. However, the flows of funds used to acquire corporate bonds and U. S. Government securities do not respond in any characteristic fashion to monetary policy.

MONETARY RESTRAINT

COMMERCIAL BANKS

As mentioned previously, commercial banks are quickly responsive to monetary policy. Most of the flows of funds through

commercial banks begin decreasing within three months after the Federal Reserve initiates a period of monetary restraint.

Demand deposits decrease quickly and substantially. The decrease does not result in a shift of funds to time deposits.

The flow of funds used by banks to acquire U.S. Government securities decreases sharply. In fact, on balance the banks liquidate a substantial volume of U.S. Government securities during monetary restraint. The liquidation of U.S. Government securities serves as a major source of funds not subject to monetary restraint. These funds are available for uses that are not compatible with the aims of monetary policy. That is, the funds can be used to increase credit extension during periods of monetary restraint.

Banks, then, do use U.S. Government securities as secondary reserves or liquidity reservoirs — accumulating them during monetary ease and liquidating them during monetary restraint. The use of U.S. Government securities as liquidity reservoirs indicates that the "lock-in" effect is not significant. Presumably, the declining capital values of fixed yield U.S. Government securities inhibit the liquidation of these securities during periods of economic expansion and rising interest rates (i. e. the "lock-in" effect).

The flow of funds from commercial banks into total loans and investments increases somewhat at first, then decreases substantially. This initial increase results from a sharp rise in bank loans

n. e. c. and a somewhat less pronounced rise in consumer credit not completely offset by decreases in other loans and investments. In extending bank loans n. e. c. and consumer credit, commercial banks tend to accomodate customers in spite of monetary policy. These customers demand short-term financing particularly during business cycle peaks. Monetary restraint is usually initiated near or during cyclical peaks and so consumer credit and loans n. e. c. are increasing when restraint is initiated. The banks liquidate U.S. Government securities (as discussed above) in order to obtain enough funds to accomodate the increasing demand for consumer credit and bank loans n. e. c. Eventually flows of funds into both of these forms of credit respond in the same direction as other banking activity and decrease.

The ability and willingness of commercial banks to expand consumer credit and bank loans n. e. c., contrary to the aims of monetary restraint, is a major weakness in Federal Reserve control over prices and real income through monetary policy.

During monetary restraint the flow of funds into state and local obligations is distinctly different from their response with respect to U.S. Government securities. Banks acquire substantial quantities of both types of securities during monetary ease when bank liquidity is high. During monetary restraint, however, banks do not engage in a substantial net liquidation of state and local obligations. As described above, banks do liquidate substantial amounts of U.S.

Government securities during monetary restraint. U.S. Government securities are used as liquidity reservoirs by banks; state and local obligations are not so used.

The flow of funds into 1- to 4-family mortgages decreases - home loans by banks are quite responsive to monetary policy. The flow of funds into other mortgages, although not as volatile as the flow into 1- to 4-family mortgages, also decreases during monetary restraint.

As indicated earlier, bank purchases of corporate bonds and bank extensions of security credit are not affected by monetary policy.

SAVINGS INSTITUTIONS

The aggregate flow of funds into deposit liabilities of savings institutions remains at about the same rate or decreases slightly during monetary restraint. This contrasts with the steady increase in flow of funds during monetary ease noted above.

The flow of funds out of savings institutions into credit and equity market instruments may move with deposit liabilities (i. e. remain steady when deposit liabilities remain steady or decrease when deposit liabilities decrease). However, this flow may instead increase substantially, contrary to the aims of monetary restraint,

even though the flow into deposit liabilities decreases. The source of additional funds for such increases in acquisition of credit and equity market instruments is the Federal Home Loan Bank. The FHLB lends money to savings and loan associations who, in turn, use the money to acquire mortgages. This ability of savings institutions to get FHLB funds enables them to extend credit contrary to the aims of monetary restraint.

Consumer credit extension by savings institutions increases during monetary restraint. This demand-accomodating behavior is similar to that discussed above in connection with commercial banks. As pointed out at that time, consumer credit increases during cyclical peaks when consumers most demand it. Financial institutions' ability to increase consumer credit contrary to monetary restraint is a major weakness in Federal Reserve control via open market operations.

The flow of funds used to acquire U.S. Government securities decreases during monetary restraint.

MUTUAL SAVINGS BANKS

Mutual savings banks respond to monetary restraint in a manner that is compatible with the aims of such policy. Both the flow of funds into mutual savings banks via savings deposits and the flow of funds out of mutual savings banks into mortgages decrease during

monetary restraint.

U.S. Government securities are used as liquidity reservoirs. This enables mutual savings banks to acquire mortgages at more satisfactory times (i. e. when yields are high) than if their net acquisitions had to correspond to deposit inflows. It can enable mutual savings banks to acquire other assets contrary to the aims of monetary restraint. The flow of funds into U.S. Government securities decreases during monetary restraint.

As discussed earlier, the response associated with corporate bonds is contrary to the aims of monetary restraint but is not large enough to offset the compatible response associated with mortgages. The flow of funds from mutual savings banks into corporate bonds increases during monetary restraint.

SAVINGS AND LOAN ASSOCIATIONS

During monetary restraint the flow of funds into savings shares at savings and loan associations does increase, however, at a significantly retarded rate. During monetary ease the flow of funds increases only slightly. It increases most of the time because of an exceptionally strong long term growth trend. The slowdown in growth is apparent within six months after a period of monetary restraint is

initiated.

The flow of funds from savings and loan associations into mortgages may decrease, but it does not necessarily decrease. The demand for funds by prospective home owners determines the level of lending. If the demand is there, savings and loan associations will borrow from the FHLB, if necessary, to meet the demand even though monetary policy is one of restraint. The ability of savings and loan associations to borrow from the FHLB during periods of monetary restraint tends to offset open market policy action and thereby reduce the effectiveness of such action.

Unless there is a vigorous demand for mortgage credit (e. g. such that it stimulates savings and loan associations to borrow heavily from the FHLB), the flow of funds into U.S. Government securities increases during monetary restraint. Savings and loan association use these securities as liquidity reservoirs until a more satisfactory time occurs to acquire mortgages.

CREDIT UNIONS

As stated earlier, the flow of funds through credit unions responds in a manner that is compatible with the aims of monetary policy. It decreases during monetary restraint.

LIFE INSURANCE COMPANIES

The aggregate flow of funds into life insurance and accordingly into life insurance reserves decreases during monetary restraint. On the other hand the flow of funds into life insurance companies associated with pension fund reserves increases during monetary restraint. Therefore this latter response, which is contrary to the aims of monetary policy, partially offsets the compatible response of the substantially larger flow of funds into life insurance reserves.

The only flows of funds used to acquire financial assets that respond to monetary policy in a manner that is compatible with the aims of such policy are the flow of funds into mortgages and the flow of funds into U.S. Government securities. The flow of funds into mortgages decreases. However, this response is sluggish, sometimes requiring more than a year to change in the appropriate direction. The flow of funds into U.S. Government securities decreases. This response is quick.

NONINSURED PENSION PLANS

Although flows of funds through noninsured pension plans do not respond in any characteristic fashion to monetary policy, they can respond in a fashion that is contrary to the aims of monetary

restraint. Occasionally the flow of funds into corporate bonds increases substantially during monetary restraint. During such times, in order to obtain funds for corporate bond purchases, noninsured pension plans liquidate U.S. Government securities. (U.S. Government securities are used as liquidity reservoirs.) The ability, made possible by U.S. Government securities' liquidation, to increase holdings of corporate bonds substantially during monetary restraint places part of the activity of noninsured pension plans outside of Federal Reserve credit control via open market operations.

OTHER INSURANCE COMPANIES

The flow of funds into nonlife policy claims increases while the flow of funds into financial investment decreases during monetary restraint. The contrasting responses of the two major sources of funds for the acquisition of financial assets do not offset each other in any characteristic fashion, however, during monetary restraint.

FINANCE COMPANIES

Contrary to the aims of monetary restraint, finance companies experience their highest levels of activity during such

monetary periods.

The overall acquisition of financial assets is dominated by the demand-accomodating behavior associated with the extension of consumer credit and other loans. Consumer credit and other loans demand moves with the business cycle rather than in a manner that is compatible with the aims of monetary policy. The flows of funds into these forms of credit peak during monetary restraint. Even though the flow of funds into 1- to 4-family mortgages decreases, this response is not enough to offset the behavior of consumer credit and other loans.

Finance companies' extension of credit to consumers and to business does not, then, behave in a manner compatible with the aims of monetary restraint. Instead, it makes the Federal Reserve's job of controlling credit through open market operations more difficult because it offsets such operations.

Federal Reserve control over credit via open market operations, then is seriously compromised by the ability of consumers and business to get short-term financing during monetary restraint. Commercial banks are the major primary source of funds for this short-term financing. As discussed above under the section titled "Commercial Banks," commercial banks extend consumer credit and loans n. e. c. directly during monetary restraint. In addition, at the same time they also increase their loans to finance companies

very substantially. In this latter case commercial banks supply funds for short-term credit extension indirectly (i. e. via bank loans n. e. c. to finance companies and then to consumers primarily, but also to businesses).

The flows of funds into finance companies from corporate bond issues and from issues of open market paper also increase during monetary restraint.

SECURITY BROKERS AND DEALERS

The flow of funds from security brokers and dealers into security credit decreases during monetary restraint. This response is compatible with the aims of such a monetary policy.

The flow of funds into customer credit balances also decreases. In fact there is actually a net decrease in customer credit balances during monetary restraint. From the point of view of decreasing the flow of funds to security brokers and dealers this response appears compatible with the aims of monetary policy. However, when customer credit balances decrease, it means that customers have either bought more securities or have withdrawn their money from stock accounts to use elsewhere. This response, which removes funds from idle balances, increases the velocity of money. Thus the behavior of customer credit balances may be partially offsetting the

Federal Reserve's efforts to decrease purchasing power during monetary restraint.

The flow of funds from banks to security brokers and dealers is exceptionally volatile. These loans from banks accomodate the flow of funds used to acquire financial assets - a flow of funds which is also exceptionally volatile.

OPEN-END INVESTMENT COMPANIES

The flow of funds used by open-end investment companies to acquire corporate stocks increases less rapidly during monetary restraint than it does during monetary ease.

SUMMARY

The most significant areas of financial activity that respond in a manner contrary to the aims of monetary policy are consumer credit, short-term business credit, and occasionally long-term credit extended via mortgages. There are two significant primary sources for the above credit extensions: first, U.S Government securities used as liquidity reservoirs, particularly by savings institutions and by commercial banks; second, FHLB loans to savings and loan associations.

There are other less significant flows of funds that respond contrary to the aims of monetary policy. There are also, of course, the large number of flows of funds that respond favorably to monetary policy.

TIME DEPOSITS AND SAVINGS ACCOUNTS

The characteristic responses of financial intermediaries described so far in this Chapter are associated with open market operations.¹ However, this section will review briefly the responses discussed in Chapter VIII, "Time Deposits and Savings Account". These responses are associated with Regulation Q - a monetary policy tool that is used specifically to regulate the level of interest rates payable by commercial banks on time deposits.

When the Federal Reserve increases the maximum permissible rates of interest payable by commercial banks on savings deposits and time deposits, the flow of savings into commercial banks increases quickly and markedly. At the same time the flow of savings into other savings institutions slows down considerably. Thus, the distribution of the flow of savings between commercial banks and

¹That is, the periods of monetary ease and monetary restraint used in describing responses were determined primarily from the Records of Policy Actions of the Federal Open Market Committee.

other savings institutions is significantly influenced by Federal Reserve actions aimed directly at the flow under the provisions of Regulation Q.

These responses are consistent with the proposition that there is a considerable amount of substitutability or competitiveness between various forms of savings. And these responses indicate that interest rate differentials are a major determinant of the composition of aggregate savings.

As indicated in the first paragraph (see page 39), this chapter summarizes the findings of this study about the characteristic responses of financial intermediaries to monetary policy. The description of responses does not include all the findings. However, it does summarize the findings pertinent to Chapters IX and X. These two chapters contain discussions of the extent to which various theories and proposals about financial intermediaries are consistent with such findings.

The following six chapters contain detailed discussions of the characteristic responses and other findings of this study.

CHAPTER III

COMMERCIAL BANKS

The aggregate flow of funds through commercial banks definitely increased during periods of monetary ease and decreased during periods of monetary restraint. The flow-of-funds behavior of total loans and investments as well as of demand deposits are shown in Chart 4, "Commercial Banks - Deposits and Total Loans and Investments". With the exception of time deposits (which are a significant source of funds for commercial banks), these aggregate flows of funds represent the major flows into and out of commercial banks. Time deposits are referred to only occasionally in this chapter because they are discussed extensively in Chapter VIII, "Time Deposits and Savings Accounts".

VOLATILE FLOWS OF FUNDS

Before discussing commercial bank responses during various periods of monetary policy, it is worth noting the evidence in Chart 4 indicating that the flow of funds through commercial banks was extremely volatile. For example, the flow of funds into total

loans and investments amounted to \$ 28.6 billion in the second quarter of 1958. It decreased \$ 32.7 billion in the next quarter (- \$ 4.1 billion during the third quarter of 1958) and then increased \$ 20.7 billion in the next quarter (\$ 16.6 billion during the fourth quarter of 1958). The sources of funds were even more volatile. Throughout one three year stretch, 1957-1959, the flow of funds into demand deposits was positive one quarter, then negative the next, then positive again, etc. Perhaps this volatile behavior results from volatile sources of funds.¹ More likely, however, such an explanation excludes what should be an important consideration. Commercial banks can create their own sources of funds (i. e. demand deposits) when they extend credit (i. e. total loans and investments). Therefore the volatility associated with the flow of funds through commercial banks may result as much or more from the demand for funds from banks as it does from the supply of funds to banks.

¹Irwin Friend offers such an explanation when discussing sources of funds for commercial banks. That is, he mentions the supply side as the causal factor for bank volatility rather than the demand side. The demand for funds, however, may cause volatility as pointed out in the remainder of the paragraph in the above text.

Irwin Friend's observation (which is consistent with Chart 4) and his explanation are that, "The total sources of funds of commercial banks were characterized by much greater year to year variability in amount than any of the other major groups of financial institutions. A substantial part of the reason is the more uneven rate of inflow of funds previously described from commercial bank depositors including businessmen as well as consumers." Friend, page 57.

SOURCES OF FUNDS

The flow of funds into demand deposits - excluding deposits held by the U.S. Government and those held by foreigners - increased from \$ 0.5 billion to \$ 2.8 billion or an increase of \$ 2.3 billion during the first easy money period; from an outflow of \$ 0.6 billion to an inflow of \$ 6.6 billion, an increase of \$ 7.2 billion, during the second period; and during the third period from an outflow of \$ 3.0 billion to an inflow of \$ 10.3 billion, an increase of more than \$ 13 billion.¹ The flow of funds into demand deposits decreased similarly during the two periods of monetary restraint. During the first period of restraint this flow decreased from an inflow of \$ 2.9 billion to an outflow of \$ 0.6 billion or a decrease amounting to \$ 3.5 billion. During the second period of restraint the flow decreased from an inflow of \$ 9.4 billion to an outflow of \$ 3.0 billion, a decrease amounting to \$ 12.4 billion in the annual rate of fund flow into demand deposits. During the two major periods of neutrality, in 1952-53 and in 1955, the Federal Reserve's non-intervention tended to produce increasing restrictiveness,² and inspection of Chart 4 indicates that

¹Refer to Table 1, "Quarters Used For Slope Analysis," Chapter I, page 32, for listing of specific quarters used in the determination of increases or decreases in flows of funds during each of the particular monetary policy periods.

²During these two neutral money periods the Federal Reserve maintained a hands-off-the-money-supply neutral policy. Increasing economic activity coupled with constant bank reserves (the Federal Reserve did not change the availability of reserves) produced increasing restrictiveness. See Appendix A, pages A-7 to A-11 (first period of neutrality) and pages A-16 to A-18 (second period of neutrality).

a decrease in flow of funds to demand deposits was associated with each of these periods.

The flow of funds into time deposits at commercial banks is shown along with demand deposits and with total time deposits and savings accounts in Chart 5, "Demand Deposits and Time Deposits". The flow of funds into time deposits is a significant source of funds which as mentioned above is discussed in Chapter VIII. At this time it is noted that the evidence contained in Chart 5 does not support the Thesis that there is a substantial shifting of funds from time deposits to demand deposits during periods of monetary ease and from demand deposits to time deposits during periods of monetary restraint.¹ If

¹The impression that there are such shifts of funds between demand deposits and time deposits is held widely enough to lead to the following statement in the CMC report, "With interest rates higher, some individuals and businesses reduce their demand deposits and purchase securities or shift to interest-bearing thrift deposits." Commission on Money and Credit (Report), page 49.

For a theoretical discussion of the effects of open market operations on shifts in the demand for deposits at commercial banks and at nonmonetary financial intermediaries, particularly with respect to various methods of regulating nonmonetary financial intermediaries, see William C. Brainard, "Financial Intermediaries and a Theory of Monetary Controls," (unpublished Ph.D. Dissertation, Yale University, New Haven, Connecticut, 1962). See particularly Chapter IV, "The Model with Two Financial Intermediaries".

A brief theoretical discussion of the effect for monetary policy of shifts of funds between demand deposits and time deposits or other deposits at nonmonetary financial intermediaries is included in David A. Alhadeff, "Credit Controls and Financial Intermediaries,"

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such shifts occurred, then, during monetary ease one would expect the line in Chart V representing the flow of funds into demand deposits and either line representing flow of funds into time deposits to converge.¹ On the other hand, during monetary restraint one would expect these same lines to diverge. Of course, such shifts could occur, and yet deposits and withdrawals for reasons other than to shift funds between demand and time deposits could offset such shifts.² The

American Economic Review, L, No. 4 (1960), pages 655-671.

He points out that during monetary restraint a shift from demand deposits to time deposits at commercial banks tends to offset restrictive policy because reserve requirements on time deposits are lower than on demand deposits. He further states that a shift from demand deposits to deposits at other nonmonetary financial intermediaries would offset restrictive policy. (See particularly pages 663-664.)

Alhadeff continues on to point out that deposit placement between institutions is a function of many variables. (See particularly pages 664-667.)

Alhadeff's "availability effect" is an explanation of the proximate impact of monetary policy on nonmonetary financial intermediaries that is based on shifts of funds from commercial banks to nonmonetary financial intermediaries during periods of monetary restraint. See my discussion of his availability effect in Chapter X, pages 307 to 310.

¹That is, shifting funds from the flow represented by the upper line in Chart V to the flow represented by the lower line would tend to decrease the flow represented by the upper line - i.e. the line would fall - and increase the flow represented by the lower line - i.e. the line would rise. If the upper line is falling and the lower line is rising, the lines are converging.

²None the less the evidence in Chart 5 does not suggest that such shifts occur. On the other hand, the evidence does not prove that such shifts do not occur. It merely indicates that such shifts are not as significant as some would have us believe. See footnote 1, pages 78 and 80.

regular occurrence of shifts of funds between demand and time deposits would constitute a serious loophole in monetary control. The lack of evidence for such shifts supports recent observations by others.¹

¹In an early article Warren L. Smith suggests that some shifting may occur. He states, "The change in composition of consumer asset holding between 1956 and 1957 suggests a shift of funds from demand deposits in commercial banks." (page 543) However, he is cautious about generalizing about such shifts. "However, it is far from certain that there will continue to be systematic destabilizing effects." (page 545) He is referring to the "destabilizing effects of shifts between demand deposits and time deposits at commercial banks..." (page 545) See particularly section A, "Substitutions Between Money and Intermediary Claims" of Warren L. Smith, "Financial Intermediaries and Monetary Controls," Quarterly Journal of Economics, LXXIII, No. 4 (1959), pages 533-553.

However, in a later article Smith moves to a position that is close to the one expressed above in the text (i. e. the evidence does not indicate that there are significant shifts between demand and time deposits). After discussing this thesis at some length he concludes, "Although further study of movements of funds between demand and time deposits during different phases of the business cycle is necessary in order to evaluate the importance of such shifts, it is certainly by no means clear that up to the present time the shifts have been large enough or cyclically systematic enough to pose much of a problem for the Federal Reserve." Warren L. Smith, in Frank Tamagna, et al., for the Commission on Money and Credit, Monetary Management, (Englewood Cliffs, N.J.: Prentice-Hall, 1963), page 315.

The "different phases of the business cycle" usually coincide with monetary policy periods. For example, business cycle peaks usually occur during monetary restraint and troughs usually occur during monetary ease. Compare the following business cycle peaks and troughs with monetary policy periods detailed on page 24 in Chapter I.

Peaks	Troughs
July, 1953	August, 1954
July, 1957	April, 1958
May, 1960	February, 1961

Source: W. Lewis, Jr., Federal Fiscal Policy in the Postwar Recessions, (Washington: The Brookings Institution, 1962), page 4. Also, The National Bureau Enters its Forty-Fifth Year, (New York: Nation Bureau of Economic Research, June, 1964), page 53.

Commercial banks rely heavily on one other major source of funds to finance credit extensions, sales of U.S. Government securities^{1, 2, 3}

¹Many other writers appreciate that commercial banks obtain large amounts of funds for credit extension by liquidating U.S. Government securities.

"The most important means used by commercial banks to acquire resources for increasing business loans is through the sale of investments, particularly government securities." E.M. Bernstein, "The Role of Monetary Policy," American Economic Review, Papers and Proceedings, XLVIII, No. 2 (1958), page 92.

For a similar view see Warren L. Smith, Quarterly Journal of Economics, LXXIII, No. 4 (1959), pages 538 through 551, particularly Part III, "Possible Destabilizing Effects of Intermediaries," Section B, "Portfolio Shifts by Intermediaries,"

This phenomenon is fully appreciated by policy practitioner Arthur Burns, past chairman of the Council of Economic Advisors.

"Commercial banks expanded loans rapidly and their ability to do so was enhanced by the sale of substantial blocks of Treasury securities to holders of 'idle' cash." (page 5)

"Commercial banks therefore found it necessary to sell government securities or borrow at the Federal Reserve Banks to maintain their lending." (page 36)

"These large holdings of government securities add immeasurably to the flexibility of bank management. In particular, they enable commercial banks to replenish their supply of loan funds, if they so wish, and thereby to circumvent for a time the restrictions that the Federal Reserve authorities may impose on their reserves." (page 51)

Arthur F. Burns, Prosperity Without Inflation, (New York: Fordham University Press, 1957).

²As is discussed in Chapter X, the liquidation of U.S. Government securities to obtain funds in spite of monetary restraint is the main justification used by David Alhadeff for his suggestion that commercial banks be required to hold U.S. Government securities in nonmarketable form. This behavior is mentioned again and again in his article: Alhadeff, American Economic Review, L, No. 4 (1960).

For example: "...most bank-induced increases in velocity are brought about by an expansion of bank loans based on security liquidations..." (page 656) and "...a bank can increase velocity when it activates idle funds by selling government securities to nonbank investors and uses the funds to make loans to customers..." (page 657).

³See footnotes 1 and 2 on page for a discussion of the CMC's inconsistent views concerning the significance of liquidations of U.S. Government securities during monetary restraint.

The flow of funds associated with U.S. Government securities is shown by financial sector in Chart B-1, "U.S. Government Securities," contained in Appendix B. In the years 1955 and 1959 these sales outweighed the combined total of all other sources of funds to commercial banks.¹ The flow of funds data indicate that banks liquidated U.S. Government securities at an annual rate of \$ 11.1 billion in the third quarter of 1955 and at an annual rate of \$ 11.4 billion in the third quarter of 1959. The banks also liquidated a substantial amount of U.S. Government securities during 1956 and the second quarter of 1957. Thus commercial banks liquidated substantial amounts of U.S. Government securities during monetary restraint. The major purchasers of U.S. Government securities during monetary restraint were consumers, non-profit organizations, nonfinancial corporations

¹In observing and discussing this same phenomena Friend comments, "It is of course not coincidental that the heavy sales of U.S. Government securities to finance other investments occurred in periods of cyclical prosperity when private demands for credit were high and when monetary restrictions were most severe." (page 57)

Warren Smith discusses the magnitude of funds obtained by commercial banks via the liquidation of U.S. Government securities. For example, when discussing the period from December 31, 1954 to June 30, 1957, he states "Commercial banks obtained \$ 14.5 billion or 64.4 percent of the funds they advanced to the private sector through sales of Treasury securities, whereas the corresponding magnitudes for [nonmonetary financial] intermediaries were \$ 0.8 billion or 1.7 percent. This striking difference reflects the much greater flexibility of portfolio policies on the part of commercial banks, which specialize in providing the marginal fluctuating portion of the financial requirements of the private sector of the economy." Smith, Quarterly Journal of Economics, LXXIII, No. 4 (1959), page 550.

(except during 1956), and state and local governments.¹ U.S. Government securities, in almost as large amounts, were purchased by commercial banks in the periods of recession and monetary ease such as 1954, 1958, and 1961 (see Chart B-1).

As is readily apparent in Chart B-1, commercial banks made much more extensive use of U.S. Government securities as a temporary investment than did other institutions.² This more extensive use reflects the large proportion of total bank holdings that are of a short-term variety (U.S. Government securities are particularly attractive for short-term investment), and it reflects the

¹Table 23, "U.S. Government Securities," Flow of Funds Accounts, 1945-62, pages 175-177.

Arthur Burns discusses bank liquidations of U.S. Government securities during 1956 (part of first period of monetary restraint included in this study) in some detail. He states that the securities were bought "...by individuals, by federal trust funds, and by various state and local investment accounts." Burns, pages 52-53.

²The American Bankers Association explains this behavior for the Commission on Money and Credit in The Commercial Banking Industry, (Englewood Cliffs, N.J.: Prentice-Hall, 1962), page 99.

"This is naturally of some concern to the banks, particularly as they are provided with additional funds precisely at the times when they have least need for them (that is, during recessions when the demand for loans falls off) and, conversely, find it difficult to acquire additional funds precisely at the times when they could make best use of them (that is, during periods of high prosperity when loan demand is strong). Banks have adapted to this situation mainly by buying government securities when provided with additional reserves during recession periods and by selling off these investments during periods of rising business activity in order to meet the larger loan demands."

And then on page 108, "Short-term Treasury securities are viewed by bankers as secondary reserves to meet cash drains arising from deposits losses." Deposits turn down during periods of monetary restraint as discussed earlier in the chapter in conjunction with Chart 4.

commercial banks' greater ability to make use of security losses for tax purposes.^{1, 2}

The substantial liquidation of U.S. Government securities during the two periods of monetary restraint when interest rates were

¹According to Federal tax provisions for commercial banks, capital losses are deductible from ordinary income, while capital gains are subject to the lower rates of the capital gains tax. Thus, when interest rates rise, commercial banks have an incentive to sell securities at losses and reinvest in securities which will provide capital gains if held to maturity, because the tax saving from the capital losses will exceed the extra taxes on the capital gain. The wash sale rule prevents reinvestment in identical securities within thirty days of the sale. Thus with this exception the tax provisions do not provide a direct inducement to shift from U.S. Government securities to private debt. The benefits would be obtained by investing in U.S. Government securities after thirty days. However, the provisions of the tax laws encourage portfolio adjustments and thus indirectly promote shifting operations.

For a good discussion of these tax provisions see Robert H. Parks, "Income and Tax Aspects of Commercial Bank Portfolio Operations in Treasury Securities," National Tax Journal, XI, No. 1 (1958), pages 21-34.

²For more on this see Irwin Friend. On page 57 Friend makes the following interesting observation about the future of this source of funds.

"While this markedly cyclical behavior of commercial bank net sales of Governments would be expected to continue, it should be noted that the ratio of their liquid assets (U.S. Government securities plus currency and reserves) to total liabilities declined from 59 percent at the end of 1948 and 48 percent at the end of 1951 to 35 percent at the end of 1959 and declined somewhat more in 1960, so that there is less leeway for further long-term reductions in Governments than formerly."

Inspection of Chart B-1, however, leads one to conclude that this downtrend in the ratio referred to in the quotation may have been arrested or even reversed because of the substantial accumulation of U.S. Government securities by commercial banks during the last two quarters of 1960 and the first three quarters of 1961.

rising,¹ indicates that the "lock-in" effect is not a significant deterrent to shifts in commercial bank portfolios.² That is, commercial banks are willing to take capital losses on U.S. Government securities in order to obtain funds for other credit extension during monetary restraint. Of course, the "lock-in" effect is a matter of degree, but presumably it inhibits bank lending policies during periods of economic expansion and rising interest rates.³

¹Interest rates are shown on Chart 41 contained in Chapter VIII, "Time Deposits and Savings Accounts," page .

²Warren Smith discusses the lock-in effect from both a theoretical and an empirical point of view and concludes that the effect is not very strong. See Section I A, "Effects via Changes in the Value of Assets of Financial Institutions," pages 589-593 of Warren L. Smith, "On the Effectiveness of Monetary Policy," American Economic Review, XLVI, No. 4 (1956), pages 600-606.

The following two quotations exemplify his conclusions:

"As will be brought out more fully later, recent experience indicates that rising interest rates do not seriously deter commercial banks, which commonly hold large portfolios of short-term government securities, from selling such securities to meet a rising demand for loans." (page 590)

"However, to the extent that the problem does arise during periods of strong inflationary pressure, it is apparent that not very much confidence should be placed in the 'freezing-in' effect as a means of deterring large institutional investors from shifting funds from government security holdings to private loans and investments." (page 593)

³The "lock-in" effect is less significant the shorter the remaining term of the security. Thus banks could minimize the "lock-in" effect by selling their shorter-term securities.

The CMC makes a similar point in their report. "During periods of credit restraint, bond prices generally fall as interest rates rise... Banks can sell off their short- and intermediate-term securities with little or no loss." Commission on Money and Credit (Report), page 48.

However, during monetary restraint most of the U.S.

It can be argued that commercial bank liquidations of U.S. Government securities do contribute to the transmission of monetary restraint throughout the economy.^{1, 2} The liquidations deplete the banks' secondary reserves thus tending to make them increasingly less anxious to extend other credit. In addition these sales of U.S. Government securities drive interest rates up, making the credit outlook uncertain throughout the economy.³ Rising interest rates also

Government securities liquidated by commercial banks have a maturity in excess of a year. See Table 23, "U.S. Government Securities," Flow of Funds Accounts, 1945-62, pages 175-177.

The flow-of-funds data for U.S. Government securities held by commercial banks is broken down into two flows: "Short-term Direct" maturing within one year, and "Other".

¹The Federal Reserve used to argue that bank liquidations of U.S. Government securities transmit the impact of monetary restraint in the manner explained in the above text. See particularly a section entitled "Commercial Banks" in the Federal Reserve System: Purposes and Functions, pages 125-128.

In the 1961 edition of the Federal Reserve System this argument "...is sharply downgraded". See Lawrence Ritter, Journal of Political Economy, LXX, No.1 (1962), page 26.

²A somewhat different argument than the one in the text is presented by the Commission on Money and Credit.

"Banks have expanded their loans during periods of monetary restraint by selling off U.S. Treasury securities. Such sales soften the impact of monetary restraint on bank lending. Nor is this wholly undesirable, because the sales of securities helps to spread the effect of monetary restriction from the banking system to other sectors. In effect such sales absorb part of the money balances (cash reserves) of other lenders and the public and reduce their ability to extend credit and make expenditures." Commission on Money and Credit (Report), page 48.

³"Rising yields on short-term paper, moreover, make the

tend to make investors cancel plans for marginal projects (assuming that rising short-term rates eventually lead to rising long-term rates). In this manner (i. e. decreasing commercial bank liquidity and rising interest rates) the impact of monetary restraint supposedly is transmitted throughout the economy via the liquidation of U.S. Government securities by commercial banks. Certainly the effects described (i. e. decreasing commercial bank liquidity and rising interest rates) tend to transmit monetary restraint throughout the economy. However, as discussed below in the section titled "Consumer Credit and Bank Loans N.E.C." the large amount of funds made available to finance consumer credit via the liquidation of U.S. Government securities is far more significant for the transmission of monetary restraint. This flow of funds, which eventually finances consumer credit, more than offsets the effects (associated with obtaining the funds such as decreasing bank liquidity and rising interest rate) that are compatible with the aims of monetary restraint. In fact, as will be pointed out below in this chapter and in Chapter VI, "Finance Companies," the

credit outlook uncertain. This uncertainty, together with the possibility of losses on the sale of paper held, makes the secondary reserve positions of banks less satisfactory to bank managements. Hence the amount of liquid assets held as secondary reserves, which was previously viewed as adequate or even more than adequate, comes to be viewed with concern. The result is a greater unwillingness on the part of bank managers to reduce holdings of secondary reserve securities in order to make more loans." Federal Reserve System: Purposes and Functions, page 127.

flow of funds to commercial banks resulting from the liquidation of U.S. Government securities is the most significant source of funds for responses contrary to the aims of monetary restraint.¹

USES OF FUNDS

The flow of funds from commercial banks, as reflected in the behavior of total loans and investments, also increased markedly during periods of monetary ease and decreased during periods of monetary restraint.²

During the first period of monetary ease, the flow of funds associated with total loans and investments increased from a retirement rate (i. e. negative flow of funds) of \$ 4.2 billion to a net extension rate (i. e. positive flow of funds) of \$ 14.4 billion. This represents an increase of \$ 18.6 billion in the flow of funds out of commercial banks into loans and investments. During the short second period of ease the increase was an even more striking \$ 30.1 billion to a \$ 28.6 billion

¹Warren Smith considers liquidations of U.S. Government securities by commercial banks and the ensuing expansion of credit extensions by banks in spite of monetary restraint "... a serious breach of the effectiveness of general credit controls". (page 603) See particularly part II, "Financial Institutions, the Government Securities Market, and the Effectiveness of Monetary Policy" in Smith, American Economic Review, XLVI, No. 4 (1956).

²Shown on Chart 4, "Commercial Banks - Deposits and Total Loans and Investments".

flow of funds.¹ During the third period of ease the flow of funds into loans and investments increased from \$ 6.2 billion to \$ 24.9 billion, an increase of \$ 18.7 billion.

During the initial period of restraint this flow of funds decreased \$ 2.6 billion. During the second period of restraint this flow of funds decreased \$ 26.5 billion from its quarterly high of \$ 28.6 billion per year. During the two major periods of neutrality, in 1952-1953 and in 1955, the Federal Reserve's non-intervention tended to produce increasing restrictiveness² and inspection of Chart 4 indicates that a decrease in flow of funds to loans and investments was associated with each of these periods.

TIMING

Easy or restrictive monetary policies are initiated with the intention, among other things, to stimulate or retard respectively

¹The Federal Reserve has been criticized for applying too much restraint during 1958 thus causing incomplete recovery during the expansion in economic activity culminating in the 1960 business cycle peak. Startling increases in short periods of time such as this one during 1958, however, give some indication why the Federal Reserve thought at the time (i. e. late 1958) that the recovery had picked up too much steam. That is, the annual rate of total credit extension by commercial banks increased \$ 30.1 billion in a mere six months during the first half of 1958. See Chart 4.

²See footnote 2, page 77.

the flows of funds into demand deposits (change in the money supply) and into loans and investments. The evidence in Chart 4 indicates that these flows of funds into and out of commercial banks were quickly responsive to monetary policy.^{1, 2, 3}

With one exception the flow of funds into demand deposits and into total loans and investments responded by switching direction from decreasing to increasing in the first quarter of each of the three periods of monetary ease. The one exception occurred with demand

¹The meaning of "quickly responsive" is explained in the discussion of step three (determination of the timing of responses) in the analysis of flow-of-funds data contained in Chapter I. See page 33.

²James Angell believes that the time-lag problem is critical. Of course, the timing associated with commercial bank responses is only part of the time-lag associated with the ultimate impact of monetary policy.

"The constant threat the Federal Reserve faces is that its actions may either be too weak or, because of lags in knowledge and in the impact of the effects of the actions, may for a time be excessively strong, and may even reinforce undesirable movements in the economy instead of offsetting them." (page 77)

"To this must be added the effects of the well-known lags, between occurrence of an event and the time when countervailing measures can take hold... The lag problem is here decisive." (page 84)

"...I think that the task of the Federal Reserve, in the present framework and with its present tools, is extremely difficult. It always faces a severe technical-lag problem..." (page 86)

Angell, American Economic Review, Papers and Proceedings, XLVIII, No. 2 (1958).

³The timing associated with the proximate impact of monetary policy is of particular significance to Milton Friedman's work. See the discussion in the section titled "Friedman's Proposal", Chapter X.

deposits - excluding deposits held by the U.S. Government and those held by foreigners - in the first quarter of the first period of monetary ease. However, here the rate of decrease itself decreased, which is at least a rate change in a direction that is consistent with the other first quarter data.^{1, 2} That is, the flow of funds was stimulated. By the second quarter of the first period, the flow of funds into demand deposits was no longer decreasing and in fact was increasing.

The flow of funds into demand deposits - excluding deposits held by the U.S. Government and those held by foreigners - responded by switching from increasing to decreasing in the first quarter of both periods of monetary restraint. The direction of flow of funds into loans and investments surprisingly switched from decreasing to increasing in the first quarter of both periods of monetary restraint. These responses are surprising because they suggest that monetary restraint stimulates rather than retards the flow of funds into loans and investments. These responses were caused by sharp rises in bank loans n. e. c. (i. e. not elsewhere classified) and somewhat less pronounced rises in consumer credit. At this point it is

¹During this quarter the Federal Reserve was "aggressively supplying reserves". See page A-6 of Appendix A.

²The flow of funds into demand deposits continued to decrease in the third quarter of 1953. However this decrease (i. e. \$ 0.8 billion), determined by comparing the third with the second quarter, is considerably less than the decrease (i. e. \$ 2.5 billion) in the immediately preceding quarter, determined by comparing the second with the first quarter of 1953. See Chart 4.

noted that such surprising responses to monetary restraint (which will be discussed more fully presently) were "quick".

CONSUMER CREDIT AND BANK LOANS N. E. C.

Chart 6, "Commercial Banks - Loans," shows the behavior of consumer credit and of bank loans n. e. c. during 1952-1962. Bank loans n. e. c. include short- and intermediate-term loans to business usually associated with commercial banking. The evidence in Chart 6 indicates that bank loans n. e. c. (range: - \$ 4.6 billion to \$ 10.6 billion) were considerably more volatile than consumer credit (range: - \$ 1.1 billion to \$ 3.4 billion) extended by banks. However, both of these forms of credit respond in the same direction within a given period of monetary policy.

In extending bank loans n. e. c. and consumer credit, commercial banks accomodate their customers. Their customers need short-term financing during cyclical peaks and are able to reduce such debt during cyclical troughs.¹ The data in Chart 6 indicates that these

¹There is an extensive discussion of this point from a banker's view in Chapter 3, "Monetary Policy and the Commercial Banks," American Bankers Association. The gist of this discussion is contained in the following quotations from pages 101-102.

"In the case of instalment loans, an individual bank may find itself forced, by competitive conditions, to extend more loans than it desires. For example, a large volume of automobile and appliance loans is written for banks by the dealers. Because attempts to reduce dealer commitments may entail the loss of a profitable account and

two flows of funds moved with the business cycle. These flows of funds peaked just preceeding cyclical peaks in late 1952-early 1953, early 1957, 1959, and 1962.^{1, 2} And these loans were retired on balance just before business cycle troughs in late 1953-early 1954, early 1958, and 1960. The behavior of these flows of funds thus suggests accomodation to changes in demand because they increase and decrease at the same times that demand for such funds increases and decreases.³

business relationship, in cutting back on such commitments it is necessary to weigh the account potential over the entire business cycle. It is on the basis of such criteria that many banks have favored short-term business loans and loans associated with consumer credit in recent periods of monetary restraint."

"Extending loans to business borrowers is the traditional function of commercial banks. Such loans are basic to attracting and holding commercial accounts. For the most part, prospective business borrowers are also the best long-term customers of commercial banks. Hence, there is a strong desire to grant applications for desirable business loans, wherever possible. Moreover, the use of lines of credit and other commitments to make loans at future dates virtually requires the banks to increase loans to business as needs expand."

¹The peak of the cycle moving through 1962 occurs later, but this is not within the years included in this study.

²See footnote 1 page 81 for the dates of the peaks and troughs in the business cycle as well as the sources for information about the business cycle.

³This behavior substantiates observations by others. For example Irwin Friend, page 75.

"In periods of monetary restrictions, the very sharp rise in commercial bank loans and to a lesser extent in consumer credit, in relation to other flows of credit from financial institutions, almost certainly reflected changes on the demand side..."

To state that commercial banks accomodate demand when they extend consumer credit and loans n. e. c. means that demand factors rather than supply factors dominate the markets for these funds. For example, during monetary restraint the cost of credit to the consumer may increase substantially. However, consumers are much more interested in the amount of their monthly payments than they are in their interest costs. As long as the amount of the monthly payment can be adjusted to fit their monthly budget, consumers won't be very sensitive to the increased interest costs. More importantly, when the business cycle nears its peak, jobs and incomes near their peak. Because income is a more important consideration than interest costs to consumers using their credit, the high level of income associated with vigorous business activity results in a high level of demand for consumer credit (the demand side) in spite of high interest rates associated with monetary restraint (the supply side).

Although the demand-accomodating behavior of commercial banks dominated the flow-of-funds movement shown on Chart 6, movements associated with various periods of monetary policy are evident. Eventually both of these forms of credit respond in the same direction as other banking activity during any given period of monetary policy. During the latter part of each of the three periods of monetary ease, flows of funds into these forms of credit increased. During the latter part of both periods of monetary restraint the flows of funds into

these forms of credit decreased.

Bank loans n. e. c. expanded during each of the three periods of monetary ease, although the real upward thrust did not assert itself until the third quarter of the first two easy money periods. The flow of funds decreased \$ 12 billion during the first period of monetary restraint. The decline during the second period of monetary restraint is not clear cut even at the end of the period. However, from the first full quarter contained in the period (i. e. the fourth quarter of 1958) to the last full quarter contained in the period (i. e. first quarter of 1960) the flow of funds into bank loans n. e. c. did decrease slightly. During the first period of neutrality (i. e. 1952-1953) when the Federal Reserve's nonintervention tended to produce increasing restrictiveness the flow of funds into loans n. e. c. declined.¹

Consumer credit increased during the second period of monetary ease and during the latter part of both the first and third periods of monetary ease. The consumer credit flow of funds fell during the first period of monetary restraint and during the latter part of the second period of monetary restraint. Thus monetary ease appeared to be associated eventually with an increasing extension of consumer credit. Monetary restraint appeared to be associated

¹ See footnote 2, page 77.

eventually with a decreasing flow of funds into consumer credit.¹

The flow of funds into consumer installment credit, detailed by various sectors, is shown in Chart B-2, "Consumer Installment Credit," contained in Appendix B. Finance companies and commercial banks were the most volatile sources of funds for consumers with corporate business a not very close third. All three of these sectors behaved similarly, that is they accommodated consumers over the business cycle with effects that were compatible with the aims of particular monetary policies eventually becoming evident.²

Consumer credit is discussed extensively in Chapter VI, "Finance Companies".

¹In discussing the impact of general credit restrictions, Arthur Burns notes this type of behavior associated with consumer installment buying. "In other activities, such as consumer installment buying, the effects are seriously felt only after a very substantial lag."

²This evidence indicating accommodation of customers over the business cycle confirms the observations of the American Bankers Association. For example, American Bankers Association, page 106.

"Moreover the rate of return to banks, even in periods of restrictive monetary policy, probably makes consumer lending attractive under any circumstances... Turning consumer credit on and off in response to monetary policy changes is not consistent with developing a successful consumer finance business. It is particularly necessary to keep up satisfactory working relations with auto and appliance dealers, for when money is readily available, dealers are likely to be in a position to choose among alternative lenders."

OTHER FINANCIAL ASSETS

Chart 7, "Commercial Banks - Securities and Mortgages," indicates the behavior of bank funds flowing into four categories of securities and mortgages.¹

Flow of funds into state and local obligations was volatile and further grew rapidly over the years 1952-1962.^{2, 3} This rapid growth may be explained by two major complimentary trends: 1) the rise in yields on these issues which has been relatively greater than the yield rise on most taxable securities, 2) the huge increase in state and local government borrowing which has resulted in a corresponding expansion in the amount of state and local obligations.

This flow of funds increased during each of the three periods of monetary ease. During the final period of monetary ease the flow of funds climbed from a negative \$ 0.7 billion to a peak of \$ 10.4 billion in the second quarter of 1962. The flow of funds

¹Chart 7 shows commercial bank behavior detailed by financial assets. Appendix B contains several charts which show the behavior of particular financial assets detailed by financial institutions.

²In a fourteen year period ending in 1960, the share of bank investments accounted for by state and local government securities rose from about 4 percent to over 21 percent, while their share of all bank earning assets rose from about 3.2 percent to about 8.8 percent.

See American Bankers Association, page 110.

³This evidence confirms the following statement by Arthur Burns. "The financing difficulties of state and local governments appear to have been exaggerated in recent discussions." (page 59)

decreased substantially during the second period of monetary restraint. It did not decrease, but rather increased \$ 2.0 billion during the first period of restraint. During the two major periods of neutrality (when the Federal Reserve's nonintervention tended to produce increasing restrictiveness¹) the flow of funds into state and local obligations decreased.

There was, then, a distinct difference between the flow of funds from commercial banks used to acquire state and local government securities and the flow of funds used to acquire U.S. Government securities. The banks acquired substantial quantities of both types of securities during periods of monetary ease when bank liquidity was high. During periods of monetary restraint, however, there was no substantial net liquidation of state and local obligations by banks. As explained above, there was substantial liquidation of U.S. Government securities during the two periods of restraint. Thus, while U.S. Government securities do serve as "secondary reserves" for banks, state and local government securities apparently do not.

In fact the flow of funds used to acquire state and local obligations responded like most other bank flows of funds during various periods of monetary policy.² The flow of funds responded in

¹See footnote 2, page 77.

²Except during the first period of monetary restraint when the flow of funds increased. Even here, however, the flow of funds decreased during the first quarter of the period.

the appropriate direction during the first quarter of each of the three periods of monetary ease (i. e. from decrease to increase) and during the first quarter of both periods of monetary restraint (i. e. from increase to decrease).

The flow of funds into 1- to 4-family mortgages increased during each period of monetary ease, decreased during both periods of monetary restraint, and decreased during both major periods of neutral monetary policy (when the Federal Reserve's nonintervention tended to produce increasing restrictiveness¹).² This behavior is consistent with the impression that home mortgage loans by banks are quite responsive to monetary policy.³ Although not as volatile as 1- to 4-family mortgages, other mortgages responded in an analogous

¹See footnote 2, page 77.

²Appendix B contains Chart B-5, "Mortgages on 1- to 4-Family Properties," which shows the behavior of these mortgages detailed by financial institutions.

³In the Commercial Banking Industry (American Bankers Association) this impression is stated and then attributed to the inflexibility of FHA and VA mortgage loan rates. For example, the following quotations from pages 106-107:

"Home mortgage loans have been more sensitive to monetary policy than most other classes of loans."

"The cyclical variability of residential construction can be attributed in large part to the relative inflexibility of FHA and VA insured mortgage loan rates, and the consequent cyclical fluctuations in the differential between these rates and other investment yields."

The flow of funds into mortgages and the rate of construction are closely tied together. Irwin Friend, page 74, states, "Flow of funds into mortgages was highly correlated with the rate of construction..."

fashion, increasing during ease and decreasing during restraint.¹ However, the flow of funds into other mortgages during the last two quarters of the first period of monetary restraint was not consistent with the above mentioned decrease over the period.

Surprisingly, the flow of bank funds into corporate bonds did not appear to have been affected by general monetary policy.²

LOANS AND SECURITY CREDIT

Chart 8, "Commercial Banks - Loans and Security Credit," shows the behavior of total loans excluding mortgages. The chart also shows the behavior of security credit advanced by banks, and this is subject to specific Federal Reserve control under Regulation U. The changes that occurred during 1952-1962 under Regulation U are shown in Table 3, "Changes in Margin Requirements".

The flow of funds into security credit was not influenced by general monetary policy. Further changes in the margin requirements by the Federal Reserve did not appear to affect this rate. For example

¹Appendix B contains Chart B-6, "Other Mortgages," which shows the behavior of these mortgages detailed by financial institutions.

²Appendix B contains Chart B-4, "Corporate and Foreign Bonds," which shows the behavior of these bonds detailed by financial institutions.

Billions of Dollars

TABLE 3
CHANGES IN MARGIN REQUIREMENTS

The Board of Governors amended Regulation U, loans by banks for the purpose of purchasing or carrying stocks registered on a national securities exchange, on the following dates in the indicated manner.

Date	Change in Margin Requirement (percents)	
February 20, 1953	decrease	75 to 50
January 4, 1955	increase	50 to 60
April 22, 1955	increase	60 to 70
January 15, 1958	decrease	70 to 50
August 4, 1958	increase	50 to 70
October 15, 1958	increase	70 to 90
July 27, 1960	decrease	90 to 70
July 9, 1962	decrease	70 to 50

margin requirements were reduced in January of 1958, and one would expect security credit to increase (assuming that expectations about the stock market remained constant). However, during the next six months security credit extended by banks fell sharply. Then in August the margin requirements were raised. Security credit increased sharply instead of decreasing (as it should have assuming that expectations about the stock market remained constant).¹ The actual behavior of the flow of funds into security credit most likely reflected stock market expectations.

The flow of funds from commercial banks into total loans excluding mortgages increased during the first and third periods of monetary ease. The flow of funds increased during the first two quarters of the second period of monetary ease but fell off sharply (i. e. it fell \$ 6.3 billion) in the third and final quarter of the second period. This sharp drop reflects an even sharper drop in security credit that was partially offset by the other elements in the total-loans-excluding-mortgages category.

During the first period of monetary restraint this flow of funds fell \$ 13.8 billion to a level indicating net debt retirement of

¹This behavior substantiates Irwin Friend's conclusion about security credit extended by commercial banks. On page 65 he concludes: "Security credit extended...by these institutions [i. e. commercial banks] ...reflected trends in the stock market rather than in general business conditions."

\$ 3.5 billion. However, the first quarter of this period of monetary restraint showed an increase, reflecting the customer-accomodating behavior by banks discussed above. The flow of funds increased during the second period of monetary restraint. In fact, during the first quarter (i. e. fourth quarter of 1958) of this period of monetary restraint, the flow of funds into total loans experienced its sharpest increase during the eleven years under study, \$ 14.5 billion.¹ However, after this first quarter which reflected customer-accomodating behavior, the flow of funds decreased over the remainder of this two year period of restraint. The flow of funds also decreased during the first period of neutral monetary policy.²

¹This \$ 14.5 billion increase included sharp rises in loans n. e. c. (\$ 7.1 billion), security credit (\$ 6.3 billion), and consumer credit (\$ 1.9 billion), offset by slight decreases in other constituents of total loans.

²See footnote 2, page 77.

CHAPTER IV

SAVINGS INSTITUTIONS

The steadily increasing amount of funds that flowed through savings institutions is shown in Chart 9, "Savings Institutions - Deposits and Credit and Equity Market Instruments". Both the flow of funds into deposit liabilities (i. e. savings shares and time deposits) of savings institutions and the flow of funds out of savings institutions into credit and equity market instruments increased more than 350 % during the years 1952-1962. By the end of the period (i. e. fourth quarter of 1962) the flow of funds into deposits amounted to \$ 15.7 billion, and the flow of funds into credit and equity market instruments amounted to \$ 15.4 billion.¹

¹The marked increase in funds flowing through savings institutions has been noted and discussed by many authors. The following quotations are indicative of these notations.

"For savings institutions, the total sources of funds... showed a strong growth trend." Friend, page 60.

"Time deposits and other fixed value redeemable claims have grown much more rapidly than the money supply during the post-war period. ...time deposits in mutual savings banks increased from \$ 17.7 billion to \$ 34.9 billion for a growth rate of 5.82 percent, while shares in savings and loan associations increased from \$ 9.8 billion to \$ 54.5 billion, for an average increase of 15.50 percent per year. Meanwhile the money supply (demand deposits adjusted plus currency outside of banks) was increasing from \$ 113.6 billion to \$ 144.9 billion, for an average increase of only 2.05 percent per annum." The period was from 1947 to 1959. Smith in Tamagna, et al., pages 304-305.

For more extensive discussions see Lawrence L. Werboff

Billions of Dollars

Although aggregate savings institution activity was affected only slightly by monetary policy, flows of funds into some specific types of assets reacted markedly to monetary policy.

The flow of funds into deposit liabilities increased during all monetary policy periods except those of monetary restraint. During the first period of monetary restraint, the flow of funds remained nearly constant until the first quarter of 1957 when it decreased. This particular decrease, as well as the decrease occurring in the second quarter of 1962 (during a period of monetary ease), was associated with the use of a specific monetary tool, Regulation Q, and is discussed in Chapter VIII, "Time Deposits and Savings Accounts". During the second period of monetary restraint the flow increased slightly from \$ 8.5 billion to \$ 8.7 billion. Throughout the rest of the years 1952-1962 the flow of funds into deposit liabilities at savings institutions increased rather steadily.

CREDIT AND EQUITY MARKET INSTRUMENTS

The flow of funds out of saving institutions into credit and

and Marvin E. Rozen, "Market Shares and Competition Among Financial Institutions," in Paul M. Horvitz, et al. for Commission on Money and Credit, Private Financial Institutions, (Englewood Cliffs, N.J.: Prentice-Hall, 1963). And see Goldsmith, Financial Intermediaries in the American Economy Since 1900.

equity market instruments moved for the most part in line with the growing deposit liabilities. That is, for the most part, in any particular quarter the two flows of funds are equal or nearly so. During the first period of monetary restraint the two flows of funds remained nearly constant. However, during the second period of monetary restraint the flow of funds into credit and equity market instruments jumped from \$ 8.7 billion (in the second quarter of 1958) to \$ 12.0 billion (in the second quarter of 1959). As mentioned above, deposit liabilities were decreasing slightly during this time. The source of additional funds for this bulge in the rate of acquisition as well as the bulge in 1955 was through savings and loan associations' borrowing from the Federal Home Loan Bank.¹ This ability to get funds during periods of monetary restraint tends to offset Federal Reserve action and thereby reduce the effectiveness of general monetary policy.^{2, 3} During the last year of this second period of

¹This behavior is discussed in the section titled "Savings and Loan Associations".

²In discussing savings institutions Friend notes the FHLB loans and then comments on them. "...and fairly sizable amounts of Federal Home Loan Bank loans to savings and loan associations in 1950, 1955, and 1959. The latter might be considered destabilizing even though the FHLB must borrow at going capital market rates, particularly since the FHLB may borrow when money is relatively easy to obtain and lend to the savings and loan associations when money is tight." (page 61)

³Savings and Loan Associations' behavior is discussed in detail in a later part of this Chapter. Borrowing from the FHLB is

monetary restraint the flow of funds into credit and equity market instruments fell.

MORTGAGES

Most funds flowing from savings institutions moved into mortgages, particularly 1- to 4-family mortgages.¹ Chart 10, "Savings Institutions - Mortgages," shows the behavior of the flow of funds into mortgages.²

The flow of funds into 1- to 4-family mortgages was responsive to general monetary policy. During the three periods of monetary ease the flow of funds increased \$ 2.1 billion, \$ 1.8 billion, and \$ 4.0 billion respectively. During the first period of monetary restraint the flow of funds decreased \$ 2.5 billion.³ Although the flow

shown at that time on Chart 16, "Savings and Loan Associations - Net Increase in Liabilities".

¹This agrees with the observations of others. For example, "For savings institutions as a whole, mortgages - almost entirely on residential property - constituted between 80 percent and 90 percent of the funds made available by these institutions to other sectors of the economy..." Friend, page 65.

²Appendix B contains two charts showing the behavior of mortgages detailed by various financial institutions.

³This was the largest decrease in flow of funds during the eleven year period. Arthur Burns explains this response to monetary policy as follows:

of funds increased a relatively slight \$ 0.1 billion over the second period of restraint, it peaked in the middle (i. e. the second quarter of 1959) and then fell \$ 1. 4 billion during the last year of this period of restraint. This bulge in 1959 which was mentioned above ran contrary to general monetary policy and will be discussed under

"With the rise of interest rates during the recent boom, the maximum interest rates fixed by law or regulation for federally underwritten mortgages soon became unrealistic and these mortgages could ordinarily be placed or sold only at a discount. The practice of discounting, however, is poorly understood and sometimes arouses intemperate criticism. To avoid possible embarrassment on this account, some financial institutions concentrated increasingly on conventional mortgages. The supply of money for underwritten mortgages, on which the home-building industry has come to depend very heavily, was therefore reduced. At the same time, as a result of the provision of law which practically requires the builder to absorb any discount on mortgages guaranteed by the Veterans Administration, the builder's profit tended to dwindle as the discounts became larger. Hence the inducement to build was diminished. In short, in view of our housing legislation with its special regulation of interest rates and discounts, the recent policy of general credit restraint acted as a selective credit control on home-building. It would, of course, be equally correct to say that, in view of the recent policy of credit restraint, our housing legislation acted as a selective credit control. Changes in the law governing discounts which were passed by the Congress this year have accentuated this difficulty, and they are likely to do so again under conditions of tight credit." (pages 62-63)

"The financial handicaps of the home-building industry at a time of credit shortage require a different attack. Here the difficulty stems largely from the unrealistic maxima that are imposed by law or regulation on the interest rates of governmentally underwritten mortgages." (page 79)

savings and loan associations later in this chapter.¹

The flow of funds into other mortgages increased slightly during the first period of ease and increased relatively substantially during the second and third periods of ease. The flow of funds was the same just before and at the end of the first period of restraint. It increased only \$ 0.1 billion during the second period of restraint.

OTHER CREDIT AND EQUITY MARKET INSTRUMENTS

Chart 11, "Savings Institutions - Other Credit and Equity Market Instruments," shows the behavior of the flow of funds into assets other than mortgages

¹As stated in the above text this evidence suggests that the flow of funds from savings institutions into 1- to 4-family mortgages is responsive to general monetary policy. However, this conclusion is qualified by the offsetting behavior associated with the FHLB in 1959.

At least one recent study draws another conclusion and qualifies it with the possibility that monetary policy may have been effective in the 1955-1957 period.

"Flow of funds into mortgages was highly correlated with the rate of construction... For savings institutions, which have dominated this market in recent years, net purchases of mortgages have fairly closely corresponded to the inflow of deposits. ... Neither savings institutions nor life insurance companies and commercial banks, which have been the important factors in the mortgage market, have displayed any noteworthy consistent cyclical variability in their purchases, but tight money in the 1955-57 period did seem to be reflected in a progressive curtailment of residential mortgage purchases, with commercial banks affected comparatively early and relatively most drastically." Friend, page 74.

The flow of funds into consumer credit from savings institutions appeared to reflect changes in consumer demand for credit. The flow of funds fell during the first two periods of monetary ease. It also fell during the first two years of the final period of monetary ease. The flow of funds increased during the first period of restraint if the last quarter is excluded. During the second period of restraint the flow of funds into consumer credit increased a substantial \$ 1 billion. The flow of funds also increased during the two major periods of monetary neutrality (when the Federal Reserve's nonintervention tended to produce increasing restrictiveness¹). This demand-accomodating behavior of savings institutions is similar to that associated with commercial banks.² As pointed out in Chapter III, "Commercial Banks," credit extension to consumers was increased during cyclical peaks when they needed it, or at least when they demanded it.³ The ability of financial institutions to increase consumer credit contrary to general monetary policy indicates a major weakness

¹See footnote 2, page 77.

²This similarity can be seen by comparing the flow of funds into consumer credit from savings institutions shown in Chart 11 with the flow of funds into consumer credit from commercial banks shown in Chart 6, "Commercial Banks - Loans".

³See particularly the section titled "Consumer Credit and Bank Loans N.E.C." beginning on page 93 for a discussion of this demand-accomodating behavior.

in Federal Reserve control.¹ It is worth noting that this is not a commercial banks versus other financial intermediaries issue in the Gurley-Shaw sense because consumer credit extension was increased by both classes of financial intermediaries during periods of monetary restraint.⁵

The flow of funds into corporate bonds decreased during periods of monetary ease. It also decreased during the second period of monetary restraint. During the first period of restraint, however, the flow of funds increased from an annual liquidation rate (negative flow of funds) of \$ 0.4 billion to an annual acquisition rate (positive flow of funds) of \$ 1.2 billion, an increase of \$ 1.6 billion. Among savings institutions, mutual banks are the only significant holders of corporate bonds and for this reason the behavior of funds flowing into corporate bonds will be discussed in this chapter in the section titled "Mutual Savings Banks". At this point it is noted that these responses are contrary to the aims of general monetary policy.

¹See section titled "Federal Reserve's Consumer Installment Credit Study" in Chapter VI.

²Finance companies, which also behave in a demand-accommodating manner (and are discussed in Chapter VI, "Finance Companies"), and commercial banks are the major sources of consumer credit. Savings institutions and non-financial business are important but smaller suppliers of consumer credit. For comparative purposes see Chart B-2, "Consumer Installment Credit," in Appendix B.

The flow of funds into U.S. Government securities was very volatile - it even changed from positive to negative and back to positive within three consecutive quarters (i. e. first three quarters of 1962). Part of this volatility resulted from the use made of U.S. Government securities by savings institutions. These government securities serve as liquidity reservoirs until an opportune time occurs to buy more preferred financial assets.^{1, 2, 3}

¹Irwin Friend suggests that U.S. Government securities serve as liquidity reservoirs but in a passive sense. That is when deposit inflows are more or less than expected, then U.S. Government securities serve as a buffer, being accumulated or liquidated respectively. The decisions about U.S. Government securities holdings depend on deposit inflows primarily. He suggests that they are used in this manner when other sources of funds fall below expectations. For example: "In some periods, such as 1959, the proceeds from sales of corporate and Government bonds were apparently used by savings banks to finance heavy mortgage commitments made in advance on the expectation of higher deposit inflows than those realized." (page 66)

²Warren Smith discusses liquidations of U.S. Government securities by nonmonetary financial intermediaries to obtain funds for other loans in Smith, American Economic Review, XLVI, No. 4 (1956).

For example, "Financial institutions other than commercial banks, such as insurance companies, savings and loan associations, and mutual savings banks may sell government securities to nonbank investors, thus taking up idle balances which they then transfer to active spenders by making mortgage or other loans or by buying newly issued corporate securities. In this case idle balances become active, passing through financial institutions in the process, and velocity is increased." (page 602)

This quotation is an excellent brief description of financial intermediation through what Gurley and Shaw call "switching operations" in their book four years later. See the section titled "Creating and Switching Operations," in Gurley and Shaw, Money, page 221.

For a later discussion of liquidations of U.S. Government securities (and some other liquid assets) by nonmonetary financial intermediaries to raise funds for loan extensions by Warren Smith see

Monetary policy, however, did have effects on this flow of funds. The flow of funds into U.S. Government securities did increase during each of the three periods of monetary ease (see Chart 11). And the flow of funds decreased during both periods of monetary restraint.¹

Chart 12, "Savings Institutions - U.S. Government Securities and Three-Month Treasury Bill Rate," shows another possible influence on this rate that results from monetary policy. Here the yield on newly issued three-month Treasury bills is shown monthly, along with the flow of funds from savings institutions into U.S. Government securities. During the period from late 1953 through 1954, the yield on Treasury bills was relatively low, and

part III, "Possible Destabilizing Effects of Intermediaries," in Smith, Quarterly Journal of Economics, LXXIII, No. 4(1959), pages 538 to 551.

Warren Smith's proposal for monetary reform is discussed in Chapter X, "Selected Proposals for Monetary Reform".

³David Alhadeff does not believe that liquidations of U.S. Government securities are an important source of funds for savings institutions. This belief is his basis for suggesting a "structural change" that would apply to commercial banks but not to savings institutions. See the discussion of Alhadeff's proposal in Chapter X.

Alhadeff presents his proposal in his article in American Economic Review, L, No. 4(1950).

¹Appendix B contains Chart B-1, "U.S. Government Securities," which shows the behavior of U.S. Government securities detailed by financial institutions.

savings institutions were decreasing their holdings of U.S. Government securities. Similar reactions appeared in the first quarter of 1958 and during the period of falling Treasury bill yields associated with 1960. When the yields climbed back to a more usual level in late 1958, funds flowed heavily into U.S. Government securities.

MUTUAL SAVINGS BANKS

Mutual savings banks responded to general monetary policy in a manner consistent with the objectives of the Federal Reserve.¹ The flow of funds through mutual savings bank increased during periods of monetary ease and decreased during periods of monetary restraint.²

The flow of funds into savings deposits at mutual savings

¹This observation agrees with that of the National Association of Mutual Savings Banks.

"... Federal Reserve... actions affect the magnitude and direction of the flow of funds through mutual savings banks in ways that conform to counter-cyclical economic policy..." National Association of Mutual Savings Banks for the Commission on Money and Credit, Mutual Savings Banking, (Englewood Cliffs, N.J.: Prentice-Hall, 1962), page 223.

²This observation agrees with that of the National Association of Mutual Savings Banks:

"Since the Federal Reserve-Treasury accord in 1951, investment flows from mutual savings banks to non-federal sectors of the economy have generally increased during periods of business recession and capital market ease and declined during business expansion and capital market stringency, in conformity with the objectives of monetary policy." Ibid., page 17.

banks is shown in Chart 13, "Mutual Savings Banks - Savings Deposits." This flow of funds increased during periods of monetary ease and decreased during periods of monetary restraint. The timing, however, was not as readily discernable as in the case of commercial banks.¹ As is evident in Chart 13, mutual savings bank behavior occasionally seemed to anticipate rather than merely respond to particular monetary policy.^{2, 3}

¹See pages 90-93 of Chapter III for a discussion of the timing associated with commercial bank reaction to monetary policy. See page 33 of Chapter I for a discussion of the determination of the timing of responses.

²This statement is not meant to imply that officers of mutual savings banks consciously attempt to anticipate monetary policy. The statement is made to draw the reader's attention to the lead-behavior of this flow of funds. For example, during the third period of monetary ease this flow of funds responded in a manner compatible with the aims of monetary ease (i. e. the flow of funds increases during the period). However, the change in direction of this flow of funds from decreasing to increasing occurred two quarters before the third period of monetary ease was initiated. Hence, the phrase "seemed to anticipate" is used to describe this lead-behavior.

³As noted above the Association of Mutual Savings Banks does attribute changes in the behavior of mutual savings banks to monetary policy. However, with specific reference to savings deposits the Association suggests three influences on the flow of funds to mutual savings banks.

"During the postwar period, fluctuations in net deposit gains of mutual savings banks have generally run counter to trends in business activity and in the total amount of individuals' financial saving. The perverse cyclical behavior of mutual savings bank deposit inflows reflects changes in interest rate patterns, in the amount of indebtedness incurred by depositors, and in savers' preferences." (page 6)

The "interest rate patterns" are discussed in Chapter VIII, "Time Deposits and Savings Accounts". Changes in interest rate patterns result in changes in flows of funds between commercial banks (time deposits) and savings institutions.

During the first two periods of monetary ease, the flow of funds into savings deposits increased \$ 0.1 billion and \$ 0.5 billion respectively. During the final period of monetary ease the flow of funds increased \$ 2.8 billion. In the first period of monetary restraint the flow of funds started and ended at \$ 0.9 billion. However, during the second period of restraint it fell \$ 1.4 billion.

Over the eleven years 1952-1962, the flow of funds into savings deposits at mutual savings banks increased substantially.¹ During the first six years, which included an easy money period, the highest level attained by the flow of funds amounted to \$ 2.0 billion (during most of 1954). By the final quarter of the period (i. e. fourth quarter of 1962) the flow of funds climbed to \$ 3.7 billion.

The flow of funds from mutual savings banks into 1- to 4-family mortgages increased during periods of monetary ease and decreased during periods of monetary restraint as shown in Chart 14, "Mutual Savings Banks - Net Acquisition of Financial Assets".²

¹There is a comprehensive discussion of this growth in Chapter 3, "Role of Mutual Savings Banks in the Savings Market," Association of Mutual Savings Banks. In this discussion it is pointed out that although savings deposits at mutual savings banks have increased, the relative position of mutual savings banks in the savings market has declined as the importance of savings and loan associations has increased.

²Mutual savings banks use their funds to mainly acquire mortgages. The following quote indicates the recent size and the

During the first period of monetary ease this flow of funds climbed from \$ 1.2 billion to \$ 1.9 billion; during the second period from \$ 1.0 billion to \$ 1.7 billion; and during the final period of ease from \$ 1.3 billion to \$ 2.5 billion. It fell from \$ 2.2 billion to \$ 1.0 billion during the first period of restraint and from \$ 1.6 billion to \$ 1.3 billion during the second period of restraint.

Although the flow of funds into other mortgages remained nearly steady until 1957, from then on this flow of funds behaved in a fashion similar to 1- to 4-family mortgages. It increased during the second and third periods of monetary ease and decreased during the second period of monetary restraint.

The timing associated with the responses of the flow of funds into mortgages was essentially the same as that discussed above with savings deposits. This is to be expected because mutual savings banks borrow very little. Thus they must depend primarily on rises in the flow of funds into savings deposits for funds to increase the net acquisition of assets. And mortgages were the major assets being

importance to mutual savings banks of this activity.

"In the decade of the 1950's, savings banks placed a steadily and rapidly increasing share of their assets in mortgages. By the end of 1960 their mortgage holdings had risen to \$ 26.7 billion, a record two-thirds of assets, compared with less than one-fourth at the end of World War II and about one-half as recently as 1954." Ibid., page 131.

acquired.¹

The flow of funds into U.S. Government securities from mutual savings banks behaved as discussed above in connection with all savings institutions and particularly in connection with Chart 12.² There was a large net liquidation of these securities during the years 1952-1962.³ Government securities appeared to be used by mutual savings banks as a liquidity reservoir until a satisfactory time occurred in which to acquire more preferred assets.⁴

¹This timing evidence partially supports the following similar observation by Irwin Friend.

"For savings institutions, which have dominated this market in recent years, net purchases of mortgages have fairly closely corresponded to the inflow of deposits." (page 74)

²It is important to realize that U.S. Government securities are first of all an earning asset to financial intermediaries. Thus sources of investable funds and comparative yields do bear on decisions concerning the purchase or sale of U.S. Government securities. Their great liquidity is another distinctive attribute. The point is that the liquidity reservoir thesis should not be over-emphasized.

The National Association of Mutual Savings Banks makes this point frequently in Mutual Savings Banking. For example:

"Although sales of Governments were undertaken primarily to accomodate increased mortgage lending, other factors such as changes in net activity in the other securities markets and changes in net deposit inflows at times also influenced the volume of Government sales by savings banks during the 1950's." (page 186)

³"From the end of World War II to the end of 1960, mutual savings banks reduced their holdings of U.S. Governments by over \$ 4 billion." Ibid., page 185.

⁴This interpretation of the evidence on Chart 12 is

The flow of funds into corporate bonds responded to monetary policy in a different direction than the flows into other financial assets. That is, this flow of funds decreased during periods of ease and increased during periods of restraint.¹ During the first

essentially the same as the mutual savings banks' explanation of their own behavior associated with U.S. Government securities. The following quotations are typical.

"During the first two postwar years, 1946 and 1947, mutual savings banks added \$ 1.3 billion to their considerable holdings of U.S. Government securities. . . . The continued expansion of savings bank Treasury portfolios during these years of marked increase in the demand for mortgage funds contrasted with net liquidation of U.S. Governments by other types of financial institutions, and reflected a shortage of mortgages of suitable quality in the local mortgage markets to which savings banks were then confined. . . . In all the subsequent postwar years, mutual savings banks disposed of U.S. Governments in order to purchase higher-yielding assets." *Ibid.*, page 185.

"The changing maturity composition of the U.S. Government portfolio during the postwar period indicates that, as mortgages grew sharply relative to assets, savings banks viewed Governments increasingly as a source of liquidity and investment flexibility and less as a source of earnings." *Ibid.*, page 176.

¹This statement does not agree with Friend's conclusion. He concludes that "There was no cyclical relation in the net purchases of corporate (and foreign) bonds by...mutual savings banks..." (page 74)

Further, he continues on this page to state that net purchase of corporate bonds showed "...a weak and erratic uptrend." From the evidence on Chart 14, particularly the net liquidation of corporate bonds by mutual savings banks in 1959, 1961 and 1962, I would conclude that net purchases of corporate bonds showed a downtrend.

The National Association of Mutual Savings Banks' explanations of this activity would compliment my interpretation rather than Friend's, provided one could assume that monetary restraint is usually associated with relatively high rates of interest. The following quotations are examples:

"Since the Federal Reserve-Treasury Accord, net flows into the corporate securities markets have generally contracted during periods of declining capital market yields and expanded when yields have risen." National Association of Mutual Savings Banks, page 14.

"Since...1951, mutual savings bank investment activity

period of ease this flow of funds fell from a \$ 0.4 billion rate of acquisition of bonds (positive flow of funds) to a \$ 0.2 billion liquidation rate (negative flow of funds). During the second period of monetary ease this flow of funds fell \$ 0.5 billion, and during the third period of monetary ease it also fell \$ 0.5 billion to a liquidation rate (negative flow of funds) of \$ 0.5 billion in the fourth quarter of 1962. During the first period of monetary restraint, the flow of funds climbed \$ 1.6 billion to reach a peak flow of funds (i. e. \$ 1.2 billion) used to acquire corporate bonds during the eleven year study. The flow of funds did decrease \$ 0.9 billion during the second period of restraint.

These responses suggest that mutual savings banks acquire corporate bonds at times when mortgages are not so readily available or at least not so desirable.¹ For example, in times of restraint there may be a shift in mutual savings banks' portfolios from mortgages to

has been determined, within limitations set by deposit inflow, by shifts in relative capital market yields through alternating periods of credit ease and stringency." (page 10)

¹This observation seems to be in agreement with that of the National Association of Mutual Savings Banks. For example:

"That corporate securities portfolios have also performed the same function [i. e. source of liquidity and investment flexibility] on occasion is suggested by the fact that in three postwar years - 1950, 1955, and 1959 - savings banks actually reduced their holdings of corporate securities in order to take up mortgage commitments for which net deposit inflows and liquidation of U.S. Governments did not provide sufficient funds." Ibid.

corporate bonds to take advantage of higher yields on corporate bonds.¹

CREDIT UNIONS

The flow of funds through credit unions is shown in Chart 15, "Credit Unions - Net Increase in Assets and Liabilities". Their activity grew significantly over the eleven years 1952-1962.² At the beginning of this period total shares in credit unions (and also total assets held by credit unions) amounted to only \$ 1.4 billion; total financial assets amounted to only \$ 1.3 billion.³ In the fourth quarter of 1958, flow of funds (which reflects a net annual addition to assets)

¹Again this observation seems to be in agreement with that of the National Association of Mutual Savings Banks. For example: "Among the outstanding characteristics of savings bank investment activities during the postwar years have been...the marked variations in net flows into the mortgage and corporate securities markets in response to changes in capital market yield relationships..."

²This growth has been noted in other recent studies. For example Werboff and Rozen (in Horvitz, et al. for the CMC) present a table showing this growth and make the following comment.

"The share of savings and loan associations has shown a more than threefold increase, and credit union savings, although much smaller in total amount, have grown by an even greater degree." (page 278)

³Table 10, "Savings Institutions Subsectors," Flow of Funds Accounts, 1945-62, page 15.

Billions of Dollars

0
1
2

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962

CREDIT UNIONS
 NET INCREASE IN ASSETS AND LIABILITIES
 (seasonally adjusted annual rates)

amounted to \$ 1.3 billion.

During the last four years, 1959-1962, this flow of funds responded in a manner compatible with the aims of monetary policy.¹ It decreased during the second period of monetary restraint and increased during the third period of monetary ease. Some of the reason for the lack of evidence in Chart 15 of similar responses to monetary policy during the earlier part of the eleven years may be due to credit unions' small base (only \$ 1.4 billion in total shares at the beginning of 1952) coupled with their very rapid growth (credit unions subsector tripled in size from 1952 to 1958).²

SAVINGS AND LOAN ASSOCIATIONS

The steady and rapid growth in the flow of funds into savings shares at savings and loan associations is shown on Chart 16, "Savings and Loan Associations - Net Increase in Liabilities".³ At the beginning

¹Irwin Friend indicated that the growth of credit unions is related to movements in the business cycle. "There was a fairly strong upward trend in consumer credit extended by credit unions, with small reversals in trend during recession years..." (page 66)

²Table 10, Flow of Funds Accounts, 1945-62, page 15.

³Financial assets of savings and loan associations increased from \$ 22.2 billion to \$ 91.4 billion during the eleven years 1952-62. (Reference: Ibid.)

This growth is discussed comprehensively by the savings and loan associations themselves (i. e. by the United States Savings

of the years 1952-1962 (i. e. first quarter of 1952), the flow of funds was at its period low of \$ 2.7 billion. At the end of these years (i. e. fourth quarter of 1962) the flow of funds reached its high of \$ 11.2 billion.

This strong growth in the flow of funds continued throughout the eleven years except during periods of monetary restraint.¹ The growth then slowed down noticeably. During the first period of monetary restraint, which lasted more than two years, the flow of funds increased only \$ 0.3 billion.² During the second period of

and Loan League) in Leon T. Kendall, U.S. Savings and Loan League, for the Commission on Money and Credit, Savings and Loan Business, (Englewood Cliffs, N.J.: Prentice-Hall, 1962).

This growth is discussed from a more independent point of view, emphasizing the share of the savings market, by Werboff and Rozen in Horvitz, et al. for the CMC.

¹The United States Savings and Loan League presents one particularly interesting explanation of why the flow of funds into savings shares at savings and loan associations is compatible with the aims of general monetary policy.

"To the extent that savings attitudes of the American consumer can be tied to monetary policy, it appears that savings at savings and loan associations perform as a sort of built in stabilizer in our economy. Increased caution on the part of consumers causes a slowdown in withdrawals, net savings rise, and more funds made available to the construction industry, giving added incentive to that sector of American enterprise. Conversely, the slowing of savings flow in peak periods tends to decrease the supply of funds available for mortgages at precisely the time when the mortgage demand reaches its peak, and has the effect of pushing mortgage rates higher. The rise in the home financing charge serves to ration funds in this sector by eliminating the marginal borrower." Kendall, pages 111-112.

²The fact that net savings receipts decreased in 1957 below the gain reported for the previous year was used by the U.S. Savings and Loan League as evidence of the effectiveness of monetary policy. After noting and discussing this they stated, "This illustrates very

restraint it increased \$ 0.8 billion. The flow of funds into savings shares reflected each period of monetary restraint within six months.¹ It may have reflected the last two periods of monetary ease even more quickly.²

The flows of funds from savings and loan associations into various financial assets are shown in Chart 17, "Savings and Loan Associations - Net Acquisitions of Financial Assets".³

Savings and loan associations use their funds primarily to acquire 1- to 4-family mortgages.⁴ However, their rate of acquisition of these mortgages does not always coincide with the objectives of general monetary policy.

well the countercyclical character of savings flows into savings and loan associations." Ibid., page 110.

¹In Chart 17 the flow of funds into savings shares turned down in the second quarter of both periods of monetary restraint (i. e. the first quarter of 1956 and the first quarter of 1959).

²In Chart 17 the flow of funds into savings shares continued upward but with a steeper slope in the first quarter of each of these two periods of monetary ease (i. e. the first quarter of 1958 and the third quarter of 1960).

³Appendix B contains charts which show the behavior of mortgage acquisition detailed by financial institutions.

⁴"Since 1950, approximately 78 percent of savings and loan assets have been invested in 1- to 4-family mortgages." Kendall, page 81.

The peaks in the flow of funds used to acquire 1- to 4-family mortgages which occurred in 1955 and 1959 coincide to a noticeable extent with the peaks in the flow of funds into savings and loan associations via loans from the Federal Home Loan Bank Board (FHLB) and banks shown on Chart 16. This suggests that the demand for funds by home owners determined the level of savings and loan association activity. If the demand is there, savings and loan associations will borrow if necessary to meet it, even though the period is one of monetary restraint. The Federal Reserve was pursuing a policy of monetary restraint before and during 1959; however, funds flowing from savings and loan associations into mortgages peaked at this time and so did savings and loan associations' borrowing from the Federal Home Loan Bank Board and the banks. This ability of savings and loan associations to borrow funds during periods of monetary restraint tends to offset Federal Reserve general monetary policy action and thereby reduce the effectiveness of such action.^{1, 2}

¹After also noting the sizable FHLB loans to savings and loan associations in 1955 and 1959, Friend makes a similar suggestion.

"The latter might be considered destabilizing even though the FHLB must borrow at going capital market rates, particularly since the FHLB may borrow when money is relatively easy to obtain and lend to the savings and loan associations when money is tight." Friend, page 61.

The savings and loan associations (i. e. the U.S. Savings and Loan League) suggest that this offset to general monetary policy was accidental. Further, they imply that this type of accident will

occur occasionally because of the nature of the home finance business. The following quotation contains their explanation of this accident.

"What at times appears to be a conflict between the policy of the Federal Reserve System and the policy of the Federal Home Bank Board regarding money matters arises by accident rather than by design. As noted earlier, considerable time elapses between the making of a mortgage commitment to a builder by a savings association and the taking down of that loan by a home buyer. Imperfect knowledge of money flows during the interval involved may make recourse to FHLB advances necessary, and any government agency would find it difficult to refuse the Home Loan Bank System the right to borrow at a time when it must borrow in order to make advances to associations for the fulfillment of loan commitments made months before. Ideally, the denial would have had to take place during the period when the advance commitments were made.

"For example, assume that the Federal Reserve and the Treasury desired to limit advances through the Federal Home Loan Bank System during the 1959 upsurge in mortgage lending. The appropriate time for the restraint to be exercised was not in the fall of 1959 when it became apparent that commitments were unusually high, but rather in late 1957 and early 1958 when the commitments to builders were being made. It would have taken extremely farsighted individuals in government to have stated at that time that mortgage commitments would amass at an extremely rapid pace and that they should be curtailed, because a turn in the direction of economic activity was imminent. In such an instance, to rely on any individual or government agency rather than on market forces seems to overestimate the infallibility of such a person or agency. The lag between commitment and loan closing is a very real part of home finance."

Kendall, page 121.

In this quotation they agree at least passively with the point made in the above text and brought out in Chart 17. Savings and loan associations are susceptible to behavior which offsets general monetary policy.

²The Commission on Money and Credit notes that the FHLB system tends to offset monetary restraint.

"The System | the FHLB System | clearly has exercised restraint in its lending to members thus far. However, the volume of advances and related borrowing have shown significant cyclical variation which has offset somewhat the restrictive effect of general monetary policy on mortgage lending." Commission on Money and Credit (Report), page 205.

Before leaving the subject of 1- to 4-family mortgage acquisition, the following should be noted. If the second period of monetary restraint with its peak flow of funds in excepted, the responses of flow of funds from savings and loan associations into 1- to 4-family mortgages were compatible with the aims of general monetary policy. This flow of funds increased sharply during each of the three periods of monetary ease. It actually declined during the first period of monetary restraint.¹ Further, at least during periods of ease this flow of funds quickly reflected general monetary policy.²

¹According to the savings and loan associations themselves, this activity is quite responsive to general monetary policy (except for the occasional accident discussed in the preceding footnote). For example in the following quotation they make such a statement and then cite supporting evidence.

"The effect of monetary policy is most pronounced on the lending side of the savings and loan business... Notice that in 1955, 1956, and 1957, when monetary policy was firm, lending associations did decline. In late 1957 and 1958, easier money conditions were accompanied by a sharp upswing in mortgage lending activity." Ibid., pages 114-115.

²In Chart 17 the flow of funds turned up in the first quarter of both the second and third periods of monetary ease (i.e. the second quarter of 1958 and the third quarter of 1960). It turned up in the second quarter of the first period of monetary ease (i.e. the fourth quarter of 1953).

The U.S. Savings and Loan League discusses timing and points out that home financing is in a class by itself as far as monetary impact is concerned. The following quotation, taken from this discussion, indicates that the timing may not be as quick as some of the evidence on Chart 17 would suggest.

"The cycle of commitment, housing start, construction expenditure, and mortgage loan closing can extend over a period of six months or more. The speed with which monetary action affects home building depends on the time of the year - particularly the time of the home building year - that an action takes place." Ibid., page 116.

The flow of funds into other mortgages has also experienced steady growth throughout the years 1952-1962. This flow of funds, although much smaller, responded in a fashion similar to that discussed above with 1- to 4-family mortgages.

The flow of funds into U.S. Government securities from savings and loan associations responded as discussed earlier in this chapter in connection with all savings institutions and particularly in connection with Chart 12.^{1, 2} There were net liquidations of U.S. Government securities during each of the three periods of monetary ease when funds were needed to finance sharply increasing mortgage lending activity. Savings and loan associations acquired U.S. Government securities on balance during the first period of

¹Appendix B contains Chart B-1, "U.S. Government Securities," which shows the behavior of U.S. Government securities detailed by financial sector.

²This evidence supports Arthur Burns' observation, "The great volume of outstanding federal securities has increased the financial maneuverability of all types of financial institutions, not only of commercial banks." (page 52)

monetary restraint when mortgage lending activity was apparently somewhat curtailed. Government securities appeared to be a way for savings and loan associations to store liquidity until a satisfactory time occurred to acquire more preferred assets (i.e. mortgages).¹

¹Savings and loan associations state this as their reason for dealing in U.S. Government securities. The following quotation is from a discussion about U.S. Government securities:

"These securities may readily be converted into cash and are considered part of the basic liquidity of the institution." Kendall, page 92.

CHAPTER V

INSURANCE COMPANIES AND PENSION PLANS

The flows of funds through the insurance sector and used by this sector to purchase various financial assets grew during the eleven years, 1952-1962, from \$ 7.8 billion to \$ 12.2 billion.¹ The behavior of these huge flows of funds are shown in Chart 18, "Insurance Sector". The insurance sector includes life insurance companies, noninsured pension plans, and other insurance companies.

Although somewhat volatile, the flow of funds used to acquire financial assets increased during all monetary policy periods throughout the eleven years except during the two periods of monetary restraint. During the first period of restraint the flow of funds decreased \$ 0.7 billion. During the second period of restraint it increased a relatively slight \$ 0.3 billion.

The flow of funds into the insurance sector from increasing

¹In 1962 total financial assets held by the insurance sector amounted to \$ 204.2 billion. Source: Table 11, "Insurance Sector," Flow of Funds Accounts, 1945-62, page 17.

liabilities responded in a fashion similar to but not the same as that associated with the acquisition of financial assets. During the two periods of monetary restraint, the net increase in liabilities did not slow down as much as the net acquisition of financial assets. Consequently a marked decrease in net financial investment (i. e. the difference between the net acquisition of financial assets and the net increase in liabilities) occurred during periods of monetary restraint. In fact during the fourth quarter of 1959 more funds flowed into the insurance sector from increasing liabilities than flowed out to acquire financial assets.¹

¹During this quarter the flow of funds representing net increases in liabilities for life insurance companies associated with insured pension fund reserves reached its eleven year high, \$ 2.5 billion above the average level for this flow of funds throughout the eleven years. In fact, the total flow of funds (not the annual rate determined quarterly but the actual flow for the year) never exceeded \$ 1.6 billion in any year throughout 1952-1962 except for 1959. (See Table 12, "Insurance Sub-sectors, " Flow of Funds Accounts, 1945-62, pages 145-150 for "total flow of funds" data.)

Because these particular pension funds are insured, the life insurance companies are likely to incur more in liabilities during the first year of contracts for such pension funds than they receive in premiums. This is represented in flow-of-funds accounts as negative financial investment. Eventually, of course, premiums, as calculated by the actuaries, will exceed liabilities. In the fourth quarter of 1959 new contracts for insured pension funds represented considerably more in liabilities than the total flow of funds into insurance companies from premiums from all contracts for insured pension funds then in effect.

This increase in sales of insured pension funds most likely occurred because of the passage of the Life Insurance Income Tax Act of 1959. Until the passage of this act pension benefits were 7.2 to 7.7 percent more expensive to the employer via the insured rather than the noninsured plans with all other aspects comparable. The Act of 1959 removed the disadvantageous tax by stages, and in 1961 investment income to pension reserves held by life insurance companies was free of federal income tax.

LIFE INSURANCE COMPANIES

Chart 19, "Life Insurance Companies - Net Increase in Liabilities," shows the behavior of life insurance reserves and insured pension fund (which are sold by and administered by life insurance companies) reserves.¹ It is the accumulation of reserves that makes life insurance companies such a large and important source of funds particularly for long-term capital investment projects.^{2, 3, 4}

Monetary restraint retarded the flow of funds into life insurance and accordingly into life insurance reserves. During the first period of monetary ease the flow of funds into insurance reserves increased \$ 0.5 billion. During the second and the third periods of

¹In the flow-of-funds accounts, reserves represent the only liabilities against life insurance companies.

²"Life insurance has produced the largest accumulation of personal saving in this country and has thus provided the greatest reservoir of capital funds to aid in financing the growth of the American economy." Life Insurance Association of America for the Commission on Money and Credit, Life Insurance Companies as Financial Institutions, (Englewood Cliffs, N.J.: Prentice-Hall, 1962), page 1.

³In the early years of a level-premium policy, the premium paid for the policy is more than the death claims. In the later years of the policy the premium paid is less than the amount needed to meet death claims. Over the life of a policy the insured age and mortality rises. Therefore, when a level-premium plan is issued the law requires that a fund or reserve must be accumulated in the early years to meet the rising level of claims expected during the later years of such policies. These reserves form the basis of personal savings through life insurance.

⁴For a brief discussion of insurance reserves and their importance for capital formation see E.W. Boehmler, ed., Financial Institutions, (Homewood, Ill.: Richard D. Irwin, 1956), pages 366-368.

Billions of Dollars

monetary ease this flow of funds increased \$ 0.9 billion and \$ 0.1 billion respectively. However, it decreased \$ 1.7 billion during the first period of monetary restraint. The flow of funds just before and at the end of the second period of restraint was the same, \$ 3.7 billion. During the first two neutral money periods (when the Federal Reserve's nonintervention tended to produce increasing restrictiveness¹) the flow of funds decreased.

On the other hand, the flow of funds into life insurance companies associated with pension fund reserves responded in a manner that was not consistent with the aims of general monetary policy. Therefore, the response of this flow of funds partially offset the response of the substantially larger flow of funds associated with life insurance reserves discussed above. The flow of funds associated with pension fund reserves reached its two peaks of the eleven years 1952-1962 during two periods of monetary restraint.² It increased only very slightly during the first and the third periods of monetary ease. This flow of funds actually decreased during the second period of monetary ease.³

¹See footnote 2, page 77.

²The second peak may in part have been the result of the passage of the Life Insurance Income Tax Act of 1959. See footnote 1, page 145.

³The evidence in Chart 19 indicates that saving through life insurance reserves has grown somewhat more than savings through

The net acquisition of various financial assets by life insurance companies is shown in Chart 20, "Life Insurance Companies - Net Acquisition of Financial Assets". The only flows of funds used to acquire financial assets that respond to monetary policy in a fashion similar to life insurance reserves were the flows into mortgages and, to a considerably lesser extent, the flow into U.S. Government securities.

The flows of funds into mortgages, that is the flow into 1- to 4-family mortgages and the flow into other mortgages, increased during the three periods of monetary ease. These flows of funds decreased during the first period of monetary restraint. In fact during this period of monetary restraint both the sum of the flows of funds into mortgages and the flow into life insurance reserves decreased \$ 1.7 billion. However, during the second period of monetary restraint the flows of funds into mortgages increased, contrary to the aims of

pension fund reserves during the years 1952-1962. The flow of funds for life insurance reserves is above the flow of funds for pension fund reserves in every quarter but one (i. e. the fourth quarter of 1957). From the first quarter (i. e. first quarter of 1952) to the last quarter (i. e. fourth quarter of 1962) of these years the flow of funds into life insurance reserves increased from \$ 3.4 billion to \$ 4.1 billion or \$ 0.7 billion. During the same time the flow of funds into pension fund reserves increased from \$ 0.1 billion to \$ 0.5 billion or only \$ 0.4 billion.

This evidence suggesting that savings through life insurance reserves was larger than savings through pension fund reserves does not agree with Friend's conclusion about postwar growth. He states, "...for life insurance companies the over-all growth largely reflected changes in saving through insured pension plans. " (page 62)

general monetary policy. During the first period of monetary neutrality (when the Federal Reserve's nonintervention tended to produce increasing restrictiveness¹) these flows of funds decreased.² These responses to monetary policy were sluggish, sometimes requiring more than a year to change in the appropriate direction.

There was a substantial liquidation of U.S. Government securities by life insurance companies during the years 1952-1962.³

¹See footnote 2, page 77.

²This study concludes that general monetary policy does have the desired effect on the behavior of the flows of funds from life insurance companies into building activity by way of mortgages.

There is not general agreement among other studies about this behavior. Here are contradictory statements taken from two recent studies of the postwar period.

"The variations in mortgage activity followed the pattern of housing starts, which during this period generally followed a counter cyclical trend." Life Insurance Association of America, page 46.

"Neither savings institutions nor life insurance companies... which have been the important factors in the mortgage market, have displayed any noteworthy consistent cyclical variability in their purchases, but tight money in the 1955-57 period did seem to be reflected in a progressive curtailment of residential mortgage purchases..." Friend, page 74.

The first quotation and the modifying statement about the tight money period contained in the second quotation support the conclusion of this study.

³\$ 11.0 billion total holdings at the beginning of 1952 and only \$ 6.3 billion at the end of 1962. Source: Table 12, Flow of Funds Accounts, 1945-62.

Even though the flow of funds reflected liquidation (i. e. the flow of funds was negative) of U. S. Government securities throughout most of these years, it did appear to behave in a fashion compatible with the aims of general monetary policy.¹ This flow of funds increased during each of the three periods of monetary ease and decreased during both periods of monetary restraint.² Further, the response to monetary policy was quick.³ This flow of funds changed in the appropriate direction in the first quarter of both periods of monetary restraint and in the third period of monetary ease.

In Chapters III and IV, about the behavior of commercial

¹This observation would appear to contradict the following observation made by Irwin Friend. "There is, however, no evidence of any sizable cyclical influence on the amount of life insurance company sales of U. S. Governments." (page 63)

²Life insurance companies explain this type of behavior by pointing out that in times of monetary restraint, yields from U.S. Government securities rise. Associated with this yield rise is a loss in market value of those U.S. Government securities already owned by the life insurance companies. Therefore: "In summary, the willingness and ability of life insurance companies to make new investments through the sale of existing assets is directly curtailed by moves of the monetary authorities toward a more restrictive policy. Although there is strong incentive for life companies to shift into higher-yielding securities, the necessity of taking a capital loss with an adverse effect upon surplus reduces the willingness to liquidate existing holdings of lower-yielding securities. Thus, monetary policy has a direct impact upon the total volume of new lending by life insurance companies." Life Insurance Association of America, page 213.

³The meaning of "quickly responsive" is explained in the discussion of step three (determination of the timing of responses) in the analysis of flow-of-funds data contained in Chapter I, see page 34.

banks and of savings institutions respectively, it was observed that both banks and savings institutions used U. S. Government securities as secondary reserves or liquidity reservoirs. The evidence shown in Chart 20 does not indicate that life insurance companies make such a use of government securities, at least not to as noticeable an extent.¹ That is not to say life insurance companies do not use U. S. Government securities as liquidity reservoirs. During World War II life insurance companies accumulated vast amounts of U. S. Government securities,² the liquidation of which served as a substantial source of funds throughout the years 1952-1962. However, they have not used them in the same way as commercial banks and savings institutions during these eleven years. Life insurance companies did not accumulate U. S. Government securities in any significant amounts during 1952-1962. On the other hand both commercial banks and savings institutions did accumulate substantial amounts of U. S. Government securities on various occasions

¹Life insurance companies, themselves, state that they do not use U. S. Government securities as liquidity reservoirs.

"It is sometimes argued that life companies have reduced their holdings of Governments to above the minimum consistent with liquidity needs, and that in any event they will continue to hold about the present amount of long-term Governments in their portfolios. This overlooks the fact, however, that with the great cash flow provided to life companies from net cash income in excess of disbursements, mortgage amortization, sinking fund payments, and other sources of cash, the life companies today have little, if any, need for Government securities." Life Insurance Association of America.

²At the end of 1946 life insurance companies held \$ 21.6 billion worth of U. S. Government securities. Table 12, Flow of Funds Accounts, 1945-62.

during these eleven years.

It is difficult to discern just what is the typical response of the flow of funds into corporate bonds during particular periods of monetary policy.¹ This behavior is shown on Chart 20 and also on Chart 21, "Corporate and Foreign Bonds Held by Insurance Sector". This flow of funds was large, usually above \$ 2 billion. In fact, life insurance companies are the largest investors in corporate bonds.² Up through 1957, this flow of funds responded in a fashion that was contrary to the aims of general monetary policy.³ It decreased

¹In this instance, this study agrees with Friend's generalization about insurance companies' investment behavior. He said, "no strong cyclical influences are evident in the rate of investment by insurance organizations in any of the major types of credit or equity market instruments." (page 66)

²Life Insurance Association of America, page 192.

³Notice on Chart 20 that up until 1958, when the flow of funds into corporate bonds was increasing, the flow of funds into 1- to 4-family mortgages was decreasing and vice-versa. Life insurance companies say that this behavior reflects "...the great sensitivity which life companies have to changing differentials in investment yields." Ibid., page 192.

They go on to say that, "...there can be no question that monetary policy has a powerful impact on the direction of flow of life insurance company investments as between corporate bonds and residential mortgages..." (pages 210-211)

However, the evidence on Chart 20 for the period from 1958 through 1962 does raise some questions! Perhaps if VA-FHA mortgages with their fixed yields were plotted, instead of all 1- to 4-family mortgages, this inverse relationship would be evident. Flow-of-funds data used by this study was not detailed enough to test this possibility.

substantially during the first period of monetary ease and increased during the first period of monetary restraint. On the other hand, from 1958 through 1962 this flow of funds responded in a fashion that was compatible with the aims of general monetary policy. It increased during the second and third periods of monetary ease and decreased during the second period of monetary restraint.

It is difficult to conclude that any of the other flows of funds into specific types of financial assets responded in a characteristic direction to particular types of monetary policy.^{1, 2}

It is interesting to notice that the flow of funds into corporate stock declined to zero in 1955 when the 85 percent intercorporate dividend credit was denied to life insurance companies. In 1959, when this credit was again restored to life insurance companies, this flow of funds increased and remained positive. Apparently, without the intercorporate dividend credit, yields from corporate stocks were not high enough to stimulate life insurance companies to purchase them.

¹Other specific types of financial assets include state and local obligations, corporate stock, and other loans. The flows of funds into these assets are shown in Chart 20. The flows of funds into specific financial assets detailed by financial institutions are shown in various charts contained in Appendix B.

²See footnote 1, page 154.

This in turn implies that corporate stocks are bought by life insurance companies for their income yield rather than their capital gains potential. Otherwise a decrease in stock yields to life insurance companies which did not affect the capital gains potential of the stocks would probably not have resulted in essentially no stock purchases by life insurance companies.

The timing of life insurance companies' responses associated with the impact of general monetary policy was not quick. The one exception to this statement was the quick response reflected in the flow of funds into U.S. Government securities. With some of the flows of funds, the lack of clear indication as to just what was a typical response associated with particular monetary policies prevented any observations about timing.¹ That is, timing determinations are out of the question if no responses are determined.

¹The life insurance companies themselves believe their responses to monetary policy were quite "prompt". Of course, they would like this to be a general impression so that regulation of or control over their industry is not increased.

For their arguments about and evidences of their "prompt" responses see Chapter 8, "Influence of Federal Government Policy Measures on Life Insurance Company Investments," Life Insurance Association of America, pages 191-230.

NONINSURED PENSION PLANS

Chart 22, "Noninsured Pension Plans - Pension Fund Reserves," and Chart 23, "Noninsured Pension Plans - Net Acquisition of Financial Assets," show the behavior of the flow of funds into the major liability and assets of noninsured pension plans.

The substantial growth of this type of financial intermediary is indicated in Chart 22 by the growth in the flow of funds into pension fund reserves.^{1, 2} In the first quarter of 1952 this flow of funds amounted to \$ 1.3 billion. By the fourth quarter of 1962 it had climbed to \$ 3.7 billion. Monetary policy did not affect the flow of funds into noninsured pension plans.³

¹In the flow-of-funds accounts pension fund reserves are the only liability of noninsured pension plans.

²For a comprehensive discussion of the growth of noninsured pension plans, see Victor L. Andrews, "Noninsured Corporate and State and Local Government Retirement Funds in the Financial Structure," in Irwin Friend, et al. for the Commission on Money and Credit, particularly see pages 388-403.

³Andrews states, "Flows through corporate funds exhibit cyclical sensitivity." (page 398)

He presents charts showing both gross and net inflows of funds over time. He shows only one plot per year for each of these two flows. He then points out that the slope of the lines in his charts representing flow of funds over time decrease in 1954 and again in 1958.

This slight slowing down during the troughs of business cycles is also evident in the quarterly plots shown in Chart 22. Growth slowed in 1954-55, in 1958, and in the latter part of 1960 continuing through 1961.

However, monetary policy, other than by eventually aiding the business cycle to move out of its trough, does not appear to affect this flow of funds.

Billions of Dollars

1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3
1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3
1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3	1.4	1.2	1.3

NONINSURED PENSION PLANS
 PENSION FUND RESERVES
 (seasonally adjusted annual rates)

U.S. Government Securities
Corporate Bonds
Corporate Stock

-1

NONINSURED PENSION PLANS
NET ACQUISITION OF FINANCIAL ASSETS
(seasonally adjusted annual rates)

Billions of Dollars

During the first period of monetary restraint the flow of funds from noninsured pension plans used to acquire corporate bonds increased to its eleven year peak. During the same period noninsured pension plans liquidated U.S. Government securities. Apparently U.S. Government securities serve as a liquidity reservoir in a fashion discussed earlier in connection with savings institutions.^{1, 2} This ability to increase substantially the flow of funds to corporations (or to those holding corporate bonds) during a period of monetary restraint represents a weakness in the Federal Reserve's ability to comprehensively control credit through the use of general monetary policy.

There was no clear evidence of characteristic responses during particular periods of monetary policy associated with any of the

¹See Chapter IV, page 119.

²In discussing this particular behavior during this period, Andrews suggests that this divergence (i.e. acquisition of corporate bonds and liquidation of U.S. Government securities) reflected pension fund response to changes in relative yields favoring corporate bonds.

For example, he said, "The incentive for this action came from a divergence of yields on high grade corporates and the fixed yields of nonmarketable Governments. Corporate bond yields, for example, rose steadily in monthly averages from 3.08 percent in February 1956 to 4.12 percent in September 1957, sharply enlarging their differential over the yield on fixed rate nonmarketables. Though corporate bond yields declined somewhat thereafter, they remained above that on non-marketable governments, and, hence, the run-off continued." Andrews in Friend, et al. for the CMC, page 473.

three flows of funds used to acquire financial assets.¹

The flow of funds used to acquire corporate stock increased from \$ 0.4 billion at the beginning to \$ 1.9 billion at the end of the eleven years. Corporate stock replaced corporate bonds as the main financial asset acquired by noninsured pension plans during this eleven years.² The main difference from a utilization of funds point of view between insured and noninsured pension plans involves the noninsured

¹V. L. Andrews does not address any effort directly to the impact of monetary policy in the course of his study. His study, however, does leave the impression that noninsured pension funds are outside the control of general monetary policy. The following quotations give the gist of his arguments around this point.

"In sum, with respect to loanable funds explicitly, it seems that corporate pension funds have little ability... to add cyclically to supplies through procyclical transactions in Governments affecting income velocity." *Ibid.*, page 476.

"In sum, then, corporate pension and profit-sharing funds are almost unassailable from without, and, thus, it is difficult to imagine circumstances under which they might transmit liquidity demands..." (page 478)

"Compared with the turbulence in net fund flows through the deposit institutions, inflows to pension funds have been models of stability." (page 479)

"The nondeposit character of pension funds largely removes them from the arena of dispute over the effects of intermediaries upon interest rates through their competition for fund inflows and upon the proliferation of claims in the economic system. It should be clear from the foregoing material in this chapter that there is little in pension funds to stir controversy in this connection." (page 480)

"...the pension funds are close indeed to the picture of a passive channel of loanable funds originating solely as saving out of current income." (page 481)

²This shift is noted and discussed by Andrews in Part II of his study (*Ibid.*, pages 404-453). He makes the following observation, "Since 1951 the outstanding feature in investing policy has been a shift from bonds to stocks." (page 406)

pension plans' ability to invest heavily in corporate stocks.¹ If it was desirable to shift pension funds' portfolios towards corporate stock - and it probably was since corporate stock performed very well during 1952-1962 —, the noninsured pension plans were able to (and apparently did) take advantage of this opportunity.

OTHER INSURANCE COMPANIES

Other insurance companies include fire and casualty companies, fraternal orders, and nonprofit medical plans.

The behavior of the flow of funds into nonlife policy claims, the major liabilities against other insurance companies, is shown in Chart 24, "Other Insurance Companies - Nonlife Policy Claims". This flow of funds decreased during periods of monetary ease and increased during periods of monetary restraint. It decreased \$ 0.3 billion during the first and second periods of monetary ease. It decreased \$ 0.7 billion during the third period of monetary ease. On the other hand, this flow of funds increased \$ 0.4 billion and \$ 0.5 billion during the first and second periods of monetary restraint

¹V. L. Andrews discusses this point after presenting the following statement, "Proposals by the life companies to segregate assets are, in essence, a concession that the ability of noninsured pension funds to invest in common stock and thereby lower employer costs has been a decisive weapon." Ibid., page 511.

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MADE IN U.S.A.

A horizontal number line is shown with a grid background. The line has tick marks at every integer from 0 to 10. The numbers 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 are written below the line. The number 4 is circled.

OTHER INSURANCE COMPANIES
NONLIFE POLICY CLAIMS

(seasonally adjusted annual rates)

respectively.

In contrast to the flow of funds into nonlife policy claims, the flow of funds into financial investment in other insurance companies increased during periods of ease and decreased during periods of restraint. The behavior of the flow of funds is shown in Chart 25, "Other Insurance Companies - Net Financial Investment".

Net financial investment of other insurance companies (i. e. retained earnings plus newly paid in capital) added to net funds set aside to meet nonlife policy claims as well as for life insurance reserves of fraternal orders were the sources of funds used for the net acquisition of financial assets.¹ The behavior of the flow of funds used to acquire financial assets is shown in Chart 26, "Other Insurance Companies - Net Acquisition of Financial Assets - Total". The contrasting behavior of the two major net sources of funds for the net acquisition of financial assets did not offset each other in any characteristic fashion during particular monetary policy periods. The flow of funds used to acquire financial assets increased during one period of monetary restraint and decreased during the other. It decreased during the first and third periods of monetary ease, but in-

¹The flow of funds into life insurance reserves of fraternal orders never exceeded \$ 0.1 billion and therefore is not shown on Chart 24.

Billions of Dollars

creased sharply during the second period of monetary ease.

The flow of funds used by other insurance companies to acquire specific types of financial assets is shown in Chart 27, "Other Insurance Companies - Net Acquisition of Financial Assets". The flow of funds used to acquire state and local obligations increased considerably from \$ 0.5 billion in the initial quarter to \$ 1.4 billion in the final quarter of the eleven years. The behavior of the flow of funds into U.S. Government securities - sometimes reflecting net acquisitions, sometimes reflecting net liquidations - indicated that they were being used as liquidity reservoirs.¹ If other life insurance

¹This fits in with statements by others. Two examples follow:

"Liquidity of investment is a cardinal factor because of the danger of a catastrophe." Thomas G. Gies, "Portfolio Regulations and Policies of Financial Intermediaries," in Horvitz, et al. for the Commission on Money and Credit, page 195.

"It must be stressed that liquidity in investment holdings of property and casualty insurance companies is a cardinal factor in portfolio management." American Mutual Insurance Alliance, et al. for the Commission on Money and Credit, Property and Casualty Insurance Companies: Their Role As Financial Intermediaries, (Englewood Cliffs, N.J.: Prentice-Hall, 1962), page 54.

The following comment about this source is perhaps best made at this point. In soliciting this monograph from the American Mutual Insurance Alliance, the Association of Casualty and Surety Companies, and the National Board of Fire Underwriters, the Commission on Money and Credit indicated the desirability of having the monograph provide information on six topics. One of these topics was, "The effects of monetary-debt management policy upon the industry and the role of property and casualty insurance companies in

— U.S. Government Securities
 - - - State and Local Obligations
 Corporate Bonds
 Corporate Stock

Year	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
U.S. Government Securities	12	3	4	1	2	3	4	1	2	3	4
State and Local Obligations	1	2	3	4	1	2	3	4	1	2	3
Corporate Bonds	1	2	3	4	1	2	3	4	1	2	3
Corporate Stock	1	2	3	4	1	2	3	4	1	2	3

OTHER INSURANCE COMPANIES
 NET ACQUISITION OF FINANCIAL ASSETS
 (seasonally adjusted annual rates)

companies considered U.S. Government securities mainly as an investment alternative rather than a liquidity reservoir, it would be difficult to explain why they liquidated U.S. Government securities throughout the first period of monetary restraint when yields from U.S. Government securities were high.¹

None of the flows of funds into these specific types of assets reflected characteristic responses associated with particular monetary policies.²

transmitting these policies throughout the economy."

Unfortunately I perused this monograph and was unable to find any evidence that this topic was even considered by those who submitted it.

²See Chart 12 in Chapter IV, page 121, for the interest rates on U.S. Government securities.

³With these other insurance companies, at least this study agrees with Friend's observation. "No strong cyclical influences are evident in the rates of investment by insurance organizations in any of the major types of credit or equity market instruments." (page 66)

CHAPTER VI

FINANCE COMPANIES

The finance companies subsector studied in this chapter includes sales finance companies, consumer finance companies, factors and other commercial lenders. The two aggregate flows of funds - one representing sources of funds (i. e. net increase in liabilities), the other the uses of these funds (i. e. net acquisitions of financial assets) - through finance companies are shown in Chart 28, "Finance Companies". The flows of funds through finance companies increased so substantially during the eleven years that the total financial assets of the subsector increased from \$ 9.5 billion to \$ 31.9 billion.¹

Finance companies experienced their highest levels of activity during periods of monetary restraint and their lowest levels of activity during periods of monetary ease. During part of each period of monetary ease the flow-of-funds data indicate actual decreases in finance companies' holdings of financial assets. On the other hand,

¹Source: Table 14, "Finance N.E.C. Subsectors," Flow of Funds Accounts, 1945-62, pages 21 and 22.

the peak flow of funds used to acquire financial assets, amounting to \$ 5.4 billion, occurred near the end of a period of monetary restraint (i. e. the first quarter of 1960). This flow of funds decreased during each of the three periods of monetary ease. During the first period of monetary restraint, this flow of funds did decrease, but during the last two-thirds of the period it increased. During the second period of monetary restraint this flow of funds used to acquire financial assets climbed from its eleven-year low to its eleven-year high, an increase amounting to more than \$ 6 billion.

Net financial investment in finance companies is also shown in Chart 28 as the difference between net acquisition of financial assets and net increase in liabilities. Throughout most of the eleven years, 1952-1962, this was a positive net rate indicating an increasing investment in finance companies. That is the capital accounts of finance companies increased via retained earnings or via new paid-in capital by owners. However, during part of the first and part of the third periods of monetary ease there was financial disinvestment in finance companies. That is dividends and losses exceeded retained earnings and new investment causing decreases in capital accounts. This may be taken as another indication that finance companies appeared to thrive during periods of monetary restraint and to grow at a much slower rate during periods of monetary ease.¹

¹As long as the flow of funds line in Chart 28 is above the

USES OF FUNDS

Chart 29, "Finance Companies - Net Acquisition of Financial Assets," shows flows of funds detailed by the three main types of credit extended by finance companies.¹

The flow of funds into 1- to 4-family mortgages increased during each of the three periods of monetary ease and decreased during both periods of monetary restraint. In addition this flow of funds decreased during the first two neutral monetary periods when the Federal Reserve's nonintervention tended to produce increasing restrictiveness.² Although the response to a particular monetary policy was not always quick, it was evident within three-quarters of the particular monetary policy period in every instance.³ This flow of funds into 1- to 4-family mortgages, then, responded in a manner compatible with the aims of general monetary policy.⁴ However, the response

zero line finance companies were actually growing. Although the flow of funds fell, finance companies were growing during most of the first and the third periods of monetary ease. During the second period of monetary ease finance companies actually decreased in size. See the discussion of flow-of-funds data in the section titled "Flow of Funds Presentation" in Chapter I, pages 27-31.

¹Chart 29 shows finance companies behavior detailed by financial assets. Appendix B contains several charts which show the behavior of particular financial assets detailed by financial institutions.

²See footnote 2, page 77.

³See page 33 in Chapter I for the definition of quickly responsive.

⁴The behavior of this flow of funds appears to substantiate

was not enough to offset the behavior of consumer credit and other loans extended by finance companies.

The flow of funds from finance companies into other loans (which are to businesses) and into consumer credit did not respond in a manner that was compatible with the aims of general monetary policy. Both of these flows of funds peaked during periods of monetary re-

a rather generally held opinion about mortgage companies' activity. (Mortgage companies are the finance companies in this field.)

The following quotation indicates the nature of this generally held opinion.

"In spite of the clear association between the fixed interest rate policy and the other disruptive circumstances that have been shown to have direct bearing upon the continuity of insured and guaranteed lending activity, the violence of its movements has often been ascribed, especially by persons in the building industry, to the actions of the monetary authorities. It is assumed either that home building activity is peculiarly vulnerable to the impact of monetary policy or that, in some way, home building is at times especially singled out for restraint by this means.

"It is, of course, not to be denied that mortgage credit is affected by Federal Reserve action, both in its interim and long-term aspects. Of the two, the impact is more definite on the former than the latter. It has been explained that mortgage companies may endeavor to maintain an inventory of mortgages for future placement with savings institutions, that such an inventory is almost invariably financed with bank credit, and that the success of the operation depends upon the availability of credit for this purpose and a spread between the interest rate on the mortgages in inventory and that on the bank loans." Miles L. Colean, Mortgage Bankers Association of America for the Commission on Money and Credit, Mortgage Companies: Their Place in the Financial Structure, (Englewood Cliffs, N.J.: Prentice-Hall, 1962), pages 28-29.

This discussion goes on to indicate that conventional mortgages are not so susceptible to monetary policy.

"The relative stability which has been observed in conventional mortgage lending activity throughout all phases of the monetary cycle since 1951 offers strong evidence that home financing has not been uniquely affected by policies directed toward credit restraint." (page 30)

The flow-of-funds data used in this study are not sufficiently detailed to test this assertion.

strait and fell off during periods of monetary ease.

In extending other loans and consumer credit, finance companies tended to accomodate their customers in spite of monetary policy.¹ These customers needed short-term financing during cyclical peaks and were able to reduce this debt during cyclical troughs.²

¹Finance companies behavior with respect to other loans and consumer credit is quite similar to commercial banks' behavior with respect to bank loans n. e. c. (short- and intermediate-term loans to business usually associated with commercial banking) and consumer credit. See Chapter III, "Commercial Banks," pages 93-99.

²Friend has made a similar observation: "Changes in consumer credit have been, as might be expected, highly cyclical in character, reflecting fluctuations in installment credit extended by commercial banks and finance companies." Friend, page 74.

He goes on to conclude about these two forms of credit (i. e. to business and to consumers) that they "...almost certainly reflected changes on the demand side..." (page 75)

However, a monograph prepared by the National Consumer Finance Association (for the Commission on Money and Credit), titled The Consumer Finance Industry, and concentrating on consumer finance companies, attempts to convince the reader that consumer finance companies behave in a fashion that is not only compatible with but actually furthers the aims of general monetary policy. The following quotations are merely some of the examples.

"...it will be shown that the loans of consumer finance companies fluctuate over a much smaller range than those of other types of credit and that the policies and practices of those companies can help reduce the severity of economic fluctuations." (page 2)

"The reasons given for these actions show that consumer finance companies...are thus particularly vulnerable to restrictive action when banks are under pressure." (pages 96-97)

"Installment credit lenders respond to money market conditions and tend to screen loans more carefully and to ration credit when money conditions are tight. Conditions in the money market depend upon the monetary authorities..." (page 154)

The evidence on Chart 29 contradicts the whole tenor of the above quoted monograph. It should be pointed out again that consumer finance companies are only part of the finance companies sub-

Inspection of Chart 28 shows that these categories of loans moved with the business cycle.¹ These loans, with the exception of consumer credit in 1955, peaked just before and during cyclical peaks such as 1957, 1959-early 1960, and 1962.² (The 1955 peak in flow of funds into consumer credit did not coincide with a peak in the general business

sector. Perhaps the very proper behavior of consumer finance companies was completely overshadowed by the dastardly behavior of sales finance companies. Flow of funds data is not sufficiently detailed to test this possibility.

To be fair, this author did find two statements in this monograph which suggested demand accomodating behavior, one in the text and one in a footnote.

"Although the demand for goods and services is probably the dominant force in changes in extensions of credit, changes in the credit market also affect the level of credit extensions." (page 134)

"Automobile paper... has been characterized by periods of very rapid growth, alternating with periods of sidewise movement and, in one instance, a marked decline. The periods of sidewise movement and the more recent period of decline have coincided with periods of monetary ease whereas the rapid increases have occurred during periods of monetary tightness. This is the result of the fact that rapid increases in demand for automobiles have occurred during prosperity periods whereas the periods of monetary ease have coincided with those periods in which a reduced sale of automobiles occurred." (page 90, footnote 4)

¹The following are the business cycle peaks and troughs occurring during the eleven years 1952-1962:

Peaks	Troughs
July, 1953	August, 1954
July, 1957	April, 1958
May, 1960	February, 1961

Source: Lewis, page 4; National Bureau of Economic Research (Forty-Fifth Annual Report), page 53.

²The peak of the cycle moving through 1962 occurs later, but this is not within the years included in this study.

cycle, but it did reflect a peak in automobile purchases.¹⁾ And these loans were retired on balance during business cycle troughs such as early 1954, 1958, and 1960-early 1961. Thus the responses of these loans suggests accomodation to demand.

SOURCES OF FUNDS

Chart 30, "Finance Companies - Net Increases in Liabilities," shows the flow-of-funds behavior of the major sources of funds for finance companies.²

During at least part of all three periods of monetary ease

¹The peak flow of funds into consumer credit during 1955, two years before the business cycle peak, reflects special circumstances associated with liberalized terms on new car financing coupled with record sales of automobiles. There is a comprehensive study of the 1955 consumer credit boom to finance automobiles included in the Federal Reserve's study of consumer installment credit. See Board of Governors of the Federal Reserve System, Consumer Instalment Credit: Part IV Financing New Car Purchases - A National Survey for 1954-55, (Washington: Board of Governors of the Federal Reserve System, 1957).

²The following brief study explores so-called "new trends in the sources of funds for lending to consumers" some of which were also determined in my study and are discussed in the above text. John M. Chapman and Frederick W. Jones, "Finance Companies: How and Where They Obtain Their Funds," (Paper, Graduate School of Business, Columbia University, 1959).

The study is interesting, covering several significant points, however it is based on a rather small sample, namely thirty sales finance companies (including the five largest) and twenty consumer finance companies (including the five largest).

there was a net reduction in debt owed by finance companies to the banks. During the two peaks in finance company activity, namely during 1955 and during the second period of monetary restraint, the banks increased their flows of funds to finance companies by several billion dollars.¹ For example, during the nine months from the second quarter of 1958 to the first quarter of 1959 the Federal Reserve initiated a period of monetary restraint and the banks increased the flow of funds to finance companies by \$ 4.3 billion. Thus commercial banks have served as a large source of funds for consumers, both directly (i. e. bank consumer credit) and indirectly (i. e. via bank loans n. e. c. to finance companies and then to consumer credit) during periods of monetary restraint.^{2,3,4} The same was true for other

¹Irwin Friend makes the following similar observation about sources of funds to finance companies, "...the bank loans and corporate bonds - particularly money raised by sales finance companies to finance consumer credit - have shown substantial cyclical variability as sources of funds, with the amounts largest in years of booming consumer durables and new housing." (page 63)

²See Chapter III, "Commercial Banks," pages 74-107 for a discussion of consumer credit extended by banks and bank loans n. e. c.

³Commercial banks as an indirect source of consumer credit has been noted by the bankers themselves. For example,

"Commercial banks also exercise an important indirect role in the extension of consumer credit through their lending to sales finance and consumer finance companies. The latter are dependent on bank loans for a significant portion of their financing." American Bankers Association for the CMC, page 106.

⁴Warren Smith discusses this indirect route, that is the relationship between commercial banks and finance companies during

loans extended by finance companies and financed in part by finance companies' loans from commercial banks.¹

Another major source of funds for finance companies resulted from issuing corporate bonds. The flow of funds to finance companies from this source also decreased during periods of monetary ease and increased during periods of monetary restraint.²

Flows of funds to finance companies raised via open market paper or other loans responded during particular monetary policy

monetary restraint, in the following article: Smith, American Economic Review, XLVI, No. 4 (1956). For example:

"Shifts in commercial bank assets may work through other financial institutions to mobilize financial support for increased spending. For example, commercial banks may use the proceeds of security sales to buy open-market commercial paper from sales finance companies... These latter institutions then lend the proceeds to purchasers of durable goods..." (page 602)

¹Bankers seem to recognize this and express some disfavor with it. For example, "As might be expected, finance companies are not favorites of commercial banks because they tend to be heaviest borrowers when other loan demands are strong and they provide little other business for banks." American Bankers Association for the CMC, page 106. However, banks do lend a considerable amount of money to finance companies.

²These observations about bank loans and corporate bonds as sources of funds for finance companies are consistent with those of Irwin Friend.

"The finance companies subgroup...has been financed mainly by three types of capital markets instruments, viz., corporate bonds, bank loans, and open-market paper. Of these, the bank loans and corporate bonds - particularly money raised by sales finance companies to finance consumer credit - have shown substantial cyclical variability as sources of funds, with the amounts largest in years of booming consumer durables and new housing." Friend, page 63.

periods in a manner similar to the other sources of funds discussed above. In addition the flow-of-funds data indicate that open market paper was an increasingly important source of funds for finance companies over the eleven years. The flow of funds through open market paper peaked at \$ 0.8 billion (in the second quarter of 1952) during the first three years. It then reached a new high of \$ 0.9 billion in the second quarter of 1955, another new high of \$ 1.4 billion in the fourth quarter of 1957, and then touched this high again in the second quarter of 1959. The rate moved to still another new high, \$ 2.3 billion, in the first quarter of 1960 and then reached its eleven-year high of \$ 2.7 billion in the third quarter of 1962. This outside source of funds for finance companies may be slowly replacing the other two outside sources, bank loans and corporate bonds, as the main source of funds. As individual finance companies become larger, they become less dependent on commercial banks for funds and better able to raise funds in the open market. The increasingly sophisticated finance company officers apparently now favor tapping the open market via open market paper rather than via corporate bonds.

FEDERAL RESERVE'S CONSUMER INSTALLMENT CREDIT STUDY

The findings of this chapter in conjunction with Chapter III indicate that a major weakness in credit control via general monetary

policy was associated with the extension of consumer credit particularly, but also with the extension of other loans. The demand for consumer credit and other loans moved with the business cycle rather than in a manner reflecting compatibility with the aims of general monetary policy. That is, customers demanded short-term financing during cyclical peaks and were able to reduce such debt during cyclical troughs. Finance companies, aided and abetted by commercial banks, accommodated these customers in spite of monetary policy. In other words, these two types of institutions (i. e. finance companies and commercial banks) were increasing their extensions of other loans and consumer credit when the Federal Reserve wanted to restrain such credit and vice-versa. Thus consumer credit, finance companies, and commercial banks (with regard to their extension of consumer credit and their loans to finance companies) are of particular interest because they are all involved in a major weakness in the Federal Reserve's ability to control credit via general monetary policy.

The Federal Reserve published a major study in 1957 which explores essentially the same area as that described above as "of particular interest". This six volume study is titled Consumer Instalment Credit.¹ This study includes major efforts by the Federal Reserve

¹Consumer Instalment Credit: Part I Growth and Import (Volumes 1 and 2); Part II Conference on Regulation (Volumes 1 and 2); Part III Views on Regulation; Part IV Financing New Car Purchases; (Washington: Board of Governors of the Federal Reserve System, 1957).

(Part I); the National Bureau of Economic Research, academic and other invited scholars (Part II); consumer credit industry spokesmen and other interested parties (Part III); and the National Analysts, Inc. of Philadelphia (Part IV). The study is so comprehensive that many diverse (and sometimes contradictory) research results, opinions and proposals are included.¹ The pertinent Federal Reserve conclusions (essentially drawn from Part I which is the part actually prepared by the staff of the Federal Reserve) are reviewed here.²

The Federal Reserve's discussions about the impact of monetary policy on consumer credit attempt to persuade the reader

¹The Federal Reserve study is not included in Chapter X, "Selected Proposals for Monetary Reform," for two reasons. First, although there are many proposals concerning consumer credit and monetary control contained in the study (specifically in Parts II and III), the Federal Reserve itself chooses to make no definite recommendations. "An investigation that has the terms of reference of the present study, no matter how comprehensive and searching its plan, should not make definite recommendations." Ibid., Part I, Volume I, page 386. Second, the study is particularly relevant in a supplemental sense to the findings of Chapter III and this chapter which deal with the extension of consumer credit. If the interested reader is convinced by my study that the extension of consumer credit is a major problem area for the Federal Reserve then I urge him to peruse the Consumer Instalment Credit study.

²In a study of the impact of monetary policy such as this one, installment credit is the pertinent part of consumer credit. This fact is brought out in the Consumer Instalment Credit study. For example:

"Since instalment credit is by far the most volatile part of the aggregate volume of consumer credit outstanding, it is generally assumed that regulation can and should relate primarily to that portion commonly identified as instalment sales credit, or even more narrowly, to instalment sales of major durable goods, inasmuch as these represent the great bulk of such credit." (Part I, Volume I, page 305)

that general monetary policy effectively controls consumer credit despite substantial empirical evidence to the contrary.¹ The empirical findings indicate the same responses determined in Chapter III and this chapter.² The Federal Reserve uses the results of interviews

¹See particularly Chapter 13, "Consumer Instalment Credit and the Credit Market," Ibid., Part I, Volume I, pages 257-285. However, discussions throughout the entire study support the above statements in the text.

²First, the evidence agrees with the findings contained in Chapter III and in this chapter concerning the significant role of commercial banks as the ultimate sources of funds for consumer credit.

"Commercial banks supply, directly and indirectly, more than half of the total volume of funds that eventually are lodged in consumer credit contracts." Ibid., Part I, Volume I, page 265.

"...in a period of...tightening credit, when many banks are confronted with the question of selling United States Government securities in order to obtain funds with which to meet loan demands." (page 266)

"In appraising the effect of general monetary restrictiveness on a specific credit sector, such as consumer instalment credit, it is particularly important to note that banks entered the periods of credit tightening...with comparatively large holdings of liquid assets..." (page 267)

"...bank credit is the paramount source of consumer credit." Ibid., Part I, Volume 2, page 55.

"Common to all finance companies is a continuing, heavy reliance upon bank lines of credit and upon bank loans in their short-term borrowing." (page 101)

"In...tightening periods there is definite evidence of an increased reliance on bank loans as a source of short-term funds for sales finance companies." (page 121)

"The primary source of credit for a finance company is its banks." (page 102)

"The existence of lines of credit in excess of current utilization helps to protect finance companies from loan curtailment in the earlier stages of a tightening of credit conditions. During the periods reviewed, this cushioning effect was enhanced by the adjustments of finance companies' bank line totals well in advance of credit needs. These adjustments played an important part in the ability of sales

(i. e. so-called "qualitative information") and copious amounts of subjective observations to offset the empirical evidence and thereby persuade the reader that in spite of the empirical evidence throughout the study general monetary policy is effective.¹

finance companies to participate heavily in recent major waves of loan expansion." *Ibid.*, Part I, Volume I, page 271.

See section titled "Bank Lenders," *Ibid.*, pages 265-273.

Thus banks are the main source of funds either directly or indirectly for consumer credit. During monetary restraint banks sell U.S. Government securities to obtain funds that eventually serve to meet consumer credit demands.

Second, the evidence agrees with the findings contained in this chapter that consumer credit expands during monetary restraint and that such expansion is demand accomodating.

"For example, in the particular periods of restraint reviewed, the area of consumer credit was subject to especially strong demand pressures, in turn reflected in the statistical record of expansion in outstanding credit." *Ibid.*, Part I, Volume I, page 285.

"...the demand forces in the periods studied have been so strong as to dominate actual credit developments..." (page 285)

"Consumer instalment credit extensions reflect...the demand forces affecting this sector. In the periods of credit restraint reviewed...the outstanding volume of instalment credit...expanded markedly. ... This behavior necessarily reflects the strength of demand on the part of consumer..." (pages 258-259)

"Strong credit demands and the accompanying inflationary pressures have characterized most periods of important economic expansion." (page 227)

"The major influence of instalment credit has been to add fuel to booms." (page 233)

Etcetera.

¹"To identify causal influences...in the supply of consumer instalment credit, it is necessary to supplement statistical data with information concerning the environment in which individual lending decisions have been made. For purposes of this study, such knowledge has been sought primarily through extensive field interviews with a variety of representatives of consumer credit lenders and borrowing-lending intermediaries in the major segments of the area." *Ibid.*, Part I, Volume I, page 258.

"As indicated, qualitative evidence on various aspects of

the relationship between consumer credit and the credit market was drawn from a series of interviews with representatives of banks and finance companies." (page 259)

Many evidences of restraint are given, but they are based on these interviews (which, I submit, can't refute empirical facts - most of the people interviewed do not want the Federal Reserve increasing its ability to control their activity and so answers are most likely biased). Here are just two of many examples of how the interviews are used as evidences of the effectiveness of restraint.

"The evidence available indicates more significant efforts at restraint in early 1956, as a result of an intensification of credit tightness and increased uncertainty over the business outlook, with consequent concern over possible losses in both the dealer and the consumer credit areas. Dealer lines were reviewed more critically. In addition, a number of banks interviewed stated that formal or informal ceilings on consumer credit, were reimposed early in the year." (page 261)

"In interviews... bank managements generally described their efforts to restrain the expansion of loans... as being applied 'across the board' in terms of major loan categories, or denied that more restrictive measures were being applied to loan areas outside consumer credit. While such general expressions may conceal real differences in the treatment accorded particular types of credit, they are indicative both of management attitude and of the fact that restrictions of various sorts in various loan areas cannot be quantitatively compared with precision." (page 268)

And then there are the many observations which suggest that monetary policy (in spite of statistical evidence) is effective in the consumer credit field. For example, "Such information as could be gathered for the two periods of credit tightness examined for this study suggests that bank lending to finance companies is responsive in some degree to sustained changes in general credit conditions." (page 269)

"By implication, additional evidence that finance companies are not in a more favorable borrowing position in periods of credit tightness can be read..." (page 271)

The Federal Reserve does seem to realize that its descriptions of consumer credit responses to monetary policy mainly reflect its judgements. Judgements which my study (as well as the statistical evidence available to the Federal Reserve at the time it made these judgements) would not support.

"The significance of the outlined responses of major consumer instalment credit lenders - banks, sales finance and consumer or personal finance companies - and the extent to which they are attributable to changes in general credit conditions must, of necessity, be in large measure a matter of judgement." (pages 281-282)

From this examination of the credit market mechanism in the relatively limited time period under review, the evidence indicates that the influences of developments in the general credit market, including the effects of general credit and monetary policy, reach in some degree the consumer instalment credit area...

At the retail level, moreover, the demand forces in the periods studied have been so strong as to dominate actual credit developments, and consequently little of the response is visible in the statistics covering these periods.¹

However, the Federal Reserve finally concludes that the issue is still unresolved.

A more exact general conclusion cannot be drawn from this special study. Unavoidably an important question must remain unanswered. That question is whether the response of the consumer instalment credit area as a whole to changes in credit conditions, and in particular to general monetary restraint, is sufficient either in degree or in timing to facilitate a national economic policy directed toward sustained high and rising levels of activity without inflation.²

The findings in Chapter III and in this chapter suggest a negative answer to this question. The "response of the consumer instalment credit area as a whole to changes in credit conditions, and in particular to general monetary restraint" is contrary to the aims of general monetary policy. The "response" significantly offsets monetary restraint.

¹Ibid., page 285.

²Ibid.

CHAPTER VII
SECURITY BROKERS AND DEALERS
AND OPEN-END INVESTMENT COMPANIES

SECURITY BROKERS AND DEALERS

The behavior of the flow of funds through security brokers and dealers is shown in a series of three charts. These are Chart 31, "Security Brokers and Dealers - Net Acquisition of Financial Assets - Total," Chart 32, "Security Brokers and Dealers - Net Acquisition of Financial Assets - Detail," and Chart 33, "Security Brokers and Dealers - Net Increase in Liabilities".

This behavior, with the exception of security credit and customer credit balances discussed below, was not influenced by general monetary policy. However, changes in the margin requirements by the Federal Reserve did affect one of these flows of funds.¹ For example, margin requirements were increased in August and

¹See Table III, "Changes in Margin Requirements," contained in Chapter III for the detailed history of changes in the margin requirements during the eleven years 1952-1962.

U.S. Government securities

Other securities

Security credit (customer debit balances)

SECURITY BROKERS AND DEALERS
 NET ACQUISITION OF FINANCIAL ASSETS - DETAIL
 (seasonally adjusted annual rates)

1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2

Billions of Dollars

October of 1958, and one would expect the flow of funds from security brokers and dealers to customers via security credit (i. e. customer debit balances) to decrease. It did. In fact, it decreased steadily from the fourth quarter of 1958 through the third quarter of 1959. This is in contrast to security credit extended by commercial banks which increased as often as it decreased during these same four quarters.¹ When margin requirements were increased in January and April of 1955, the same type of responses occurred. That is, security credit extended by security brokers and dealers decreased during the first, second, and fourth quarters of 1955. On the other hand, security credit extended by commercial banks increased during the first, third, and fourth quarters of 1955. Security credit extended by security brokers and dealers responded more compatibly to the aims associated with changes in margin requirements than did such credit extended by commercial banks.

In addition the flow of funds into security credit (i. e. money borrowed by customers of security brokers and dealers to purchase and carry stocks in margin accounts), shown in Chart 32, increased during each period of monetary ease and decreased during both periods of monetary restraint.² Customer borrowing for stock

¹See the discussion of security credit in Chapter III, pages 103-106.

²This observation is consistent with the following one by

margin accounts, therefore, responded in a manner compatible with the aims of general monetary policy. Thus this flow of funds responded favorably to both general monetary policy and to changes in margin requirements. This is to be expected as changes in general monetary policy and in margin requirements tend to compliment each other.

The flows of funds from security brokers and dealers into U.S. Government securities and into other securities did not respond in any characteristic fashion during particular periods of monetary policy.

Customer credit balances, shown in Chart 33, decreased during periods of monetary restraint and increased during periods of monetary ease. The flow of funds was negative during most of both periods of monetary restraint indicating a net decrease in customer credit balances. On the other hand, this flow of funds was positive during most of the three periods of monetary ease. It was negative during the first two periods of neutral money (when the Federal

Irwin Friend, "Changes in security credit...have not reflected business conditions to any significant extent, but they have shown relatively large increases in postwar recession years simply because of the coincidence of favorable security market in these years." (page 74)

Reserve's nonintervention tended to produce increasing restrictiveness¹).

From the point of view of decreasing the flow of funds to security brokers and dealers this behavior appeared compatible with the aims of general monetary policy.² However, when customer credit balances decrease, it means that the customers have either bought more securities or have withdrawn their money from the stock accounts to use elsewhere. This behavior, which removes funds from idle balances, increases the velocity of money. Thus the behavior of customer credit balances may be partially offsetting the Federal Reserve's efforts to decrease purchasing power during monetary restraint. This potentially offsetting flow of funds never exceeded \$ 0.5 billion during the two periods of monetary restraint.

The other two flows of funds to security brokers and dealers did not respond in any characteristic fashion to general monetary policy.

¹See footnote 2, page 77.

²This behavior may account for the following observation about security brokers and dealers:

"There is some evidence of a moderately counter cyclical tendency in the total sources of funds utilized by this subsector." Friend, page 63.

However, as I go on to explain in the above text, I wonder if this behavior really is countercyclical.

The flow of funds from banks was exceptionally volatile.¹ In one instance it decreased \$ 8.6 billion in one quarter, after having increased from the preceding quarter, and then increased \$ 5.5 billion in the next quarter (i. e. the second, third, and fourth quarters of 1958). In another instance the flow of funds increased, then decreased \$ 4.2 billion and then increased \$ 4.8 billion (i. e. the first, second, and third quarters of 1962). The flow of funds from banks appeared to accomodate the total flow of funds used to acquire financial assets - a flow which was also exceptionally volatile.²

OPEN-END INVESTMENT COMPANIES

The flow of funds from open-end investment companies (mutual funds) used to acquire financial assets is shown in Chart 34, "Open-end Investment Companies - Net Acquisition of Financial Assets". During the first ten years, this flow of funds increased from \$ 0.5 billion (i. e. in the first quarter of 1952) to \$ 2.4 billion (i. e. in

¹Irwin Friend also made this observation. "The security brokers and dealers subgroup was characterized by considerably instability in their annual sources of funds... Most of their funds came from banks in the form of security loans, with customer credit balances the only other significant external source." (page 63)

²Compare the flow of funds from banks to security brokers and dealers shown in Chart 33 with the net rate of acquisition of financial assets shown in Chart 31.

the fourth quarter of 1961). Throughout these ten years, this flow of funds grew somewhat more rapidly during periods of monetary ease than it did during periods of monetary restraint.

During the last three quarters of 1962 the flow of funds dropped from \$ 2.5 billion to \$ 0.5 billion. This \$ 2.0 billion decrease occurred during a period of monetary ease and offset the growth in flow of funds (but not the absolute growth in assets, etc., because the flow of funds never became negative) achieved during the first ten years. The flow of funds used to acquire financial assets was \$ 0.5 billion at the beginning and at the end of the eleven years, 1952-1962.

The flows of funds used to acquire various securities held in the portfolios of open-end investment companies are shown in Chart 35, "Open-End Investment Companies - Portfolio Securities". The flow of funds used to acquire corporate stocks grew more rapidly during periods of monetary ease ~~than~~ during periods of monetary restraint with the exception of the last three quarters of 1962.¹ The flow of funds used to acquire corporate bonds and U.S. Government securities did not respond in any characteristic fashion during particular monetary policies.

¹ Apparently Irwin Friend would not agree with this statement. While discussing issues of corporate stock, he said, "Of the major sectors in the market - consumers, pension plans and open-end investment companies - only consumers exhibited any cyclical tendency in their net purchases." (page 74)

CHAPTER VIII

TIME DEPOSITS AND SAVINGS ACCOUNTS

During the years 1952-1962 the net flow of savings into time deposits and savings accounts increased from an annual rate of \$ 8.1 billion to \$ 28.6 billion or 253 percent.^{1, 2} This growth, ex-

¹The source for the flow-of-funds data used throughout this discussion is Table 20, "Time Deposits and Savings Accounts," Flow of Funds Accounts, 1945-62, pages 171-172.

²For thorough yet brief theoretical, practical and empirical discussions of time deposits at commercial banks and their relationship to time deposits at other financial institutions as well as to demand deposits, see Joseph Aschheim, "Commercial Banks and Financial Intermediaries: Fallacies and Policy Implications," Journal of Political Economy, LXVII, No. 1 (1959), pages 59-71. Also see Joseph Aschheim "Why Control Time Deposits?" Southern Economic Journal, XXVII, No. 1 (1960); and Joseph Aschheim, Techniques of Monetary Control, (Baltimore: Johns Hopkins Press, 1961), particularly part II iii, "Regulation of Time Deposits," in Chapter 7, pages 116-121, and Chapter 8, "The Control of Time Deposits," pages 135-158.

Aschheim argues that time deposits at commercial banks differ significantly from demand deposits at commercial banks. Further he points out that time deposits at commercial banks are actually quite similar to savings accounts at savings institutions. He feels that many members of society like to have banks handle both demand and time deposits, and he can see no reason why banks shouldn't handle both. However, he strongly urges that reserve requirements against time deposits and regulation of interest rates paid on time deposits held by commercial banks be done away with. He argues that anything the monetary authorities wish to do by regulation of time deposits at commercial banks can be done by controlling only the money supply (i. e. currency and demand deposits) via ~~active~~ open market operations.

pressed as a percentage of national income, remained around three percent until 1958. (See Chart 36, "Time Deposits and Savings Accounts as a Percentage of National Income".) It peaked at 6.2 percent during the first quarter of 1958. The growth rate then dropped to a low of 1.9 percent during the first quarter of 1960. From that point the growth rate increased steadily during the last three years of the period. It will be suggested presently that the major fluctuations in this growth rate are related to the difference between the interest rates in the market (e. g. government securities) and those paid by banks and other savings institutions. The generally higher level of savings of the last three years, 1960, 1961, 1962, may represent a significant increase in the propensity of savers to place their funds with commercial banks and savings institutions. This may indicate some switching within savers' portfolios as it has been noted elsewhere that the ratio of personal saving to income has been quite stable throughout this period.¹ Or more likely it reflects the increasing use being made of time accounts at commercial banks and savings institutions by corporate businesses.

The part of this flow of savings that moved into savings

¹"Over the past decade the ratio of personal saving to income has been remarkably stable, particularly on an annual basis. There is little indication of any effect of the substantial changes in interest rates or of any other institutional changes over this period on the total of personal saving." Friend, page 35.

TIME DEPOSITS AND SAVINGS ACCOUNTS AS A PERCENTAGE OF NATIONAL INCOME

accounts at savings institutions increased 160 percent. The other part which moved into time deposits and savings accounts at commercial banks increased a very substantial 394 percent. (See Chart 37, "Time Deposits and Savings Accounts".) It will be suggested presently that the distribution of the flow of savings between commercial banks and other savings institutions was significantly influenced during these years by Federal Reserve actions aimed directly at this flow.

First, however, the responses to general monetary policy (i. e. open market operations) will be briefly considered. It has been suggested that during monetary restraint when interest rates rise, funds shift from time deposits at commercial banks (where interest rates are constrained to a regulated maximum) to savings deposits at other nonmonetary financial intermediaries.¹ The evidence in Chart 37 supports such a suggestion even though the flow of funds into savings deposits at savings institutions did not increase by approximately the amount that the flow of funds into time deposits at commercial banks decreased during monetary restraint.² However, the gap in Chart 37

¹John G. Gurley, "Discussion," American Economic Review, Papers and Proceedings, XLVII, No. 2 (1958), page 105.

²If this did occur, the case for the shift of funds from time deposits at commercial banks to savings institutions during monetary

between flow of funds into savings institutions and flow of funds into commercial banks is substantially wider during monetary restraint than it is during monetary ease. In fact, during the last two periods of monetary ease the gap disappears altogether because the flow of funds into commercial banks exceeded the flow of funds into savings institutions. Thus during monetary restraint the flow of funds into savings institutions continued at about the same level while the flow of funds into time deposits at commercial banks decreased substantially. A possible explanation for these responses to monetary restraint is that several billion dollars of the decreased aggregate flow of funds (i. e. the sum of savings flow into time deposits at commercial banks and savings flow into savings accounts at savings institutions) shifted to savings institutions because of higher interest rates.

Now Federal Reserve actions aimed directly at this flow will be considered. Effective January 1, 1957, the Board of Governors of the Federal Reserve System made the following changes in the maximum permissible rates of interest payable by member banks of the

Federal Reserve System on savings deposits and time deposits pursuant

restraint would be particularly convincing. One reason that this did not occur is that the aggregate flow of funds into savings at both commercial banks and savings institutions decreased several billion dollars.

to the provisions of Regulation Q.¹ The rate of interest was increased from 2 1/2 percent to 3 percent on any savings deposit, postal savings deposit (which constitutes a time deposit), or time deposit having a maturity date six months or more after the deposit date. The rate of interest was increased from 2 to 2 1/2 percent on any time deposit having a maturity date less than six months but not less than ninety days after the deposit date.² The maximum permissible rate of interest prescribed by the Federal Reserve on time and savings deposits had remained unchanged for more than twenty years prior to 1957.³

Effective January 1, 1962, the maximum permissible rates of interest payable by commercial banks were increased still further.⁴ Again pursuant to the provisions of Regulation Q, the rate of interest was increased from 3 percent to 4 percent on any savings deposit, postal savings deposit (which constitutes a time deposit), or time deposit having a maturity date twelve months or more after the deposit. For the same type deposits having maturity dates less than twelve but more than six months the interest rate was increased from 3 percent to

¹Board of Governors of the Federal Reserve System, Annual Report... 1956, page 52.

²No change was made in the maximum permissible rate of one percent on any time deposit having a maturity date of less than ninety days.

³Board of Governors of the Federal Reserve System, Annual Report... 1956, page 53.

⁴Board of Governors of the Federal Reserve System, Annual Report... 1961, page 101.

3 1/2 percent. No change was made in the maximum permissible rates for time deposits having a maturity date of less than six months.¹

From 1952 to 1956, before the first increase in interest rates on time and savings deposits at commercial banks, the flow of funds into such deposits at commercial banks decreased 32 percent from \$ 3.1 billion to \$ 2.1 billion. During this same period the flow of funds into savings accounts at savings institutions climbed steadily to \$ 7.3 billion, or 143 percent of the 1952 annual rate. (See Chart 37, "Time Deposits and Savings Accounts," and Chart 38, "Time Deposits and Savings Accounts Detail".)

Actually Chart 38 contains the same information as Chart 37, except that savings institutions are detailed by their three major components. The flow of funds into deposits at savings and loan associations has more than tripled from 1952 (\$ 3.1 billion) to 1962 (\$ 9.6 billion).

Effective January 1, 1957, the Federal Reserve, as discussed above, approved an increase in interest rates payable by commercial banks.² Apparently this Federal Reserve action immediately

¹The maximum payable interest rate continued to be 2 1/2 percent for time deposits having a maturity date from ninety days to six months, and 1 percent for time deposits having a maturity date of less than ninety days.

²Apparently at this time relatively few commercial banks

affected the flow of savings between commercial banks and other savings institutions, because a marked change in the savings flow of funds is clearly evident when the last quarter of 1956 is compared to the first quarter of 1957. In this comparison the flow of funds decreased 12 percent for savings institutions while it increased 252 percent for commercial banks. For the first time during the eleven year period under study the net flow of savings into commercial banks (\$ 7.4 billion flow of funds during the first quarter of 1957) exceeded the net flow into savings institutions (\$ 6.4 billion flow of funds). Further this change to a higher interest rate by commercial banks had a continuing effect. From 1956 to 1962 the flow of savings into savings institutions increased 77 percent.² Meanwhile the flow of savings into commercial banks from 1956 to 1962 reversed the previously observed decline and increased a striking 629 percent.³

were actually paying rates at or near the regulatory ceilings. None the less, some banks do feel that the regulatory limit constrains them in their competition for funds and do raise their pay-out rates when allowed to do so.

For a brief recent discussion, along these lines, of this 1957 interest rate increase see Friend, page 107.

The following quotation from the American Bankers Association indicates that the banks themselves are sensitive to this regulation. "A growing number of commercial banks have been limited in their ability to pay higher rates to holders of time and savings deposits by the ceiling imposed on such rates by regulation. No such rigid ceiling is applied to most nonbank institutions." (page 12)

²This compares with a 43 percent increase during the period 1952-1956 and discussed above.

³This compares with a 32 percent decrease during the period 1952-1956 and discussed above.

When the maximum permissible rates of interest payable by commercial banks were increased further effective January 1, 1962, the same sort of reaction as occurred in the 1957 instance was reflected in the distribution of the flow of savings between savings institutions and commercial banks. From the fourth quarter of 1961 to the first quarter of 1962 the savings flow into savings institutions remained the same while the savings flow into commercial banks increased 313 percent.¹

¹ Although he is primarily concerned with the prohibition of interest payments on demand deposits, the effects of shifts of funds into and out of commercial banks as a result of changes in the regulated rates of interest are discussed by William Brainard. He develops a theoretical model of the banking system to analyze the effect of changes in the interest rate paid by commercial banks on their deposits in Chapter III, "Regulation With One Financial Intermediary-Variable-Deposit-Rate".

He concludes that "Even though the volume of deposits at banks always increases with an increase in the regulated deposit rate we found that the effect of such an increase... was ambiguous." (page III-19) That is, no definite conclusion could be reached concerning the effect of deposit increases on bank loan rates. Therefore no conclusion could be reached about whether such deposit rate changes are expansionary or contractionary. In his model results depend upon assumptions. "We found that the answer to these questions depends on whether cash and deposits are substitutes or compliments,..." (page III-19)

Assuming that cash and deposits are substitutes in the real world, his model has the following policy implications,

"Under these conditions the removal of deposit rate restrictions is likely to: 1) decrease the response of the rate of return on capital to open market sales of bonds, 2) decrease the response of the rate of return on capital to shifts in banks' demand for bonds and loans, 3) increase the response of the rate of return on capital to changes in the demand for loans by borrowers, and 4) lead to either an increase or decrease in the response of the rate on capital to shifts in non-bank demand for bonds and capital." (page III-21)

This impact of Federal Reserve policy (via the provisions of Regulation Q) on the flow of savings is shown on Chart 39, "Effects of Interest Rate Increase Reflected in Time Deposits and Savings Accounts". Specifically, the behavior of time deposits and savings accounts for the year immediately before and the year immediately after each of the two interest rate increases is shown. The substantial increase in the flow of funds into time deposits at commercial banks during the same time that the flow of funds into savings deposits at savings institutions remained the same (1962) or declined (1957) is illustrated.

These responses are consistent with the proposition that there is a considerable amount of substitutability or competitiveness between various forms of savings. Apparently there is a much greater substitutability between various forms of savings than between savings items and consumption.^{1, 2} The above responses, as well as the

¹See Irwin Friend, "Determinants of the Volume and Composition of Saving with Special Reference to the Influence of Monetary Policy," in Daniel B. Suits, et al. for the Commission on Money and Credit, Impacts of Monetary Policy, (Englewood Cliffs, N.J.:Prentice-Hall, 1963). Page 670 and some of the following pages briefly discuss studies aimed at determining the factors which are responsible for this substitution among various forms of savings. The behavior discussed above in the text certainly seems to illustrate Friend's conclusion, "However, while interest rates (and other terms of credit) may not affect saving propensities very greatly, they do have a marked impact on the composition of saving, with savers not too surprisingly preferring assets with higher yields and lower costs or easier credit terms." (page 686)

²"On the other hand, it appears that the composition of the stock of accumulated savings held by consumers, as well as the direction

responses to be discussed presently indicate that interest rate differentials are a major determinant of the composition of aggregate savings. That is, changes in these interest rate differentials are an important factor responsible for the substitutions of some savings items for other savings items which take place.

Chart 40, "Commercial Bank Time Deposits and Savings Accounts," shows the behavior of the major depositors at commercial banks. Corporations, state and local governments, and the rest of the world increased or decreased their accounts nearly simultaneously. This similarity in responses suggests that these depositors reacted to the same stimulus with respect to their time deposits.

The most active, at least recently, of these three, deposits held by corporations, is shown on the bottom of Chart 41, "Short Term Interest Rates and Corporation Time Deposits". On the top of this chart the interest rate on newly issued three-month Treasury bills is plotted monthly. Superimposed on this plot is the 2 percent and then the 2 1/2 percent maximum interest rate payable on comparable maturity time deposits (ninety days to six months) at commercial banks subject to Regulation Q.

The red areas on the graph - during 1954-55, during 1958,

of the flow of new saving out of current income, may be significantly influenced by the relative rates of return available on different types of assets." Smith in Tamagna, et al. for the CMC, page 308.

and during 1960-61 - represent periods when the yield on short-term funds placed in commercial banks exceeded the yield on those placed in short-term government securities. During these periods there was clearly an incentive to place short-term funds in time deposits at commercial banks. During the remainder of the time short-term funds were more profitably invested in Treasury bills than in deposits at commercial banks.

Until 1954 there was almost no movement of corporation funds into time deposits at commercial banks.¹ In 1954 the substantial interest rate differential offered a strong inducement to place short-term funds in time deposits at commercial banks rather than in Treasury bills. Throughout 1954 the corporation flow of funds into time deposits at commercial banks amounted to \$ 0.2 billion. During 1955 the interest rate on Treasury bills rose steadily and again was higher than the maximum interest rate the commercial banks were permitted to pay. Thus this steady rise in Treasury bill interest rates reduced and eventually eliminated the inducement (discussed above) to place short-term funds with commercial banks. The interest rate on Treasury bills remained higher than commercial banks were permitted to pay until 1958. There was no flow of corporate funds into time deposits at commercial banks during this period 1955-1957.

¹Table 20, Flow of Funds Accounts, 1945-62, indicates that there were none during 1952 and 1953.

In 1958 the interest rate on Treasury bills fell quickly to levels substantially below those paid by commercial banks on short-term time deposits. In fact, at the low point during June the interest rate was only 0.881 percent.¹ During the last quarter of 1957 the interest rate paid by the Treasury on its bills was higher than the rate paid by commercial banks on their time deposits. However, during the first quarter of 1958 the Treasury interest rate was below the comparable bank rate. Corporate savings flowing into deposits at commercial banks increased quickly from zero during 1957 to a flow of funds amounting to \$ 2.2 billion during the first half of 1958.

During the latter half of 1958 the Treasury bill rate again rose above the comparable bank rate and corporate savings flowed out of time deposits at commercial banks at a \$ 0.4 billion annual rate (negative flow of funds). This movement of funds out of banks continued at this rate for a year and three-quarters. Although this discussion is suggesting a strong relationship between the interest differential (discussed above) and the flow of corporate savings into (or out of) commercial banks, it is never the whole story. For example, some of the return of savings from banks to corporations during the last half of 1958 and all of 1959 very probably reflects a corporate cash shortage

¹Table D-43, "Bond Yields and Interest Rates, 1920-58," Economic Report of the President, (Washington: U.S. Government Printing Office, January, 1959), page 189.

resulting from the sharp 1958 recession.

When during the third quarter of 1960 the interest rate inducement to place funds with commercial banks again became positive, the flow of corporate savings into time deposits at banks again became positive. The corporate savings flow of funds into time deposits at commercial banks reached its peak for the eleven year period under study during the first quarter of 1961 - \$ 5.8 billion. Although the short-term interest rate differential was in the right direction to encourage a flow of savings into commercial banks, it does not appear strong enough to account for such a large flow.¹ Perhaps with business revenues expanding, corporations were placing their savings in six month or longer deposits at commercial banks where the interest rate was 3 percent. Another possible contributing influence may be that corporations wished to strengthen their ties with commercial banks. With the recent sharp recession in mind, corporations may have decided to place their short-term funds with banks now that they have some, in the hope that the banks will reciprocate by lending them funds when they need them.

¹For example, in February and March of 1961 the Treasury bill rate was 2.408 and 2.420 respectively. This compares to a maximum rate of 2.5 percent on short-term deposits at commercial banks.

The only apparent inconsistency in Chart 41 occurs in 1962. During this period with the interest rate on newly issued three-month Treasury bills somewhat above the maximum interest rate payable on ninety days to six months time deposits, one would expect corporate savings to flow into Treasury bills rather than into commercial banks. However, effective January 1, 1962, as discussed above, the maximum interest rate payable on time deposits held more than twelve months was increased from 3 percent to 4 percent. Thus there was an incentive to move funds into commercial banks during 1962 which is not shown on Chart 41 and this could explain the apparent inconsistency. Thus Chart 41 would support the thesis that corporations do react to yield differences in the placement of their short-term funds.¹

¹The Commission on Money and Credit apparently does not appreciate the significance of movements of corporate funds into and out of savings and time deposits, perhaps because this is a recent development. For example, "However, shifts by corporations are largely into and out of short-term Treasury securities rather than into or out of savings and time deposits." Commission on Money and Credit (Report), page 79.

CHAPTER IX

GURLEY-SHAW THEORY AND PROPOSALS

The recent work of John G. Gurley and Edward S. Shaw is referred to in Chapter I. This reference in Chapter I indicates the relevance of Gurley-Shaw theory to an examination of financial intermediation. The discussion also indicates controversy over the significance of Gurley-Shaw theory - do financial intermediaries actually respond to monetary policy in a "Gurley-Shaw" manner? Now this question is considered.

Before evaluating the applicability of Gurley-Shaw theory to current U.S. financial institutions and markets in light of the findings of this study, a careful review of the theory is necessary. First, theory drawn from some of the Gurley-Shaw articles is reviewed and discussed in light of the findings.¹ Second, the findings are brought to

¹The review is drawn from the following articles (original reference on page 1):

Gurley, "Monetary Theory" and "Study Paper 14", Study of Employment, Growth and Price Levels.

Gurley and Shaw, American Economic Review, XLV, No. 4 (1955).

Gurley and Shaw, Review of Economics and Statistics, XXXIX, No. 3 (1957).

Gurley and Shaw, Journal of Finance, XI, No. 2 (1956).

Gurley and Shaw, American Economic Review, XLVIII, No. 1 (1958).

bear on theory drawn from their book, Money in a Theory of Finance. Interestingly, there are differences between the theoretical framework employed as a basis of the analysis contained in the articles and the more general theory contained in the book. As will become apparent, in light of the findings of this study the differences are critical to the use of the theory as a basis for the development of proposals for monetary reform.

GURLEY-SHAW THEORY CONTAINED IN THEIR ARTICLES

Financial intermediaries lend at one stratum of interest rates and borrow at a lower stratum. They buy primary securities in the market, supplying funds to deficit sectors of the economy. They borrow funds by supplying claims against themselves - indirect financial assets or liquid assets - whose qualities command a higher price (lower stratum of interest) than the primary securities purchased with the borrowed funds.¹ The margin between yields on primary and indirect securities is the gross compensation to intermediaries for the special services they perform.² Their intermediation serves to raise

¹"They relieve the market of some primary securities and substitute others - indirect securities or financial assets - whose qualities command a higher price." Gurley and Shaw, Journal of Finance, XI, No. 2 (1956), page 259.

²"This margin between yields on primary and indirect

the levels of saving and investment and to allocate more efficiently scarce savings among alternative investment opportunities by bridging the gap between surplus and deficit sectors of the economy. Financial intermediaries are a source of funds to deficit sectors of the economy. They offer surplus sectors the opportunity to acquire indirect claims (i. e. claims against financial intermediaries) rather than direct claims against debtors.¹

Money is one type of indirect financial asset, created by the monetary system when it purchases primary securities.² It is a claim against the monetary system. Nonmonetary financial intermediaries, however, create other indirect financial assets when they

securities is the intermediaries' compensation for the special services they supply." Ibid., page 259. Of course, in the actual world financial intermediaries also earn revenue via service charges, commissions, etc. However, these are never mentioned in the Gurley-Shaw articles.

¹"The finance is indirect if the surplus units acquire claims on financial intermediaries. It is direct if surplus units acquire claims on debtors that are not financial intermediaries." Ibid., pages 259-260. Also see Gurley, "Paper 14", Study of Employment..., page 27; and Gurley and Shaw, Review of Economics and Statistics, XXXIX, No. 3 (1957), page 250.

²"Money, as one type of indirect security, is created by the monetary system when it purchases primary securities." "Thus liquid assets are created by the monetary system when it purchases primary securities and creates money and time deposits." Gurley, "Paper 14", Study of Employment..., page 23. Also see Gurley and Shaw, Review of Economics and Statistics, XXXIX, No. 3 (1957), page 250.

sell claims against themselves for money.¹ All these claims result in a spectrum of liquid assets which can be held by spending units in the economy.² Money itself is the most liquid of these claims being the medium of exchange. The other claims are, however, also liquid assets because they serve as close substitutes for money for precautionary and diversification purposes.^{3,4} They are not merely substitutes

¹"They [liquid assets] are also created by nonmonetary intermediaries when they purchase money and create liquid claims on themselves..." Gurley, "Paper 14," Study of Employment, . . ., page 23.

²"Liquid claims on the monetary system include the money supply and time deposits, while those on nonmonetary intermediaries include mutual savings deposits, postal savings deposits, credit union shares and deposits, savings and loan shares, and policy reserves of life insurance companies." Ibid., page 46. Also see Gurley and Shaw, Review of Economics and Statistics, XXXIX, No. 3 (1957), page 250; and Gurley and Shaw, Journal of Finance, XI, No. 2 (1956), page 259.

³"...the monetary system is in some significant degree competitive with other financial intermediaries. The growth of these intermediaries in terms of indirect debt and of primary security portfolios is alternative to monetary growth and inhibits it. Their issues of indirect debt displace money..." Gurley and Shaw, Journal of Finance, XI, No. 2 (1956), page 261. Also see Gurley, American Economic Review, L, No. 4 (1960), pages 685-687.

⁴"But money is not in demand exclusively as a means of payment. It is in demand as a financial asset to hold. As a component of balances, money does encounter competition. Other financial assets can be accumulated preparatory to money payments, as a precaution against contingencies, or as an alternative to primary securities. For any level of money payments, various levels of money balances will do and, hence, various sizes of money supply and monetary system.

"The more adequate the non-monetary financial assets are as substitutes for money in transactions, precautionary, speculative, and - as we shall see - diversification balances, the smaller may be the money supply for any designated level of national income. For any level of income, the money supply is indeterminate until one knows the

for primary securities. The articles are quite specific on this point.

Liquid assets...comprise those financial assets that nonfinancial economic units consider to be fixed in price and redeemable into money on demand.^{1,2}

Gurley-Shaw theory does not deny that money is uniquely the medium of exchange. But the theory emphasizes that money is also used as a store of value. "It is in demand as a financial asset to hold."³ In this capacity money directly competes with other liquid assets.⁴ These other liquid assets are just as good as money for every purpose except the actual act of spending because they are fixed in price and redeemable into money on demand. In return for the slight inconvenience of redemption before spending, these other liquid assets

degree of substitutability between money created by banks and financial assets created by other intermediaries. How big the monetary system is depends in part on the intensity of competition from savings banks, life insurance companies, pension funds, and other intermediaries." Gurley and Shaw, Journal of Finance, XI, No. 2 (1956), page 261.

¹Gurley, "Paper 14," Study of Employment,..., page 23.

²Ibid., see page 3-4.

³Gurley and Shaw, Journal of Finance, XI, No. 2 (1956), page 261.

⁴"Each financial intermediary offers its own differentiated product for the public to hold. This product is competitive with bonds. It may be more or less liquid than bonds, but it embodies a service, perhaps insurance, that bonds do not. The product is also competitive with money narrowly defined, offering less in liquidity perhaps but offering as well security, interest, and other services." Gurley and Shaw, American Economic Review, XLV, No. 4 (1955), page 257.

yield earnings while they are being held.

Gurley and Shaw have thus broadened the theoretical liquidity base (the quantity theory "M" which can directly affect prices and real income) to include all claims against financial intermediaries that are fixed in price and redeemable in medium-of-exchange money on demand.¹ These particular claims are all liquid assets and therefore bear heavily on spending decisions. All of them are stores of value which, as far as individual spending units are concerned, can readily be turned into media of exchange.

Monetary authorities attempt to regulate the total supply of loanable funds in relation to the total demand for these funds. Gurley and Shaw point out that monetary authorities have no direct control over the demand for loanable funds.² Further, they have no direct control over the supply of loanable funds coming from ultimate lenders and from nonmonetary intermediaries (except those funds coming from time deposits at commercial banks). Gurley and Shaw emphasize that monetary authorities usually control only funds coming from the monetary system, and this is only one portion of the total supply of loanable funds.

¹"This is the essential point: the 'uniqueness of money' is a red herring." Gurley and Shaw, American Economic Review, XLVIII, No. 1 (1958), page 132.

²See particularly two sections entitled "The Scope of Monetary Controls," and "The Efficacy of Monetary Controls in the Postwar Period," Gurley, "Paper 14," Study of Employment, . . ., pages 23-25.

Consequently by controlling one portion of the total supply of loanable funds, without directly controlling the demand for these funds, and without directly controlling internal financing, the monetary authorities attempt to influence aggregate spending in the economy.¹

Gurley and Shaw claim that monetary authorities have been somewhat ineffective in attempting credit restraint via restricting commercial banks.² They suggest that the explanation for this lack of success with monetary restraint involves the activities of nonmonetary financial intermediaries.³ These activities are not controlled by

¹Gurley, "Paper 14," Study of Employment, . . ., page 24.

²"Monetary controls were not eminently successful during the postwar period in halting increases in commodity prices, despite the fact that the growth of the money supply was held in check." Ibid.

³"The reason is simply that nonmonetary intermediaries grew so rapidly that the required growth of the monetary system was sharply reduced. Financial analysis cannot stop with the money supply when other indirect assets are of growing importance." Gurley and Shaw, Journal of Finance, XI, No. 2 (1956), page 276.

"Many observers feel that the impact of monetary policy on prices and output has been weakened over the past few decades by fundamental changes in the economic environment, and that these changes account for the comparatively poor postwar record of the monetary authorities.

"One of the fundamental changes, it is believed, has been the fast growth of nonmonetary financial intermediaries, which lie outside of the monetary authorities' direct control. These intermediaries, by purchasing large amounts of primary securities, have greatly increased the supply of loanable funds and have created a substantial volume of highly liquid assets. . .

"There is little doubt that ultimate borrowers obtained much of their postwar external financing through the sale of primary security issues to nonmonetary financial intermediaries, that the intermediaries obtained loanable funds by selling claims — often highly liquid ones — on themselves for money balances, and that such financing took place

monetary authorities but do have their roots in the issuance of claims which are substitutes for money in varying degree.¹ These uncontrolled claims are the above discussed liquid assets that compete with money.

When monetary restraint is initiated, the flows of funds through commercial banks decrease and interest rates rise. In Gurley-Shaw theory the rise in interest rates is significant because it means that nonmonetary financial intermediaries receive higher yields when they lend money (i. e. when they acquire primary securities). Because they receive higher yields, they can afford to pay more for the money they borrow, encouraging people to lend to them. And when nonmonetary financial intermediaries borrow, according to Gurley-Shaw theory, they issue fixed value claims redeemable into money on demand, that is, liquid assets.² This increase in liquid assets, which results from high

beyond the reach of the monetary authorities." Gurley, "Paper 14," Study of Employment, . . ., page 24.

"This was mainly due to the growth of liquid claims on financial institutions that lay outside the direct control of the monetary authorities." (page 3)

¹See footnote 4, page 225.

²"What is the business of financial intermediaries? They lend at one stratum of interest rates and borrow at a lower stratum." Gurley and Shaw, Journal of Finance, XI, No. 2 (1956), page 259.

"Liquid assets, as previously noted, comprise those financial assets that nonfinancial economic units consider to be fixed in price and redeemable into money on demand. . . . They are also created by nonmonetary intermediaries when they purchase money and create liquid claims on themselves. . . ." Gurley, "Paper 14," Study of Employment, . . ., page 23.

interest rates, offsets the decrease in the money supply. Thus Gurley-Shaw theory suggests that increases in flows of funds through nonmonetary financial intermediaries can offset decreases in flows of funds through commercial banks during monetary restraint.¹ Further, according to Gurley-Shaw reasoning, in order to prevent increases in flows of funds through nonmonetary financial intermediaries from offsetting the monetary authorities efforts to decrease total liquidity during monetary restraint, flows of funds through commercial banks must be severely restricted. To restrain total liquidity by squeezing just a part of it means that the part must be squeezed all the harder.

For the most part the actual characteristic responses of nonmonetary financial intermediaries move with the responses of commercial banks during restraint.² There are a few notable exceptions, however. These exceptions involve consumer credit, other loans by finance companies, and mortgage loans and will be discussed

¹"Despite restraint on monetary growth, there was a large expansion of nonmonetary liquid assets during the postwar period, which mainly took the form of increases in liquid claims on financial institutions lying outside of the direct controls of the monetary authorities, and which reduced the economy's demand for money balances." Ibid., page 20.

²See Chapter II, "Financial Intermediaries and Monetary Policy".

below. First, however, the significance for Gurley-Shaw theory of the majority of responses (namely those that respond in a manner compatible with the aims of monetary policy) is discussed.

The fact that the majority of the responses of nonmonetary financial intermediaries do decrease during restraint does not mean that financial intermediation isn't well explained by Gurley-Shaw theory. Even if all flows of funds turned down during monetary restraint, it would not mean that Gurley-Shaw theory is inapplicable to actual financial intermediation. Gurley-Shaw theory encompasses the possibility that commercial bank activities can be restricted enough to decrease all flows of funds through financial intermediaries. So far the findings of this study do not appear to have answered the question of the applicability of the Gurley-Shaw theory.

However, the exceptions involving consumer credit, other loans extended by finance companies, and mortgages seem, at first glance, to substantiate Gurley-Shaw theory. As described in Chapter II, consumer credit and other loans extended by finance companies, consumer loans and loans n. e. c. extended by commercial banks, and mortgage loans extended by savings and loan associations can increase substantially during monetary restraint.

Commercial banks are the source of funds used by finance companies to substantially increase consumer credit. A large part of the increase in commercial bank loans n. e. c. are, in fact, loans to

finance companies. This increase in financial intermediary activity does not result from the creation of liquid assets. Finance companies do not issue fixed-value claims, redeemable into money and considered money substitutes by the rest of the economy. The increases in consumer credit and other loans extended by finance companies, then, are not directly accounted for by the theoretical framework employed as a basis of the analysis in the Gurley-Shaw articles.^{1, 2} However,

¹The cornerstone of this Gurley-Shaw theoretical framework (as explained in the text) is the creation of liquid assets by financial intermediaries.

²Interestingly and, I suggest, very pertinent to my point is the fact that finance companies are explicitly excluded from a listing of Gurley-Shaw financial intermediaries in the largest of the Gurley-Shaw articles and are not explicitly included in listing of Gurley-Shaw financial intermediaries contained in other articles and in other listings contained in their largest article. Gurley-Shaw financial intermediaries, as explained in the above text, are financial intermediaries who issue indirect debts that are considered liquid assets. (Liquid assets comprise those financial assets that nonfinancial economic units consider to be fixed in price and redeemable into money on demand.)

"For purposes of this discussion, financial intermediaries include all institutions that create highly liquid claims - claims that are fixed in price and redeemable into money on demand. These institutions are Federal Reserve banks, commercial banks, life insurance companies, mutual savings banks, savings and loan associations, the Postal Savings System, and credit unions. The first two make up the monetary system, and the others are nonmonetary intermediaries. 'Other lenders' are principally business firms and consumers but they also include some financial institutions and trust funds, such as sales finance companies..." Gurley, "Paper 14, " Study of Employment,..., page 37.

"...surplus sectors may accumulate indirect financial assets in the form of money, say, or of such nonmonetary indirect financial assets as savings and loan shares, mutual savings deposits, insurance reserves, and the like." Gurley and Shaw, Review of Economics and Statistics, XXXIX, No. 3 (1957), page 250.

"The financial institutions that fit these specifications are

the sources of funds for these increases are commercial banks - financial intermediaries which definitely can create liquid assets.

Commercial banks actually accomodate demand for consumer credit (and, to a lesser extent, demand for short-term credit by businesses) during monetary restraint both indirectly and directly. Indirectly, they supply funds for consumer credit via loans n. e. c. to finance companies. They also increase their extension of credit directly to consumers. Where do commercial banks borrow the funds for the increases in consumer credit and bank loans n. e. c. ? They don't. They do not create more liquid assets (demand deposits) by issuing claims against themselves. In fact, demand deposits decrease during monetary restraint. Instead commercial banks obtain the funds

savings and loan associations, insurance companies, mutual savings banks, Postal Savings banks, investment companies, common trust funds, pension funds, government lending agencies and others. In addition we count the monetary system, including commercial banks, as one among many intermediaries." Gurley and Shaw, Journal of Finance, XI, No. 2 (1956), page 259.

"Liquid claims on the monetary system include the money supply and time deposits, while those on nonmonetary intermediaries include mutual savings deposits, postal savings deposits, credit union shares and deposits, savings and loan shares, and policy reserves of life insurance companies." Gurley, "Paper 14," Study of Employment, ... , page 46.

My assertion is that the reason finance companies are never included in lists of Gurley-Shaw intermediaries is that they are not such intermediaries in the context of the Gurley-Shaw theoretical framework. Finance companies do not issue indirect debts that are considered liquid assets by nonfinancial economic units.

by liquidating U.S. Government securities.^{1, 2} Therefore, the increases

¹Savings institutions also liquidate U.S. Government securities to obtain funds to lend to consumers during monetary restraint. However, the volume of credit involved is considerably less than with commercial banks and finance companies.

²In fact, in my opinion the role played by U.S. Government securities in contributing to the U.S. economy's liquidity is not handled at all well by Gurley and Shaw. For example, the article "Paper 14, Study of Employment, . . . is an effort to account for the liquid assets in the postwar economy. "This paper examines the consequences and causes, in that order, of postwar growth of money and its close substitutes." (page 3) In a section titled "The Growth of Liquid Assets, 1939-58" liquid assets are defined as follows: "The term 'liquid assets' is a shorthand expression for claims held by nonfinancial sectors of the economy that are considered by these sectors to be fixed in price and redeemable into money on demand." (page 3) Then the discussion is based on "Table I - Liquid assets of nonfinancial sectors and GNP, 1939-59". (page 5) This table lists total liquid assets for the years 1939-59 and then breaks down this total into the following eight categories: Money supply, Time deposits, Savings and loan shares, Mutual savings deposits, Credit union shares, Postal savings deposits, Policy reserves in life insurance companies, and U.S. savings bonds. Using this table as evidence, the growth of liquid claims issued by nonmonetary financial intermediaries is emphasized. "From 1946 to 1958, other liquid assets made up 78 percent of the increase in all liquid assets, while the money supply and savings bonds lagged behind at 20 percent and 2 percent respectively. Thus, liquidity expansion during the postwar years was predominately in the form of growth of nonmonetary liquid claims on financial institutions." (page 5)

The reader is left with the impression that Gurley and Shaw have empirically proven their point and thus accounted for liquidity in the postwar economy. However, they don't suggest that U.S. Government securities other than savings bonds are "liquid assets". Rather U.S. Government securities are explicitly identified as primary securities. "Primary securities are all debt and equity obligations of non-financial units. These obligations include Federal Government securities, State and local government securities, corporate bonds and stocks, mortgages, consumer short- and intermediate-term debt, trade debt, and 'other' bank loans." (page 25)

And in the Gurley-Shaw theoretical framework primary securities are not the all-important "liquid assets" created by financial institutions but rather the financial assets which financial institutions

receive in return for creating liquid assets (which are claims against financial institutions). "Primary security issues were the raw material from which liquid assets were created by financial institutions." (page 32) This section continues to state that primary securities from which liquid assets are created include "Federal Government securities". (page 33)

Although the theoretical frame work indicates that primary securities and liquid assets are different entities altogether - after all, a major point in Gurley-Shaw financial intermediation theory is that primary securities are the assets of financial intermediaries and liquid assets are the liabilities of financial intermediaries - and the immediately preceding quotation implies that they are different entities, Gurley and Shaw make one minor exception. "Finally, liquid assets are created, in small part, by those nonfinancial economic units who issue highly liquid primary securities such as savings bonds." (page 23) Gurley and Shaw never state that marketable U.S. Government securities are liquid assets in their articles. I am sure that if they were questioned about this point, they would readily agree that such securities were in fact liquid assets. However, because it does not fit their theoretical framework, they make no use of the fact that marketable U.S. Government securities are liquid assets. As I shall now attempt to show, this omission leads them astray when they use their theoretical framework to discuss the efficacy of monetary policy.

In my study, for example, the funds used to increase consumer credit during the second period of monetary restraint came from the substantial liquidations of U.S. Government securities, classified as marketable securities as opposed to savings bonds in the flow-of-funds accounts used in my study, during 1959. (See Table B-1, Appendix B) Also during 1959 the consumers and nonprofit sub-sector of the U.S. economy decreased their holdings of savings bonds but increased their holdings of U.S. Government marketable securities by \$ 9.6 billion. (Source: Table 23, "U.S. Government Securities, " Flow of Funds Accounts, 1945-62, pages 32-33.) Therefore, I suggest in this study that any difficulty the monetary authorities had in restraining credit during 1959 was due to asset switching by commercial banks, not to liquid asset creation.

In fairness to Gurley and Shaw it must be mentioned that they are primarily analyzing the role of finance during long-term growth, and consumer holdings of U.S. Government securities didn't change much between the end of the war and 1958. However, they use their analysis to explain the ineffectiveness of monetary control (where short-term shifts in holdings are important) during the postwar period, for example, in a section titled "The Efficacy of Monetary Controls in the

in consumer credit made possible by funds from commercial banks are not accounted for by the theoretical framework contained in the Gurley-Shaw articles. That is, commercial banks did not increase credit extensions during monetary restraint via the issuance of liquid claims against themselves.¹ In addition, the whole tenor of Gurley and Shaw's writings indicates that commercial banks are unduly restricted while liquid assets pour into the economy from nonmonetary financial intermediaries.² The fact that commercial banks, not nonmonetary financial intermediaries, are a major source of funds contrary to the aims of monetary restraint after all, hardly fits this tenor.

The other activity of major significance that can respond in a direction contrary to the aims of general monetary policy is mortgage lending by savings and loan associations. Savings and loan associations sometimes increase their mortgage loans during monetary

Postwar Period, "Paper 14, " Study of Employment, . . ., pages 24-25. In this section, as discussed previously in the above text and associated footnotes, they blame the inability of monetary authorities to effectively restrain credit on nonmonetary financial intermediaries who "have created a substantial volume of highly liquid assets". (page 24) I suggest that this account of what happens during monetary restraint completely misses the mark.

¹Using the Gurley-Shaw theoretical framework one would conclude that credit extension in spite of monetary restraint results from liquid asset creation by nonmonetary financial intermediaries. And this is just what Gurley and Shaw conclude.

"Despite fairly severe restraint on monetary growth, there was a large expansion of nonmonetary liquid assets during the postwar period, which mainly took the form of increases in liquid claims on financial institutions lying outside of the direct controls of the monetary authority. " "Summary and Conclusions, " Ibid., page 49.

²For example see Ibid.; also see discussion of Gurley-Shaw proposals on pages 247 to 253.

restraint. They borrow the funds for these loans. In the Gurley-Shaw theoretical framework the funds would flow to them through increases in savings shares. This would be Gurley-Shaw borrowing because it would create liquid assets (i.e. savings shares). However, this is not what actually happens. Savings and loan associations borrow the funds from the Federal Home Loan Bank and the commercial banks (which again is not in harmony with the tenor of the Gurley-Shaw argument). The increase in mortgage loans (purchases of primary securities) by these nonmonetary financial intermediaries does not result from the creation of liquid assets. The actual growth of savings shares (i.e. the actual creation of liquid assets) slows down considerably during monetary restraint. Again, the Gurley-Shaw theoretical framework does not account for responses that are contrary to the aims of monetary policy.

In other words, those responses of financial intermediaries most notably contrary to the aims of monetary policy are not accounted for by Gurley-Shaw theoretical framework used as a basis of analysis in their articles.¹ Yet these are the responses of most interest to

¹William Brainard makes a statement about Gurley-Shaw theoretical analysis and the impact of monetary policy with which I agree.

"The writings of Gurley and Shaw (1955), (1958), (1960), have been largely responsible for the profession's interest in the general implications for monetary theory and policy of the growth of non-monetary financial intermediaries. In their own work they have developed a theory in which financial assets (other than money) and finan-

deliberations on the effectiveness of monetary control. Because other activities do respond in a manner that is compatible with the aims of monetary policy, they are not as pressing a concern to monetary authorities. The findings of this study do not prove or disprove the applicability of the Gurley-Shaw theoretical framework contained in their articles to the majority of responses by financial intermediaries.¹ However, it has been shown that the Gurley-Shaw theoretical framework does not apply to the major problem areas. For current monetary policy purposes, then, the Gurley-Shaw theoretical framework contained in the articles is rather sterile.

This conclusion does not mean that the Gurley-Shaw theoretical framework used as a basis of analysis in their articles is an unimportant contribution to thought about monetary theory. Far from it! The similarities between money and other liquid assets do exist and needed to be emphasized. All liquid assets do bear on an economy's total liquidity and must be accounted for in a truly general theory of finance. To this author the choice of a theoretical framework for use in policy decisions seems to be a matter of priorities

cial institutions (other than banks) are included. They have been more concerned, however, with the role of finance during long-term growth than during business cycles. They have not presented a detailed theoretical analysis of the way in which non-monetary financial institutions may affect the usefulness of monetary policy in controlling short run economic fluctuations." (page 1-13)

¹See pages 230-231.

(provided, of course, the theoretical framework is not known to be incorrect). The Gurley-Shaw theoretical framework (as contained in their articles) as an aid to policy formulation should have low priority because it just does not deal with the more important current monetary policy problems (i. e. it does not deal with the shirting of assets by commercial banks). Fortunately, it matters little because the significant contribution - a broadened concept of the manner in which claims against nonmonetary financial intermediaries contribute to an economy's liquidity - can still have an important role in policy decisions. This broadened concept is also at the heart of Gurley-Shaw theory contained in their book. In addition, the more general theory put forth in their book accounts for the liquidations of U. S. Government securities by commercial banks and thus may be quite useful in considerations of current monetary policy problems.

GURLEY-SHAW THEORY AS CONTAINED IN THEIR BOOK

As mentioned earlier, the theory Gurley and Shaw describe in their book, Money in a Theory of Finance, differs somewhat from the theoretical framework used as a basis of analysis in their articles. Essentially, the theory contained in the book is a further development of the theoretical framework contained in the articles. Consequently it is more comprehensive than the theoretical framework contained in the articles. In fact, it is comprehensive enough to account for the responses contrary to monetary policy and designated above as major problem areas.

The pertinent broadening of theory contained in the book over the theoretical framework contained in the articles is evident in the following quotation from Chapter VI, "Nonmonetary Financial Intermediation".

The principal function of financial intermediaries is to purchase primary securities from ultimate borrowers and to issue indirect debt for the portfolios of ultimate lenders. Although primary securities are their principal asset, financial intermediaries also hold the indirect debt of other intermediaries.¹

The phrase "principal function" is the key. In the theoretical framework contained in the articles it is the only function, while in the book it is merely the principal function. This leads to a more

¹Gurley and Shaw, Money..., page 192.

general theory than that contained in the articles in at least two respects which the findings of this study indicate are quite significant.

First, as pointed out above, finance companies are not included as nonmonetary financial intermediaries in the theoretical framework contained in the articles, because finance companies do not issue indirect debts that are considered liquid assets by the nonfinancial sectors of the economy.¹ In the book, finance companies are nonmonetary financial intermediaries that are one step removed from ultimate lenders.² This theory, then allows financial intermediation to take place in steps involving more than one financial intermediary.³

¹This first respect in which the theory in the book is more general than that contained in the articles is not as significant as the second which will be discussed later. However, because of the findings of this study, it is clearer to discuss them in the above order.

²The following statement appears at the end of a paragraph which discusses "various criteria for classifying nonmonetary financial intermediaries".

"A few intermediaries, principally sales finance companies, rely heavily on other intermediaries as purchasers of their indirect debt." Gurley-Shaw, Money . . ., page 193.

³As pointed out in the above discussion of the Gurley-Shaw theoretical framework contained in their articles, finance companies are explicitly excluded from their definition of financial intermediaries in one article (Gurley, "Paper 14, " Study of Employment, . . .) and never explicitly included in the definitions contained in the other articles. Finance companies could have been easily included as financial intermediaries (as they are in the book) if two-step financial intermediation had been a part of the theoretical framework contained in the articles. Such a process is never mentioned in any of the articles. However, the fact that the book's more general theory permits more than one financial intermediary to be involved in the intermediation process is the less significant of the two respects in which book and articles differ be-

One financial intermediary creates liquid assets by issuing fixed value claims against itself that are redeemable in money on demand. In so doing the intermediary receives money (i. e. demand deposits) and an ultimate lender receives indirect debt (i. e. liquid assets) for his portfolio.¹ A second financial intermediary borrows money from the first, creating an indirect financial asset that is more a primary security than a liquid asset as these are defined by Gurley and Shaw.² The first intermediary has a claim against the second intermediary. The second intermediary now lends the money to an ultimate borrower in return for primary securities. The accomplishments of this financial intermediation are the same as discussed above with respect to theory in the articles. Ultimate borrowers obtain money to spend; ultimate lenders replace some of their money with money-substitutes, namely liquid claims (i. e. liquid assets as defined by Gurley and Shaw) against

cause the process of intermediation remains the same in both instances. That is, "Intermediating techniques turn primary securities into indirect securities for the portfolios of ultimate lenders." Gurley and Shaw, Money..., page 197.

¹This description of the "process of intermediation" is based on a section titled "The Process of Intermediation: Indirect Finance," Ibid., particularly page 201. Here the movement of money (i. e. demand deposits) from the ultimate lender to the ultimate borrower is described.

²Gurley and Shaw's definitions for primary securities and liquid assets are contained in the previous section of this chapter, "Gurley-Shaw Theory Contained in Their Articles". By Gurley and Shaw's definitions associated with their theoretical framework they are not the same. See footnote 2, page 234.

financial intermediaries.

One theory allows for a single financial intermediary; the other theory allows for one or more financial intermediaries. The process emphasized is the same in both theories: "Intermediating techniques turn primary securities into indirect securities for the portfolios of ultimate lenders."¹

The increase in consumer credit and other loans extended by finance companies during monetary restraint is the final step in a process of financial intermediation. Finance companies lend money to ultimate borrowers in return for primary securities. Finance companies do not create liquid assets. Instead, they issue indirect financial assets to other financial intermediaries, i.e. commercial banks, in order to raise the money they lend to ultimate borrowers. So far, so good - the more general Gurley-Shaw theory contained in their book accounts for actual responses.

However, commercial banks do not borrow this money (which they lend directly to consumers as well as to finance companies via loans n.e.c.) by creating liquid assets, rather they liquidate U.S. Government securities. This type of financial intermediation is never mentioned in their articles but is explicitly included in theory contained

¹Gurley and Shaw, Money..., page 197.

in the book.^{1, 2} This is the more significant second respect (referred to earlier) in which theory contained in their book is more general than theory contained in their articles. Here financial intermediaries sell government securities to spending units and purchase primary securities (e. g. consumer credit) from them. Thus this type of financial intermediation takes relatively illiquid securities from spending units and in their place gives them highly liquid ones.³ Liquid assets in the portfolios of spending units increase. Gurley and Shaw call this type of financial intermediation a "switching operation".⁴ They suggest that switching is essentially an alternate to liquid asset creation as far as increases in the economy's total liquidity are concerned.

Either way, by switching operations or by creating indirect debt, nonmonetary intermediaries are capable of reducing spending units' demand for money and thus of creating an excess stock of money. The monetary system by switching and creating can also bring about an excess stock of money, in the first case by reducing the demand for money and in the second by increasing the

¹See section titled "Creating and Switching Operations," Ibid., page 221.

²If this type of financial intermediation had been included in the theoretical framework used as a basis of analysis in their articles, then perhaps Gurley and Shaw would not have suggested that the ineffectiveness of monetary restraint was due to the creation of liquid assets. See footnote 3, page 228.

³"This 'switching operation' removes from spending units' portfolios relatively illiquid securities and replaces them with highly liquid ones." Gurley and Shaw, Money..., page 221.

⁴Ibid.

absolute stock of it. In fact, these switching and creating operations by financial intermediaries are dual methods of taking one type of security off the market and issuing another.¹

Therefore the actual responses of commercial banks (and the less significant but similar responses of savings institutions) during monetary restraint are accounted for by Gurley-Shaw theory contained in the book. The sale of U.S. Government securities to supply consumer credit and loans n. e. c. is a switching operation.

In fact, in their book while discussing the "Basic Elements of Monetary Control" (Chapter VII, beginning on page 247), Gurley and Shaw emphasize that government debt can play such roles in financial intermediation.

Throughout this volume little has been said about 'public debt', that is interest-bearing nonmonetary issues of the Treasury. We have been concerned primarily with private securities. This is a serious omission. The common assumption is right that a large government debt has important consequences not only for the Treasury but also for the Central Bank, its member banks, and spending units. It may affect goals of monetary policy, control techniques, the responses of commercial banks to various techniques, and the real profits of the monetary system... A financial authority competent to manage both nominal money and public debt has a grip upon interest rates, in the short run, and upon the price level as well as upon real variables, in the long run, that the traditional Central Bank cannot achieve.²

¹Ibid., pages 221-222.

²Ibid., page 275. Also see pages 252-253.

To emphasize just how well Gurley-Shaw theory does account for actual responses, consider again this part of the quotation which explicitly cautions against what actually happens. "It may affect goals of monetary policy, control techniques, the responses of commercial banks to various techniques..."

The other significant contrary response, increase in mortgage loans from savings and loan associations, is beside the point in an evaluation of Gurley-Shaw theory. The main source of funds for this response contrary to the aims of monetary restraint is a governmental body, the Federal Home Loan Bank. By coordinating the activities of the FHLB with another governmental body, the Federal Reserve, this major problem area could be dealt with easily. Within the Gurley-Shaw theoretical framework both of these bodies are considered monetary authorities and therefore part of the "Policy Bureau or Central Bank".¹

The Gurley-Shaw theory contained in Money in a Theory of Finance does account for characteristic responses associated with particular monetary policies determined in this study. Switching operations rather than liquid asset creations are the sources of funds for the significant responses contrary to the aims of monetary restraint. Encompassed (and thus accounted for) by the theory to be sure, but

¹Ibid., see page 247 for discussion of role played by the Policy Bureau or Central Bank in monetary control.

none the less surprising in light of the controversy surrounding the theory, is the evidence indicating that commercial banks, not non-monetary financial intermediaries, are the sources of funds for the significant contrary responses.

The controversy referred to here is associated with Gurley and Shaw's proposals for monetary reform which involve "...extending our general controls to cover a wider area of financial intermediation."¹ These proposals are discussed in the next section.

GURLEY AND SHAW'S PROPOSALS

Gurley and Shaw propose various monetary control reforms in a paper presented to the Southern Economic Association.² First, however, they outline three long-term financial trends in the United States which they believe bear directly on the effectiveness of monetary control.³ One, primary securities rose relative to national income during the 19th century and then leveled off during the first half of the 20th century. Two, recently (since 1925) an increasingly large share

¹Gurley and Shaw, "Financial Growth and Monetary Controls," page 22.

²Ibid.

³See section titled "Some Financial Trends, 1800-1952," Ibid., pages 2-11.

of primary securities has gone to financial intermediaries instead of to nonfinancial spending units. Spending units accumulate an increasing amount of their financial assets in the form of indirect debt rather than in the form of primary securities. Third, and most important for the argument and ensuing proposals in their paper,

...nonmonetary intermediaries have gained at the expense of the monetary system. They have captured an increasing share of the primary securities that have been purchased by all financial intermediaries. Nonfinancial spending units have not only accumulated a rising share of their financial assets in the form of indirect debt, but this type of accumulation has been directed more and more towards the indirect debt of nonmonetary intermediaries and less and less towards the monetary indirect debt of the monetary system.¹

For considerations of monetary control, the third trend is crucial according to Gurley and Shaw.² An increasing percentage of financial intermediation activity, from liquid asset creation to the purchase of primary securities, occurs outside commercial banks.³ Monetary authorities via general monetary policy attempt to control the liquidity promoting activities of all financial activities.⁴ However,

¹Ibid., page 11.

²See section titled "The Financial Trends and Monetary Controls," Ibid., pages 11-17.

³See section titled "Gurley-Shaw Theory Contained in Their Articles" for a review of their theoretical analysis of financial intermediation.

⁴"In broadest terms, a general, impersonal financial control

Gurley and Shaw argue that monetary control is implemented via a decreasing part of the financial system.^{1, 2} This does not mean that current monetary policy tools can not do the job,³ rather it means that in order to do the job commercial banks are unduely restricted.⁴

The findings of this study indicate that the majority of flows of funds through financial intermediaries respond in a manner compatible

would limit the supply of indirect debt whether in the form of money, saving deposits, or shares." Gurley and Shaw, "Financial Growth and Monetary Controls," page 17.

¹"The authorities today limit the growth of a relatively diminishing segment of this system, making the job of regulating terms of lending correspondingly more difficult." Ibid., page 16, see also page 17.

²Arthur Burns' impressions about the U.S. financial system are close to those of Gurley and Shaw on this point. For example:

"The essential point of the preceding analysis, however, is that in order to achieve a particular effect on the nation's total expenditure in today's environment, the degree of credit restriction which needs to be taken is likely to be appreciably greater than was the case a generation ago." (page 54)

"There is a serious question, however, whether the economic power of the Federal Reserve System — that is, its ability to restrain the expansion of credit with reasonable promptness and yet without shock — may not have been eroded in some degree by the narrowing of the economic base on which its policies impinge." (page 81)

Arthur Burns' proposals for monetary reform are discussed in Chapter X.

³"We are not arguing that general monetary controls cannot do the job at all, simply that the job has to be done with outmoded instruments." Gurley and Shaw, "Financial Growth...", page 16.

⁴"...when other financial intermediaries are expanding too rapidly, the authorities are compelled to crack down on the growth of the monetary system, even when the monetary system may have been behaving in a most admirable way. The 'good boy' may have to be punished for the actions of the 'bad boys'." Ibid., page 17.

with the aims of monetary policy. However, as explained earlier in this chapter, such evidence may or may not support Gurley and Shaw's argument.¹

The findings of this study also indicate that the most significant responses contrary to the aims of monetary policy are the result of commercial bank activity (i. e. the liquidation of U.S. Government securities to obtain funds to increase consumer and other short-term credit during monetary restraint). This evidence does not support the Gurley-Shaw argument leading up to the conclusion "...that some thought be given to the possibility of extending our general controls to cover a wider area of financial intermediation".² That is, commercial banks are not "good boys".³ Thus contrary to the implications of the Gurley-Shaw argument, commercial banks continue to be the major problem area with regard to the efficacy of monetary control. However, since the Gurley and Shaw proposals for monetary reform are based on an argument which implies that nonmonetary financial intermediaries are the "bad boys",⁴ the findings of this study do not

¹See pages 230-231 of this chapter.

²Gurley and Shaw, "Financial Growth and Monetary Control," page 22.

³"Good boy" is a term used by Gurley and Shaw to indicate commercial banks, *Ibid.*, page 17, or see footnote 4, page 249.

⁴See footnote 4, page 249.

support the proposals.¹ The proposals are: either 1) require all financial intermediaries to hold reserves with the Federal Reserve,² or 2) require nonmonetary financial intermediaries to hold reserves in the form of commercial bank deposits,³ or 3) establish a central bank for nonmonetary intermediaries,⁴ or 4) utilize transfers of U.S. Treasury funds between the Federal Reserve, commercial banks, and nonmonetary financial intermediaries.⁵

The policy recommendations contained in their book are different from those proposed above.⁶ These policy recommendations

¹There is a close relationship between these proposals for monetary reform and the theoretical framework used as a basis of analysis in the Gurley-Shaw articles. (See section titled "Gurley-Shaw Theory Contained in Their Articles".) The findings of this study indicate that both have a common weakness. Neither these proposals nor the theoretical framework contained in their articles adequately accounts for liquidations of U.S. Government securities by commercial banks to obtain loanable funds during monetary restraint.

It seems to me both use long-term financial trends inappropriately as an empirical base for analysis of short-term behavior associated with business cycles and monetary policy.

²Gurley and Shaw, "Financial Growth and Monetary Control," page 18.

³Ibid., page 20.

⁴Ibid., page 20-21.

⁵Ibid., page 21.

⁶See particularly Chapter VII, "Basic Elements of Monetary Control," Gurley and Shaw, Money..., pages 247-298.

range from consolidation of monetary and government-debt management^{1, 2} to 100 percent reserves supporting demand deposits³ or even a nationalized banking system.⁴ However, with regard to the findings of this study, the exact natures of the many policy recommendations inherent

¹See section titled "Consolidation of Monetary and Government-Debt Management," Ibid., pages 278-280.

For example, "Government debt, on the one hand, and debts of the monetary system on the other, are each so important a segment of total financial assets that management of them by different authorities working for dissimilar goals must be expensive in real interest costs to the Treasury, in monetary stability, or in real earnings of the banking system." Ibid., page 280.

²James Angell believes that the U.S. economy is heading towards monetary controls of the Gurley-Shaw kind (page 86) with a central coordinating agency to coordinate fiscal and monetary policy "... such as a National Economic Agency" (page 87). (This latter idea is quite close to Arthur Burns' proposal discussed in the next chapter.) Angell also feels that some selective credit controls are also probably inevitable. As the following quotation indicates, he is quite concerned about the prospects for increasing controls.

"These are the directions toward which I suspect we may actually be heading at present. Such an increase in controls is instinctively repugnant to most of us, yet it may be the only way by which we can obtain both optimal real growth and also stability, on the average, in our price structure.

"The choice which the commission and the country face is thus basically a choice between greater stability and probably more rapid growth but with less individual economic freedom, on the one hand; and on the other, more freedom but less stability and probably much slower average growth. It is a difficult choice, and in the last analysis must be made not on economic but on political grounds."

Angell, American Economic Review, XLVIII, No. 2 (1958).

³"An alternative solution is 100 percent reserves - commercial banking without primary securities." Gurley and Shaw, Money..., page 290.

⁴"The same considerations suggest a more radical solution - nationalization of the banking system." Ibid.

in the discussion of "Basic Elements of Monetary Control"¹ are not as important as the analysis used in the discussion.

Contrary to the above instance associated with the proposals put forth by Gurley and Shaw in their article, the findings of this study do support the analysis used in the discussions about monetary policy in their book. This analysis explicitly states that U.S. Government securities are important in considerations of monetary policy.² The analysis continues by pointing out that during monetary restraint commercial banks can carry out switching operations,³ and thus expand credit just as if they created liquid assets.⁴ In fact, it is even stated in this analysis that inflationary switching - the liquidation of U.S. Government securities by commercial banks to obtain funds for credit expansion - is to be expected during monetary restraint.⁵ The

¹"Basic Elements of Monetary Control" is the title of Chapter VII, Ibid., page 247.

²"Throughout this volume little has been said about 'public debt', that is interest-bearing nonmonetary issues of the Treasury. We have been concerned primarily with private securities. This is a serious omission. The common assumption is right that a large government debt has important consequences not only for the Treasury but also for the Central Bank, its member banks, and spending units. It may affect goals of monetary policy, control techniques, the responses of commercial banks to various techniques, and the real profits of the monetary system." Ibid., page 275.

³Ibid., page 276. ⁴Ibid., page 277, and then pages 221-222.

⁵"Outright sale [of U.S. Government securities] is inflationary and is to be expected when short-run monetary policy is on a deflationary tack." Ibid., page 277.

findings of this study confirm that such inflationary switching is, indeed, to be expected.¹

Finally, time-lags associated with the proximate impact of monetary policy on commercial banks are discussed very briefly in two different contexts in the book.² No quantitative measure of the time lag was associated with the discussion in either context. However, the point being made in one of the discussions depended upon whether "the time lags of adjustment are indefinitely long" or "are short".³ The findings of this study indicate that flows of funds through commercial banks respond to some degree within three months after a particular period of monetary policy has been initiated.

CULBERTSON'S CRITICISM

J. M. Culbertson argues that the theoretical framework employed by Gurley and Shaw in their articles is not valid in his paper "Intermediaries and Monetary Theory: A Criticism of the Gurley-Shaw

¹I suggest that the more comprehensive analysis (i. e. more comprehensive than the corresponding analysis in the article) leading to policy recommendations in their book that are different from the policy recommendations in their article results from the theoretical framework used in the book. The theory in the book is significantly (particularly in the light of the findings of this study) more general than the theoretical framework contained in the Gurley-Shaw articles.

²Gurley and Shaw, Money...., pages 266 and 296.

³Ibid., page 296.

Theory".^{1, 2} He states that,

This paper limits itself to discussion of certain theoretical innovations that seem to the present writer to be of fundamental importance and to play an essential role in the Gurley-Shaw argument.³

The discussion concerns the Gurley-Shaw theory contained in their articles, not theory contained in their book.⁴ He summarizes the main issues he discusses in two questions:

(1) Do commercial banks differ from financial intermediaries (i. e. nonmonetary intermediaries) in their ability to create credit in any sense that is significant from the point of view of financial control over the economy?

¹J. M. Culbertson, "Intermediaries and Monetary Theory: A Criticism of the Gurley-Shaw Theory," American Economic Review, XLVIII, No. 1 (1958), pages 119-131.

²"The thesis of this paper is that Gurley-Shaw innovations discussed below are not valid and, therefore, that the authors' argument cannot be accepted." Ibid., page 119.

"The question is whether the Gurley-Shaw theoretical framework is a valid basis for the inquiry, and is an improvement over our accustomed tools of analysis. It seems to me that, on the contrary, it represents a step backward." Ibid., page 131.

³Ibid., page 119.

⁴Culbertson draws Gurley-Shaw theory from the following: "J. G. Gurley and E. S. Shaw, 'Financial Aspects of Economic Development,' American Economic Review, September 1955, XLV, 515-38, ... 'Financial Intermediaries and the Saving-Investment Process,' Journ. Finance, May 1956, XI, 257-76... also 'Financial Growth and Monetary Controls,' a paper delivered at the November 1956 meetings of the Southern Economic Assoc., and 'The Growth of Debt and Money in the United States, 1800-1950: A Suggested Interpretation,' Rev. Econ. Stat., Aug. 1957, XXXIX, 250-62." Ibid., page 119.

(2) Are the concepts of 'direct debt' and 'indirect debt' useful tools for analyzing financial developments and an appropriate basis for formulating government financial policies to combat instability?¹

Culbertson argues against the Gurley-Shaw theoretical framework by answering the first question affirmatively.² His argument is the conventional one that considers commercial banks unique among private financial institutions. It is based on the assumption that money is a unique asset (i. e. it is the generally accepted medium of exchange).³ The only private institutions whose debts (i. e. demand deposits) serve as money are commercial banks. When banks extend credit, they exchange demand deposits for notes (i. e. primary securities signed by borrowers) thereby creating money. Because they can create money, banks are unique in their ability to affect the volume of their liabilities and in their ability to create or extinguish credit. The fine points in the development of Culbertson's argument against Gurley-Shaw theory in part I of his paper are beside the point here because the findings of this study do not bear on them. However, the findings of this study do bear on his argument in part II where he answers the

¹Ibid., page 119.

²Part I, titled "I. Are Commercial Banks Unique in Their Ability to Create Credit?" Ibid., pages 119-125.

³"Money is a unique asset; some others can substitute for it to some degree in some uses, but there is no fully adequate substitute." Ibid., page 120.

second question raised above negatively.¹ He reviews Gurley and Shaw's definitions of "direct" and "indirect debt". "Indirect debt", he states, is defined by them as including the obligations of all financial intermediaries. "Direct debt" includes all other debt.² He states that their theory of interest and their conclusions regarding monetary policy are based on their concepts of "direct debt" and "indirect debt".² He then points out that the usual approach to financial analysis rests on the liquidity of financial assets "...irrespective of whether the assets are those of intermediaries or of other debtors".²

Culbertson agrees that the Gurley-Shaw approach is one of several possible approaches to the problem.³ However, Culbertson goes on to argue that acceptance or rejection of such an approach as a valid, theoretical basis for analyzing financial intermediation turns on the actual behavior of economic units.⁴ He concludes that such an approach can not, in fact, be defended.⁵

In drawing this conclusion he emphasizes how close some "direct debts", such as U.S. Government securities, are to money and,

¹Part II, titled "II. 'Direct Debt' - 'Indirect Debt' or Liquidity-Illiquidity?", Ibid., pages 125-127.

²Ibid., page 125.

³"This is one valid approach to the problem." Ibid., page 125.

⁴"The underlying question is a basically factual one: Does the effect of a given type of financial asset on the behavior of the holder depend on whether the asset is created by an intermediary or by another debtor, or does it depend upon certain characteristics of the asset itself, mainly its liquidity?" Ibid.

⁵"I do not see how the realism of the 'direct-debt' 'indirect-debt' can be defended." Ibid., page 126.

on the other hand, how little substitutability there is between such types of "indirect debt" as demand deposits and equities in retirement systems. For example he states, "It is well known that Treasury bills, a type of 'direct debt', are considered by a large class of investors as one of the closest substitutes for money."¹ Yet, as Culbertson notes, U.S. Government securities are ignored by Gurley and Shaw in their analysis.² In the earlier discussion of Gurley-Shaw theory it is pointed out that Gurley-Shaw theory drawn from their articles does not account for responses of commercial banks which are contrary to the aims of monetary restraint.³ These responses are possible because banks can liquidate U.S. Government securities. As pointed out in the earlier discussion, the Gurley-Shaw theoretical framework contained in their articles does not account for funds at the disposal of financial intermediaries generated by security liquidation. In addition, Gurley and Shaw ignore U.S. Government securities when they attempt to account for post World War II liquidity in the United States using their theory. In fact, there is no attempt in any of their discussion, with or without theory, to account for the contribution to the economy's liquidity

¹Ibid., page 126.

²"...the supply of Treasury bills and savings bonds, which are quite left out of account in the Gurley-Shaw analysis." Ibid., page 129.

³Pages 230 to 238 of this chapter.

during this period resulting from the large amount of marketable U.S. Government securities.

To recapitulate, Culbertson argues in part II that the concept of "direct debt" - "indirect debt" (Gurley and Shaw's concept) can not be used to account for what actually happens as well as the liquidity-illiquidity concept (the "usual approach"). He states that the issue is basically a factual one.

The underlying question is basically a factual one: Does the effect of a given type of financial asset on the behavior of the holder depend upon whether the asset is created by an intermediary or by another debtor, or does it depend upon certain characteristics of the asset itself, mainly its liquidity.¹

The findings of this study are not accounted for by Gurley-Shaw theory contained in the articles because Gurley and Shaw do not account for behavior associated with the very liquid U.S. Government securities. Thus the findings of this study (which could serve as an answer to Culbertson's factual question) substantiate that part of Culbertson's criticism of the Gurley-Shaw theoretical framework contained in part II of his discussion.

Finally, in part III of his paper, Culbertson does discuss the fact that Gurley and Shaw's empirical work supports their theory.²

¹Culbertson, American Economic Review, XLVIII, No. 1 (1958), page 125.

²Part III, titled "III. Applications of the Gurley-Shaw Theory," Ibid., pages 127-131.

However, he points out how the same empirical work would support other theories which Culbertson believes are more plausible on logical grounds. In fact he finally states that Gurley and Shaw's empirical effort is quite insufficient to justify their "radical" theory.

I cannot, however, see that Gurley and Shaw justify their theoretical innovations by the arguments and the facts that they adduce in these articles; indeed, the effort that is given to attempting to support them is scarcely proportionate to their importance or to the accumulated weight of argument on the other side.¹

The findings of this study would, therefore, also support Culbertson's argument in part III.^{2, 3}

¹Ibid., page 131.

²Again, Culbertson attacks Gurley-Shaw theory contained in their articles and the findings of this study support his attack. However, the same findings would support Gurley-Shaw theory contained in their book against a similar attack. The more comprehensive Gurley-Shaw theory contained in their book thus represents a significant improvement of the theory contained in their articles.

³Culbertson states that the theory contained in the articles should be improved, "If the authors would continue to build on their unorthodox theory, they should offer a more thoroughly worked out position in support of it." Culbertson, American Economic Review, XLVIII, No. 1 (1958), page 131.

I agree completely. I think, as indicated in my discussion about Gurley-Shaw theory, that the authors do "offer a more thoroughly worked out position in support of it" in their book.

ASCHHEIM'S CRITICISM¹

In his book Techniques of Monetary Control Joseph Aschheim criticizes the "new approach to financial intermediaries" authored by Gurley and Shaw.² He describes "conventional monetary theory" in terms of the "conventional dichotomy between commercial banks and other private financial institutions".³ He then states that just because "financial intermediaries" can be defined to include both commercial banks and nonmonetary financial intermediaries, hardly proves that they are sufficiently similar to warrant Gurley and Shaw's policy recommendations.⁴ He concludes, then, by reaffirming the conven-

¹Aschheim's proposals for monetary reform are discussed in Chapter X, "Selected Proposals for Monetary Reform," pages 289-293.

²Aschheim, Techniques..., Chapter 7, "The Contrast Between Commercial Banks and Financial Intermediaries," pages 111-134.

³Ibid., section III, "Theoretical Underpinning," particularly page 121.

⁴Ibid., pages 122-123. For example, "Manifestly, it would be erroneous to infer from the mere fact that commercial banks can be defined as one of several variants of financial intermediaries that the same principles of control properly apply to all these variants." (page 122)

"Thus it could be hardly contended that, merely because both commercial banks and other private financial enterprises can be defined as financial intermediaries, it necessarily follows that they are sufficiently similar from the viewpoint of central banking to require the same set of controls." (page 122)

tional dichotomy.^{1, 2}

The findings of this study do not directly bear on Aschheim's criticism of Gurley-Shaw theory. However, in a circumstantial way, Aschheim's criticism does bear on the analysis of Gurley-Shaw theory contained in the first two sections of this chapter.³ In this analysis

¹"Our reaffirmation of the conventional dichotomy between commercial banks and other private financial institutions..." *Ibid.*, page 126.

²At one point in his argument Aschheim criticizes Gurley-Shaw theory because (he argues) it is based on an ex post concept of loanable funds. He then argues that regardless of how loanable funds are defined (i.e. ex post basis or ex ante basis) commercial banks can create loanable funds and other financial institutions cannot.

"Thus, even with loanable funds redefined as ex post savings, it is still true that commercial banks can create loanable funds: their operations can make ex post savings exceed ex ante savings. In contrast, other private financial institutions - collectively as well as individually - can lend no more than they have received from depositors and, therefore, cannot create loanable funds either in an ex post sense or in an ex ante sense." *Ibid.*, page 125.

I think that this conclusion is incorrect because Aschheim has ignored velocity considerations. He himself defines the supply of loanable funds as follows: "The supply of loanable funds (in the conventional usage) consists of the following components: (1) planned current gross savings; (2) planned dishoardings of idle cash balances; and (3) net creation of new money." *Ibid.*, page 124. Now if nonmonetary financial intermediaries can affect the velocity (even if not the quantity) of money, then they can affect total transactions. This in turn affects National Income which is a prime determinant of gross saving. Thus the activity of nonmonetary financial intermediaries can affect ex post savings and therefore can affect (if the affect causes an increase, then the term is "create") loanable funds.

³"Gurley-Shaw Theory Contained In Their Articles," pages 223 to 239; and "Gurley-Shaw Theory Contained In Their Book," pages 240 to 247.

the point is repeatedly made that the theory in Gurley and Shaw's book is an improvement over the theoretical framework employed as a basis of analysis in their articles. Aschheim also explicitly recognizes that the two theoretical frameworks are different¹ and that the latter one is an improvement.^{2, 3}

¹Aschheim, Techniques..., pages 123-126. For example, "let us, therefore, examine, in turn, the initial and the revised formulations of the new approach." Ibid., page 123.

²Ibid., page 125.

³Above I said that this was of interest to my analysis only in a circumstantial way. I said this because Aschheim discusses different reasons than I used in my analysis for pointing out that the two versions of Gurley-Shaw theory are not the same. He feels that a difference between these two versions involves "...the ex post or the ex ante conception of loanable funds..." Ibid., page 127.

CHAPTER X

SELECTED PROPOSALS FOR MONETARY REFORM

This chapter contains discussions of the extent to which various proposals for monetary reform are consistent with the findings of this study. The proposals selected for discussion here were authored by the following (listed in the order in which they are discussed in this chapter): Arthur Burns, Milton Friedman, Warren Smith, Joseph Aschheim, David Alhadeff, James Henderson, Donald Shelby, and the Commission on Money and Credit.

BURN'S PROPOSAL

In his book Prosperity Without Inflation Arthur Burns is concerned with the United States' inability to cope with "creeping inflation".^{1, 2, 3} A distinctive feature of this inflation, according to Burns,

¹"There is room for doubt, however, whether the threat of creeping inflation can be adequately met within the framework of business-cycle policy alone." Burns, page 83.

²"This small volume consists of the Miller Lectures that I had the honor to give... The lectures are focused on the problem of inflation, which has seriously marred our nation's prosperity in the post-war period." Ibid., Prefatory Note.

³"Since 1933, the price level has declined only moderately

is the increased concern of the federal government with the maintenance of full employment.¹ Government efforts have favorably affected employment, but they have also exerted upward pressure on prices. Burns emphasizes that the government has not complimented its full employment policies with coordinated efforts designed to maintain price stability.² Federal Reserve monetary policy, alone, can not do the job in Burns' opinion.³

To contain inflation, Burns proposes a broader approach to price stability on the part of the federal government.^{4, 5} The major

if at all during business contractions, despite its substantial advances during business expansions." Ibid., page 16.

¹"There is, however, one factor which rather sharply differentiates the environment of price formation during the past quarter century from earlier times, and that is the increased concern of government with the maintenance of prosperity and the avoidance of depression." Ibid., page 16.

²For example, "The conclusion... is that... our economy is faced with a threat of gradual or creeping inflation... Our conclusion, however, rests also on another assumption: namely, that public policies for resisting inflation will be no more energetic in the future than they have been during the past decade or two." Ibid., page 20.

³"Monetary and credit controls are undoubtedly helpful in checking private expenditures, but experience suggests that they are not likely to prove helpful enough." Ibid., page 75.

⁴"There are several reasons why a broad approach to the problem of inflation, such as I have tried to suggest, carries a greater promise of success than concentration on any particular tool of policy." Ibid., page 85.

⁵The approach is described in detail in chapter four, "Public Policies for Coping with Inflation," Ibid., pages 66-88. The approach

factor in this broader approach is to amend the Employment Act of 1946 to declare

...that it is the continuing policy of the federal government to promote reasonable stability of the consumer price level, as well as 'maximum employment, production, and purchasing power'...^{1, 2}

Burns argues that broadening of the Employment Act to include price stability among its objectives "...would tend to make it a constant reference point for the public and private actions that bear on the level of prices."³ Supposedly this would lead to effective government policy action with regard to price stability.⁴

involves the use of a high level economic policy-making committee, greater reliance on the timing associated with public expenditures, and "reduction of monopolistic practices" particularly by labor unions when bargaining for wages, in addition to the major factor discussed above in the text.

Apparently E. M. Bernstein would agree with a proposal similar to Burns', particularly with respect to the high level economic policy-making committee. He discusses the inability of monetary policy alone to cope with economic fluctuations. He points out the need for coordination between the Federal Reserve, the Treasury, and the Council of Economic Advisors.

For example, he concludes, "The essential point is to have good working relations between the Federal Reserve System, the Treasury, and the Council of Economic Advisors." Bernstein, American Economic Review, Papers and Proceedings, XLVIII, No. 2 (1958), page 97.

¹"What we need more than anything else at this juncture of our great experiment in the management of prosperity is a national declaration of purpose with regard to the level of prices that could have a moral force such as the Employment Act already exercises with regard to our levels of production and employment." Burns, page 71.

²Ibid., page 71. ³Ibid., page 72.

⁴"Policies that promote stability of the price level would

As explained in the first chapter, this study concerns the relationship between monetary authorities and financial intermediaries. On the other hand, Burns¹ proposed broadened approach to the problem of inflation includes many other parts of the economy in addition to monetary authorities and financial intermediaries. Therefore the findings of this study are only pertinent to a part of his proposal.¹

therefore tend to gain in prestige and to exercise increasing power over the thoughts and actions of both government officials and private citizens." Ibid., page 72.

"It is because I expect that the proposed amendment would strengthen efforts to deal with inflation, while it would in no way reduce zeal in checking recessions, that I regard the explicit inclusion of reasonable stability of the consumer price level among the objectives of the Employment Act as a wise and progressive step at this time." (page 73)

"But once we make reasonable stability of the price level one of the key objectives of the nation's economic policy, and do this so plainly that there can be no mistaking the fact, it seems likely that public officials will become more enterprising in seeking ways and means of offsetting or containing the price raising forces that some governmental policies - whether with regard to agriculture, foreign trade, trade unions, or other areas of national interest - unavoidably release." (page 85)

Etcetera.

¹Further Burns actually bases his proposal on a broad spectrum of facts and personal impressions rather than on a carefully developed theory. Of course, he has some theory in mind, but his book is mainly institutional in approach reflecting his long association with the National Bureau of Economic Research and particularly his years as economic advisor (i. e. Chairman of the Council of Economic Advisors) to President Eisenhower. The findings of this study then can confirm or contradict some of Burns' impressions about financial intermediation. However, neither this study nor perhaps any currently feasible empirical study of the economy could conclusively bear on Burns' proposal. The relevant judgement about this proposal involves political organization and political motivation. That is, just what effect would a word change in the Employment Act of 1946 have on governmental control over the price level? And a word change in this Congressional Act is really

BURNS AND FINANCIAL INTERMEDIATION

First of all it is noted above that Burns does not believe that monetary policy alone can control creeping inflation.¹ The findings of this study indicate that many flows of funds from financial intermediaries decrease during monetary restraint. The study is not, however, directly concerned with the effect of responses (to monetary restraint) of financial intermediaries on real prices. The findings of this study do indicate then which responses of financial intermediaries promote and which do not promote price stability, but this information is not enough to counter or substantiate Burns' belief in the insufficiency of monetary policy.

Actually Burns' conception of the relationship between

the essence of his proposal.

Burns himself seems to reduce the main factor in his proposal to such a word change. "It has been said that such an amendment of the Act is unnecessary since it already covers the objective of general price stability by implication. I would agree to this interpretation of the law. Nevertheless, I believe that it would be a highly constructive step if the Congress stated explicitly what the Act appears to some of its interpreters to state implicitly." *Ibid.*, page 71.

By making this point I do not intend to downgrade Burns' proposal. It may well be the best approach to cope with U.S. inflation. My intention rather is to indicate that the issues associated with this proposal can not in the final analysis be resolved with empirical economic studies.

¹This statement should be qualified. Burns believes that the price we would have to pay in terms of unemployed resources to use monetary policy alone to achieve price stability means that such intensive use of monetary policy is out of the question. He does believe, however, that theoretically monetary policy could do the job. "Viewed in the abstract, there is almost no limit to what the Federal Reserve can accomplish..." *Ibid.*, page 54.

financial intermediaries and the economy's liquidity is very close to the thinking of Gurley and Shaw. For example, he explains the rapid growth of nonmonetary financial intermediaries since the end of the war and the relationship of this growth to monetary policy in almost the same way that Gurley and Shaw explain the same phenomena.¹

After this explanation he goes on to say the following:

¹"Since the end of World War II the spectacular growth of the assets of financial institutions other than commercial banks reflects only in small part the rise in stock prices. What it basically signifies is the efficiency of financial markets in assumbling 'idle' funds and putting them to work in commerce and industry. This process not only can continue in the face of restrictions on the growth of commercial bank assets, but it is even likely for a time to be accelerated by a restrictive credit policy. A rise of interest rates increases the cost of holding demand deposits, on which commercial banks have been forbidden to pay interest since 1935. Hence, rising interest rates, especially if the movement is of considerable magnitude and duration, tend to stimulate both consumers and business firms to convert their cash balances into earning assets. This can often be done without any significant loss of liquidity. For example, when an individual draws on his checking account to buy a life insurance policy or to acquire savings and loan shares or to deposit funds in a mutual savings bank, he obtains against a financial institution a claim which can be readily converted into cash. The institution, in turn, having acquired ownership over a part of his demand deposit, now has additional money to lend to others who are likely to be active spenders. Much the same thing happens when a corporation buys the commercial paper issued by a sales finance company, especially when the transaction is handled through a repurchase agreement. In these and other ways the loans of financial intermediaries can for a time grow quite rapidly even when the reserves of commercial banks are severely restricted by Federal Reserve actions." Ibid., pages 50-51.

"Other financial institutions were likewise active in mobilizing idle funds and putting them to work in the nation's markets for goods and services. For example, when a savings and loan association induced someone, by the offer of an attractive rate of return, to draw down his demand deposit in a commercial bank and acquire instead the association's shares, neither the lending power of the banking system

The rapid growth of financial institutions other than commercial banks is not, however, the only development of recent times that has tended to limit the control that the Federal Reserve System can exercise over credit expansion. The emergence of a large amount of federal government securities in the portfolios of commercial banks has had a similar influence... These large holdings of government securities add immeasurably to the flexibility of bank management. In particular, they enable commercial banks to replenish their supply of loan funds, if they so wish, and thereby to circumvent for a time the restrictions that the Federal Reserve authorities may impose on their reserves.^{1, 2}

The findings of this study certainly support Burns on this point: bank liquidations of U.S. Government securities are a major source of funds for responses contrary to the aims of monetary restraint. The findings of this study also indicate that some nonmonetary financial intermediaries use U.S. Government securities as liquidity

nor the supply of money was changed. However, the lending power of the savings and loan association was increased by the transaction, as was also the outstanding amount of its shares - which in practice are readily convertible into money and therefore a close substitute for it. Hence, the lending power of the financial system taken as a whole became larger, and so too did the combined supply of money and of its close substitutes. With countless variations, this sort of thing has happened on an extensive and increasing scale in recent years." (page 5)

¹Ibid., page 51.

²As discussed above, Gurley-Shaw theory contained in their articles does not account for this source of funds. Gurley-Shaw theory contained in their book, however, does account for this source of funds. Burns published Prosperity Without Inflation (1957) after some of Gurley and Shaw's early articles had appeared, but well before their book (1960) was published.

stores. Burns also notes this.^{1, 2}

The findings of this study, however, indicate that most flows of funds into nonmonetary financial intermediaries decrease or at least are retarded during monetary restraint. Correspondingly, most flows of funds from nonmonetary financial intermediaries into various forms of credit also decrease or are at least retarded. These findings do not support Burns' impression of the responses of non-monetary financial intermediaries. He believes that Federal Reserve monetary restraint has either little influence over flows of funds into and out of nonmonetary financial intermediaries or actually stimulates these flows of funds.³

Finally, Burns mentions three suggestions, apparently made by others, for "...reconstructing our financial machinery so as

¹"The great volume of outstanding federal securities has increased the financial maneuverability of all types of financial institutions, not only of commercial banks." Burns, page 52.

²In addition Burns states that the U.S. Government securities liquidated by financial intermediaries during 1956 (the first full year in the first period of monetary restraint included in this study) "...were largely bought, on balance, by individuals, by federal trust funds, and by various state and local investment accounts." Ibid., page 52.

³"But the Federal Reserve authorities have little influence, at least in the short run, over the volume of credit extended by other financial intermediaries or over the creation of money substitutes. Indeed, there is reason to believe that these activities may for a time be stimulated by a policy of general credit restraint." Ibid., page 81.

to enhance the effectiveness of monetary policy."¹ However, he dismisses them all "...until a comprehensive study of our financial system and of the basis of monetary policy has been carried out..."¹ The findings of this study bear directly on one of these suggestions. The findings indicate that the most significant responses contrary to the aims of monetary restraint involve increases in consumer credit and in mortgage loans. One of these suggestions would establish stand-by authority on the part of the government to regulate the terms of consumer credit and of conventional housing mortgages.² The findings of this study indicate that this suggestion is directed at the troublesome responses.

¹Ibid., page 82.

²"A third suggestion is to give the President or the Federal Reserve Board stand-by authority to regulate the terms of consumer instalment credit and perhaps also the terms of conventional housing mortgages." Ibid.

FRIEDMAN'S PROPOSAL

In his book, A Program For Monetary Stability, Milton Friedman proposes a sweeping reformation of U.S. monetary and banking arrangements. He recommends that the Federal Reserve should retain only one of its current policy tools, open market operations, and that open market operations should be used to produce a steady 4 % per year rate of growth in the combined total of currency and demand deposits held by the public. He suggests that banks accepting demand deposits be required to keep reserves equal to 100 % of their deposits whether demand or time in the form of either currency in vault or interest-bearing deposits with the Federal Reserve (interest rate to be the same as the market yield on short-term government securities). In addition he suggests that all controls over interest paid by banks on deposits should be abolished and that completely free entry be permitted in the deposit banking business. He recommends that present debt management by the Treasury should be eliminated, and all debt management concentrated in one agency, the Federal Reserve. In addition, he recommends that the Federal Reserve be given the power to issue its own securities. He also proposes to abolish pegging of gold and silver prices, permitting foreign exchange rates to be determined in the free market without Treasury intervention. These are Friedman's main recommendations, but there are others, some to complement the above, some to serve in their

place if the above are unacceptable.¹

Friedman believes that acceptance of his proposals would benefit society in three major ways.

The major gains would be, first, effective insurance against major monetary disturbances; second, a notable reduction in short-term monetary uncertainty and instability; third, a wider scope for private initiative and enterprise in the allocation of capital.²

Milton Friedman's recommendations and his beliefs about their potential benefits reflect his fundamental stand for "rules" rather than for "authorities" with regard to monetary policy.³ In deliberations about monetary policy "rules" versus "authorities" is the issue in Friedman's eyes.⁴ His stand reflects his intellectual association with Henry C. Simons and Lloyd W. Mints.⁵ A large part of Friedman's

¹For a complete list of his recommendations see "Summary of Recommendations," Friedman, pages 100-101.

²Ibid., page 99. ³Ibid., page 84.

⁴"The central problem in respect to monetary and banking arrangements is the role government should play - the restrictions it should impose on private individuals, the powers that should be granted to government authorities, and the criteria that should guide the use of these powers." Ibid., page 3.

⁵He mentions that his inclinations with regard to proposals about banking reform result from being a student of Simons and Mints and the original "Chicago Plan of Banking Reform". Ibid., pages 65-66. See the following for general background on the "rules" side of the "rules" versus "authorities" controversy.

Henry C. Simons, "A Positive Program For Laissez Faire: Some Proposals for a Liberal Economic Policy," in his Economic Policy for a Free Society, (Chicago: 1948).

Henry C. Simons, "Rules versus Authorities in Monetary

stand results from his thoroughly liberal political leanings.¹

The findings of this study do not directly bear on political philosophies. However, part of Friedman's stand results from his empirical studies of the monetary system.^{2, 3} His empirical work

Policy, "Journal of Political Economy", (1936).

Lloyd W. Mints, Monetary Policy for a Competitive Society, (New York: 1950).

Albert G. Hart, "The 'Chicago Plan' of Banking Reform," Review of Economic Studies, 2, (1935).

¹Friedman, page 4. "The point of view from which I shall examine the role of government in monetary matters is that of a liberal in its original sense - a viewpoint that I used to call nineteenth century liberalism but that, in the light of changing currents of thought, I am now beginning, perhaps too hopefully, to call the 'new liberalism'. Such a liberal regards the market as the only means so far discovered of enabling individuals to coordinate their economic activities without coercion. He recognizes that government has an important role to play, but is suspicious of assigning to government any functions that can be performed through the market, both because this substitutes coercion for voluntary cooperation in the area in question and because, by giving government an increased role, it threatens freedom in other areas. Control over monetary and banking arrangements is a particularly dangerous power to entrust to government because of its far reaching effects on economic activity at large - as numerous episodes from ancient times to the present and over the whole of the globe tragically demonstrate. In consequence, one question that a liberal must answer is whether monetary and banking arrangements cannot be left to the market, subject only to the general rules applying to all other economic activity."

²"The suggestions for monetary reform it i.e. the book contains, and even more, the evidence adduced in support of them, are largely a by-product of my recent research in the field of money: a large-scale study, now nearly complete, of the secular and cyclical behavior of the money supply in the United States on which I have been collaborating with Mrs. Anna J. Schwartz under the auspices of the National Bureau of Economic Research..." Ibid., preface.

³Also see Milton Friedman, "The Lag in Effect of Monetary

indicates that the time-lapse between Federal Reserve action (e. g. change in stock of money through open market operations) and the impact on prices or on real income ranges from 4 months to 29 months.^{1, 2} He has concluded that the long time-lapse between Federal Reserve action and ultimate impact is a strong argument against "authorities" and, thus, for his proposal. He argues that a time-lapse, both uncertain and potentially 29 months long, aggravates more than it mitigates

Policy, " Journal of Political Economy, LXIX, No. 5 (1961), pages 447-466. This article discusses the long and variable lag (observed empirically by Friedman) between monetary policy action and ultimate impact. In Friedman's empirical work the major evidence he uses to determine the lags is the timing of peaks and troughs in the rate of change of the stock of money relative to peaks and troughs in general business. (pages 447-448)

¹"In the National Bureau study on which I have been collaborating with Mrs. Schwartz, we have found that, on the average of 18 cycles, peaks in the rate of change in the stock of money tend to precede peaks in general business by about 16 months and troughs in the rate of change in the stock of money to precede troughs in general business by about 12 months. The results would be roughly comparable if the comparisons were made with peaks and troughs in a price index rather than in general business. For individual cycles, the recorded lead has varied between 6 and 29 months at peaks and between 4 and 22 months at troughs." Friedman, A Program For Monetary Stability, page 87.

²Friedman discusses reasons for the long length of this lag in a section titled "Why Should 'The' Lag be Long?" (Friedman, Journal of Political Economy, LXIX, No. 5 (1961), pages 461-463.) In this discussion he indicates that he believes most of the lag does occur beyond financial intermediaries. "The lag we are interested in is not between monetary change and its impact on the financial markets, which may indeed be short for some financial markets, but between monetary change and its impact on the flow of income, which might be expected to be very much larger." (page 463)

monetary disturbances.

The findings of this study, thus, bear on Friedman in two respects. First timing associated with responses found in this study is always considerably faster than 29 months. In many cases credit extensions turn down (or up depending on whether monetary policy is one of ease or restraint) within six or even three months. To be consistent with Friedman's work this must indicate that a considerable part of the time lag occurs beyond financial intermediaries. That is, part of the time lag is due to the behavior of spending units. The behavior of spending units does affect prices and real income, and with respect to timing their behavior may be critical.

Second, the findings indicate that consumer credit, some short-term business credit, and mortgage loans can respond in a manner that offsets monetary policy. Consumer spending and home purchases do bear on prices and real income. Perhaps these types of spending influence prices and real income enough to prevent responses in prices and real income which are compatible with the aims of monetary policy until up to 29 months have elapsed. If this were so, perhaps special allowances for these extensions of credit (such as selective credit controls) would overcome the time lag used by Friedman as crucial evidence in favor of his recommendations. Interestingly, Friedman explicitly refers to his disapproval of special controls over

consumer credit and over real estate credit.¹ His displeasure with these controls "now happily lapsed"² does not result from empirical findings but rather reflects his liberal political outlook.

The findings of this study, coupled with Friedman's work, then, indicate that a considerable part of the time lapse between policy action and ultimate impact occurs beyond financial intermediaries (i. e. beyond the proximate impact of monetary policy). In addition the findings of this study indicate that extensions of consumer credit by finance companies and by commercial banks as well as extensions of mortgage loans by savings and loan associations may account for some of the "considerable time lapse" observed and emphasized by Friedman.

¹Friedman, A Program For Monetary Stability, page 27.

²Ibid.

SMITH'S PROPOSAL

Warren L. Smith analyzes the role of nonmonetary financial intermediaries in the economy in an effort to determine their relation to commercial banks and to monetary policy in his article "Financial Intermediaries and Monetary Controls".^{1, 2} He concludes that nonmonetary financial intermediaries do not significantly offset monetary policy.³ Rather he argues that the ability of commercial banks to liquidate U.S. Government securities and then to use the funds so obtained to extend credit contrary to monetary restraint is the main source of difficulty for monetary policy.^{4, 5}

¹Smith, Quarterly Journal of Economics, LXXIII, No. 4 (1959), pages 533-553.

²Ibid., "Introduction," page 533.

³"The analysis in the paper suggests that financial intermediaries have not contributed very much to instability or to the ineffectiveness of monetary policy in recent years." Ibid., page 551.

⁴See section III B, "Portfolio Shifts by Intermediaries," Ibid., pages 546-551.

⁵In an earlier article Smith also emphasizes this point. He states, "The inability to control commercial bank lending effectively constitutes a serious breach of the effectiveness of general credit controls." (page 603) Therefore, "The effectiveness of monetary policy would be considerably increased if we could devise more effective methods of controlling commercial bank lending." (page 606)

Because Smith's arguments and suggestions are so strongly supported by the findings of this study, I have included the following rather lengthy quotation to indicate just how closely his account of what actually happens during monetary restraint is confirmed by this study.

"There are a number of ways in which the financial machinery, lubricated by flows of these money-like assets, may operate to

The findings of this study substantiate Smith's conclusions.

Most responses of nonmonetary financial intermediaries to open market operations are compatible with the aims of monetary policy. The most significant responses contrary to the aims of monetary policy, particularly monetary restraint, are increased flows of funds into consumer credit (and, to a lesser extent, short-term business credit) extended by both commercial banks and finance companies. Finance companies borrow the funds for their increased credit extensions from

effect a more efficient utilization of the existing money supply, thus producing what will appear statistically as an increase in velocity.

"1. Commercial banks, besieged by demands of their customers for loans, may sell government securities. When these securities are purchased by nonbank investors, deposits are liquidated, and when the banks make loans to customers, the deposits are recreated. . . . The deposits created through the making of loans are, almost by definition, active deposits. Thus, although the money supply is unchanged as a result of such operations, the proportion of the money supply in active circulation is increased and a rise in velocity occurs.

"2. Shifts in commercial bank assets may work through other financial institutions to mobilize financial support for increased spending. For example, commercial banks may use the proceeds of security sales to buy open-market commercial paper from sales finance companies or to make loans to mortgage brokers for the temporary financing of mortgages. These latter institutions then lend the proceeds to purchasers of durable goods or new houses.

"3. Financial institutions other than commercial banks, such as insurance companies, savings and loan associations, and mutual savings banks may sell government securities to nonbank investors, thus taking up idle balances which they then transfer to active spenders by making mortgage or other loans or by buying newly issued corporate securities. In this case idle balances become active, passing through financial institutions in the process, and velocity is increased."

Smith, American Economic Review, XLVI, No. 4 (1956), pages 601-602.

the commercial banks. Commercial banks are therefore the source of significant responses contrary to the aims of monetary restraint. To obtain most of the funds for such responses commercial banks liquidate U.S. Government securities.

Smith, therefore, does not believe that additional controls over financial intermediaries are needed.¹ Instead he thinks that some means for controlling liquidations of U.S. Government securities by commercial banks are needed.² He proposes three different approaches to the problem of controlling bank liquidations of U.S. Government securities.³ One proposal would be to initiate

Policies which keep down the supply of short-term Treasury securities which commercial banks use to make such adjustments and which are most likely to prove to be good substitutes for idle cash balances on the part of nonbank investors when interest rates rise...^{3,4}

¹Smith, Quarterly Journal of Economics, LXXIII, No. 4 (1959), page 553.

²"What is needed to make monetary policy more effective is not additional controls over the activities of intermediaries but rather some means by which the scope for destabilizing portfolio adjustments by commercial banks can be reduced." Ibid., page 551.

³Ibid., footnote 3, page 551.

⁴See footnote 2, page 295 of my discussion of Alhadeff's proposal. Alhadeff proposes to make long-term U.S. Government securities held by commercial banks non-marketable and to continue to allow banks to hold marketable short-term U.S. Government securities. In the note referred to above I questioned this proposal on the grounds that the banks would just as soon store idle funds in short-term securities. Thus I think Smith's approach is more sensible than Alhadeff's. Banks

In his second proposal he suggests that monetary ease should not be pursued aggressively enough to allow commercial banks to accumulate substantial quantities of liquid assets.¹ If they did not own such assets during periods of monetary restraint, they could not liquidate them. Finally he suggests that if the above approaches are not sufficient then "... some method of influencing directly the composition of bank portfolios - such as a secondary reserve requirement - might be considered."^{2,3}

He states, however, that the proposals for monetary reform "...need not be directed only at the sector or institutions primarily responsible for the instability."⁴ He mentions that "One principle that has been suggested for monetary controls is that they should be devised to touch the economy in its 'sensitive spots'."⁴ "Sensitive

could easily avoid Alhadeff's "structural change" by concentrating on short-term securities. To get around Smith's proposal, banks would have to concentrate on long-term securities and in times of rising interest rates the "lock-effect" would be aiding monetary restraint.

¹The findings of this study indicate that commercial banks accumulate substantial amounts of U. S. Government securities during monetary ease.

²Smith, Quarterly Journal of Economics, LXXIII, No. 4 (1959), footnote 3, page 551.

³Perhaps Alhadeff and Smith should get together on this point. Make bank-eligible short-term U. S. Government securities non-marketable.

⁴Smith, Quarterly Journal of Economics, LXXIII, No. 4 (1959), page 552.

spots" are financial intermediaries particularly amenable to controls.¹ He offers two reasons why nonmonetary financial intermediaries might be particularly amenable to effective monetary policy, one involving administrative convenience, the other involving effectiveness.² Smith gives the following example of this type of policy. "An example of this is the possibility of regulating consumer credit by controlling the availability of funds to sales finance companies."³ The findings of this study indicate that finance companies are able to significantly increase consumer credit contrary to the aims of monetary restraint by borrowing funds from commercial banks.

In the course of his discussion Smith argues that commercial banks are not very similar to nonmonetary financial intermediaries.⁴

¹Ibid.

²"...either because controls can be devised that can influence them effectively or because from an administrative point of view they provide a convenient point for the application of controls." Ibid., page 552.

³Ibid.

⁴See part II entitled, "II Financial Intermediaries and Commercial Banks," Ibid., pages 533-538.

He directs his argument against this "view" (i. e. against the idea that banks and nonmonetary financial intermediaries are similar) which "...is expressed in Gurley and Shaw". (page 535, also see 533)

In his final paragraph he argues against special controls

He states that the reasons for depositing in nonmonetary financial intermediaries (i. e. to store savings) differ from the reasons for depositing in demand deposits at commercial banks (i. e. "no presumption... of saving"¹). However, to really prove his point he emphasizes a timing difference between the two.^{2, 3} Smith believes that the "payment-turnover period"⁴ which lasts merely a couple of days, is a unique attribute of the commercial banking system.⁵

for nonmonetary financial intermediaries again on these grounds. "But I do not think such controls can be justified on the grounds that intermediaries are, in some meaningful sense, similar to commercial banks." (page 553)

None the less, Smith seems to agree quite closely with Gurley-Shaw theory as expressed in their book. Smith states, "The importance of intermediaries as a destabilizer depends upon their ability to sell their own newly issued claims or liquid assets from their portfolios in exchange for existing cash balances and thus obtain funds for lending to supplement the inflow of current savings." (pages 539-340) This sentence would serve as a good one sentence summary of Gurley and Shaw's views on the same matter. See particularly the section titled "Creating and Switching Operations," Gurley and Shaw, Money..., page 221.

¹Smith, Quarterly Journal of Economics, LXXIII, No. 4 (1959) page 536.

²Ibid., see particularly pages 536-537.

³"The time periods are entirely different." Ibid., page 537.

⁴Ibid.

⁵"What is truly unique about commercial banks is the speed and automaticity of the process by which reserves lost by one bank when it makes loans are restored to the banking system." Ibid., page 535. "That is, the restoration of reserves to the commercial banking system within a few days of the time they are lost through lending is a built-in feature of our payments mechanism, and it is for this reason that their

On the other hand, the time period involved in expansion by [nonmonetary] intermediaries is an income-turnover period... Clearly the time period for commercial banks is very much shorter.¹

The findings of this study do indicate that commercial banks respond more quickly than nonmonetary financial intermediaries.² However, these findings about timing do not really bear on Smith's analysis. Quarterly data as used in this study do not indicate timing differences of such short duration. That is, the difference between a few days (payment-turnover period) and an unknown number of days (income-turnover period³), probably less than ninety days,⁴ is too short to be

distinctive role as issuers of means of payment gives commercial banks a peculiar ability to expand credit." (page 536, italics are Smith's)

¹Ibid., page 537, italics are Smith's.

²Most characteristic responses associated with commercial banks occur within three months after the initiation of monetary policy. Some responses associated with nonmonetary financial intermediaries are this quick, many however are not.

³The income-turnover period is defined by Smith as "... the average period that elapses between successive receipts of income in the income-expenditure process." Smith, Quarterly Journal of Economics, LXXIII, No. 4 (1959), page 537. Smith then states in footnote 2 on page 537 that the income-turnover period is the reciprocal of the income velocity of active money and then refers the reader to Fritz Machlup, "Period Analysis and Multiplier Theory," Quarterly Journal of Economics, LIV, No. 2 (1939), pages 1-27.

⁴Fritz Machlup believes this period to be less than ninety days. For example he states, "Although the presumption seems to be more in favor of a shortened income propagation period, we shall assume for the further analysis that the marginal propagation period is the same as that of the... average period i. e. of three months duration." Machlup, Quarterly Journal of Economics, LIV, No. 2 (1939), page 10.

evident (if it in fact exists) in the findings of this study.¹

Also in this article Warren Smith indicates that shifts between demand deposits and time deposits may offset monetary policy.² Although he proposes equalizing reserve requirements on time deposits

¹In an earlier article Smith discusses another time lag associated with monetary policy. He breaks down "...the lag relevant to any kind of economic stabilization program...into three parts:" (a) recognition lag - the lag between need for action and recognition of such need, (b) administrative lag - the lag between recognition of a need for action and the initiation of action, (c) operational lag - the lag between the taking of action and the effective impact of such action on real income and prices. Smith then concludes: "However, for various reasons outlined at some length in this paper, the operational lag may be considerably longer for monetary than for fiscal policy, at least in many situations. The great advantage of fiscal policy is that it has a direct and powerful impact on the income stream, whereas monetary policy's first impact is on the asset structure and only through its effects on this structure does it indirectly and with some delay affect the income stream." Smith, American Economic Review, XLVI, No. 4 (1956), pages 605-606.

However, Smith does not attempt to quantify this operational lag associated with monetary policy. The findings of this study about timing give quantitative insight (e.g. commercial banks respond quickly, that is within three months) into the timing problem associated with monetary policy.

²"The change in composition of consumer asset holdings... suggests a shift of funds from demand deposits...to time deposits in commercial banks." Smith, Quarterly Journal of Economics, LXXIII, No. 4 (1959), page 543.

"...it does seem at least plausible that the rise in time deposit interest rates in 1957 caused a shift of funds from demand to time deposits at commercial banks which may have been large enough to weaken perceptibly the restrictive monetary policy which the Federal Reserve was attempting to apply most of the year." (page 545)

and demand deposits,¹ he indicates some hesitancy because he is not sure such shifts will continue.^{2,3} The findings of this study indicate that such shifts are not significant.

¹Ibid., page 545.

²"However, it is far from certain that there will continue to be systematic destabilizing effects." Ibid.

³In a later article Smith shifts his position further toward one that the findings of this study would support.

"Although further study of movements of funds between demand and time deposits during different phases of the business cycle is necessary in order to evaluate the importance of such shifts, it is certainly by no means clear that up to the present time the shifts have been large enough or cyclically systematic enough to pose much of a problem for the Federal Reserve." Smith in Tamagna, et al. for the CMC, page 315.

ASCHHEIM'S PROPOSAL

Joseph Aschheim, in his book *Techniques of Monetary Control*, suggests that the Federal Reserve could considerably improve "the efficacy of monetary control" and still preserve the ultimate liquidity of the monetary system by utilizing only two monetary policy tools.¹ First, for monetary control purposes he suggests doing away with present monetary policy tools (including the "bills-only" doctrine associated with open market operations at the time he wrote the book) and relying instead on "eclectic open market operations".² That is, the Federal Reserve should be allowed to buy or sell U.S. Government securities of any maturity in order to implement the objectives of monetary policy.³ He states that for monetary control purposes such

¹Many of the arguments contained in this book are adumbrated in Aschheim, *Journal of Political Economy*, LXVII, No. 1 (1959). Particularly see pages 68-69 for discussions concerning the liquidations of U.S. Government securities which, as pointed out in the above text, are relevant to the findings of this study.

For example, "It is suggested that, as private demand for credit increases, financial institutions are both willing and able to liquidate their holdings of governments and to shift into loans. Indeed, it has been observed that even in the case of commercial banks the capacity and incentive to liquidate holdings of governments make it possible for them to expand loans in the face of their tightened reserve position." (page 68)

²See particularly Chapter 1, "Innovations in Central-Banking Theory: Review and Preview," Chapter 2, "Open-Market Operations Versus Reserve-Requirement Variation," and Chapter 4, "Open-Market Operations: 'Bills-Only' Doctrine and Economic Stabilization," Aschheim, *Techniques...*

³Aschheim is particularly concerned throughout his book

a flexible open-market-operations tool is superior to even any combination of other monetary policy tools.

No other technique of central banking - indeed, not even all the other techniques of central banking together - can approximate the instrument of open-market operations in terms of the efficacy imparted to the monetary authority.¹

Second, to insure that the Federal Reserve is in fact an effective lender of last resort, Aschheim suggests the use of a penalty-rate similar to the one used by the Bank of England. He believes that the Federal Reserve's discount window is currently an avenue of escape for member banks from the impact of monetary restraint rather than a source of guaranteed liquidity for member banks in times of severe financial crises.² Thus he concludes that,

with the constraint placed on open-market operations by the "bills-only" doctrine. See particularly Chapter 4, "Open-Market Operations: 'Bills-Only' Doctrine and Economic Stabilization," *Ibid.* In this chapter Aschheim argues that it is crucially important that the Federal Reserve be able to alter the term structure of interest rates. Therefore all maturities of U.S. Government securities must be fair game for monetary policy operations. He deals at some length with the advantages to be gained from swapping operations (i. e. simultaneous purchase and sale by the Federal Reserve of U.S. Government securities of different maturities) in order to influence the term structure of interest rates. See particularly pages 78-81.

² *Ibid.*, page 12.

³ "On the basis of our comparative analysis, we arrive at the conclusion that discretionary rediscounting in a monetary system with an extensive Government securities market is primarily a mechanism of escape from the impact of monetary restraint. Thus, in the specific case of contemporary American central banking, the rediscount facility has not served the cause of the central either as lender of last resort,

The constructive proposal to which this critical appraisal impels us is for abolition of the existing rediscount facility and its replacement with nondiscretionary, penalty-rate rediscounting.¹

Aschheim's arguments for the superiority of open market operations over each of the other significant monetary policy tools are based on the following premise. The major problem area with regard to monetary control involves credit extended during monetary restraint via the use of funds obtained by commercial bank liquidation of U.S. Government securities.² Thus Aschheim's proposal is intended to best

or as moderator of cyclical fluctuations, or as promoter of the development of the money market." Ibid., page 7.

For Aschheim's complete argument see Chapter 5, "Bank Rate, Rediscount Rate, and Other Interest Rates," Ibid.

¹ Ibid., page 7.

² For the argument for open market operations over reserve-requirement variation based on the above premise see pages 21-28. The following quotation contains the gist of Aschheim's argument pertinent to the above point.

"In the first place, the imposition of higher cash-reserve requirements reduces to zero the rate of return on a certain proportion of commercial banks' assets that have hitherto yielded a positive rate of return. In other words, the higher reserve requirements reduce not only the total volume of commercial-bank assets but also the proportion of commercial bank earning assets to their total assets. On the other hand, open-market operations reduce the total volume of commercial-bank assets without reducing the proportion of earning assets to total assets. Thus, imposition of the higher reserve requirements has a more restrictive impact on commercial-bank income than the equivalent volume of open-market sales by the monetary authority. Therefore, the marginal utility of bank income is higher as a result of increased

reserve requirements than as a result of open-market sales by the monetary authority. The higher marginal utility of bank income induces commercial banks to sacrifice liquidity, i. e. to shift further out of Government securities into loans, in order to obtain additional earnings.

"Second, the liquidity needs of commercial banks are to a greater extent met by the reduced reserves themselves with a higher reserve requirement than with an unchanged reserve requirement. To illustrate, if required reserves are 10 percent and bank deposits drop from 100 to 80, only 2 units of the 20 cash are available for paying off the deposits. On the other hand, if required reserves are 20 percent, and deposits drop from 100 to 80, 4 units of the 20 cash are available for paying off the deposits. Thus the higher reserve requirements reduce the marginal utility of the 'moneyness' of bank assets, also inducing commercial banks to sacrifice liquidity in order to obtain additional earnings.

"Under conditions of a restrictive monetary policy, i. e. amid excess demand in the market for private credit, banks are afforded ample opportunity to offset the constraint placed upon them by the higher reserve requirements. The 'income' effect and the 'liquidity' effect of the imposition of the requirements jointly induce banks to switch out of Government securities into loans on a larger scale than in response to open-market sales on the part of the monetary authority." *Ibid.*, pages 23-24.

For the argument for open market operations over security-reserve requirements based on the above premise see pages 39-45. For example, "Furthermore, with some securities newly immobilized by supplementary requirements, the banks' incentive to shift out of remaining Government securities would be increased for two reasons...

"The 'income' effect and the 'liquidity' effect of the imposition of the requirements jointly induce banks to switch out of freely disposable Government securities into loans on a larger scale than they would have in the absence of the newly imposed requirements. Thus, from the viewpoint of credit control, the imposition of requirements that immobilize only a part of banks' intra-marginal holdings will have a perverse impact: switching by banks from Government securities to loans will be stimulated rather than curtailed. Any attempts by the monetary authorities to prevent the volume of bank loans from rising are likely to involve greater, rather than smaller, open-market operations than in the absence of the newly imposed requirements." *Ibid.*, pages 42-43.

He also bases his discussion about whether or not to control nonmonetary financial intermediaries on this premise. See pages 128-132. Etcetera.

implement the proximate objective of monetary restraint which in his words is as follows.

In the face of a boom in the demand for private credit the proximate objective of a restrictive monetary policy is to curb the switching by banks from Government securities into commercial loans.¹

The findings of this study confirm that liquidations of U.S. Government securities by commercial banks and the resulting expansion in private credit (particularly consumer credit) via the funds so obtained is a major weakness in the effectiveness of monetary restraint. Thus Aschheim's proposals are designed explicitly to overcome the responses which this study indicates do, in fact, significantly offset monetary restraint.²

¹Ibid., page 23.

²Aschheim's proposals are designed to "improve the efficacy of monetary control". Minimizing undesired switching of funds by commercial banks from U.S. Government securities to short-term private loans is just a part of the task of monetary control. However, Aschheim considers such switching to be a most important current problem area for the Federal Reserve.

ALHADEFF'S PROPOSAL

With special reference to credit restriction David A. Alhadeff examines some proposals for additional bank controls and some proposals for extending bank-type controls over nonmonetary financial intermediaries in his article "Credit Controls and Financial Intermediaries".¹ The problem with credit control, as he sees it, is that all instruments of monetary restraint together can not ensure sufficient control over the economy's liquidity.² He proposes and then reviews several monetary reforms designed to gain sufficient control over liquidity and rejects all but one of them. In this one he suggests that all "bank-eligible government securities be non-marketable" with the exception of short-term securities used as liquidity reserves.³

In developing his argument for this proposal he starts with the following premise:

The major way in which the banks can offset the pressure on their reserves is by tapping idle funds and thereby increasing velocity.⁴

More specifically he states that commercial banks are able to extend loans in spite of monetary restraint by obtaining funds from the liquidation

¹Alhadeff, American Economic Review, L, No. 4 (1960), pages 655-671.

²Ibid., pages 656 and 667. ³Ibid., page 658.

⁴Ibid., page 656.

of U.S. Government securities.¹ He recognizes that: "In principle, both loans and securities are potential sources of liquidity for banks."² That is, theoretically a bank could liquidate customers loans (sell them to some one) to obtain funds in the same way that it can sell securities to obtain funds. Practically, however, the ready market for U.S. Government securities means that these securities have superior shiftability and thus are more important than loans as a source of liquidity.

He points out that U.S. Government securities are the largest component in the security portfolios of commercial banks.³ He then states, with no further comment, that bank holdings of U.S. Government securities (e.g. Treasury bills and certificates) for short-term liquidity reserves are not troublesome for credit policy.³ Rather:

The potentially troublesome government securities are those purchased with funds which are temporarily surplus on the customer loan market and which are held for income purposes pending a revival of loan demand.³

These are supposedly long-term U.S. Government securities.⁴

¹"At present, a bank can increase velocity when it activates idle funds by selling government securities to nonbank investors and uses the funds to make loans to customers. " Ibid., page 657.

²Ibid. ³Ibid.

⁴"Bank holdings of government securities for short-term liquidity reserves are not troublesome for credit policy. The potentially troublesome government securities are those purchased with funds which are temporarily surplus on the customer loan market and which are held for income purposes pending a revival of loan demand. As a rough approximation, let us assume that the former category consists

Alhadeff dismisses for a variety of reasons additional controls over U.S. Government securities (e.g. secondary reserve requirements) and instead calls for a "structural change".¹ The change, quite simply, is to require that all bank-eligible U.S. Government securities, with the exception of short-term liquidity reserves, be non-marketable.¹ He argues that this would preserve most of the advantage of U.S. Government securities holdings for bank while preventing their potentially unstabilizing effects.² The potential money supply could still be altered via open market operations. However, increases in velocity from undesirable bank responses would be significantly reduced.³ That is, a major source of bank liquidity, U.S. Government security liquidation, would be precluded except at the discretion of the monetary authorities operating through the discount window.¹

of Treasury bills and certificates while the latter category consists of longer-term securities. This division could be the basis of a possible structural change in lieu of additional controls. For example...the same purpose might more effectively be served by requiring that, with the exception of short-term liquidity reserves, all other bank-eligible government securities be non-marketable." Ibid., page 657-658.

¹Ibid., page 658.

²Alhadeff glosses over an important consideration here. A major advantage for banks in holding U.S. Government securities is to store liquidity during periods of surplus funds until "a revival of loan demand". Obviously this advantage - perhaps the overriding one as far as the banks are concerned - would be lost under Alhadeff's proposal. Alhadeff merely states that the main disadvantage for banks would be the greater inflexibility in portfolio management. Ibid.

³"In addition, bank-induced increases in velocity would be significantly reduced." Ibid.

This structural change is not intended to stabilize the velocity of money.¹ For example banks could still tap idle funds by liquidating other assets such as corporate or municipal securities, to say nothing of reactions affecting the velocity of money on the part of the rest of the economy.

The findings of this study certainly support Alhadeff's premise. The major source of funds for bank responses contrary to the aims of monetary restraint is, in fact, the liquidation of U. S. Government securities. In addition this study indicates that bank liquidations of U. S. Government securities are also sources of funds for the contrary responses associated with finance companies. Alhadeff's proposal, then, would shut off the source of funds which the findings of this study indicate to be the source enabling commercial banks and finance companies to extend consumer credit and short-term business credit contrary to the aims of monetary restraint.

He does not explain why banks would put their temporarily idle funds into non-marketable U. S. Government securities rather than into short-term marketable securities which, under his proposal, they would be permitted to hold. If these funds are truly idle funds being stored until "a revival of loan demand"², then why wouldn't commercial

¹"It should be stressed that this structural change could not stabilize the velocity of money. " Ibid.

²Ibid.

banks store the funds via short-term marketable securities and avoid long-term non-marketable U.S. Government securities altogether? Perhaps this is a tactical rather than a strategic question.¹

Alhadeff examines and dismisses several proposals for extending controls to nonmonetary financial intermediaries.² One of

¹One other disturbing part of Alhadeff's argument should be mentioned. He states that long-term rather than short-term U.S. Government securities are the source of trouble during monetary restraint. (*Ibid.*, page 657) During monetary restraint interest rates are usually rising. To the extent that banks hold short-term U.S. Government securities, they can liquidate them to acquire funds for credit extension without much capital loss. On the other hand the liquidation of long-term U.S. Government securities would involve more capital losses because of the rising interest rates. Thus I don't think it would inconvenience commercial banks very much to store all their funds waiting for "a revival of loan demand" in short-term U.S. Government securities.

Arthur Burns uses an argument similar to mine to describe the advantage to commercial banks of storing funds in short-term rather than long term U.S. Government securities. Burns, pages 51-52.

²Unfortunately, he draws a false analogy when he compares the appropriateness of legal reserve requirements for commercial banks with their appropriateness for nonmonetary financial intermediaries (i. e. deposit institutions). He begins the analogy by stating that required reserves of nonmonetary financial intermediaries be in the form of deposits in commercial banks. He then argues that monetary policy aimed at the reserves of the nonmonetary financial intermediaries would not be as effective as in the commercial bank case because financial intermediaries would not be subject to multiple expansion or contraction. The nonmonetary financial intermediaries could always meet an increase in the reserve requirement by selling securities for demand deposits, thereby obtaining more reserves. His argument holds together only because required reserves of nonmonetary financial intermediaries are demand deposits at commercial banks. A proper analogy would have

these dismissed proposals is analogous to the commercial bank proposal he accepts: that nonmonetary financial intermediaries be permitted to hold only non-marketable U.S. Government securities. His decision to accept or reject this proposal depended on the importance of liquidations of U.S. Government securities as sources of funds.¹ He

the required reserves of both the commercial banks and the nonmonetary financial intermediaries in the same form - for example, deposits at the Federal Reserve. If this were so, his argument would not hold.

The discussion containing this false analogy is in section II, "Reserve Requirements and Nonmonetary Intermediaries," Alhadeff, American Economic Review, L, No. 4 (1960), pages 658-661.

In "Financial Growth and Monetary Controls" (Gurley and Shaw, Paper to Southern Economic Association, November, 1956) Gurley and Shaw propose that both banks and nonmonetary financial intermediaries be required to hold reserves in the Federal Reserve. However, they mention that nonmonetary intermediaries might be required to hold reserves in the form of commercial bank deposits. (page 20) They realize that this case is not analogous to both banks and nonmonetary financial intermediaries holding reserves at the Federal Reserve, however. "This instrument [nonmonetary financial intermediaries reserves in commercial banks] would be potentially less powerful than the previous one [banks and nonmonetary financial intermediaries reserves in Federal Reserve]." (page 20)

For a theoretical discussion of the use of demand deposits at commercial banks for required reserves of nonmonetary financial intermediaries as a means of increasing the effectiveness of monetary control, and for a theoretical discussion of the use of cash for required reserves of nonmonetary financial intermediaries as a means of increasing the effectiveness of monetary control see Brainard, part II of Chapter IV, "Reserve of the Second Intermediary at Banks," pages IV-18 to IV-27, pages IV-36 to IV-38, and part III of Chapter IV, "Reserve Requirement on the Second Intermediary in Cash," pages IV-27 to IV-38.

¹"The answer depends on whether the sales of government securities is potentially an important source of funds for the intermediaries." Alhadeff, American Economic Review, L, No. 4 (1960), page 668.

concludes that liquidation of U.S. Government securities is not an important source of funds for nonmonetary financial intermediaries.¹ The findings of this study indicate that liquidations of U.S. Government securities are not as important sources of funds to savings institutions as such liquidations are to commercial banks.² However, the findings do indicate that liquidations of U.S. Government securities are significant sources of funds to savings institutions on some occasions. It is a matter of degree. Alhadeff does not think such liquidations are significant; the findings of this study cast doubt on that premise.

Alhadeff presents an interesting theoretical discussion that could account for the responses of savings institutions which the findings of this study indicate are compatible with the aims of monetary restraint.³

¹Ibid.

²Alhadeff sometimes calls the nonbank financial institutions he is discussing "nonmonetary" intermediaries and other times he calls them "savings deposit" intermediaries. He is actually discussing those intermediaries called savings institutions in this study (plus time deposits at commercial banks).

In the section titled "Reserve Requirements and Nonmonetary Intermediaries," he specifically refers to three institutions. "The most important ones are commercial banks - with respect to time deposits - (TD), savings and loan associations (SLA), and mutual savings banks (MSB)." Ibid., page 659.

³The discussion is in a section entitled "Availability Effect," Ibid., page 667. Alhadeff believes that he may have made a unique contribution with this discussion. "The possibility that a tight money policy might induce a direct shift from savings (both time and intermediary) deposits to demand deposits is generally ignored in the literature." (page 667)

He suggests that a shift between savings and demand deposits may be "...viewed as an availability effect of tight money policy" rather than "...related to interest rate changes."^{1, 2} If deficit units find that they are denied credit from their usual sources or that credit has become very costly because of higher borrowing rates, they can add to their money balances by shifting funds from savings deposits to demand deposits.

...when the availability effect of a restrictive credit policy takes the form of a shift from intermediary deposits to demand deposits, the volume of commercial bank credit would not be affected but the volume of intermediary credit would decline.³

The findings of this study did not indicate significant shifts of funds between demand deposits and time deposits. However, when demand deposits decrease during monetary restraint, the flow of funds into savings institutions also decreases and these responses could be explained by the behavior emphasized in the availability effect. Because

¹Ibid.

²In a theoretical and empirical discussion of reactions to monetary restraint and high interest rates, Warren Smith mentions that firms may react in this manner.

"Firms may well succeed in finding ways to finance investment expenditures temporarily through borrowing at short-term or reducing their cash balances." Smith, American Economic Review, XLVI, No. 4 (1956).

³Alhadeff, American Economic Review, L, No. 4 (1960), page 667.

credit is less available, economic units may attempt to preserve money balances at the expense of loans (i. e. savings deposits) to savings institutions.

The disturbing part of Alhadeff's "availability effect" discussion is its surprising underlying assumption which is not stated and may not have been fully appreciated by Alhadeff. If an economic unit initiates repayment of its loans to financial intermediaries (i. e. if it draws down its savings deposits) because credit is no longer available to it, the economic unit must be both a surplus unit (it loans money) and a deficit unit (it borrows money). For example, the investor with credit no longer available to him must use his own savings which he had lent to savings institutions. Savers and investors are one and the same.¹ For the "availability effect" to be significant in the aggregate, a large part of the economy must be simultaneously a deficit unit and a surplus unit when monetary restraint is initiated. This may be.² However,

¹In other words, instead of financial intermediation bridging the gap between surplus units (e. g. savers) and deficit units (e. g. investors), it merely offers units, who both save and invest, an opportunity to diversify their portfolios.

²I appreciate that many economic units borrow and save at the same time. Individuals may finance houses or cars and at the same time be involved in company savings plans or insurance programs with savings features. Also some economic units may borrow during one part of the business cycle and lend during another. Corporations may borrow for inventory purposes when business is increasing rapidly and lend (i. e. buy securities) when business is steady or decreasing.

However, the more usual case, it seems to me, is many, many savers (e. g. individuals) accumulating their surplus in financial

most financial intermediation theory develops along lines that place financial intermediaries in a position bridging the gap between surplus units and deficit units, with the assumption that for the most part they are separate units.¹

intermediaries who in turn lend the funds to fewer, larger investors or deficit units (e. g. businesses or home purchasers), with the savers and investors being separate units. See the next footnote.

¹For example refer to the discussion of Gurley-Shaw theory in Chapter IX.

As another example J. M. Culbertson explicitly states that this is the usual assumption about financial intermediaries. "The usual view is that intermediaries (using our definition of intermediaries) cannot themselves create credit or loan funds, but rather play a middleman role in conveying to their ultimate users loan funds brought into being by others." "Our definition of intermediaries" excludes commercial banks. Culbertson, American Economic Review, XLVIII, No. 1 (1958).

HENDERSON'S PROPOSAL

James Henderson proposes that uniform reserve requirements, in the form of deposit and currency claims on the Federal Reserve and Treasury, be imposed on all deposits of such institutions as commercial banks, mutual savings banks, savings and loan associations, credit unions, etc.^{1, 2} In arguing for his proposal, Henderson points out that the Federal Reserve operates mainly by regulating the volume of member bank reserves which constitute the base for bank credit and the money supply.³ He then explains that a dollar of demand deposits at commercial banks "absorbs" a considerably larger amount of federal funds - i.e. currency plus deposits at the Federal Reserve (which he argues are the ultimate source of reserves for all financial intermediaries) - than does a dollar of deposits at a savings institution.⁴ Therefore

¹James M. Henderson, "Monetary Reserves and Credit Control," American Economic Review, L, No. 3 (1960), pages 348-369.

²See particularly part IV, "The Case for Uniform Reserves," Ibid., pages 362-367.

³Ibid., page 348.

⁴He presents his argument and the statistical support for his argument in terms of the "federal-funds absorption ratio". For member banks this amounts to about the required reserve ratio. For some other deposit institutions the ratio is less than that associated with demand-deposits at member banks by a factor of at least ten. See Table 5, "Average Absorption Ratios: December 31, 1950-1957," Ibid., page 362.

"The federal-funds absorption ratio for a financial liability is defined as the amount of federal funds which directly and indirectly support a one-dollar public holdings of the liability." Ibid., page 350.

monetary restraint can be rendered ineffective by increased public use of deposits at savings institutions rather than demand deposits at member banks: the reason stated for this is that any given amount of reserves (i. e. federal funds) will support a considerably larger amount of deposits at savings institutions than demand deposits at member banks.¹ He argues that during monetary restraint it is likely that the public will increase their use of savings deposits in place of the restrained demand deposits because such deposits are close substitutes for demand deposits.^{2,3}

¹"Differential absorption ratios are sufficient to cause major credit-control problems even if the ratios are rigidly maintained. The amount of credit supported by a given amount of federal funds, or the change in credit brought about by a change in the amount of funds depends upon the asset choices of the public. If the public reacts to a tight-credit policy by increasing its proportional holdings of the relatively low funds-absorbing assets, it can obtain more credit from each dollar of funds, and a given variation in the supply of funds will have a correspondingly smaller credit-restriction effect." Ibid., page 358.

²Henderson draws heavily on Gurley-Shaw reasoning in these arguments. For example, the follow quotations are very similar to some quotations from the writings of Gurley and Shaw discussed in Chapter IX.

"Savings deposits are fixed in money value, almost always paid on demand, and are, therefore, highly liquid in the eyes of the public. The problems of time deposits during the 1930's are becoming a dim memory. Savings deposits do not serve as a means of payment, but have become very close substitutes for the assets functions of demand deposits. Balances classified as precautionary or speculative are probably more frequently held in the form of savings deposits than in the form of demand deposits." Ibid., page 365.

"Savings deposits have provided highly liquid substitutes for demand deposits for the public's expanding asset portfolios." Ibid.

Although Henderson notes that he is influenced by the writings of Gurley and Shaw (Ibid., page 348), he emphasizes a point which contradicts one of the Gurley-Shaw ideas. Instead of proposing

In the final analysis he rests his case heavily on the assumption that the postaccord behavior of nonmonetary financial intermediaries has been largely outside of Federal Reserve control.^{1, 2} With

merely that all financial intermediaries be subject to reserves, he proposes uniform reserves for all such intermediaries. He bases his insistence on uniform reserves on the supposed necessity of uniform federal-funds absorption ratios. (See the quotation contained in footnote 1 page 304.)

In other words, without stating so, Henderson assumes that savings deposits are substitutes for demand deposits on a 1 to 1 basis. If an individual is going to consider his savings deposit as a part of his "money supply" (e.g. for precautionary or speculative purposes), Henderson apparently assumes that such individual will consider each dollar of his savings deposits fully equivalent to a dollar of demand deposits. This may be. However, Gurley and Shaw have different ideas on this matter. They suggest that a dollar of savings deposits for liquidity purposes may be worth considerably less than a dollar of demand deposits. (For example, see Gurley and Shaw, Review of Economics and Statistics, XXXIX, No. 3 (1957), page 251.) This leads Gurley and Shaw to propose non-uniform reserve requirements covering all financial intermediaries. For example, "Consequently, the more that non-monetary indirect debt competes with money, and the less that it competes with primary securities, in the desired portfolios of spending units, the closer should the reserve requirements on nonmonetary intermediaries be to those imposed on commercial banks." Gurley and Shaw, "Financial Growth and Monetary Controls," page 18.

¹Henderson, American Economic Review, L, No. 3 (1960), page 364.

²"The case for this proposal is considered on the grounds of direct effect, uncontrolled asset expansion, equity, and convenience." Ibid., page 364.

"Direct effect" and "uncontrolled asset expansion" both involve the behavior of nonmonetary financial intermediaries. For example, the gist of his explanation under the heading "Direct Effect" is contained in the following quotation.

"Money which is placed in a savings deposit may represent savings from current income, but this does not mean that the subsequent spending of this money is not inflationary. The spending-savings relationship works both ways. The public increases its holdings of

regard to the efficacy of monetary control the findings of this study do not bear him out. That is, most of the responses to monetary policy of flows of funds associated with nonmonetary financial intermediaries are compatible with the aims of such policy. These compatible responses imply that additional controls over the activities of nonmonetary financial intermediaries are not required for monetary control purposes. In addition the major responses (i. e. bank shifts from U. S. Government securities to consumer credit) contrary to monetary policy are associ-

savings deposits as the money value of its gross savings increases. The money channeled into the savings banks is passed on to borrowers whose spending in turn increases the money value of income and the money value of the public's gross savings. The credit generated by this sequence is largely outside of the Federal Reserve control, and is limited only by spending time lags and the public's reluctance to increase its holdings of savings deposits relative to demand deposits. Conditions during the postaccord period have been such that the public has been willing to accept large relative increases in its savings-deposit holdings." Ibid.

Under the heading "Uncontrolled Asset Expansion" he discusses the long-term growth of nonmonetary financial intermediaries. For example, "Savings and loan association deposits, which were in relative disfavor after the experiences of the 1930's, have undergone major qualitative changes in the eyes of the public. The savings and loan associations have carried out major promotional campaigns in an attempt to convince the public that their liabilities are no different from any other savings deposit, and furthermore, they pay the highest interest rate. The success of their campaigns is witnessed by their growth rate." (page 365)

Also see the quotations in footnote 2 page 304 which are also from the section titled "Uncontrolled Asset Expansion".

Henderson states his position about the behavior of non-monetary financial intermediaries explicitly and concisely at one point, "...a lack of control or an inadequate control over the institutions issuing savings deposits has raised serious problems regarding... the effectiveness... of Federal Reserve policy." That is, "The Federal Reserve has little control over credit which is not based upon the issuance of new money." (page 348)

ated with⁴ commercial banks who are members of the Federal Reserve System, not with nonmonetary financial intermediaries.

SHELBY'S PROPOSAL

Donald Shelby suggests that current monetary control tools are adequate.¹ In particular he argues that extension of direct control to include nonmonetary financial intermediaries is quite unnecessary.²

He readily accepts the rapid growth of nonmonetary financial intermediaries.³ He then argues that this growth has lead to more effective monetary control because of a "powerful leverage effect."

The smaller the quantity of money balances held behind incomes, transactions, and assets, the greater is the effect on them of a given change in money.⁵

¹Donald Shelby, "Some Implications of the Growth of Financial Intermediaries," *Journal of Finance*, XIII, No. 4 (1958), pages 527-541. See particularly "Implications for the Powers of the Federal Reserve," pages 538-541.

²"The fact that the Federal Reserve lacks direct control over intermediaries' reserve ratios, however, is no cause for serious alarm because these ratios are not crucial." *Ibid.*, page 538. "We conclude, therefore, that the rapid growth of intermediaries does not appear to threaten seriously, if at all, the general monetary powers of the Federal Reserve." (page 541)

³"The rapid growth of these financial intermediaries is not open to question. The public has shown a rising preference for holding financial assets in the form of deposits and shares of intermediaries rather than in commercial bank deposits." *Ibid.*, page 527.

⁴"The very fact that the relative size of the commercial banking system is declining and that the public and intermediaries are economizing in the use of their money balances automatically furnishes the Federal Reserve with a powerful leverage effect." *Ibid.*, page 540.

⁵*Ibid.*

The reason behind this leverage effect, according to Shelby, involves the increasing marginal rate of substitution of money for near-monies as the money supply is restrained during economic expansion.¹ Interestingly, Shelby's conclusion is the antithesis of the analogous Gurley-Shaw conclusion.²

The findings of this study support Shelby's suggestion that direct controls (currently used in connection with commercial banks) need not be extended to include nonmonetary financial intermediaries. The majority of flows of funds associated with nonmonetary financial intermediaries responded in a manner compatible with the aims of monetary policy. In fact, Shelby's reasoning, based on the marginal rate of substitution of money for near-monies, would adequately account for the favorable responses.

¹"Eventually, further economizing with a declining stock of money becomes difficult because money and near-monies do not provide, of course, equivalent quantities of liquidity to the holder. Money is a special asset whose marginal rate of substitution rises as near-monies are substituted for it. In any given set of circumstances, consequently, unlimited shifts to shares by the public seem to be controllable by these automatic market adjustments, and therefore the potential expansion of intermediaries is limited." Ibid., page 539.

²Shelby states explicitly that he "cannot agree" with Gurley and Shaw when they conclude that the growth of nonmonetary financial intermediaries relative to commercial banks has made the Federal Reserve's job of controlling credit correspondingly more difficult. Ibid., page 540.

COMMISSION ON MONEY AND CREDIT'S PROPOSAL

The Report of the Commission on Money and Credit contains approximately one hundred specific recommendations intended to improve the U.S. monetary and credit system.¹ Although these recommendations cover various specific points drawn from an exceptionally broad area, they are supposedly interrelated.² Namely,

A fundamental and basic element in this report is the recommendation that the help of government in its various phases requires more liaison between the different institutions involved and more coordination.^{3, 4}

Only a few specific recommendations contained in the CMC Report (i. e. those considered particularly pertinent to this study) are reviewed here.

The Commission recommends that there be no extension of direct Federal Reserve controls over nonbank financial institutions.⁵

¹Commission on Money and Credit (Report).

²"No member of the Commission...endorses personally every specific proposal in its entirety or concurs fully with every statement in the supporting analysis, but all approve the major substance of the report and urge careful consideration of its interrelated recommendations."
Ibid., preface.

³Ibid.

⁴Arthur Burns also proposes increased coordination between governmental bodies influencing economic stability and growth. See my discussion of his proposal.

⁵Commission on Money and Credit (Report), page 81.

The CMC bases this recommendation on the following assumption about financial intermediary behavior.¹ Shifts of funds between demand deposits at commercial banks and claims against non-monetary financial intermediaries in response to monetary policy are not significant.² For this reason the CMC concludes that the contribution of nonmonetary financial intermediaries "...to cyclical changes in velocity appears to be too small to warrant such an extension..."³ of direct monetary controls over nonmonetary financial intermediaries.

The findings of this study confirm the CMC assumption. That is, shifts of funds between demand deposits at commercial banks and claims against nonmonetary financial intermediaries in response to monetary policy were not significant.

However, nonmonetary financial intermediaries can respond in a manner that is contrary to the aims of monetary policy without shifting funds from or to demand deposits. The CMC recognizes one such possibility in a secondary argument used to support the above recommendation (for no extension of controls over nonmonetary finan-

¹The conclusion regarding behavior is, in turn, based on "fragmentary" evidence. See Ibid., pages 78-80.

²"The velocity effects attributable to movements of funds out of currency and demand deposits into claims on nonbank financial intermediaries do not appear to be great." Ibid., page 78.

"In general, the argument that the cyclical behavior of velocity has been caused by systematic shifts of individual and business funds out of money assets into near-money thrift deposits during periods of monetary restraint is not supported by the facts." (page 79)

³Ibid., page 80.

cial intermediaries). In this argument the CMC suggests that liquidations of U.S. Government securities in order to obtain funds to extend credit "...do not contribute significantly to the cyclical variations in velocity."^{1, 2} The findings of this study do not confirm this secondary

¹"Financial institutions, including banks, also influence velocity in other ways. When money is tight they may economize on their own cash balances. Moreover, they may sell liquid assets such as Treasury bills in order to make more remunerative longer-term loans. If the purchasers of these securities had used their previously held deposits less actively than the new holders, velocity would increase. However, the evidence, although fragmentary, suggests that portfolio adjustments by private nonbank financial institutions do not contribute significantly to the cyclical variations in velocity." *Ibid.*, pages 79-80.

The findings of this study indicate that liquidations of U.S. Government securities by commercial banks are significant sources of funds which definitely change velocity in a manner that is contrary to the aims of monetary policy. The quotation above does not unambiguously state that such liquidations "do not contribute significantly" etcetera, because the last sentence in the quoted paragraph refers to "nonbank financial institutions" explicitly. However, the CMC implies that liquidations of U.S. Government securities by commercial banks are not significant for monetary control purposes when it starts the above paragraph by including commercial banks - "Financial institutions, including banks, ...".

²The position of the CMC concerning the significance of commercial bank liquidations of U.S. Government securities (which I refer to in the preceeding footnote as "not unambiguous") is not consistent throughout the CMC Report.

For example, in a section titled "Effects of a Policy of Restraint," the CMC explains how such liquidations are compatible with the aims of monetary restraint. "Banks have expanded their loans during periods of monetary restraint by selling off U.S. Treasury securities. Such sales soften the impact of monetary restraint on bank lending. Nor is this wholly undesirable, because the sale of securities helps to spread the effect of monetary restriction from the banking system to other sectors. In effect such sales absorb part of the money balances (cash reserves) of other lenders and the public and reduce their ability to extend credit and make expenditures. Also, the shift of part of the

argument. In fact, this study indicates that such liquidations of U.S. Government securities, particularly by the commercial banks, are the most significant source of funds for responses by nonmonetary financial intermediaries (particularly finance companies) contrary to the aims of monetary policy.

The CMC makes several other recommendations concerning monetary policy (particularly in Chapter III, "Monetary Policy") based on the assumption that for the most part financial institutions do respond in ways that are compatible with the aims of monetary policy.¹ For example,

impact of a restrictive monetary policy to other sectors of the market does not imply that a restrictive monetary policy lacks a significant effect on bank lending." Ibid., page 48.

On the other hand, in a section titled "Debt Management Policy" the CMC states that such liquidations are contrary to the aims of monetary restraint. "Compulsory holding of Treasury securities - under the title of security reserve requirements - also has been supported as a device for increasing the effectiveness of monetary policy. The objective is to immobilize Treasury securities in the portfolios of owners and thereby to prevent their sale in periods of economic expansion. The purchases at that time frequently are financed from idle cash balances and contribute to a rise in the income velocity of money, which in turn counters a monetary policy of restraint." Ibid., page 101.

Perhaps the ambiguity noted in the preceeding paragraph is intentional. That is, the members of the CMC could not agree on the significance of liquidations of U.S. Government securities during monetary restraint.

¹Ibid., particularly pages 62-81.

The present general form of fractional reserve requirements against net demand deposits is adequate for the purposes of general monetary policy and the Commission recommends that it be continued.¹

Unfortunately, very little evidence is presented, or even referred to, in order to support the recommendations.² The findings of this study, however, do indicate that most responses of flows of funds associated with financial intermediaries are compatible with the aims of monetary policy.

The findings of this study also indicate that the extension of consumer credit via commercial banks and finance companies is a major offset to monetary restraint. The CMC recognizes that consumer credit is a source of cyclical instability.³ In addition the CMC

¹Ibid., page 68.

²For example, the following quotation is part of the argument supporting the recommendation to continue the current form of reserve requirements quoted above. Notice the use of the term "might" in the first paragraph and the unsupported (i.e. no empirical evidence is presented or referred to) statement "can achieve little for credit control" in the second paragraph.

"A system of reserves based on turnover of deposits has been advocated to give the authorities some automatic offset to changes in monetary velocity... Such a system might not touch those banks which are responsible for activating idle balance through their lending operations.

"A compulsory secondary reserve requirement was proposed in the early postwar years when reserve requirements were already at their maximum legal levels and open market powers were subordinated to the task of pegging long-term security prices. Under present conditions, a secondary reserve requirement can achieve little for credit control that cannot be accomplished equally well by instruments already available." Ibid., page 68.

realizes that general monetary policy is not necessarily the most appropriate method for controlling such credit. It is even noted that selective credit controls would increase the efficacy of monetary policy.¹ However, the CMC does not recommend the adoption of selective controls over consumer credit because of difficulties associated with the administration of such controls.²

³See section titled "Consumer Credit," Ibid., pages 73-74.

¹"Thus they [including consumer credit] can be reached quickly through general monetary policies only by imposing credit conditions on the economy as a whole that might not be appropriate. Influencing these expenditures directly, through selective controls, would make monetary policy more effective." Ibid., page 72.

²"The difficulty of efficient administration of selective controls over consumer credit is a major argument against them. Past experience shows that evasion is a constant problem. A minimum ratio of down payments on some durable goods, such as automobiles, have been bypassed by changing ostensible trade-in allowances. The growth of leasing could permit consumers to acquire cars on terms which might differ significantly from those being imposed by the credit authorities.

"Regulation of consumer credit terms might contribute to cyclical stability, but it would require a large and complex administration to be fully effective. The benefits to stability promised by such a system must be weighed against the cost and inconvenience of installing and managing it.

"During wartime emergencies, direct controls over the output and sale of consumer durables probably would be imposed, and if so, consumer credit control would be redundant.

"During more normal periods, it might be useful to discourage undue loosening of credit terms when the demand for durables is an important source of inflationary pressure. But as a regular countercyclical tool of stabilization its practical possibilities are limited.

"The Commission is almost evenly divided as to the desirability of granting standby authority to the Federal Reserve Board for consumer credit controls. In the absence of a consensus, no recommendation is made except to urge an investigation of better forms of such controls which could be administered more effectively if they should be needed." Ibid., page 74.

Two short sections of the CMC Report contain discussions of the timing associated with the impact of monetary policy.¹ These sections indicate that a lag of a year or so is associated with most of the impact of monetary policy.² However, the CMC notes that,

The evidence available on the timing of monetary policy's impact on other types of spending is sparse and inconclusive.³

The findings of this study indicate that time lags associated with the proximate impact of monetary policy on financial intermediaries are considerably shorter than a year. Many flows of funds associated with financial intermediaries (particularly those associated with commer-

¹One section is titled "Speed of Effects," Ibid., pages 56-57, the other "Timing Effects," Ibid., pages 244-245.

²"Some experts have argued that monetary policy works so slowly that its effects become perverse, because the effects of a restrictive policy are not felt until after the start of the ensuing downswing and the effects of monetary expansion until the next boom.

"In the postwar period, somewhat less than a year has elapsed before a change in the direction of monetary policy - from tightness toward ease or vice versa - has been followed by a change in the direction of movement of expenditures on residential construction. Even more time elapsed before the change in monetary policy had its full effect." Ibid., page 56.

"The effect on expenditures of changes in general monetary policy seems to have a longer lag. Since the war, six to nine months have elapsed between the date of a definite shift toward an easy money policy and the first date at which a noticeable effect on housing starts occurred. An additional six months or so has elapsed before the maximum effect on residential construction expenditures. However, commitments on new mortgages may change earlier, thereby increasing new orders for housing and stimulating activity. The lags for other types of expenditures are at least as long. The same lags are observed in a shift from an easy to a restrictive monetary policy, though they may be undesirable on other grounds." Ibid., pages 244-245.

³Ibid., page 56.

cial banks) responded to monetary policy quickly (i. e. within approximately three months).

CONCLUDING REMARKS

In light of the findings of this study about the proximate impact of monetary policy on financial intermediaries, I would conclude that the Federal Reserve's operations effectively influence the total liquidity of the U.S. economy. During monetary restraint, credit flows are restrained and during monetary ease, credit flows are stimulated throughout the financial sector of the U.S. economy. Therefore major reliance on open market operations for the implementation of monetary policy appears justified by experience.

I do believe, however, that the weakness in control associated with consumer credit is serious enough to warrant some remedial action. The observed weakness could be remedied by controls over consumer credit directly (e.g. regulate minimum downpayments and maximum maturities), or controls over finance companies and additional controls over commercial banks. I would favor controls of the former variety for two reasons. First, I do not think that control over the two current major sources of consumer credit (this approach has been tried in England) would be effective because other sources of funds would rise to meet the consumer demand. Interest rate increases induced by the Federal Reserve do not seriously affect the demand for such credit, nor, in fact, the profits associated with such credit. Con-

sumers are rather insensitive to interest costs, instead they fix their attention on the size of monthly payments. Thus interest rate increases can be readily passed on to consumers via adjustments in consumer credit maturities.

Second, the U.S. has had experience recently (i. e. during World War II, during 1948-49, and during the Korean emergency) with direct controls over consumer credit. The U.S. experience with selective credit controls has not been notably successful, primarily because of problems associated with administration and evasion.¹ However, a computer age society seriously interested in stable prices could overcome such problems.

Although I am suggesting that the Federal Reserve be given authority to control consumer credit directly, I believe the Federal Reserve should use this authority as rarely as possible.² That is, only after a period of monetary restraint via open market operations without consumer credit controls has had an opportunity, but has failed,

¹The consumer credit study of the Federal Reserve continually emphasizes the seriousness of these two types of problems. See particularly Consumer Instalment Credit, Part I, Vol. I.

The CMC also states that administrative difficulties are formidable. See page 315 of my discussion of the CMC's proposal.

²This belief is based not on the efficacy of such control but rather on a political conviction: for the preservation of individual freedom in our democracy governmental controls of any sort should be minimized. That is, the economic gains from use of such controls must be substantial enough to warrant the loss of freedom that inherently accompanies such controls.

to restrain inflationary tendencies.¹

¹This suggestion leads immediately to another problem which I will not attempt to answer. How can it be determined that open market policy has failed? That is, at what point does the increasing extension of consumer credit during monetary restraint necessitate direct controls?

APPENDIX A
DETERMINATION OF FEDERAL RESERVE POLICY
FOR THE PERIOD 1952-1962

DIGEST

At the end of 1951, just before the eleven years included in this study, the Federal Reserve was pursuing a monetary policy of minimum intervention or neutrality. Neutrality continued into 1952. By the spring of 1952 credit expansion coupled with a neutral monetary policy (i. e. Federal Reserve was not supplying reserves for expansion) was resulting in a modest amount of restraint on availability of reserves. This policy of very modest restraint continued until June 1953.

In June monetary policy changed markedly to one of aggressively supplying reserves to the market. This policy, which the Federal Reserve referred to as active ease, continued until December 1954. At that time the Federal Reserve decided to conclude such an active program of supplying reserves to the market. Instead the Federal Reserve decided to maintain merely a condition of ease in the money market.

In January 1955 the Federal Reserve moved to a policy of neutrality which it continued until August 1955. In August a policy of

monetary restraint was initiated. The Federal Reserve continually increased the degree of credit restraint until near the end of January 1956. For the next several months the degree of restraint remained quite firm. In March 1957 the Federal Reserve began to lessen somewhat the degree of restraint but within a month had returned to a firm policy of restraint. In October the Federal Reserve again began to ease slightly away from the now long standing policy of maintaining substantial pressure on reserves. The degree of restrictive pressure continued to be relaxed until monetary policy became neutral in late December 1957.

By February 1958 the Federal Reserve had definitely moved into a policy of monetary ease. This policy of ease continued until August.

During August the Federal Reserve again began to increase pressure in the money market. By September monetary policy was exercising moderate restraint. Moderate restraint continued throughout the fall and then in December the degree of restraint was increased. This increased monetary restraint continued through early 1959 and then was increased still further in late May 1959. Substantial pressure on reserves remained until March 1960, although a slightly lesser degree of restraint was exercised from September 1959 to March 1960. In March the Federal Reserve reduced pressure on reserves by pursuing a policy of only moderate restraint.

In the next two months the Federal Reserve continued to move away from restraint, and by June 1960 was pursuing a policy of neutrality leaning towards ease. By the middle of August, the Federal Reserve began to actively increase the availability of reserves, and monetary policy was definitely one of ease.

From that time until the end of the eleven years under study (i. e. December 1962) the Federal Reserve pursued an easy money policy. There were, however, two significant qualifications to policy occurring in this extensive period of easy money. In October 1960 the following phrase was added to the Federal Open Market Committee's directive reflecting concern over the U. S. balance of payments difficulties: "while taking into consideration current international developments".¹ In February 1961 the Open Market Committee departed from their long standing bills-only policy by deciding to effect transactions in intermediate- and longer-term securities.²

Table 4, "Major Federal Reserve Monetary Policy," summarizes monetary policy by quarter for the period 1952-1962.

¹Forty-Seventh Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1960, page 67.

²Forty-Eighth Annual Report... Year 1961, page 37.

<u>Year</u>	<u>Quarter</u>	<u>Monetary Policy</u>	<u>Year</u>	<u>Quarter</u>	<u>Monetary Policy</u>
1952	I	neutral	1957	III	restraint
	II	neutral		IV	restraint
	III	neutral to modest restraint	1958	I	neutral then ease ³
	IV	neutral to modest restraint		II	ease
1953	I	neutral to modest restraint		III	ease then neutral then mod. restraint ^{4, 5}
	II	neutral to modest restraint		IV	moderate restraint
	III	ease	1959	I	restraint
	IV	active ease		II	restraint
1954	I	active ease		III	restraint
	II	active ease		IV	restraint
	III	active ease	1960	I	restraint to moderate restraint ⁶
	IV	active ease		II	neutral
1955	I	neutral		III	ease
	II	neutral		IV	ease
	III	neutral then restraint ²	1961	I	ease
	IV	restraint		II	ease
1956	I	restraint		III	ease
	II	restraint		IV	ease
	III	restraint	1962	I	ease
	IV	restraint		II	ease
1957	I	restraint		III	ease
	II	restraint		IV	ease

MAJOR FEDERAL RESERVE MONETARY POLICY
by Quarter for the Period 1952-1962¹

¹Appendix A, "Determination of Federal Reserve Policy for the Period 1952-1962," is the source for this table.

²At its August 2, 1955 meeting the Federal Open Market Committee changed policy from one of neutrality to one of restraint. See page A-17.

³The Board of Governors reduced reserve requirements on February 19, 1958 "to foster conditions of credit ease". This replaced a brief period of "even keel policy". See page A-37.

⁴On July 29, 1958 the Federal Open Market Committee modified its directive for carrying out monetary policy from one of ease to one of neutrality. See page A-42.

⁵On August 19, 1958 the Federal Open Market Committee changed its directive to establish a policy of moderate restraint. See page A-43.

⁶At the Federal Open Market Committee meeting on March 1, 1960 the directive was changed to produce "a policy of moderately less restraint". See page A-57.

DETERMINATION OF FEDERAL RESERVE
POLICY FOR THE PERIOD 1952-1962

The record of policy actions of the Federal Open Market Committee is presented in this report pursuant to the requirements of Section 10 of the Federal Reserve Act. That section provides that the Board of Governors of the Federal Reserve System shall keep a complete record of the actions taken by the Board and by the Federal Open Market Committee upon all questions of policy relating to open market operations and shall record therein the votes taken in connection with the determination of open market policies and the reasons underlying the actions of the Board and the Committee in each instance. Section 10 also provides that the Board shall include in its Annual Report to the Congress a full account of the actions taken during the preceding year, both by the Board and by the Federal Open Market Committee, with respect to open market policies and operations and with respect to the policies determined by the Board.

The record of policy actions of the Federal Open Market Committee is prepared on the basis of the minutes of the meetings of that Committee, as approved by the Committee, and sets forth the policy decisions reached together with a resume of the reasons therefor. Many policy decisions are by unanimous vote of the Committee members, but the emphasis on specific reasons for preferring a particular line of policy may vary from individual to individual. There are times when individual members of the Committee may concur in a concept of policy action formed by a majority because it moves generally in the direction that they believe to be called for, even though their views may differ considerably from those of other members of the Committee as to the degree of movement that is desirable. When a member records a dissent from an action of the majority of the Committee, the dissent may reflect a variety of factors, such as a fundamental

disagreement with the direction of policy action as indicated in the directive, or a fundamental disagreement with the emphasis attached to a particular objective as indicated in the directive.

It should be noted that the policy directive adopted at a meeting of the Federal Open Market Committee is usually in general terms and that, without changing the wording of the directive, the Committee may from time to time modify considerably the emphasis to be placed on operations designed to implement the general policy. The shadings of opinion that enter into the formation of a policy decision provide the Manager of the System Open Market Account (who attends the meetings of the Committee) with a guide to be used in the conduct of open market operations within the framework of the policy directive adopted at that meeting.¹

1951 Federal Reserve policies were determined from minutes of meetings contained in Thirty-Eighth Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1951.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"²

October 4, 1951 meeting³

The foregoing direction, which was in the same form and with the same limitations as that approved in May, was adopted with a view to the pursuit of a neutral policy by the System, which would permit market forces of demand and supply to operate with a minimum of Federal Reserve intervention.⁴

¹Forty-Fifth Annual Report... Year 1958, pages 32-33.

²Thirty-Eighth Annual Report... Year 1951, page 95.

³Ibid., page 105.

⁴Ibid.

Therefore Federal Reserve policy at this time was neutral.

November 14, 1951 meeting

There had been no basic change in the underlying conditions...since the meeting on October 4.

The above direction was adopted in the same form and with the same limitations as the earlier direction since it was felt that no change in existing objectives of credit policy was needed. It was agreed that in maintaining orderly market conditions the System would permit prices of securities to reflect market forces so long as the market was an orderly one.¹

Therefore Federal Reserve policy at this time was neutral.

1952 Federal Reserve policies were determined from minutes of meetings contained in Thirty-Ninth Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1952.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"²

March 1, 1952 meeting³

The objective of credit policy was to maintain conditions that would be conducive to the meeting of credit demands as much as possible through the use of available savings with a minimum of new money creation through bank credit.

The direction to the executive committee quoted above was adopted, therefore, with a view to continuing the policy which had been pursued

¹ Ibid., page 109.

² Thirty-Ninth Annual Report... Year 1952, page 90. ³ Ibid.

for several months.

Continuance of this policy was based on the Committee's judgement that no major disturbances in the market in either direction were to be expected in the near future, that while additional restrictions on credit seemed unnecessary at the time, relaxation of restraint was not called for....¹

Therefore Federal Reserve policy at this time was neutral.

June 19, 1952 meeting²

The System's policy of 'neutrality' had become increasingly one of restraint as credit demands expanded.³

Thus, it was concluded that the general policy of limiting the availability of bank reserves that had been pursued by the System since October, 1951 was still appropriate and that that policy provided adequate flexibility for dealing with market influences in the absence of extremes of pressure in either direction.⁴

Therefore Federal Reserve policy at this time was neutral with slight restraint of reserves.

September 25, 1952 meeting⁵

The Committee considered that operations during the preceding three months had been reasonably successful in keeping an even flow of money through the economy...and that the policy of modest restraint with respect to the availability of reserves...be reaffirmed.⁶

Therefore Federal Reserve policy at this time was neutral.

¹Ibid., page 92. ²Ibid. ³Ibid., page 93. ⁴Ibid., page 94.

⁵Ibid., page 95. ⁶Ibid., page 97.

December 8, 1952 meeting¹

...but did not call for action to change the existing policy of modest restraint in furnishing any additional reserves,... Thus, the Committee renewed the direction set forth above in the same form as the direction issued to the executive committee at the meeting on September 25, 1952.²

Therefore Federal Reserve policy at this time was neutral.

1953 Federal Reserve policies were determined from minutes of meetings contained in Fortieth Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1953.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

March 4-5, 1953 meeting³

This policy... [of the last several months]... resulted in modest restraint on credit growth. During the preceding two years, the Federal Reserve had moved toward greater reliance on influencing the cost, availability, and supply of credit through the discount mechanism,... This mechanism limits credit expansion... this policy resulted in bank reserve positions being under pressure throughout most of the year [1952].⁴

The discount rates of Federal Reserve Banks

¹Ibid., page 98. ²Ibid., page 99.

³Fortieth Annual Report... Year 1953, page 86.

⁴Ibid., page 87.

were increased from 1 3/4 percent to 2 percent around the middle of January 1953 | Board of Governors decided to raise discount rates on January 15, 1953 |.

The Committee agreed, therefore, that it would pursue a policy which would maintain about the same degree of restraint on credit expansion that had been followed in recent preceding months,...¹

Therefore Federal Reserve policy at this time was neutral with some restraint.

June 11, 1953 meeting²

...avoiding deflationary tendencies without encouraging a renewal of inflationary developments (which in the near future will require aggressive supplying of reserves to the market),... rather than 'exercising restraint upon inflationary developments' as provided in the directive issued by the Committee at the preceding meeting in March.³

It was the view of the Committee, therefore, that policy should be one of aggressively supplying reserves to the market during the near future on a sharply rising scale and, accordingly, the instruction to the executive committee was changed in the manner directed.⁴

Therefore Federal Reserve policy at this time was one of ease.

September 24, 1953 meeting⁵

...reflected a policy that the Committee described as 'active ease'...⁶

¹Ibid., page 88. ²Ibid., page 92. ³Ibid., page 93.

⁴Ibid., page 94. ⁵Ibid., page 96. ⁶Ibid., page 97.

Under these circumstances, the Committee authorized the pursuit of the policy of 'active ease'...¹

A reduction in member bank reserve requirements was announced by the Board of Governors of the Federal Reserve System on June 24, 1953.

Therefore Federal Reserve policy at this time was one of active ease.

December 15, 1953 meeting²

...to promoting growth and stability in the economy by actively maintaining a condition of ease in the money market,...

...there would be more emphasis on a program of actively maintaining a condition of ease in the money market.³

Therefore Federal Reserve policy at this time was one of active ease.

1954 Federal Reserve policies were determined from minutes of meetings contained in Forty-First Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1954.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

¹Ibid., page 98. ²Ibid., page 100. ³Ibid., page 101.

February 4, 1954

"Reduction in Rates on Discounts for and Advances to Member Banks by Federal Reserve Banks"¹. This reduction was from 2 percent to 1 3/4 percent.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

March 3, 1954 meeting²

Pursuit by the Federal Reserve in late 1953 and the first two months of 1954 of the credit policy described as 'active ease'... In order to continue this atmosphere and to foster recovery, the Committee concluded that the policy of actively providing reserves to the money market to facilitate credit expansion should be continued during the spring of 1954.³

Therefore Federal Reserve policy at this time was one of active ease.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

April 13, 1954

"Reduction in Rates on Discounts for and Advances to Member Banks by Federal Reserve Banks"⁴. This reduction was from 1 3/4 percent to 1 1/2 percent.

... the System was continuing the policy of actively maintaining ease in the money markets,

¹Forty-First Annual Report... Year 1954, page 86.

²Ibid., page 92. ³Ibid., page 93. ⁴Ibid., page 87.

the above reductions were approved for substantially the same reasons as prompted the earlier action.¹

June 21, 1954

"Reduction in Reserve Requirements of Member Banks"¹.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

June 23, 1954 meeting²

...the Committee renewed without change the directive to the executive committee which was adopted in December 1953 and renewed without change at the meeting on March 3, 1954.²

...the Committee's existing general policy of 'active ease' should be continued...³

Therefore Federal Reserve policy at this time was one of active ease.

September 22, 1954 meeting⁴

The Committee...felt that the economic outlook at the time warranted a continuation of the existing credit policy of actively maintaining a condition of ease in the money market, and it therefore renewed its directive in the same form that had been approved at the three preceding meetings.⁵

Therefore Federal Reserve policy at this time was one of active ease.

December 7, 1954 meeting⁵

¹Ibid., page 88. ²Ibid., page 94. ³Ibid., page 95.

⁴Ibid., page 96. ⁵Ibid., page 97.

...to promoting growth and stability in the economy by maintaining a condition of ease in the money market.¹

A re-examination of the policy of 'active ease' in the light of this economic review led the Committee to the conclusion that the developing economic situation did not warrant continuing as active a program of supplying reserves to the market as had been followed during the preceding year,...²

Therefore Federal Reserve policy at this time was one of ease.

1955 Federal Reserve policies were determined from minutes of meetings contained in Forty-Second Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1955.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

January 11, 1955 meeting³

The change to eliminate the word 'ease' from the Committee's directive and to adopt the wording set forth above reflected the view of the Committee that...easy credit was no longer needed to foster recovery.

The Committee's conclusion that...it should not continue to promote 'ease' in credit availability...

On the other hand, the change in directive at

¹Ibid. ²Ibid., page 98.

³Forty-Second Annual Report...Year 1955, page 89.

this meeting did not call for pursuit at this stage of a program of credit restraint or of firmness in the money market.¹

Therefore Federal Reserve policy at this time was neutral.

March 2, 1955 meeting¹

The Federal Open Market Committee approved a renewal without change of the directive issued at its meeting on January 11, 1955 with respect to effecting transactions for the System open market account.¹

The Committee...agreed that, although increased ease should be avoided, further measures toward restraint should be deferred until the effects of the shift in operations that had taken place since the beginning of the year were more apparent.²

Therefore Federal Reserve policy at this time was neutral.

"RECORD OF POLICY ACTIONS BOARD OF GOVERNORS"

April 13, 1955

"Increase in Rates on Discounts and Advances by Federal Reserve Banks"³.

"RECORD OF POLICY ACTIONS FEDERAL OPEN MARKET COMMITTEE"

May 10, 1955 meeting⁴

...the change approved at this meeting was a further shift in emphasis toward a policy that would discourage undue credit expansion.

The Committee was seeking to allow market forces to have their effect within some moderate limits...⁵

¹Ibid., page 90. ²Ibid., page 91. ³Ibid., pages 82-83.

⁴Ibid., page 94. ⁵Ibid., page 96.

Therefore Federal Reserve policy at this time was neutral.

June 22, 1955 meeting¹

...the Committee concluded that for the immediate future it should not alter the course it had been following recently which had had a restraining influence on credit expansion, that reserves should be supplied to the market on the basis of current needs, and that operations for the System account should be directed toward maintaining about the existing degree of pressure on the reserve position of banks.²

Therefore Federal Reserve policy at this time was neutral.

July 12, 1955 meeting²

The Federal Open Market Committee renewed its directive to the Federal Reserve Bank of New York in the same form as the directive issued at the meeting on June 22, 1955,...

The Committee was clear that there should be no easing of the situation, but it did not feel that a more restrictive credit policy was immediately necessary.³

Therefore Federal Reserve policy at this time was neutral.

August 2, 1955 meeting⁴

At this meeting, the Federal Open Market Committee changed clause (6) of its directive...to provide that transactions for the System open market account be with a view... 'to restraining inflationary developments in the interest of sustainable economic growth'.⁴

...it [the Committee] agreed...to show that increased monetary restraint on credit expansion was now clearly appropriate.⁵

¹Ibid. ²Ibid., page 99. ³Ibid., page 100. ⁴Ibid., page 101.

⁵Ibid., page 102.

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

August 3, 1955

"Increase in Rates on Discounts and Advances by Federal Reserve Banks"¹.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

August 23, 1955 meeting²

There was agreement that the Committee's policy should be one of gradually increasing pressure...

The Committee's existing directive calling for operations for the System account that would restrain inflationary developments... seemed appropriate to the program agreed upon, and it was therefore renewed without change.³

Therefore Federal Reserve policy at this time was one of restraint.

September 14, 1955 meeting³

The Committee renewed without change the directive to the Federal Reserve Bank of New York that had been approved at its meetings on August 2, and 23, 1955...

To carry this out, it renewed the directive calling for restraint on inflationary developments... but with the additional understanding that doubts should be resolved on the side of increased pressure.³

¹Ibid., page 86. ²Ibid., page 103. ³Ibid., page 104.

Therefore Federal Reserve policy at this time was one of restraint.

September 26, 1955 meeting¹

...the Committee agreed that no change be made in the existing general program of restraint on credit expansion, excepting the elimination of ...doubts should be resolved on the side of greater restraint.¹

Therefore Federal Reserve policy at this time was one of restraint.

October 4, 1955 meeting²

The Committee again renewed without change the directive...in the form approved at meetings held on August 2, August 23, and September 14, 1955...

In addition, the Committee restored the understanding...that in carrying out open market operations, doubts should be resolved on the side of greater restraint than of ease.²

The Committee approved...restraint on credit expansion...³

Therefore Federal Reserve policy at this time was one of restraint.

October 25, 1955 meeting³

The Committee renewed at this meeting the directive...that had been approved at the meeting of the Committee on August 2, 1955 and at each meeting since...³

Continuation of the policy of restraint on credit expansion seemed to be called for, with the understanding that doubts should be resolved on

¹Ibid., page 105. ²Ibid., page 106. ³Ibid., page 107.

the side of dispelling any idea of an easing of System policy at this time.¹

Therefore Federal Reserve policy at this time was one of restraint.

November 16, 1955 meeting¹

The Committee approved another renewal of its directive... in the form that had been approved at several recent meetings...¹

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

November 17, 1955²

Increase in Rates on Discounts and Advances
by Federal Reserve Banks

The current action, therefore, represented an additional step to increase the degree of credit restraint being exerted by Federal Reserve policy...²

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

November 30, 1955 meeting³

Special meeting to support a Treasury refunding.

December 13, 1955 meeting⁴

The Committee renewed its directive... in the form in which it had been approved in August and since...⁴

¹Ibid., page 108. ²Ibid., page 88. ³Ibid., page 109.

⁴Ibid., page 110.

...it | Committee | concluded that the general policy of restraint followed in recent months should be reaffirmed with a view to regaining, ... as much as possible of the level of pressure that had existed shortly before the announcement of the Treasury refunding operation near the end of November.¹

Therefore Federal Reserve policy at this time was one of restraint.

1956 Federal Reserve policies were determined from minutes of meetings contained in Forty-Third Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1956.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

January 10, 1956 meeting²

The Federal Open Market Committee renewed without change the directive that was in effect at the beginning of 1956... which called for a policy of restraint on credit expansion.²

Therefore Federal Reserve policy at this time was one of restraint.

¹Ibid., page 111.

²Forty-Third Annual Report... Year 1956, page 18.

January 24, 1956 meeting¹

The Committee modified its directive...at this meeting by adding to clause (b) an instruction that transactions for the System account, in addition 'to restraining inflationary developments in the interest of sustainable economic growth,' should take 'into account any deflationary tendencies in the economy.'¹

Thus, for the purpose of emphasizing flexibility, the Committee added the instruction to take into account any deflationary tendencies in the economy while carrying out operations directed toward restraining inflationary developments.²

Therefore Federal Reserve policy at this time was one of restraint.

February 15, 1956 meeting

The Committee renewed its directive...with no change in the wording approved at the meeting on January 24, 1956.²

Therefore Federal Reserve policy at this time was one of restraint.

March 6, 1956 meeting

The Committee again renewed its directive... in the same form that had been adopted at the meeting on January 24, 1956...³

Therefore Federal Reserve policy at this time was one of restraint.

March 27, 1956 meeting

The Committee modified its directive...by deleting from clause (b) of the first paragraph

¹Ibid., page 19. ²Ibid., page 20. ³Ibid., page 21.

the instruction to take 'into account any deflationary tendencies in the economy' while effecting transactions in pursuit of the general policy of 'restraining inflationary developments in the interest of sustainable growth'.¹

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

April 12, 1956

Increase in rates on discounts and advances by Federal Reserve Banks.²

The increase in the discount rates... represented a further step to strengthen the degree of credit restraint being exerted by Federal Reserve policy...³

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

April 17, 1956 meeting⁴

The Federal Open Market Committee renewed without change the directive that had been approved at the meeting on March 27, 1956...⁴

The Committee therefore agreed that there should be no relaxation of pressures.⁵

Therefore Federal Reserve policy at this time was one of restraint.

May 9, 1956 meeting⁵

The Committee renewed without change the directive issued... on March 27 and April 17, 1956...⁵

¹Ibid., page 25. ²Ibid., page 48. ³Ibid., page 49.

⁴Ibid., page 27. ⁵Ibid., page 28.

The Committee's decision to make no change in the existing policy reflected its belief... that no change either toward increased pressure or toward relaxation would be justified at this time.¹

Therefore Federal Reserve policy at this time was one of restraint.

May 23, 1956 meeting¹

At this meeting the Committee restored to clause (b) of its directive... an instruction to take into account deflationary tendencies in the economy while pursuing a general policy of restraining inflationary developments.¹

Therefore Federal Reserve policy at this time was one of restraint.

June 5, 1956 meeting²

The Committee made no change in the directive ... that had been approved at the preceding meeting held on May 23, 1956, stating a policy of restraining inflationary developments while taking into account any deflationary tendencies in the economy.²

Therefore Federal Reserve policy at this time was one of restraint.

June 26, 1956 meeting³

The Committee again renewed its directive... without change from the instruction approved at the meeting on May 23, 1956.³

The Committee agreed that, within the framework of the restrictive policy it had been following,...⁴

¹Ibid., page 29. ²Ibid., page 30. ³Ibid., page 32.

⁴Ibid., page 33.

Therefore Federal Reserve policy at this time was one of restraint.

July 17, 1956 meeting¹

The Committee continued without change the directive... that had been approved on May 23, 1956 and at each meeting since.¹

...the Committee decided that continuation of firm restraint was appropriate for the time being.²

Therefore Federal Reserve policy at this time was one of restraint.

August 7, 1956 meeting³

In concluding that it was no longer appropriate to retain in the directive the instruction to take into account deflationary factors, the Committee also discussed other measures that might be taken to strengthen credit restraint, ...⁴

Therefore Federal Reserve policy at this time was one of restraint.

August 21, 1956 meeting⁴

The Committee felt that credit policy should be made somewhat more restrictive, but in view of the fact that individual Federal Reserve Banks were known to be considering discount rate increases at a time when the market for Government securities was showing strain, the directive was renewed with no change in the general open market policy of restraint on credit expansion.⁵

Therefore Federal Reserve policy at this time was one of

¹Ibid., page 33. ²Ibid., page 34. ³Ibid., page 35.

⁴Ibid., page 36. ⁵Ibid., page 37.

restraint.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

August 23, 1956¹

Increase in rates on discounts and advances
by Federal Reserve Banks.¹

The current discount rate increases... served
to indicate to the financial and business community,
and the public generally, the need for credit re-
straint...²

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

September 11, 1956 meeting³

The directive of the Federal Open Market
Committee was renewed without change at this
meeting, providing for continuation of a policy
having as its objective the restraint of inflationary
developments in the interest of sustainable ec-
onomic growth.³

Therefore Federal Reserve policy at this time was one of

restraint.

September 25, 1956 meeting⁴

...the Committee again renewed without
change its directive calling for a policy of re-
straining inflationary developments in the in-
terest of sustainable economic growth.⁴

Therefore Federal Reserve policy at this time was one of

restraint.

¹Ibid., page 50. ²Ibid., page 51. ³Ibid., page 37.

⁴Ibid., page 39.

October 16, 1956 meeting¹

Again the Committee renewed without change its directive stating a policy to restrain inflationary developments in the interest of sustainable economic growth.¹

Therefore Federal Reserve policy at this time was one of restraint.

November 13, 1956 meeting²

No change was made at this meeting in the wording of the Committee's directive that System operations in the open market be with a view...to restraining inflationary developments in the interest of sustainable economic growth.²

...in continuing its policy of credit restraint, the Committee did so with the thought that another meeting should be held within two weeks, that in the meantime the degree of pressure in the money market should remain substantially unchanged,...³

Therefore Federal Reserve policy at this time was one of restraint.

November 27, 1956 meeting³

The Committee continued its directive calling for a policy of restraining inflationary developments...³

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

¹Ibid., page 41. ²Ibid., page 42. ³Ibid., page 43.

December 3, 1956¹

Amendment to Regulation Q, Payment of Interest on Deposits.

Effective January 1, 1957, the Board made changes as follows in the maximum permissible rates of interest payable by member banks of the Federal Reserve System on savings deposits and time deposits pursuant to the provisions of Regulation Q.¹

Rates increased from 2 1/2 percent to 3 percent, essentially.

It also appeared to the Board that there was insufficient reason to prevent banks, in the exercise of management discretion, from competing actively for time and savings balances by offering rates more nearly in line with other market rates.²

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

December 10, 1956 meeting³

The Committee made no change in credit policy at this meeting...³

However, the market had continued under rather severe pressure.⁴

Therefore Federal Reserve policy at this time was one of restraint.

1957 Federal Reserve policies were determined from minutes of meeting contained in Forty-Fourth Annual Report of the

¹Ibid., page 52. ²Ibid., page 53. ³Ibid., page 45.

⁴Ibid., page 46.

Board of Governors of the Federal Reserve System Covering Operations
for the Year 1957.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

January 8, 1957 meeting¹

In other words, the directive issued at this first meeting of 1957 continued the policy of restraint upon credit expansion that had been in effect for approximately two years, but it represented an adjustment from the program followed in the last few weeks of 1956 when funds had been put into the market to help meet added seasonal pressures within the limits of the policy of restraint.²

Therefore Federal Reserve policy at this time was one of restraint.

January 28, 1957 meeting³

The Committee made no change at this meeting in the wording of its directive...³

Therefore Federal Reserve policy at this time was one of restraint.

February 18, 1957 meeting⁴

No change was made in the policy directive issued by the Committee...⁴

Therefore Federal Reserve policy at this time was one of

¹Forty-Fourth Annual Report... Year 1957, page 34.

²Ibid., page 35. ³Ibid., page 36. ⁴Ibid., page 39.

restraint.

March 5, 1957 meeting¹

This change in wording of clause (b) of the Committee's directive was not an indication of a shift in direction of policy but was designed to emphasize the factor of uncertainty in the current business outlook. The general direction of policy continued to be one of restraining inflationary developments.²

Thus, the Committee sought to continue about the same pressure on credit expansion that had been intended by the actions taken at the last several meetings...³

Therefore Federal Reserve policy at this time was one of

restraint.

March 26, 1957 meeting³

The policy directive calling for a continuation of restraint on inflationary developments was renewed without change at this meeting...³

The Committee's conclusion that the policy directive should be continued with emphasis on restraint included the understanding that, in adjusting amounts of reserves supplied to the market by the Federal Reserve System, doubts should be resolved on the side of greater rather than less restraint than had existed in recent months.⁴

Therefore Federal Reserve policy at this time was one of

restraint.

April 16, 1957 meeting⁵

¹Ibid., page 41. ²Ibid., page 42. ³Ibid., page 43.

⁴Ibid., page 44. ⁵Ibid., page 45.

The directive of the Committee was renewed without change, continuing the policy of restraint on inflationary developments.

The Committee considered that the increased degree of pressure that had resulted since the preceding meeting had been appropriate.¹

Therefore Federal Reserve policy at this time was one of restraint.

May 7, 1957 meeting¹

Again the Committee's directive was renewed without change, providing for restraint on inflationary developments.¹

Therefore Federal Reserve policy at this time was one of restraint.

May 28, 1957 meeting²

The policy directive of the Committee calling for restraint on inflationary developments was renewed without change at this meeting.²

Therefore Federal Reserve policy at this time was one of restraint.

June 18, 1957 meeting³

Renewal of the directive without change at this meeting continued the policy of firm restraint on inflationary developments.

The tighter condition of the money market during the past three months, which had been brought about within the present wording of the Committee's directive, did not appear to have been too restrictive, and the Committee's conclusion was that a firm policy of restraint should be continued for the present.³

¹Ibid., page 45. ²Ibid., page 46. ³Ibid., page 47.

Therefore Federal Reserve policy at this time was one of restraint.

July 9, 1957 meeting¹

Another renewal without change of the directive providing for restraint on inflationary developments ... at this meeting.¹

The Committee's decision therefore, was to renew the directive without change and to maintain but not to increase the existing degree of restraint for the immediate future.²

Therefore Federal Reserve policy at this time was one of restraint.

July 30, 1957 meeting²

This meeting of the Committee also resulted in a decision to continue without change the policy directive providing for restraint on inflationary developments.²

The Committee's decision that there should be no change in its policy directive at this time... reflected the view that it was appropriate to keep the banking system under substantial pressure.³

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS BOARD OF GOVERNORS"

August 8, 1957⁴

Increase in rates on discounts and advances
by Federal Reserve Banks.⁴

¹Ibid., page 47. ²Ibid., page 48. ³Ibid., page 49.

⁴Ibid., page 67.

This was a technical move at a time when market rates were considerably above discount rates and merely reflected an increase in market interest rates.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

August 20, 1957 meeting¹

No change was made at this meeting in the Committee's directive that policy should be with a view to restraining inflationary developments.¹

Therefore Federal Reserve policy at this time was one of restraint.

September 10, 1957 meeting¹

The Federal Open Market Committee's policy directive was again renewed at this meeting without change in the wording calling for restraint on inflationary developments.¹

...there was recognition throughout the country of the Federal Reserve's policy of firm restraint. Thus, although the Committee made no change in the policy directive, it was renewed with the understanding that in carrying out the broad policy of restraint in the immediate future doubts would be resolved on the side of less rather than greater restraint.²

Therefore Federal Reserve policy at this time was one of restraint.

October 1, 1957 meeting²

The directive of the Federal Open Market Committee was renewed without change at this meeting...²

¹Ibid., page 50. ²Ibid., page 51.

In reaching this conclusion, the Committee did do with the understanding that, in carrying on transactions for the System open market account, an effort would be made to continue the same degree of restrictive pressure that had been sought during the preceeding three weeks.¹

Therefore Federal Reserve policy at this time was one of restraint.

October 22, 1957 meeting²

The Committee concluded,... that there was no immediate occasion to reverse its policy of restraint on credit expansion or to make a change in the policy directive.

Thus, in renewing the directive without change the Committee agreed that although general policy was not to be changed appreciably, it should tend on the easier side from where it had been in recent weeks.³

Therefore Federal Reserve policy at this time was one of restraint.

November 12, 1957 meeting³

The directive... was changed at this meeting ... 'to fostering sustainable growth in the economy without inflation by moderating the pressures on bank reserves.'³

This did not signify a shift that would entirely eliminate restraint on credit expansion, but it did reflect a decision that there should be a moderate⁴ relaxation of the degree of restrictive pressure.

¹Ibid., page 52. ²Ibid., page 53. ³Ibid., page 54.

⁴Ibid., page 55.

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

November 14, 1957¹

Reduction in rates on discounts and advances by Federal Reserve Banks.

The action... provided a relaxation of the restraint of credit that had prevailed.¹

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

December 17, 1957 meeting²

The policy directive of the Federal Open Market Committee was changed at this meeting to provide that transactions for the System open market account were to be with a view, among other things, 'to cushioning adjustments and mitigating recessionary tendencies in the economy.'²

The change at this meeting in wording of the Committee's policy directive was adopted with the understanding that reserves would continue to be made somewhat more available, but the particular reason for this change was to recognize that the economy had encountered a recession and that the Federal Open Market Committee's policies were being molded accordingly.³

Therefore Federal Reserve policy at this time was neutral.

1958 Federal Reserve policies were determined from

¹Ibid., page 68 and 70. ²Ibid., page 60. ³Ibid., page 61.

minutes of meetings contained in Forty-Fifth Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1958.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

January 7, 1958 meeting¹

No change was made in the Committee's policy directive...¹

In concluding that no change should be made in the policy directive, the Committee agreed that a slight easing in the reserve positions of banks would be desirable and that operations in the System Open Market Account should be conducted with sufficient latitude to permit this development to take place within the limits of the directive.²

Therefore Federal Reserve policy at this time was neutral.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

January 21, 1958³

Reduction in rates on discounts and advances by Federal Reserve Banks.³

This was a reduction from 3 to 2 3/4 percent effective

January 22 or 24 for most Federal Reserve Banks.

With the accumulating evidence of recessionary tendencies, a further decrease in the discount rate was deemed an appropriate step in the execution of System Policy designed to encourage credit and monetary expansion.⁴

¹Forty-Fifth Annual Report... Year 1958, page 34.

²Ibid., page 36. ³Ibid., page 73. ⁴Ibid., page 74.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

January 28, 1958 meeting¹

The Committee made no change at this meeting in the wording of the directive... which called for operations in the System Open Market Account directed toward cushioning adjustments and mitigating recessionary tendencies in the economy.¹

...the Committee concluded that, even though the level of economic activity was continuing to decline, there should be no change at this meeting in the policy...²

Therefore Federal Reserve policy at this time was neutral.

February 11, 1958 meeting³

The Committee again renewed without change the policy directive that placed emphasis upon operations in the System Account with a view to cushioning adjustments and mitigating recessionary tendencies in the economy.³

Accordingly, for the present it was felt that the Committee should continue to follow an 'even keel policy tipped on the side of ease.'⁴

Therefore Federal Reserve policy at this time was neutral.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

February 19, 1958⁵

Reduction in reserve requirements of member banks.

The reduction of reserve requirements was complementary to steps being taken actively by

¹Ibid., page 36. ²Ibid., page 37. ³Ibid., page 38.

⁴Ibid., page 39. ⁵Ibid., page 72.

the Federal Reserve System through the use of other policy instruments to foster conditions of credit ease during a period of deepening recession and thus to increase the willingness and ability of the banking system to expand credit.¹

Therefore Federal Reserve policy at this time was one of ease.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

March 4, 1958 meeting²

...the directive was changed at this meeting to provide that, among other things, open market transactions would be with a view 'to contributing further by monetary ease to resumption of stable growth of the economy.'³

The Committee's discussion of the situations disclosed considerable feeling that the policy directive should reflect a more positive approach to recovery than was embodied... [in previous directives]⁴

Therefore Federal Reserve policy at this time was one of ease.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

March 6, 1958⁵

Reduction in rates on discounts and advances by Federal Reserve Banks.⁵

The reduction was from 2 3/4 to 2 1/4 percent.

¹Ibid., page 75. ²Ibid., page 39. ³Ibid., page 40.

⁴Ibid., page 41. ⁵Ibid., page 76.

...the action to reduce the discount rate to 2 1/4 percent was not of particular immediate significance from the standpoint of member bank borrowing. However, it brought the discount rate into better alignment with short-term interest rates, reflected the general attitude of System policy at this stage of the recession, and tended toward a position that would afford the System greater flexibility of adjustment to future developments.¹

March 18, 1958²

Reduction in reserve requirements of member banks.²

This second reduction of reserve requirements, viewed in association with earlier discount rate changes and the provision of reserves through open market operations, reflected furtherance of a System policy designed in its over-all aspects to foster ease in credit markets...²

Therefore Federal Reserve policy at this time was one of ease.

"RECORD OF POLICY ACTIONS FEDERAL OPEN MARKET COMMITTEE"

March 25, 1958 meeting³

The Committee renewed without change the directive approved at the meeting on March 4, 1958, which called for transactions in the System Open Market Account with a view, among other things, to contributing further by monetary ease to resumption of stable growth of the economy.³

The present posture of Federal Reserve policy was one of ease and it was the view of the Committee that it should continue to be such.⁴

¹Ibid., page 77. ²Ibid., page 78. ³Ibid., page 42.

⁴Ibid., page 44.

Therefore Federal Reserve policy at this time was one of ease.

April 15, 1958 meeting¹

This meeting of the Committee resulted in a decision to continue without change in the policy directive calling for operations designed to contribute further by monetary ease to resumption of stable growth of the economy.¹

Therefore Federal Reserve policy at this time was one of ease.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

April 17, 1958²

Reduction in Reserve Requirements²
Reduction in rates on discounts and advances
by Federal Reserve Banks.³

The reduction was from 2 1/4 to 1 3/4 percent.

The concurrent actions on the discount rate and on reserve requirements placed monetary policy clearly in the posture of doing everything possible to assist in the turnaround and recovery of the economy.⁴

Therefore Federal Reserve policy at this time was one of ease.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

¹Ibid. ²Ibid., page 78. ³Ibid., page 80. ⁴Ibid., page 81.

May 6, 1958 meeting¹

The policy directive calling for operations to contribute further by monetary ease to resumption of stable growth of the economy was again renewed at this meeting.¹

The pattern of economic and financial developments caused the Committee to conclude that the prevailing policy of ease should continue...²

Therefore Federal Reserve policy at this time was one of ease.

May 27, 1958 meeting²

The Committee again continued without change the policy directive providing for operations in the System Account with a view to contributing further by monetary ease to resumption of stable growth of the economy.²

Therefore Federal Reserve policy at this time was one of ease.

June 17, 1958 meeting³

The directive was renewed without change...³

Therefore Federal Reserve policy at this time was one of ease.

July 8, 1958 meeting⁴

...the Committee reached the conclusion that, on balance, there should be no change in policy at this time and that the directive should be renewed in its existing form calling for continued monetary ease.⁵

¹Ibid., page 47. ²Ibid., page 48. ³Ibid., page 50.

⁴Ibid., page 52. ⁵Ibid., page 53.

Therefore Federal Reserve policy at this time was one of ease.

July 29, 1958 meeting¹

... The Committee modified its directive... to require that operations be conducted with a view to recapturing redundant reserves that were to be released to the market on August 1.²

Therefore Federal Reserve policy at this time was neutral.

August 4, 1958 meeting²

The Committee agreed that for the present, having recaptured redundant reserves, the policy to be followed with respect to operations for the System Open Market Account should be one of keeping from having redundant reserves.²

Therefore Federal Reserve policy at this time was neutral.

"RECORD OF POLICY ACTIONS BOARD OF GOVERNORS"

August 14, 1958³

Increase in rates on discounts and advances by Federal Reserve Banks.³

Between August 15 and September 23 rates increased from 1 3/4 percent to 2 percent.

As a result, member banks were obliged to draw down their excess reserves and to begin to increase their borrowings at the Federal Reserve Banks.⁴

¹Ibid., page 57. ²Ibid., page 58. ³Ibid., page 82.

⁴Ibid., page 83.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

August 19, 1958 meeting¹

The policy directive of the Federal Open Market Committee was changed at this meeting by adopting wording for clause (b) of paragraph (1) to provide that, among other things, transactions be with a view 'to fostering conditions in the money market conducive to balanced economic recovery.¹

...the data presented indicated that the rate of expansion in the money supply in the immediate future should be tempered and that operations for the System Open Market Account should² move in the direction of lower free reserves...

Therefore Federal Reserve policy at this time was one of moderate restraint.

September 9, 1958 meeting³

The directive of the Committee was renewed without change, continuing the policy of fostering conditions in the money market conducive to balanced economic recovery.³

Therefore Federal Reserve policy at this time was one of moderate restraint.

September 30, 1958 meeting⁴

The directive of the Committee was renewed without change, thus continuing the policy adopted on August 19, 1958 of fostering conditions in the money market conducive to balanced economic recovery.⁴

This was based on the view that no further

¹Ibid., page 59. ²Ibid., page 60. ³Ibid., page 61.

⁴Ibid., page 62.

increase at this time in the degree of restraint was favored, nor on the other hand was there a desire to ease the market from its present position.¹

Therefore Federal Reserve policy at this time was one of moderate restraint.

October 21, 1958 meeting¹

No change was made at this meeting in the Committee's directive that policy should be directed toward fostering conditions in the money market conducive to balanced economic recovery.¹

The conclusion of the Committee was that in present circumstances it would be undesirable to aim toward a greater degree of restraint on reserve availability through open market operations, especially if an increase in discount rates at the Federal Reserve Banks were to be made at the same time.²

Therefore Federal Reserve policy at this time was one of moderate restraint.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

October 23, 1958³

Increase in rates on discounts and advances by Federal Reserve Banks.³

Between October 24 and November 7 rates increased from 2 to 2 1/2 percent.

Other pressures also tending to influence the trend toward a higher structure of interest rates included growing apprehension concerning potential

¹Ibid., page 63. ²Ibid., page 64. ³Ibid., page 85.

inflationary developments...¹

This was primarily an effort to bring the discount rate more in line with short-term money market rates.

Therefore Federal Reserve policy at this time was one of moderate restraint.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

November 10, 1958 meeting²

The Committee again reaffirmed its policy of fostering conditions in the money market conducive to balanced economic recovery.

...with a view to achieving the objectives agreed upon by the Committee at the meeting on October 21, namely, the maintenance of about the same degree of restrictive pressure in the market that had existed at the time of that meeting.²

The conclusion of the Committee was that the System Account should seek during the period immediately ahead to maintain conditions in the market about as they were at present, believing that the moderate degree of restraint that had existed for the past several weeks was appropriate under the circumstances and that it could be applied within the terms of the directive to the Federal Reserve Bank of New York that had been in effect since August 19.³

Therefore Federal Reserve policy at this time was one of moderate restraint.

December 2, 1958 meeting³

The Committee made no change at this meeting in the directive that had been in effect since August 19, 1958...³

¹Ibid., page 86. ²Ibid., page 65. ³Ibid., page 66.

The policy discussion by the Committee pointed to some increase in the degree of restraint that should be exerted...¹

Therefore Federal Reserve policy at this time was one of restraint.

December 16, 1958 meeting¹

The discussion at this meeting...indicated a consensus favoring a move in open market operations towards somewhat greater restraint.

...the Committee also felt that the policy directive that had been adopted at the meeting on August 19...should be changed to delete the word 'recovery' and to put emphasis on preventing expansion at an unsustainable rate.²

Therefore Federal Reserve policy at this time was one of restraint.

1959 Federal Reserve policies were determined from minutes of meetings contained in Forty-Sixth Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1959.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

January 6, 1959 meeting³

¹Ibid., page 67. ²Ibid., page 69.

³Forty-Sixth Annual Report... Year 1959, page 32.

The conclusion of the Committee that the degree of restraint on credit expansion in the near future should be about the same as in the immediate past, but that any deviation should be on the side of restraint, reflected the foregoing considerations.¹

Therefore Federal Reserve policy at this time was one of restraint.

January 27, 1959 meeting¹

No change was made at this meeting in the Open Market Committee's directive, thus continuing the policy of conducting operations in the System Open Market Account with a view, among other things, to fostering conditions in the money market conducive to sustainable economic growth and stability.¹

Consequently, it was the view of the Committee that the current degree of restraint on bank reserves was appropriate...and should be continued...²

Therefore Federal Reserve policy at this time was one of restraint.

February 10, 1959 meeting²

The Committee again renewed without change its directive that set forth a policy of fostering conditions in the money market conducive to sustainable economic growth and stability.²

In reaching its decision to make no change in policy and to maintain the same degree of pressure on bank reserve positions that had been exerted recently...³

Therefore Federal Reserve policy at this time was one of restraint.

¹Ibid., page 34. ²Ibid., page 35. ³Ibid., page 36.

March 3, 1959 meeting¹

No change was made at this meeting in the directive of the Committee...²

The foregoing considerations led the Committee to conclude that the policy directive should be continued without change, with the understanding as expressed by a majority of the Committee that about the same level of restraint should be maintained on bank reserves as at present and that any doubts on the part of the Account Management regarding transactions to be effected should be resolved on the side of restraint.³

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

March 5, 1959⁴

Effective March 6, 1959, the Board approved action... establishing a rate of 3 percent [an increase from 2 1/2 percent] on discounts for and advances to member banks...⁴

This 3 percent rate was in effect at all district banks by

March 16, 1959.

The increase in the discount rate meant that, if contemplated pressures upon the money markets and the banks developed and if a restrictive open market policy made it necessary for member banks to borrow additional reserves, the policy of restraint upon credit expansion would be reinforced by a discount rate close enough to market rates to help deter such borrowing.⁵

¹Ibid. ²Ibid., page 38. ³Ibid., page 39. ⁴Ibid., page 66.

⁵Ibid., page 68.

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

March 24, 1959 meeting¹

The Open Market Committee renewed without change its directive...¹

The consensus favored maintaining about the same degree of restraint that had prevailed during the preceeding three weeks...²

Therefore Federal Reserve policy at this time ~~was~~ one of restraint.

April 14, 1959 meeting²

The consensus at this meeting in terms of policy for the three-week period ahead called for maintenance of about the same degree of restraint as had existed during the past three weeks.³

...there came agreement that the existing policy directive should be renewed without change and that operations in the immediate future should continue as nearly as practicable the existing degree of pressure against credit expansion.⁴

Therefore Federal Reserve policy at this time was one of restraint.

May 5, 1959 meeting⁴

The decision of the Committee at this meeting was to renew without change the policy directive that called for operations with a view to fostering conditions in the money market conducive to sustainable economic growth and stability.⁴

¹Ibid., page 39. ²Ibid., page 40. ³Ibid., page 41.

⁴Ibid., page 42.

Therefore Federal Reserve policy at this time was one of restraint.

May 26, 1959 meeting¹

Clause (b) of the first paragraph of the Committee's policy directive was revised at this meeting so as to provide for increased restraint on credit expansion. This was indicated by adoption of wording specifying that open market operations should be conducted with a view 'to restraining inflationary credit expansion in order to foster sustainable economic growth and expanding employment opportunities'.¹

... the Open Market Committee reached the conclusion that the current level of restraint imposed by monetary and credit policy was not sufficiently restrictive and that an intensification of restraint was required.

... the Committee favored conducting open market operations with a view to exerting additional pressure as rapidly as that could be done without creating an untenable condition in the market for Government securities.²

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS BOARD OF GOVERNORS"

May 28, 1959³

Effective May 29, 1959, the Board approved action... establishing a rate of 3 1/2 percent [an increase from 3 percent] on discounts for and advances to member banks...³

This 3 1/2 percent rate was in effect at all district banks by June 12, 1959.

¹Ibid., page 44. ²Ibid., page 46. ³Ibid., page 73.

The added restraint of a discount rate increase seemed appropriate...¹

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

June 16, 1959 meeting²

...the consensus favored continuance of the present open market policy of restraint on inflationary credit expansion.

With no change in policy indicated by the consensus at the meeting, the Committee continued without change the directive, adopted at the May 26 meeting, which was stated in terms of restraining inflationary credit expansion in order to foster sustainable economic growth and expanding employment opportunities.³

Therefore Federal Reserve policy at this time was one of restraint.

July 7, 1959 meeting³

For the period immediately ahead, it was the consensus that there should be no change in open market policy. However, in view of the difficult Treasury financing situation, the instruction to the Manager of the System Open Market Account was tempered with the proviso that, in carrying on operations for the Account, doubts should be resolved on the side of ease during the period of Treasury financing.⁴

...the directive calling for restraint on inflationary credit expansion...was again renewed without change.⁵

¹Ibid., page 76. ²Ibid., page 47. ³Ibid., page 48.

⁴Ibid., page 49. ⁵Ibid., page 50.

Therefore Federal Reserve policy at this time was one of restraint.

July 28, 1959 meeting¹

At this meeting the Open Market Committee continued without change the policy directive providing for restraint on inflationary credit expansion in order to foster sustainable economic growth and expanding employment opportunities.¹

...the consensus favored aiming as far as practicable at the same degree of restraint on credit expansion as currently prevailed.²

Therefore Federal Reserve policy at this time was one of restraint.

August 18, 1959 meeting²

The conclusion reached by the Open Market Committee was to aim toward maintenance of the status quo, that is, continuation of the existing degree of restraint, during the period immediately ahead, with no change at this time in the policy providing for System open market operations with a view to restraining inflationary credit expansion ... Accordingly, the directive was renewed in the form that had been in effect since May 26.²

Therefore Federal Reserve policy at this time was one of restraint.

September 1, 1959 meeting³

...the Committee favored maintenance of the existing degree of pressure on reserve positions of banks in the period immediately ahead, but no intensification...

...in view of the consensus that there should

¹Ibid. ²Ibid., page 52. ³Ibid., page 53.

be no move at this point toward either more or less restrictiveness on reserves, the Committee made no change in the existing directive...¹

Therefore Federal Reserve policy at this time was one of restraint.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

September 10, 1959²

Effective September 11, 1959, the Board approved action... establishing a rate of 4 percent [an increase of 1/2 percent] on discounts for and advances to member banks...²

The 4 percent rate was in effect at all district banks by September 18, 1959.

The increase in the discount rate brought it to a level that produced a better alignment with short-term money market rates...³

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

September 22, 1959 meeting¹

The directive to the Federal Reserve Bank of New York was renewed without change...¹

Although no change was made in the directive that provided for restraint on inflationary credit expansion, the Committee qualified its instruction... with an understanding that to whatever extent operations in the open market for the System Account might result in deviations from the existing degree of restraint... such deviations preferably should be on the side of reducing restraint.⁴

¹Ibid., page 55. ²Ibid., page 78. ³Ibid., page 80.

⁴Ibid., page 56.

Therefore Federal Reserve policy at this time was one of restraint.

October 13, 1959 meeting¹

... unanimous vote to continue the existing directive... which provided for restraining inflationary credit expansion...²

Therefore Federal Reserve policy at this time was one of restraint.

November 4, 1959 meeting²

The Open Market Committee again renewed without change its directive... calling for operations with a view to restraining inflationary credit expansion in order to foster sustainable economic growth and expanding employment opportunities.²

Therefore Federal Reserve policy at this time was one of restraint.

November 24, 1959 meeting³

The policy directive providing for restraint on inflationary credit expansion... was again renewed by the Open Market Committee.

The consensus of this meeting favored maintaining the same degree of restraint.³

Therefore Federal Reserve policy at this time was one of restraint.

December 15, 1959 meeting⁴

¹Ibid., page 57. ²Ibid., page 58. ³Ibid., page 60.

⁴Ibid., page 61.

The Open Market Committee continued the policy directive calling for restraint on inflationary credit expansion...¹

...consensus favoring maintenance of the degree of restraint on credit expansion that had been agreed upon by the Committee at its meeting on November 24, 1959.²

Therefore Federal Reserve policy at this time was one of restraint.

1960 Federal Reserve policies were determined from minutes of meeting contained in Forty-Seventh Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1960.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

January 12, 1960 meeting³

The Federal Open Market Committee continued without change the directive...calling for operations with a view to restraining inflationary credit expansion in order to foster sustainable economic growth and expanding employment opportunities.³

The consensus...favored no change in credit and monetary policy, which had been directed for several months toward restraint on credit expansion.⁴

¹Ibid., page 61. ²Ibid., page 62.

³Forty-Seventh Annual Report... Year 1960, page 35.

⁴Ibid., page 37.

Therefore Federal Reserve policy at this time was one of restraint.

January 26, 1960 meeting¹

The Federal Reserve Bank of New York was directed by the Federal Open Market Committee to conduct open market operations that would continue the policy of restraining inflationary credit expansion...

The Committee's decision as to policy for the period immediately ahead was to continue substantially the same degree of restraint on credit expansion that had been followed for some weeks past.¹

Therefore Federal Reserve policy at this time was one of restraint.

February 9, 1960 meeting²

...the Committee took into account...the fact that the easier money situation had resulted from market forces rather than any change in monetary policy. There was unanimity of opinion that any tightening in the degree of restraint should be avoided.

...consideration was given to the possibility of a modification of the policy directive...³

The consensus, however, did not favor a change at this time, on the grounds that it would indicate a basic shift in open market policy and that such a shift was not called for at present.

Therefore, the action taken was to renew the directive, which called for restraining inflationary credit expansion...⁴

Therefore Federal Reserve policy at this time was one of restraint.

¹Ibid., page 38. ²Ibid., page 39. ³Ibid., page 40.

⁴Ibid., page 41.

March 1, 1960 meeting¹

Clause (b) of...the Committee's policy directive was revised at this meeting so as to provide that open market operations should be conducted with a view 'to fostering sustainable growth in economic activity and employment while guarding against excessive credit expansion.'¹

...the consensus favored, for the immediate future, a policy of moderately less restraint.

In the light of existing conditions, a policy directive calling for fostering sustainable growth in economic activity and employment, while guarding against excessive credit expansion, was deemed more appropriate than a directive emphasizing restraint on inflationary credit expansion, and the Committee unanimously agreed to change clause (b) accordingly.²

Therefore Federal Reserve policy at this time was one of moderate restraint.

March 22, 1960 meeting³

There was a clear consensus...that open market operations during the period immediately ahead should be directed toward maintaining about the existing situation, with no tightening and with no further relaxation.⁴

...the Committee continued the policy directive adopted at the preceding meeting...⁵

Therefore Federal Reserve policy at this time was one of moderate restraint.

April 12, 1960 meeting⁶

...the consensus as to open market policy for the ensuing three weeks favored easing further the

¹Ibid. ²Ibid., page 43. ³Ibid., page 45. ⁴Ibid., page 46.

⁵Ibid., page 47. ⁶Ibid., page 49.

reserve positions of member banks, and thus encouraging an increase in the money supply, this to be done, however, in a modest way. Subject to this understanding, the Committee renewed the outstanding directive...¹

Therefore Federal Reserve policy at this time was one of moderate restraint to neutrality.

May 3, 1960 meeting²

It was the consensus of the Committee that current conditions justified moving modestly in the direction of increasing the supply of reserves available to the banking system. The Committee concluded that this further relaxation of restraint could be accomplished within the scope of the existing policy directive...

Accordingly, although some question was raised with regard to the appropriateness of the last part of that statement [clause (b)], the directive was renewed without change.³

Therefore Federal Reserve policy at this time was neutral.

May 24, 1960 meeting⁴

Clause (b)... of the Committee's policy directive was changed at this meeting to provide that open market operations should be conducted with a view to fostering sustainable growth in economic activity and employment by providing reserves needed for moderate bank credit expansion.⁴

The consensus... favored a further supplying of reserves through open market operations with a view to permitting a moderate expansion of bank credit and encouraging an increase in the money supply, which thus far had failed to respond to the easing steps taken by monetary policy.⁵

¹Ibid., page 50. ²Ibid., page 52. ³Ibid., page 53.

⁴Ibid., page 54. ⁵Ibid., page 55.

Therefore Federal Reserve policy at this time was one of neutrality to ease.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

June 2, 1960¹

Effective June 3, 1960, the Board approved action... establishing a rate of 3 1/2 percent [a decrease from 4 percent] on discounts and advances to member banks...¹

This 3 1/2 percent rate was in effect at all district banks by June 14, 1960.

Therefore, with few, if any, indications that there were excessive uses of credit that needed to be restrained, the discount rates were reduced from 4 percent to 3 1/2 percent in order to bring them into better alignment with the lower level of short-term interest rates that had resulted from developments in the credit market.²

Therefore Federal Reserve policy at this time was neutral.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

June 14, 1960 meeting³

... the consensus at this meeting favored waiting watchfully in the period immediately ahead, although with the understanding that any deviations in the conduct of open market operations should be on the side of ease rather than restraint. In the light of this consensus, the policy directive... was renewed without change.⁴

¹Ibid., page 80. ²Ibid., page 81. ³Ibid., page 56.

⁴Ibid., page 57.

Therefore Federal Reserve policy at this time was one of neutrality to ease.

July 6, 1960 meeting¹

...the consensus for the period immediately ahead was to continue to provide reserves at approximately the present rate, within the general framework of the existing policy directive to the New York Bank which called for fostering sustainable growth in economic activity and employment by providing reserves needed for moderate bank credit expansion.²

Therefore Federal Reserve policy at this time was one of neutrality to ease.

July 26, 1960 meeting³

...it was the consensus of the Committee that open market operations should continue to make reserves for bank deposit expansion readily available. Accordingly, the directive...was renewed.⁴

Therefore Federal Reserve policy at this time was one of neutrality to ease.

"RECORD OF POLICY ACTIONS BOARD OF GOVERNORS"

August 11, 1960⁵

Effective August 12, 1960, the Board approved action...establishing a rate of 3 percent [a decrease from 3 1/2 percent] on discounts for and advances to member banks...⁵

¹Ibid., page 58. ²Ibid., page 59. ³Ibid., page 60.

⁴Ibid., page 61. ⁵Ibid., page 85.

This 3 percent rate was in effect at all district banks by September 9, 1960.

This further reduction to 3 percent served to place the discount rate in better relationship to short-term market rates and also to reduce the cost to member banks of meeting temporary reserve deficiencies through borrowing from the Federal Reserve.¹

Therefore Federal Reserve policy at this time was one of neutrality to ease.

**"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"**

August 16, 1960 meeting²

At this meeting clause (b) of the first paragraph of the Committee's policy directive was changed to provide that open market operations should be conducted with a view 'to encouraging monetary expansion for the purpose of fostering sustainable growth in economic activity and employment.'²

After consideration of several suggestions for revision of the policy directive in a manner that would more strongly suggest a positive attitude toward increasing the availability of reserves, it was voted to change clause (b) of the directive in the manner heretofore indicated.³

Therefore Federal Reserve policy at this time was one of ease.

September 13, 1960 meeting³

The consensus as to open market operations called for supplying needed reserves readily, avoiding the development of seasonal strain in

¹Ibid., page 86. ²Ibid., page 61. ³Ibid., page 63.

bank reserve positions, and resolving doubts on the side of ease...

This being the consensus, the directive... was renewed without change.¹

Therefore Federal Reserve policy at this time was one of ease.

October 4, 1960 meeting²

...it was agreed that open market operations should continue to supply needed reserves readily in order to avoid seasonal strain on bank reserve positions, and that doubts should be resolved on the side of ease.³

The policy directive... was again renewed without change.⁴

Therefore Federal Reserve policy at this time was one of ease.

October 25, 1960 meeting⁴

Clause (b) of the first paragraph, which since August 16, 1960 had provided for open market operations with a view 'to encouraging monetary expansion for the purpose of fostering sustainable growth in economic activity and employment' was amended to add the words 'while taking into consideration current international developments.'⁴

If... a conflict should arise between providing additional reserves and a further decline in the bill rate, it was understood that the first of these considerations would take precedence.⁵

Insofar as it described the objectives of domestic monetary policy, the existing directive... was regarded as continuing to be appropriate.⁶

¹ Ibid., page 64. ² Ibid., page 65. ³ Ibid., page 66.

⁴ Ibid., page 67. ⁵ Ibid., page 69. ⁶ Ibid., page 70.

Therefore Federal Reserve policy at this time was one of ease.

November 22, 1960 meeting¹

It was the consensus that no change in the current degree of monetary ease was called for...²
The directive...was renewed...³

Therefore Federal Reserve policy at this time was one of ease.

December 13, 1960 meeting⁴

It was the majority view...that a continuation of the current degree of ease would be the preferable objective.⁴

Accordingly, the policy directive calling for the encouragement of monetary expansion for the purpose of fostering sustainable growth in economic activity and employment, while taking current international developments into consideration, was again renewed.⁵

Therefore Federal Reserve policy at this time was one of ease.

1961 Federal Reserve policies were determined from minutes of meetings contained in Forty-Eighth Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1961.

¹Ibid. ²Ibid., page 71. ³Ibid., page 72. ⁴Ibid., page 73.

⁵Ibid., page 74.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

January 10, 1961 meeting¹

The Federal Open Market Committee continued without change the directive...calling for operations with a view to encouraging monetary expansion for the purpose of fostering sustainable growth in economic activity and employment, while taking into consideration current international developments.¹

...it was the consensus of the Committee... that the System should seek to maintain approximately the same amount of ease in the market as it had since the preceding meeting, at the same time paying close attention to developments in the international area.²

Therefore Federal Reserve policy at this time was one of ease.

January 24, 1961 meeting²

There was ample evidence of continuing money market ease.

The consensus as to policy for the period immediately ahead was that there should be no change in the existing degree of monetary ease...³

Therefore Federal Reserve policy at this time was one of ease.

February 7, 1961 meeting³

The Committee's directive...was continued without change.³

The consensus of the Committee favored no change in open market policy...⁴

¹Forty-Eighth Annual Report... Year 1961, page 34.

²Ibid., page 36. ³Ibid., page 37. ⁴Ibid., page 39.

Therefore Federal Reserve policy at this time was one of ease.

Also at this meeting authority to effect transactions in intermediate- and longer-term securities was granted by the Federal Open Market Committee.

March 7, 1961 meeting¹

The Federal Reserve Bank of New York was directed by the Committee to continue to conduct open market operations with a view toward encouraging monetary expansion...¹

The consensus of the Committee was that the existing monetary policy of ease should be followed until the next meeting.²

Therefore Federal Reserve policy at this time was one of ease.

March 28, 1961 meeting³

...it was the consensus...that until the next meeting of the Committee the policy directive should be implemented by open market operations seeking to maintain about the existing degree of ease.⁴

Therefore Federal Reserve policy at this time was one of ease.

April 18, 1961 meeting⁵

At this meeting clause (b)...of the Committee's policy directive...was changed to provide that open

¹Ibid., page 43. ²Ibid., page 45. ³Ibid., page 51.

⁴Ibid., page 52. ⁵Ibid., page 55.

market operations should be conducted with a view 'to encouraging expansion of bank credit and the money supply so as to contribute to strengthening of the forces of recovery that appear to be developing in the economy, while giving consideration to international factors.'¹

The change in the Committee's policy directive was deemed appropriate in recognition of the new phase of the business cycle into which the nation's economy appeared to have entered, even though the configuration of the recovery could not as yet be forecast. As to monetary policy, the pattern that the committee had been following in the past few months still appeared suitable, and revision of the directive carried with it no intent to modify open market policy in any significant respect at this stage. For the period until the next meeting, it was the consensus that the directive should be implemented by open market operations aimed at maintaining approximately the same degree of ease that had prevailed for the past several weeks.²

Therefore Federal Reserve policy at this time was one of ease.

May 9, 1961 meeting³

The Federal Open Market Committee made no change at this meeting in its policy directive...³

...the consensus was that operations for the System Account should be directed toward maintaining the same degree of ease that had prevailed in recent weeks...⁴

Therefore Federal Reserve policy at this time was one of ease.

¹Ibid. ²Ibid., page 57. ³Ibid., page 58. ⁴Ibid., page 60.

June 6, 1961 meeting¹

At this meeting, the Federal Open Market Committee, in directing that open market operations be with a view 'to encouraging expansion of bank credit and the money supply so as to contribute to strengthening of the forces of recovery while giving consideration to international factors,' modified the wording of the preceding policy directive by deleting the phrase 'that appear to be developing in the economy'.¹

This modification did not indicate a change in the policy of ease that had been pursued for some months ... it was the consensus that any doubts as to the availability of reserves should be resolved on the side of ease and that there should be no tightening in the market.²

Therefore Federal Reserve policy at this time was one of ease.

June 20, 1961 meeting³

... the consensus of the Committee was that open market policy should be directed toward maintaining substantially the same degree of reserve availability as had prevailed recently, with the understanding that any doubts arising in the operation of the System Open Market Account would continue to be resolved on the side of ease.⁴

Therefore Federal Reserve policy at this time was one of ease.

July 11, 1961 meeting⁵

The Committee's directive... was renewed without change.⁵

¹Ibid., page 62. ²Ibid., page 64. ³Ibid., page 65.

⁴Ibid., page 66. ⁵Ibid., page 67.

...it was the consensus that open market operations should be designed to maintain approximately the same degree of ease that had recently prevailed, associated with a free reserve level of around \$ 500-\$600 million.

Therefore Federal Reserve policy at this time was one of ease.

August 1, 1961 meeting²

The Committee renewed the directive...²
...the consensus favored continuation of approximately the same degree of ease that had been maintained recently.³

Therefore Federal Reserve policy at this time was one of ease.

August 22, 1961 meeting⁴

Clause (b) of the directive...was changed to provide for open market operations with a view to encouraging credit expansion so as to promote fuller utilization of resources, while giving consideration to international factors.⁴

...the consensus favored continuing about the same degree of ease that had prevailed...

The change in the language of the directive therefore did not signify an intent to effect any immediate change in System policy. Instead, it reflected the view of the Committee that the amended wording was more appropriate at a time when the domestic economy was progressing from the stage of recovery into an expansionary phase.⁵

Therefore Federal Reserve policy at this time was one of

¹Ibid., page 69. ²Ibid., page 71. ³Ibid., page 72.

⁴Ibid., page 73. ⁵Ibid., page 75.

ease.

September 12, 1961 meeting¹

The Committee renewed without change the directive...¹

...the consensus was favorable to continuation of essentially the same degree of ease that had prevailed...²

Therefore Federal Reserve policy at this time was one of

ease.

October 3, 1961 meeting³

The directive...was renewed without change.

...the consensus favored continuation during the period immediately ahead of approximately the same degree of ease that had prevailed during recent weeks...³

Therefore Federal Reserve policy at this time was one of

ease.

October 24, 1961 meeting⁴

Consideration of these diverse factors resulted in a consensus that a continuation of the monetary policy the committee had been following would be appropriate from the standpoint of domestic conditions, though with a tendency to resolve any doubts arising in the conduct of open market operations on the side of less ease.⁵

Therefore Federal Reserve policy at this time was one of

ease.

¹Ibid., page 76. ²Ibid., page 78. ³Ibid., page 79.

⁴Ibid., page 81. ⁵Ibid., page 82.

November 14, 1961 meeting¹

The Committee renewed without change the directive to the Federal Reserve Bank of New York providing for open market operations with a view to encouraging credit expansion so as to promote fuller utilization of resources, while giving consideration to international factors.¹

The consensus... favored continuation for the period just ahead of a monetary policy calculated to produce approximately the same degree of ease that had prevailed for same time...²

Therefore Federal Reserve policy at this time was one of ease.

"RECORD OF POLICY ACTIONS BOARD OF GOVERNORS"

December 1, 1961³

Amendment to Regulation Q. Payment of Interest on Deposits

Effective January 1, 1962, the Board prescribed the following maximum permissible rates of interest payable by member banks of the Federal Reserve System on time and savings deposits:³

Twelve months or more, 4 percent; less than twelve but more than six months, 3 1/2 percent; less than six months but more than ninety days, 2 1/2 percent; less than ninety days, 1 percent.

"RECORD OF POLICY ACTIONS FEDERAL OPEN MARKET COMMITTEE"

December 5, 1961 meeting⁴

¹Ibid., page 83. ²Ibid., page 85. ³Ibid., page 101.

⁴Ibid., page 86.

The policy directive... was renewed at this meeting without change.¹

...the consensus favored maintaining for the immediate future approximately the same policy in respect to the supplying of reserves that the Committee had been pursuing for some time.²

Therefore Federal Reserve policy at this time was one of ease.

December 19, 1961 meeting³

It was the judgement of the Committee majority that improvements in the domestic economic situation coupled with the continuing balance of payments problem warranted a policy trending toward slightly less easy monetary conditions...³

Therefore Federal Reserve policy at this time was one of ease.

1962 Federal Reserve policies were determined from minutes of meeting contained in Forty-Ninth Annual Report of the Board of Governors of the Federal Reserve System Covering Operations for the Year 1962.

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

January 9, 1962 meeting⁴

¹Ibid., page 86. ²Ibid., page 88. ³Ibid., page 89.

⁴Forty-Ninth Annual Report... Year 1962, page 47.

It is the current policy of the Committee to permit further bank credit and monetary expansion...

To implement this policy, operations for the System Open Market Account during the next two weeks shall be conducted with a view to maintaining current money market conditions...¹

Therefore Federal Reserve policy at this time was one of ease.

January 23, 1962 meeting²

...the Committee favored no change in the basic monetary policy that had been in effect for the past several weeks...

It continues to be the current policy of the Committee to permit further bank credit and monetary expansion...³

Therefore Federal Reserve policy at this time was one of ease.

February 13, 1962 meeting⁴

It continues to be the current policy of the Committee to permit further bank credit and monetary expansion...⁵

Therefore Federal Reserve policy at this time was one of ease.

March 6, 1962 meeting⁶

Some members...leaned toward a slightly reduced degree of ease. Others felt that...it

¹Ibid., page 48. ²Ibid., page 50. ³Ibid., page 51.

⁴Ibid., page 52. ⁵Ibid., page 54. ⁶Ibid., page 63.

would be appropriate to increase the degree of ease slightly...

...it remains the current policy of the Federal Open Market Committee to promote further expansion of bank credit and the money supply...¹

Therefore Federal Reserve policy at this time was one of ease.

Marcy 27, 1962 meeting²

...it remains the current policy of the Federal Open Market Committee to promote further expansion of bank credit and the money supply...³

To implement this policy, operations for the System Open Market Account during the next three weeks shall be conducted with a view to maintaining a supply of reserves adequate for further credit and monetary expansion...⁴

Therefore Federal Reserve policy at this time was one of ease.

April 17, 1962 meeting⁴

The majority of the Committee members agreed ...that no change was indicated at this time in monetary and credit policy... As a result, the Committee issued a current economic policy directive...in the same form as the directive issued at the meeting on March 27, 1962.⁵

Therefore Federal Reserve policy at this time was one of ease.

May 8, 1962 meeting⁶

¹Ibid., page 65. ²Ibid., page 68. ³Ibid., page 70.

⁴Ibid., page 71. ⁵Ibid., page 73. ⁶Ibid., page 74.

...it was the majority view that the current posture of monetary policy continued to be appropriate... Accordingly, the Committee re-issued the current policy directive... that had been issued at the two preceding meetings of the Committee.¹

Therefore Federal Reserve policy at this time was one of ease.

May 29, 1962 meeting²

...there was general agreement that no change of policy should be made at this meeting of the Committee.³

Therefore Federal Reserve policy at this time was one of ease.

June 19, 1962 meeting⁴

In view of the continuing concern for the international position of the dollar and the further, even though gradual, improvement in the domestic economy, a majority of the Committee concluded that a time had been reached when a slightly less easy monetary policy was indicated.⁵

It is the current policy of the Federal Open Market Committee to permit the supply of bank credit and money to increase further, but at the same time to avoid redundant bank reserves that would encourage capital outflows internationally.⁶

Therefore Federal Reserve policy at this time was one of ease.

July 10, 1962 meeting⁷

¹Ibid., page 76. ²Ibid., page 77. ³Ibid., page 78.

⁴Ibid., page 79. ⁵Ibid., page 80. ⁶Ibid., page 81.

⁷Ibid., page 83.

The consensus, however, was for continuation of the degree of ease contemplated by the policy adopted at the June 19 meeting.¹

Therefore Federal Reserve policy at this time was one of ease.

July 31, 1962 meeting²

...the current policy directive issued to the Federal Reserve Bank of New York was in the same form as the directive issued at the meeting on July 10, 1962.³

Therefore Federal Reserve policy at this time was one of ease.

August 21, 1962 meeting⁴

A majority of the Committee concluded that ...circumstances warranted a continuation of recent monetary policy.

It is the current policy of the Federal Open Market Committee to permit the supply of bank credit and money to increase further, but at the same time to avoid redundant bank reserves that would encourage capital outflows internationally.⁵

Therefore Federal Reserve policy at this time was one of ease.

September 11, 1962 meeting⁶

A majority of the Committee concluded that ...monetary policy should remain unchanged for the next three weeks.⁷

¹Ibid., page 84. ²Ibid., page 87. ³Ibid., page 89.

⁴Ibid., page 90. ⁵Ibid., page 91. ⁶Ibid., page 92.

⁷Ibid., page 93.

Therefore Federal Reserve policy at this time was one of ease.

October 2, 1962 meeting¹

...the majority view favored a continuation of current policy for the next three weeks. This policy contemplated that reserves needed for seasonal purposes would be supplied freely...²

Therefore Federal Reserve policy at this time was one of ease.

"RECORD OF POLICY ACTIONS
BOARD OF GOVERNORS"

October 18, 1962³

...the Supplement to Regulation D was amended to reduce the reserve requirement against time deposits from 5 percent to 4 percent.³

Thus, this method of supplying reserves will minimize downward pressures from System purchases upon short-term market rates, which is desirable in the present circumstances in order to keep incentives for short-term capital flows abroad from becoming stronger.⁴

"RECORD OF POLICY ACTIONS
FEDERAL OPEN MARKET COMMITTEE"

October 23, 1962⁵

While, as indicated, the policy decision was to maintain the status quo at this time, the wording of the current economic policy directive was changed to reflect awareness of the Cuban emergency situation...
...operations for the System Open Market Account

¹Ibid., page 95. ²Ibid., page 96. ³Ibid., page 119.

⁴Ibid., page 120. ⁵Ibid., page 98.

during the next three weeks shall be conducted with a view to providing moderate reserve expansion in the banking system...¹

Therefore Federal Reserve policy at this time was one of ease.

November 13, 1962 meeting¹

...the Committee, felt that recent changes... had not yet been so pronounced as to call for any change at this time in the current Committee policy, which called for encouraging a moderate further increase in bank credit and the money supply...²

Therefore Federal Reserve policy at this time was one of ease.

December 4, 1962 meeting³

...the Committee members...voted in favor of no change at this time from the policy adopted at the November 13, 1962 meeting.⁴

Therefore Federal Reserve policy at this time was one of ease.

December 18, 1962 meeting⁵

It is the current policy of the Federal Open Market Committee to accommodate moderate further increases in bank credit and the money supply, while aiming at money market conditions that would minimize capital outflows internationally.⁶

Therefore Federal Reserve policy at this time was one of ease.

¹Ibid., page 100. ²Ibid., page 102. ³Ibid., page 104.

⁴Ibid., page 106. ⁵Ibid., page 107. ⁶Ibid., page 109.

APPENDIX B

FLOW OF FUNDS CHARTS ON FINANCIAL MARKETS

Chart B-1

Chart B-5

Chart B-7

Chart B-8

Chart B-9

Chart B-10

APPENDIX C

LETTERS FROM THE FEDERAL RESERVE

February 2, 1964

Joseph E. Kelleher, Director
Division of Administrative Services
Board of Governors of the Federal Reserve System
Washington, D.C. 20551

Dear Mr. Kelleher,

I am a National Science Foundation Fellow in economics at Rice University and am now starting my Ph. D. dissertation. In this dissertation I propose to make an empirical study of the behavior of the major asset and liability accounts in the balance sheets of selected American financial intermediaries during the postwar period in order to determine the monetary significance of the operations of these financial intermediaries. Specifically, I intend to study the short-term changes in assets and liabilities in each of seventeen financial intermediary sub sectors (sub-sectors identified by the Federal Reserve).

In the Quarterly Flow-of-Funds presentation in the Federal Reserve Bulletin it was stated that subsector flow statements are prepared but not presented in the Bulletin. I am very interested in obtaining copies of flow-of-funds data for the seventeen subsectors listed on the attached sheet. I understand that these statements have been prepared on an annual basis since 1945 and on a quarterly basis since 1952. Would you please forward copies of these subsector flow-of-funds statements for the postwar period to me? I will gladly pay the necessary expenses associated with producing and sending them to me.

Perhaps this matter should be referred to Guy E. Noyes, Director, Division of Research and Statistics. If so, would you please forward it to him.

Thank you for your consideration.

Sincerely,

William G. Nelson IV
2209 W Rio Grande
Orange, Texas 77630

FINANCIAL INTERMEDIARY SUB-SECTORS¹

1. Commercial banks
2. Monetary authorities
3. Savings banks
4. Savings and loan associations
5. Credit unions
6. Domestic life insurance companies
7. Domestic other insurance companies
8. Private noninsured pension and retirement plans
(that is, those not administered by insurance companies)
9. Insurance activity of fraternal orders
10. Sales finance companies
11. Industrial and personal finance companies
12. Mortgage companies and short-term business finance companies
13. Open-end investment companies
14. Security and commodity-exchange brokers and dealers
15. Banks in U.S. territories and possessions
16. Agencies of foreign banks in the United States
17. Closed-end investment companies

1. Sub-sectors 1 and 2 are included in the Commercial Banking Sector; sub-sectors 3, 4, and 5 in the Savings Institutions Sector; 6 through 9 in the Insurance Sector; 10 through 16 in Finance Not Elsewhere Covered Sector; and 17 in the Corporate Business Sector.

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON

February 17, 1964

Mr. William G. Nelson IV
2209 W Rio Grande
Orange, Texas 77630

Dear Mr. Nelson:

This replies to your request of February 2 for detailed flow-of-funds data on financial institutions. In about three weeks we shall have available a publication containing all of what we can supply to meet your requests, and we shall send you a copy then. There is no charge. I hope the delay will not seriously inconvenience you.

In the meantime I enclose a volume that contains the seasonally unadjusted quarterly tables from 1952 corresponding to the annual tables, assets and liabilities, and seasonally adjusted tables in the main volume. As you will note in the introduction, all of the explanatory footnotes are in the main volume, so to some extent you will be in the dark about the nature of the data. This will be only for a few weeks, though.

In the tables here and in the main book you will be able to find all of the data we have of the kind you ask for. This includes everything but the detail by type of finance company and for closed end investment companies. We have an account for finance companies as a whole but have never had enough detail to separate them into sales finance, small loan company, commercial credit, and mortgage companies, mainly because of deficiencies in loan and security information. Closed-end investment companies we found to be a highly ambiguous entity, with only a very blurred boundary from holding companies, both operating and of the Christiana type that is closely held by one family. We therefore never tried to separate closed-end companies from the corporate sector as a whole and instead treat them as consolidated with that sector or with the banking sector. We therefore have nothing on them to send you.

For the rest, examine the tables enclosed.

Sincerely,

Stephen P. Taylor, Chief
Flow of Funds and Savings Section

Oct. 1, 1964

Mr. Daniel H. Brill, Director
Division of Research and Statistics
Board of Governors of the Federal Reserve System
Washington, D.C. 20551

Dear Mr. Brill,

I am a National Science Foundation Fellow in Economics at Rice University and am working on my Ph.D. dissertation. In this dissertation I need to identify just what monetary policy (i. e. restraint, ease, or neutrality) the Federal Reserve was pursuing throughout the eleven years 1952-62. In order to do this, I used the records of policy actions of the Federal Open Market Committee and the Board of Governors published in the Annual Reports of the Board of Governors. My conclusions are shown on the attached sheet of paper.

Would you either confirm that the Federal Reserve would agree with my interpretation of the records of policy actions (being sure that I used the appropriate starting date for each period of monetary policy), or indicate to me the manner in which I would need to correct my interpretation to bring it into agreement with the Federal Reserve?

I certainly appreciate any consideration you can give to this request.

Thankyou,

William G. Nelson IV
2209 W Rio Grande
Orange, Texas 77630

William G. Nelson IV
2209 W Rio Grande
Orange, Texas 77630
October 1, 1964

Would the Federal Reserve agree with the following
interpretation of its monetary policy aims during 1952-62?

<u>Period</u>	<u>Monetary Policy</u>
Jan. 1, 1952	neutrality
until	
June 11, 1953 then	ease
until	
Jan., 11, 1955 then	neutrality
until	
August 2, 1955 then	restraint
until	
December 17, 1957 then	neutrality
until	
February 19, 1958 then	ease
until	
July 29, 1958 then	neutrality
until	
August 19, 1958 then	restraint
until	
May 3, 1960 then	neutrality
until	
August 16, 1960 then	ease

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM

WASHINGTON, D. C. 20551

ADDRESS OFFICIAL CORRESPONDENCE
TO THE BOARD

October 28, 1964.

Mr. William G. Nelson IV,
2209 W Rio Grande,
Orange, Texas. 77630

Dear Mr. Nelson:

This is in reply to your letter of October 1 addressed to Mr. Brill requesting confirmation or suggested revisions of your interpretation of the policy of the Federal Reserve over the period 1952 to the present, a copy of which accompanied your letter.

Any attempt to characterize monetary policy according to a specified set of labels, such as ease, neutrality, or restraint, must of necessity rest on the application of some quantitative standard or indicator of policy. There must also be a clear understanding of the meaning of the labels employed. Since you have not defined these terms, it would not be possible to appraise the characterization you have applied to various time periods. Even if you had done so, however, there would not be general agreement on the most appropriate indicators to be used.

I do not feel that there is any single appropriate indicator of the posture of monetary policy. Many indicators are taken into account by the Federal Reserve in the administration of monetary policy and are used in various combinations and with different emphasis at different times. These indicators do not always move in a precisely parallel manner, thus complicating the question of selecting transition points in the evolution of policy, and at times, they may even give contradictory readings.

Thus the problem of characterizing Federal Reserve policy at any given time is most difficult, and one that does not always yield clear-cut answers. In large measure, any characterization is conditioned by judgmental considerations, and the results in any particular case will inevitably reflect the views of the individual analyst.

Mr. William G. Nelson IV

-2-

Despite all of these difficulties, you may find useful the enclosed copy of a paper prepared by Mr. Deming, President of the Federal Reserve Bank of Minneapolis, which illustrates the approach of one person in the Federal Reserve System to the policy-characterization problem.

Very truly yours,

A handwritten signature in dark ink, reading "Albert R. Koch". The signature is written in a cursive style with a large, stylized initial 'A'.

Albert R. Koch,
Associate Director,
Division of Research and Statistics.

Enclosure

APPENDIX D

SOURCES FOR FLOW OF FUNDS CHARTS

Chart 1: Appendix A, "Determination of Federal Reserve Policy for the Period 1952-1962".

Chart 2: Table 14, "Finance N. E. C. Subsectors," Flow of Funds Accounts, 1945-62, pages 153-158.

Charts 3 and 4: Table 16, "Commercial Bank Subsector," Ibid., pages 162-164.

Chart 5: Table 19, "Demand Deposits and Currency 1," Ibid., pages 168-170; and Table 20, "Time Deposits and Savings Accounts," Ibid., pages 171-172.

Charts 6, 7, and 8: Table 16, "Commercial Bank Subsector," Ibid., pages 162-164.

Charts 9, 10, and 11: Table 9, "Savings Institutions Sector," Ibid., pages 135-136.

Chart 12: Table 10, "Savings Institutions Subsector," Ibid., pages 137-142, for flow of funds data. Economic Report of the President, (appropriate editions for the years 1952-1962), for Treasury Bill interest rates.

Charts 13 through 17: Table 10, "Savings Institutions Subsectors," Ibid., pages 137-142.

Chart 18: Table 11, "Insurance Sector," Ibid., pages 143-144.

Charts 19 and 20: Table 12, "Insurance Subsectors," Ibid., pages 145-150.

Chart 21: Table 25, "Corporate and Foreign Bonds," Ibid., pages 180-181.

Charts 22 through 27: Table 12, "Insurance Subsectors," Ibid., pages 145-150.

Charts 28 through 35: Table 14, "Finance N.E.C. Subsectors," Ibid., pages 153-158.

Chart 36: Table 20, "Time Deposits and Savings Accounts," Ibid., pages 171-172 for flow of funds data. Economic Report of the President, (appropriate editions for the years 1952-1962) for national income statistics.

Charts 37 through 40: Table 20, "Time Deposits and Savings Accounts," Ibid., pages 171-172.

Chart 41: Table 20, Ibid., for flow of funds data. Economic Report of the President, (appropriate editions for the years 1952-1962), for Treasury Bill interest rates.

Chart B-1: Table 23, "U.S. Government Securities 1," Ibid., pages 175-177.

Chart B-2: Table 29, "Consumer Credit," Ibid., pages 189-190.

Chart B-3: Table 24, "State and Local Obligations," Ibid., pages 178-179.

Chart B-4: Table 25, "Corporate and Foreign Bonds," Ibid., pages 180-181.

Chart B-5: Table 27, "Mortgages on 1- to 4-Family Properties," Ibid., pages 184-185.

Chart B-6: Table 28, "Other Mortgages," Ibid., pages 186-188.

Chart B-7: Table 2, "Saving, Investment, and Financial Flows," Ibid., pages 97-102.

Charts B-8, B-9, and B-10: Table 4, "Sector Statements of Sources and Uses of Funds," Ibid., pages 127-132.

APPENDIX E
CONTINGENCY COEFFICIENT C
CONFIRMATION OF RESULTS

There were seventeen full quarters of monetary ease during the years 1952-1962. They were the third and fourth quarters of 1953, all of 1954 (i. e. the first period of monetary ease); the second quarter of 1958 (i. e. the second period of monetary ease); the third and fourth quarters of 1960, all of 1961, and all of 1962 (i. e. the third period of monetary ease).

There were fourteen full quarters of monetary restraint during the years 1952-1962. They were the fourth quarter of 1955, all of 1956, and the first, second, and third quarters of 1957 (i. e. the first period of monetary restraint); the fourth quarter of 1960 (i. e. the second period of monetary restraint). In addition the last quarter of each of the first two periods of neutral monetary policy are included as periods of monetary restraint because they tended towards restraint (i. e. the second quarter of 1953 and the third quarter of 1955).

Thus the contingency table is for thirty-three quarters and consists of four cells. The expected results (if there were no relationship between monetary policy and flow of funds) are shown in each cell.

This is the null hypothesis.

	monetary ease	monetary restraint
positive slope	8.5	8
negative slope	8.5	8
Σ	17	16

If a slope is neither positive nor negative it is assumed to be a favorable result (e.g. as though it were positive during ease, and as though it were negative during restraint) on the assumption that monetary policy attempts to offset the cycle and level slopes represent an offset.

The significance of a C coefficient is determined from the associated X^2 which in these examples has 1 degree of freedom ($df = (k-1)(r-1) = (2-1)(2-1) = 1$). The null hypothesis was tested at the 10 % level. If the results are significant at the 10 % level, the null hypothesis (i.e. no relationship between monetary policy and flows of funds) is rejected. Therefore if these results are significant, the results discussed in Chapters III through VIII are confirmed by the

Contingency C Coefficient approach. In some of the cases where the Contingency C Coefficients are not significant this too confirms results in Chapters III through VIII because such results in Chapters III through VIII also indicate no relationship.

SUMMARY OF CONTINGENCY C COEFFICIENT RESULTS

<u>Chart</u>	<u>Flow of Funds</u>	<u>Favorable During Ease</u>	<u>Favorable During Restraint</u>	<u>X²</u>	<u>Significant or Not-Significant</u>
3	1- to 4-family mortgages	14	11	9.35	significant ^{2, 3}
4	demand deposits	12	9	3.13	significant
6	consumer credit	10	10	1.53	not-significant
7	state and local obligations	12	9	3.13	significant
7	corporate bonds	12	11	5.13	significant ²
7	1- to 4-family mortgages	14	11	9.36	significant ^{2, 3}
7	other mortgages	13	11	7.01	significant ^{2, 3}
9	credit and equity instruments	12	9	3.13	significant
10	1- to 4-family mortgages	14	10	8.11	significant
11	consumer credit	9	10	1.12	not-significant
11	corporate stock	12	10	3.88	significant ²
13	savings deposits	12	10	3.88	significant ²

<u>Chart</u>	<u>Flow of Funds</u>	<u>Favorable During Ease</u>	<u>Favorable During Restraint</u>	<u>X²</u>	<u>Significant or Not-Significant</u>
14	1- to 4-family mortgages	14	11	9.35	significant ^{2, 3}
14	other mortgages	14	11	9.35	significant ^{2, 3}
14	corporate bonds	12	13	9.13	significant ^{1, 2, 3}
17	1- to 4-family mortgages	16	10	14.24	significant ^{2, 3}
17	other mortgages	12	12	6.88	significant ^{2, 3}
17	U.S. Government securities	12	9	3.13	significant
18	financial assets	10	8	.53	not-significant
	liabilities	9	9	.31	not-significant
19	life insurance reserves	9	8	.06	not-significant
19	pension fund reserves	10	8	.53	not-significant
20	corporate stock	10	12	4.53	significant ²
20	1- to 4-family mortgages	12	9	3.13	significant
23	corporate stock	12	9	3.13	significant
24	nonlife policy claims	14	12	11.11	significant ^{1, 2, 3}
27	U.S. Government securities	12	11	5.13	significant ²
27	corporate stock	15	14	18.94	significant ^{2, 3}
31	financial assets	9	10	1.06	not-significant ¹
33	from banks	9	10	1.06	not-significant ¹
33	customer credit balances	12	9	3.13	significant

<u>Chart</u>	<u>Flow of Funds</u>	<u>Favorable During Ease</u>	<u>Favorable During Restraint</u>	<u>X²</u>	<u>Significant or Not-Significant</u>
34	financial assets	11	8	1.47	not-significant
35	corporate bonds	12	10	3.88	significant ²
35	corporate stocks	11	8	1.47	not-significant
35	U.S. Government securities	9	10	1.12	not-significant

¹Favorable response means negative slope during ease and positive slope during restraint.

²Also significant at 5 % level.

³Also significant at 1 % level.

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