MONETARY POLICY OBJECTIVES AND GUIDES

Most analytical evaluations of monetary policy begin, at least implicitly, with a particular monetary theory and attempt to judge the formulation, execution and results of policy in terms of that theory. As a simple example, if the evaluator holds that the aim of monetary policy should be to influence the supply of money, the success of policy is measured against the achievement of a particular ideal level or rate of growth in the money supply.

The primary difficulty in this approach is that no monetary theory yet evolved accounts very precisely for monetary developments and reactions under all circumstances. Thus, in a sense it may be said that there is no general theory of money if "theory" is taken to mean a statement of functional relationships between variables which hold under all circumstances. There are, for example, a number of theories of interest rate determination which center on different, though not necessarily mutually exclusive, aspects of the process through which rates are established. Some theories stress supply and demand for loanable funds, some stress cash balances and liquidity demands, some stress the savings-investment process. However, elements of all of these theories seem to account for interest rate movements at particular circumstances of time and place and under particular institutional characteristics of the economy.

In part, the lack of a truly general theory of money may stem from definitional and statistical difficulties; in part, the presence of several theories from mere semantics. More importantly, however, both lack of a general and presence of a variety of theories may reflect inability to quantify
such human factors as attitudes and expectations and changing institutional factors.

Probably because of the shortcomings of monetary theories some analysts have attempted to look beyond such theories to the very broad objectives of economic policy and to measure achievements of monetary policy in terms of price stability, high employment and economic growth. These attempts also suffer from difficulties. First, the fact that there is no really general theory of money does not mean that the financial factors stressed by the various money theories are unimportant. On the contrary they are quite important and under stressing them is likely to lead to faulty analysis and evaluation. Second, the broad indicators of economic welfare are affected by many factors other than those normally associated with money and credit. In passing, it might be noted that there are major definitional and statistical problems involved in connection with these broad economic objectives also; monetary theory is not the only field which has such problems. Third, there seems to be considerable confusion as to whether the broad indicators should be objectives of or guides to monetary policy.

In this paper it is argued that there are three kinds or classes of objectives of monetary policy and that the guides to policy should be distinguished from the objectives of policy. It is argued further that an analytical framework which rests on this concept provides a means of evaluating monetary policy formulation, execution and results in far more meaningful fashion than is true of other such evaluations.

Despite the lack of a precise general theory of money, there is a conceptual framework for monetary policy and, in a sense, there can be said to be a central banking theory of money. This theory is expressed in terms of general tendencies rather than in precise relationships between variables and may be stated in a series of propositions.
1. The first proposition may be called the full employment or capacity proposition. Over the long pull the demand for real investment must be matched by the supply of real savings if there is to be a growing economy operating at close to its current capacity under conditions of reasonably stable values. This is true because economic resources are limited and in a capacity operation resources going for investment purposes have to be withheld from consumption purposes and saving represents withholding of spending from consumption.

2. The second proposition is that under less than capacity conditions created money or credit can be a relatively short-run substitute for savings in financing investment. It can bridge temporarily gaps between the flow of current financial savings and needed investment when real resources are available because the economy is operating below capacity.

3. The third proposition is that created money or credit also can aid in smoothing the resource allocation process even under an economy operating at capacity. And since a growing economy needs an expanding supply of credit and money, the supply of credit and the supply of money need to grow also. Neither credit supply nor money supply, however, should grow too rapidly for the economy to absorb smoothly, nor too slowly to provide the needed finance for capacity operation. The rate of economic growth is affected by many factors and varies appreciably from year to year. The rates of growth of credit supply and money supply will vary also if they are to be kept in reasonable balance with the requirements of the economy.

4. The money supply itself, either narrowly or broadly defined as cash plus demand deposits or cash plus total commercial bank deposits, cannot be made to exceed the amount of such balances the public is willing to hold at a particular rate of turnover. The volume of liquid assets affects the amount of the money supply needed to operate at a given level of economic activity.
5. Interest rates are primarily a reflection of the interplay of demand-supply forces in the saving-investment process and serve as an essential allocation factor in the market. Normally monetary policy affects marginally the supply forces in this process and hence influences interest rates. Interest rates are influenced also, at least in the short run, by expectational factors.

It follows from the nature of these propositions and from the lack of a precise general theory of money that monetary policy has to be made on a pragmatic basis. Central bankers cannot be guided exclusively by any one or any unchanging mixture of such factors as: the state of liquidity, the level of cash balances, the money supply, the volume of financial savings, the demand for investments or the demand for loans. Central banking thus is, as it has been, more art than science, a fact that has brought forth criticism that it is more mystique than method, that its impacts and its results are uncertain and that its practitioners are committed to saying little because they know little to say.

Actually, of course, the fact that central banking is more art than science hardly makes it unique in the fields of economic, political or social policy. All policies in these fields lack the underpinning of precise general theory and precise measurement of their impacts. But the fact that it is not possible to have precise determination of, say, the effects of credit cost versus credit availability, or of changes in money supply versus changes in liquidity and velocity does not mean that the general linkage between monetary policy action and economic response is impossible to state or to discern. Quite obviously, central banking action affects bank reserves; such reserves form the basis of the money supply and underpin bank loans and investments; changes in these affect spending and saving; which, in turn, affect growth, employment and prices. Questions of "how much", "how fast" and so on can be answered reasonably well at a particular point in time; they merely are not,
yet at least, susceptible to formula treatment.

As noted earlier, it is argued in this paper that monetary policy can be appraised and its utility evaluated in a reasonably objective manner. But the appraisal and evaluation must be undertaken within an appropriate analytical framework. The framework used here is designed to take into account three important facts. First, and most important, is the fact that there are different classes or degrees of policy objectives and the linkages between them are not precise and unvarying. In the discussion which follows it will be seen that objectives are classified into three groups: proximate, intermediate and ultimate. Second, distinction between policy objectives and policy guides is an important one. Third, monetary policy can neither claim all credit nor take all blame for the record of the national economy.

To take the third point first, it is highly important that any appraisal of monetary policy recognize the obvious fact that the ultimate goals of high employment, price stability and economic growth are not obtainable solely by monetary policy. Theoretically everyone recognizes this fact, but practically it seems that many analysts pay only lip service to it. It does not stretch the truth very much to say that half of the critics of monetary policy charge any price rise, any increase in unemployment, any slowdown in growth rate to failure to carry out a proper monetary policy. (The other half seems to argue that since such developments occur, monetary policy is a weak device, almost approaching a useless one.) The truth of the matter is, of course, that monetary policy is an important, perhaps even one of the most important economic stabilization devices. It is, however, not all-powerful and good monetary policy cannot by itself guarantee full employment, high growth rates and price stability. (It probably is true, however, that bad monetary policy can almost guarantee against the achievement of long-term high rates of growth, high employment and price stability.)
As to the second point, it is convenient to consider the question of objectives in some detail before attempting to discuss policy guides and their distinction from objectives. It might be noted here, however, that the distinction is important to comprehension of how monetary policy is formulated and implemented. The achievements of policy must be measured against objectives; the implementation of policy calls for guides.

As noted above, monetary policy objectives may be classed into three broad groups: proximate, intermediate and ultimate. As their names imply, they represent three stages of objectives. The proximate objectives are those closest to central bank action levels and have to do with the cost and availability of bank reserves and with interest rates. The intermediate objectives are one stage removed from the proximate and have to do with the financial factors which affect spending and consumption, saving and investment. Thus they include the volume of credit, the liquidity of the financial system and of the economy as a whole and the supply of money. The ultimate objectives are at the last stage. They represent the final goals of monetary policy, in fact of economic policy. Because of this fact and because most statements of the purposes of central banking are phrased in terms of the ultimate objectives we consider them first.

"The Federal Reserve System - Purposes and Functions", a book published by the Board of Governors, states "The function of the Federal Reserve System is to foster a flow of credit and money that will facilitate orderly economic growth and a stable dollar." In a paper submitted to the Commission on Money and Credit, the Board wrote that the goal of monetary policy is "to provide maximum assistance toward promoting long-term growth and containing cyclical swings in economic activity within reasonable bounds, while permitting adjustments which are required to preserve the dynamic character of our economy". Other official statements have stressed that Federal
Reserve policy aims at promoting or contributing to high employment and production, a rising standard of living, and stable prices. Thus the ultimate objectives of monetary policy may be said to be identical with those of broad economic policy - economic growth, high employment and stable values. In recent years a fourth major objective for American monetary policy might be added - a balanced international payments situation. Actually, in most countries, this has always been, at least implicitly, understood as an objective of central banking policy; until recently, however, in the United States central banking policy had not been directly much concerned about this objective for a long time.

Two comments may be made about these ultimate objectives. First, it is sometimes observed that they may not always be compatible. In one sense this is true; in another sense it is misleading. When we deal with politico-socio-economic affairs, we almost always have conflicts. Easy examples include low borrowing costs versus high rewards to savers, current consumption versus capital formation, low taxes versus high demand for public services, individual freedom versus the demands of the state. The strength of a dynamic and democratic system lies in its ability to make adjustments that permit optimum attainment of the goals of a free society. So to say that the ultimate objectives of monetary policy may not always be compatible is to state the obvious but without any understanding of our society.

Ideally we want to attain all of the ultimate objectives and no one is more important than another, nor are they really separable in the long run. In the short run the objectives sometimes are not completely compatible but sometimes they are. And practically speaking, there are relatively few times when it is very difficult to assign priorities to them. The priorities change, of course, as conditions change. Under the conditions of today (1963) policy emphasis is naturally colored by relatively high unemployment and an adverse
balance of payments rather than by preoccupation with rising prices, because the former exist and the latter does not.

Second, a point made earlier should be referred to again and elaborated somewhat. The ultimate goals are not the concern solely of the central bank. Other economic policies and happenings affect economic growth, employment, prices and the balance of payments. This fact alone makes it difficult to measure with precision the achievements of monetary policy relative to those goals. Also, however, the linkage between specific monetary policy action and ultimate response is not very direct. The drive shaft is too long and is linked by too many gears of indeterminate ratios. As noted, these are the major reasons for the weaknesses of monetary policy evaluations which attempt to go directly from policy action to broad economic goals.

This does not mean, however, that the force of monetary policy cannot be evidenced at all, nor does it mean that the ultimate objectives have little practical meaning for the working central banker. Since he does not operate in a vacuum, he is aware of other forces working toward or against attainment of the ultimate goals and adjusts his policies in that light. Since he is not bent on claiming all credit for attainment of the ultimate goals he is more interested in the results attained than in a precise allocation of the credit for success. Since monetary policy formulation and execution is a continuous process, a continuous review of developments provides the basis for continuous consideration of policy. Shifts in policy are rather promptly initiated in response to behavior of the indicators of the ultimate goals. Thus the indicated direction of central bank policy is ordinarily fairly clear and the continuous review process makes it possible to change the speed and pressure of policy as the course of developments in the ultimate goals is observed. And so while ultimate response cannot be precisely and directly linked to monetary policy action, it certainly can be associated
with it in a reasonably measurable fashion, assuming that the policy action can be identified and interpreted correctly. Both the record of policy action and the broad economic record are there to read.

It is important, however, for the policy action to be identified and interpreted correctly. So from the ultimate objectives let us move all the way back to the proximate objectives, which are those having to do with the cost and availability of bank reserves and with interest rates. These proximate objectives are those most directly controlled or influenced by central banking policy actions. In this group are placed nonborrowed reserves, total reserves and net free reserves (both positive and negative). And while it may be controversial, also put in this proximate category are short-term interest rates and the general level and configuration of the interest rate curve.

There is no argument about the fact that the Federal Reserve has direct control over nonborrowed reserves. It is sometimes argued, but not really persuasively, that control over total reserves is not as direct as that over nonborrowed reserves because member bank borrowing from the Federal Reserve is done at the bank's volition and is controlled only to the extent that Federal Reserve discount administration may determine length and amount of borrowing. Thus, it is said that the System may determine that borrowing has an upper limit, but it cannot determine that member banks will borrow. Given a volume of total reserves, part of which is borrowed, Federal Reserve action to increase total reserves may be thwarted by member bank actions to repay borrowings. The arithmetic, of course, is correct, but this argument is rather specious, for obviously more nonborrowed reserves may be pumped in to offset the member bank repayments of borrowings and when borrowings become zero no more repayments can be made.
Net free or net borrowed reserves also are within fairly direct control of the Federal Reserve, although the control is less direct than it is with total or nonborrowed reserves. By definition, free reserves (positive or negative) are excess reserves minus borrowings. While the System can control total reserves and can limit borrowings, it cannot directly control excess reserves nor make banks borrow. Thus, if the System wants to attain a given level of net free or net borrowed reserves, it cannot completely determine total reserves or borrowings, and, conversely, if it seeks to attain a given level of total reserves, it cannot completely determine net free or net borrowed reserves. From a practical standpoint, however, this arithmetic fact does not reduce System control over free or net borrowed reserves to any significant degree.

Far more controversial as proximate objectives are short-term rates and the general configuration of the interest rate curve. The controversy turns partly on the point of propriety of interest rates being an objective at all, partly on the point of propriety as to their being a proximate objective, and partly on the point that pursuit of interest rate objectives makes reserve volume (whether nonborrowed, total, or free) less susceptible of direct central bank control.

It is important to qualify interest rates as a proximate objective. The view presented here is that a central bank should not seek either an arbitrary, nonmarket determined level or pattern of rates nor attempt to rigidly peg such a pattern. Obviously, however, central bank policy action with respect to reserves has direct influence on interest rates if supply-demand relationships have any meaning. Therefore, central bank policy implicitly has some interest rate goals in mind. In point of fact, current monetary policy has fairly specific goals in mind for short-term Treasury bill rates.
The distinction drawn here is a subtle one. In this view, proper central bank action does not involve imposing the central banks' view of an appropriate interest rate structure upon the money and credit markets without any regard for reserve volume objectives. But it may be quite proper central bank policy to have a view as to what interest rates are likely to be as reserves are added or subtracted and to use both short-term rates and general rate pattern as goals along with reserve volume goals. And furthermore, it may be quite proper central bank action to pursue an interest rate goal somewhat more diligently than a reserve volume goal at a particular conjuncture of circumstances.

This kind of approach is not only different in degree but in kind from rate pegging as was done in World War II. It is different because it would seek to not dominate the rate structure at all costs and it is different because the rate structure, and even a specific short-term rate, would not be viewed in absolute terms but rather in terms of maximums and minimums which themselves may fluctuate. Thus, a goal for short-term bill rates expressed in, say, a range of 1/4 per cent from top to bottom, is quite different in both degree and kind from a goal of "x" per cent with no plus or minus allowance. And when a goal of a certain level and pattern of rates obviously is being resisted by market forces after operations in reserve volume seem fully adequate, proper central bank policy would reconsider and probably change that goal, which approach is something far different in both degree and kind from a rigidly pegged market.

The point as to whether interest rates should be classed as proximate or intermediate objectives is difficult to resolve. From the above discussion, it is obvious that interest rates are not quite as proximate as reserve volume. The opinion expressed here is that they are more proximate than intermediate. It may well be that short-term rates should be regarded as proximate objectives,
and the general rate pattern as an intermediate objective.

As is true of ultimate objectives, there may be conflicts between proximate objectives. Part of the art of central banking is the resolution of such conflicts and as a practical matter the proximate objective conflicts can be and are resolved without too much difficulty.

The last class of objectives to be discussed is the intermediate class which lies in the stage between proximate and ultimate. These relate to spending and saving, consumption and investment, and thus have to do with the state of liquidity, both for the financial system and the economy as a whole, the volume of credit and the supply of money. The effect of movements in these factors is translated into developments in employment, growth and prices although, as noted, the linkage is involved and the relationships are far from being precise and unvarying. Similarly, the linkage between the proximate objectives and those intermediate ones is not very exact although the response of the proximate objectives to Federal Reserve policy action and the secondary response of the factors in the intermediate area ordinarily can be seen with reasonable clarity.

It probably is fair to say that central banking control, or at least strong influence, exists with respect to the proximate objectives. It is not proper to say that any real control exists with respect to the intermediate objectives but influence obviously does exist even though the degree of influence may vary with time, place and circumstance. Federal Reserve policy strongly influences total bank deposits and bank credit (loans and investments). The influence is less definite on money supply and general liquidity but it is apparent. When funds flow into ultimate particular uses, however, they are beyond central bank control. Nevertheless, the chain of reaction between policy action and response in the ultimate objectives exists and can be seen.
A comment is in order about the money supply and general liquidity. It is relatively easy to talk in conceptual terms about these factors; it is very difficult to define them and measure them in an exact statistical sense. Reference was made earlier, in connection with discussion of a central banking theory of money, to the apparent fact that the size of the "money supply" needed at an appropriate rate of turnover is affected by the general level of liquidity. Perhaps a more precise statement would be that the size of the "money supply" is affected by the size of the liquid asset supply and that may be just another way of saying that there are varying degrees of "moneyness" with the differences between some degrees almost non-apparent to the naked eye, nor even to the microscope.

The particularly difficult aspect of definition and measurement of money supply or liquid asset supply is that the degree of "moneyness" of a particular type of asset seems to change as institutions and attitudes change. It is also possible that change in degree of "moneyness" may be related to size and composition of the total amount of liquid assets.

The important point to note here is that money supply or the state of liquidity has no particular significance in its own right; the significance lies in its effect on spending and saving and their effect on growth, employment and values. Thus institutional and attitudinal changes that change the degree of "moneyness" of particular assets may well lead to difficult relationships between the volume of "money" or of liquid assets to spending and saving flows. Those enamored of the pure money supply concept may argue that only cash and demand deposits are truly "money", that any other liquid asset must be converted into "money" before it can be spent or invested, and that given a monetary authority with control over reserves, promotion or retardation of such conversion of assets into "money" can be accomplished more or less easily. But this argument assumes that changes in velocity come slowly or that there is a sort
of natural upper limit to the rate of money turnover, at least under reasonably stable economic conditions. The recent history of money velocity would seem to raise serious question as to the validity of that assumption. And, in any event, other serious questions can be raised as to whether assets other than pure money really have to be converted into money to be "spent" or "invested".

It is in the light of these considerations that money supply is classed here as only one of the intermediate objectives of monetary policy and that the state of liquidity and the volume of credit are ranked more or less equally with money supply in that category of objectives.

Let us turn now to discussion of guides to policy and the difference between guides and objectives. Earlier it was stated that the achievements of policy must be measured against objectives; the implementation of policy calls for guides.

Part of the confusion between guides and objectives comes about because the objectives of policy do serve the function of guides for policy direction. Thus falling output and rising unemployment normally would lead to the formulation of an easy credit policy. Similarly, changes in liquidity and in the volume of credit normally would influence the judgments of the monetary policy makers. And obviously the central banker watches closely the volume of reserves and the level of interest rates as first stage indicators of response to such policy as he has formulated. In this sense, the whole complex of economic occurrences observed by the central banker may be termed a guide or guides for the direction of policy and for measurement of the success of that policy.

But guides to implement policy serve a quite different function from that served by guides for the formulation of policy. The central banker conceives of guides as being those attainable and observable developments which tell him promptly and clearly that policy is being implemented.
No matter how complex the problem of monetary policy formulation may be, the final decision for the policy maker always is expressed in terms of more tightness or less ease, more ease or less tightness, or no change in ease or tightness. The guides to implementing policy then must be phenomena which reflect directly that policy orientation. In one sense the proximate objectives serve this purpose but they are not really completely adequate guides and the intermediate and ultimate objectives cannot serve as guides to policy implementation at all.

These guides to policy implementation differ among countries because of institutional differences. In the United States they include the "tone" of the money market which expresses itself in such phenomena as the rate on and the volume of trading in federal funds, dealer loan rates, dealer borrowings and inventories of securities, and the distribution of reserves between money market and other banks. The guides include the amount of borrowings from the Reserve banks and the number of such banks doing the borrowing, the amount of excess reserves and the composite of excess reserves and borrowings or free reserves, which is, of course, also a proximate objective. At times other proximate objectives may serve as guides, especially total reserves and short term Treasury bill rates.

The distinction between objective and guide is important to comprehension of the process of monetary policy formulation and implementation. The central banker regards the ultimate objectives as being the real variables he wishes to effect. But they are far removed from the immediate policy action, are subject to many influences other than monetary policy and their actual course simply cannot be known to him until some time after the policy action is taken because of the lag in availability of data. The intermediate objectives suffer almost as much data availability lag although they are closer in the sense of measurable response to policy action. The proximate objectives have little data
availability lag and are very closely related to policy action. Thus they can, as noted, fulfill in part the function of guides. But to implement a policy directed at more or less tautness, more or less ease, or the same degree of tautness or ease, and to determine quickly that such implementation is being done, requires more than the proximate objectives in the way of guides. The central banker therefore tends to express his day to day instructions in terms of the phenomena noted above.

To conclude, it should be noted that special circumstances often complicate the framing of policy. Thus, in the past three years the balance of payments position of this country has dictated that short-term rates be treated as more important objectives and as important guides. Treasury financings require a steady money market during their course, and such a market is sought almost irrespective of what underlying policy trends are. A disorderly market necessarily calls for actions to correct it, which may be temporarily at variance with basic policy.

The real point to be emphasized is that the making of credit policy is a continuous process, involving continuous review and shifting emphasis as to objectives and guides. It was noted earlier that central banking remains more art than science. Its practitioners have by necessity moved from the classical and romantic periods of art to the more modern schools. They have not yet, however, become surrealists or abstractionists. They never should because, above all else, central banking art is and has to be realistic if it is to serve and endure.
Explanatory Notes on Charts Used in Connection
With "Monetary Policy Objectives and Guides"

The three charts are designed to illustrate the behavior of indicators of proximate, intermediate and ultimate objectives of monetary policy against the background of the kinds of monetary policy prevailing during the thirteen-year period, 1951-1963, from the Treasury-Federal Reserve Accord to the most recent date for which data are available. The following comments explain the concepts and methodology behind the charts.

1. The background colors. The colored background of each chart is the same and represents the character of monetary policy in terms of three degrees of tightness or ease. Thus deep red is the greatest degree of tightness and deep green the greatest degree of ease. Medium red and medium green represent moderate tightness or ease. Light red and light green represent mild tightness or ease. The white area from January 1, 1951, to March 1, 1952, represents the period of neutrality following the Accord; the white area following December 31, 1962, merely reflects the fact that the 1963 policy record has not yet been completed and consequently is not publicly available.

There are obviously far more degrees of credit tightness and ease than are shown on the charts but the practical problem of presentation limited the number to those used.

2. The methodology for determining the degrees of tightness or ease. Several steps were involved in this classification. The source material used are the Annual Reports of the Board of Governors, and various sources which carry official economic and financial statistics.

a. The Federal Open Market Committee at each meeting issues a directive to the Manager of the Open Market Account. Part of that directive is what might be called "the economic policy instruction". For a long time this was identified as the "(b) clause" in the directive; more recently it has been described as the "current economic
policy directive" and is in somewhat fuller form than the former "(b) clause". In the discussion which follows this economic policy instruction is called the "directive", even though that word technically covers more than the economic policy part.

All directives given by the Federal Open Market Committee to the Account management, 1951-1962, inclusive, were listed in chronological order. Each time the directive was changed a judgment was made by the writer as to whether policy was designed to be tighter or easier (or kept the same). No attempt was made to determine the degree of increase in tightness or ease. No difficulty was encountered in determining the direction of change and the writer doubts that anyone, student or layman, would encounter any difficulty in making a judgment as to whether policy was to be relatively easier or relatively tighter solely on the basis of comparing the current directive with the preceding one.

b. A moderately careful reading of the official policy record indicates that the Account management was frequently given a subsidiary instruction at meetings when the directive itself was left unchanged. Such subsidiary instruction is called a "shade" in this paper. The most typical "shades" are expressed by such phrases as "resolve doubts on the side of ease", "resolve doubts on the side of restraint", "maintain an even keel during the Treasury financing", "meet seasonal needs" or "hold steady". These "shades" were listed in chronological order, interspersed with the chronological order of the directives. Again no difficulty was encountered in determining the direction of policy change - to greater ease or to greater restraint. Again the writer doubts that anyone would have difficulty in making this determination.
It is worthy to note here that the "shades" constitute actual instructions to the Account management and the record clearly indicates this fact. No attempt was made to indicate a "shade" merely from the policy record explanation of what the Open Market Committee had in mind. Thus the fact that the Committee was concerned (say) about the balance of payments, as noted in the policy record, is not classed as a shade. But when the Committee states that it wishes present ease continued but without putting further downward pressure on short-term rates a "shade" is indicated; that "shade" incidentally indicating slightly less ease.

c. The next step involved classifying policy in terms of three degrees of ease and three degrees of tightness. Obviously, as noted, this classification is over-simplified; the range is more a spectrum than a series of discreet shades. Nevertheless the attempt was made and worked surprisingly well. In a broad sense a change in directive was weighted 1 and a "shade" was weighted 1/2. A color code was employed with red indicating restraint and green indicating ease. Red 3 indicated greatest restraint, Red 2 moderate restraint, Red 1 least restraint, Green 1 least ease, Green 2 moderate ease and Green 3 greatest ease. Plus and minus signs were used for fine adjustments, particularly with "shades". Then beginning with March 1, 1952, which was classed as Red 1, the directives and shades were merely run through in chronological order to determine the color pattern with each change in color reflecting comparison of the current directive or shade with the preceding one. The reason for beginning with March 1, 1952 is that the date marks the first meeting of the Federal Open Market Committee in 1952 and 1951 was classed as a year of neutrality in view of the Accord.
d. Step (d) was a checking device. Each directive from January 31, 1951 up to December 19, 1961 was written on a card. The cards then were arranged in order from greatest ease to greatest restraint solely on the basis of the language of the directive. After arrangement the directives were given color codes, just as described in step (c). Obviously, more subjective judgment was involved in this ranking than in the former since it depended solely upon the phrasing of the directive and not on any chronological order. Upon comparing this color coding with that derived under step (c) a high degree of uniformity was found. Of the 26 directives involved, 17 corresponded almost exactly (differing only by a plus or a minus sign) from the color coding given under step (c) and it must be remembered that the step (c) coding was influenced by the "shades" as well as the directives. Of the nine other deviations the differences were only one degree of color (e.g. Green 1 under step (c) and Green 2 under step (d)).

The reason for not including the directives from December 19, 1961 on in this check (they were included in the chronological rating) was that the form of the directive was changed from the relatively simple (b) clause to a much more elaborate phrasing beginning with December 19, 1961. In effect the old (b) clause form of directive and the "shade" were combined in the new form of directive and the instruction to the Account management was given in greater detail together with some rationale of policy. Paradoxically, this greater elaboration makes the directives harder to classify and makes the course of policy less clear than did the (b) clause form, although it is still relatively easy to determine whether policy is moving toward more or less restraint or more or less ease.
In this step the other policy moves (reserve requirements, discount rates, etc.) were introduced into the chronological order and allowed to date changes in policy and affect the color intensities. The major effect, however, was upon the dating of policy change. For example, policy is dated as shifting from the least degree of ease to the least degree of restraint, Green 1 to Red 1 on April 14, 1955 when the discount rate was advanced instead of on May 10, 1955 (the Open Market Committee meeting date) when the directive was changed.

In an appendix to this note, all of the directives, the "shades" and the other policy moves (discount rate, reserve requirements, margin requirements and other moves such as those in connection with Regulations W, X and Q) are listed in chronological order. It should be observed that on many occasions the color code does not change even when a "shade" or another policy move is involved, and in a few cases when the directive itself changes. In most of these cases the color code does not shift because only a plus or minus sign is involved and by definition the color code contains only three reds and three greens. This underlines the point made earlier that the range of policy, when viewed in color intensity is more of a spectrum than a series of discreet color intensities. In a few cases, there is no color shift because the explanation in the policy record makes clear that the change was technical in nature and involved no change in policy.

The following table shows by years the number of Committee meetings, the number of directive changes, the number of times "shades" were used to amplify instructions and the number of other policy moves. It might be observed that "flexible monetary policy" has meant just that in the sense that policy has changed frequently.
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<th>No. of directive changes</th>
<th>No. of &quot;shades&quot;</th>
<th>No. of discount rate changes</th>
<th>No. of reserve requirement changes</th>
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<tr>
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<td>42</td>
<td>59</td>
<td>21#</td>
<td>8##</td>
<td>9###</td>
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* Not including telephone meetings.
** Includes two special directives and one "shade" relative to market support operation of July 1958
# Thirteen increases and eight decreases.
## One increase and seven decreases, including counting of vault cash as reserves.
### Five increases and four decreases.

f. As a final checking step the indicators of the proximate objectives of policy were coded red or green in the following manner. Since the series are monthly averages, each month was given a red or green check for each of eight factors: change in level of total reserves, nonborrowed reserves, free reserves, borrowings and three-month Treasury bill rate; absolute level of free reserves, borrowings or Treasury bill rate. Thus if total reserves, nonborrowed reserves or free reserves declined (on average) in the month from the preceding month, it got a red check; if it increased it got a green check. If volume of borrowings or the three-month bill rate rose (on average) it got a red check; if it fell it got a green check. If free reserves were positive (on average) it got a green check, if negative a red check. When the bill rate averaged under 2 per cent, it got a green check, above 2 per cent it got a red check. When borrowings exceeded $300 million (on average) it got a red check; below $300 million it got
a green check. If there were no changes, a blue check was used but there were only nine such instances. Then a simple scanning of the check marks in color indicated a red or green pattern for the month or for longer periods. By and large the number of red or green checks varied with the color intensity as derived by the preceding steps. It should be stressed that this was merely a check step; it did not change the colors derived by the preceding steps.

3. The series plotted. Attached to this note is a description of each of the series used in the charts. Obviously the series shown are no more than proxies for the objectives since space precluded using the whole complex or matrix of economic and financial data which really represent the ultimate, intermediate, and proximate objectives of policy plus the guides to policy.