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The methodology employed in this study is of a different kind, if not a different order of importance from that used in most economic analysis and therefore merits more than the attention of technicians. The inquiry began conventionally enough. Since the objective was to describe, explain and evaluate monetary and credit policy in the years following the Treasury - Federal Reserve Accord it was natural to use as a major source the Annual Reports of the Board of Governors of the Federal Reserve System covering the years, 1951-1962, inclusive. These Annual Reports contain the official records of policy actions of the Federal Open Market Committee and the Board of Governors.

During the course of the study, however, three collateral questions came up. First, and most important, was the question of analytical and descriptive framework. How did one describe, explain and evaluate money and credit policy in meaningful form? What were the objectives of policy and how could central banking performance be measured? These questions led to a classification of objectives of (and guides to) policy into three groups: Proximate, intermediate and ultimate. Various system publications have stated that the functions of the system are to influence the supply, cost and availability of bank reserves so as to facilitate a flow of money and credit with a view to contributing to economic growth, high employment and stable values. The paper dealing with the

aims and objectives of monetary policy contains the general theoretical framework and full explanation of the classification of objectives. All that is necessary to note here is that the actuals or the proxies used for the three classes of objectives are:

Proximate: total, nonborrowed and free reserves; three month Treasury bill rate.

Intermediate: liquid assets, money supply (both broad and narrow) bank credit, gold stock.

Ultimate: personal income, plant and equipment expenditures, industrial production, unemployment rate and wholesale prices.

Precise descriptions of the series used are given in an appendix to this paper.

The second question came from the frequent criticism, both inside and outside the System, of the language of official policy explanation. There have been many assertions that the language of Federal Open Market Committee directives to the Open Market Account management were meaningless, or, even if meaningful to the management, were virtually meaningless to the Congress and to students of monetary affairs and completely so to the layman. Furthermore, it has been asserted that the whole official policy record was written in a form so as to be almost as meaningless as the directives. The third question sprang naturally from the second, and is of interest mainly to professional central bankers.

If the above charges were valid, was the Federal Open Market Committee giving adequate instruction to the Account management; if not, how could the form of the instruction be improved?

It is against the background of these latter two questions that the comment is made about the methodology employed in this study being of a different kind of importance from that used in most economic analysis. The methodology leads to the clear conclusion that the directives have meaning and can be understood clearly not only by the Account management but by students and probably by reasonably well-informed laymen; that the policy record is a meaningful record and contains sufficient information to judge the objectives of policy. That statement stands whether one looks at an individual entry of policy action or at the record as a whole but obviously study of the record as a whole is more meaningful. Monetary policy is a continuous process and therefore the record should be read as a continuum.

The methodological points leading to the above conclusions are as follows:

The approach to determining what monetary policy was being followed involved the following steps.

(a) Each directive given by the Federal Open Market Committee to the Account management was listed in chronological order. Each time the directive changed a judgment was made as to whether policy was designed to be tighter or easier. No attempt was made to determine the degree of increase in tightness or ease. There was no difficulty 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 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 explanation given in the policy record 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, high, moderate or low. Obviously 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 reflecting comparison of the current directive or shade with the preceeding 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)) and of these, all but one showed an easier policy rating under step (d) from that under step (c).

The reason for not including the directives from December 19, 1961 on 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.

(e) ~~Under~~ this step the other policy moves were introduced with the chronological order and allowed to date changes in policy and intensify 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 paper, 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 with the color codes shown. It will 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. This applies mainly to the year 1962.

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.

<u>Year</u>	<u>No. of meetings</u>	<u>No. of directive changes</u>	<u>No. of "shades"</u>	<u>No. of discount rate changes</u>	<u>No. of reserve requirement changes</u>	<u>No. of Margin requirement changes</u>	<u>Other Policy moves</u>
1951	7	-	-	-	1	1	-
1952	4	-	-	-	-	-	2
1953	4	4	1	1	1	1	-
1954	4	1	2	2	1	-	-
1955	15	3	10	4	-	2	-
1956	19	5	7	2	-	-	-
1957	18	4	6	2	-	-	1
1958	19*	5**	11	5	1	3	-
1959	18	1	10	3	1	-	-
1960	17	4	8	2	2	1	-
1961	18	4	5	-	-	-	-
1962	18*	13	-	-	1	1	1
Total	161	44	60	21#	8##	9###	3

- * 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 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.

(g) The final step was to color the background of three charts in line with the color codings derived from the above procedure. Then against these backgrounds were plotted the series noted earlier which served as actuals or proxies for proximate, intermediate and ultimate objectives. The charts then served as an analytical device to describe, explain and evaluate monetary policy.

Two concluding observations should be made. The whole methodology tends toward showing policy as more restrictive than it really was. At virgually no time was policy designed to reduce the level of reserves or the

volume of bank credit or the money supply. Restriction meant reduction in rate of gain rather than absolute reduction. That does not mean that policy was ineffective but merely that the thrust of a restrictive policy is toward deceleration rather than reversal. Furthermore, the whole color scheme in a sense depends upon the color with which the coding begins, used here is Red 1 for the beginning color in March, 1952, because the directive itself sounds as though restraint was intended. (The period January, 1951 through February, 1952 is shown as white since operations were neutral under the Accord.)

Actually the first half of 1951 shows 38 green checks and only 10 red checks; the second half shows 25 green and 23 red. The first quarter of 1952 shows 17 green checks and 7 red checks, the next two quarters 23 green and 25 red, the last quarter 6 green and 18 red. When one considers that there is some overlapping among the eight factors (e.g. a rise in borrowing is quite likely to be associated with a drop in nonborrowed reserves and free reserves), that classing a bill rate of 2 per cent as being the line between ease and restraint and borrowings of \$300 million as being a mark of restriction it is evident that the coding tends toward producing red marks even under conditions of relative ease. Thus it is agreeable that 1952 really should be classed as a period of relative ease rather than one of relative restraint which would

affect the relative voting of subsequent periods. Actually, this bias toward classifying policy as more restrictive than it really was was deliberate.

Rather than incur criticism that central bankers tend to be restrictive and thus claim credit is easier than it is, the author deliberately strove in his classifications to lean over backward by employing very rigorous standards for determining a policy as being easy.

Finally, to repeat a point made earlier, the whole analysis and the whole methodology could be employed by anyone because nothing is used that is not in the public record. While the author has participated in credit policy formulation for half the period as a Reserve bank president, and for the balance as a relatively high ranking Reserve bank official with access to all information available to an Open Market Committee member, the methodology and analysis did not employ any of this confidential information. Obviously the author could not deliberately close his mind to such knowledge and experience that he had but he did not call upon it for the classification of credit policy as easy or restrictive. And it is instructive to note that an almost independent check of the author's work (using the methodology outlined) by two relatively new staff members of his bank's research department, neither

of whom had any access to the confidential material, yielded results virtually indistinguishable from those obtained by the author.

Therefore, this one methodological note closes with the assertion made earlier. The policy record is written in meaningful language, the directives are phrased in meaningful language and the course of policy can be determined quite clearly by anyone who wishes to read the record with a modicum of care as a continuum. Obviously, the analytical process and the conclusions as to the "goodness" of policy reflect the author's judgments, but the facts of policy are there for anyone to read.