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OF THE
FEDERAL RESERVE SYSTEM
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May 16, 1968.

TO: Federal Open Market Committee
FROM: Daniel H. Brill, Economist

At the Committee meeting on March 5, the staff of the FOMC was instructed to explore the question of modifying the structure of the directive to the Manager of the System's Open Market Account by casting the instruction in terms of achieving certain rates of change in monetary aggregate, and casting the proviso clause in terms of money market conditions. A joint meeting of the System Research Advisory Committee and the Committee on Banking and Credit policy was convened to discuss this problem. Prior to the meeting, Mr. Holmes was asked to consider the problem from the viewpoint of the operations of the Trading Desk, Mr. Axilrod to consider the problems it would pose in preparing estimates of the type incorporated in the Blue book, and Messrs. Kareken and Andersen were asked to consider the theoretical issues involved in such a change in the directive.

Following presentations by these gentlemen, the subject was discussed at length by members of the two Research committees. A summary of this discussion is appended. If the Committee desires, the staff will pursue the matter further.

A handwritten signature in cursive script that reads "Daniel H. Brill".

Daniel H. Brill, Economist,
Federal Open Market Committee.

Attachment.

May 14, 1968

FINAL MINUTES

Joint Meeting of the System Research Advisory Committee
And the Committee on Banking and Credit Policy
April 2, 1968 - Washington, D. C.

Present for all or part of the meeting:

Boston	Mr. Eisenmenger
New York	Messrs. Garvy, Holmes, Geng
Philadelphia	Mr. Eastburn
Cleveland	Mr. Mann
Atlanta	Mr. Taylor
Chicago	Mr. Baughman
St. Louis	Mr. Andersen
Minneapolis	Messrs. Kareken and Duprey
Kansas City	Mr. Tow
Dallas	Mr. Green
San Francisco	Mr. Craven
Board Staff	Messrs. Brill (Chairman), Axilrod, Baker, Bernard, Broida, Eckert, Fry, Gramley, Hersey, Holland, Keir, Partee, Reynolds, Sigel, Stone, Thompson, Weiner, Wernick, and Miss McWhirter

A joint meeting of the System Research Advisory Committee and the Committee on Banking and Credit Policy was held in the Board's offices on April 2, 1968, beginning at 1:50 p.m., Messrs. Brill and Craven presiding.

The meeting was called to discuss a proposal made by President Francis, of the St. Louis Federal Reserve Bank, at the meeting of the Federal Open Market Committee on March 5, 1968. This proposal, which was similar to those made by certain other members of the Committee on various recent occasions, was that the emphasis in the second paragraph of the FOMC current economic policy directive be reversed by specifying growth rates in a monetary aggregate as the proximate goal of operations, and using the proviso clause to provide for modification of operations if money market conditions fluctuated outside some desired limits. He further proposed that a time span longer than the inter-meeting period--perhaps three to four months--should be used in judging the growth rate of the monetary aggregate.

To launch the discussion, Mr. Holmes was asked to comment on the operational implications of the proposed new form of the directive. In his view, several difficulties would be encountered in attempting to use one or more aggregates as the main focal point of the directive. First, there would be the problem of selecting the appropriate aggregate(s), since the available alternative would have different significance to the

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various members of the FOMC. And if more than one aggregate were used, it would be difficult to assure their consistency. Second, short-run fluctuations in the aggregates would be difficult to appraise from the standpoint of the need for Desk operations. Owing to inadequacies in current estimates and projections of the aggregates, random movements could not readily be distinguished from shifts in trend, and the prospects for developing satisfactory measures of short-run seasonality were doubtful. Third, he would not know how to conduct operations under a directive that focused on the aggregates, since changes in such variables are not controllable in the short run. Thus, it would not be possible to achieve any "fine tuning" with this approach. Finally, any attempt to focus mainly on an aggregate would have adverse impacts on markets. In the event that there were short-run demands for credit greater than those assumed in setting the target, it would be necessary to let money market conditions tighten so as to force banks to dispose of assets and bring bank credit back within the prescribed range. Under these widely fluctuating market conditions, he felt that the market would lose its sense of continuity and market participants would not know how to adjust to what was happening.

Mr. Holmes thought that increasing constructive use could be made of the proviso clause, and he believed that bank credit was a useful aggregate on which to focus in shading operations. A distinction needs to be made, however, between what the FOMC looks at and what the directive says. The Committee already focuses on the aggregates under the present

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form of directive; and with a meeting every 3-4 weeks, it has ample opportunity to reassess developments in all the aggregates and move policy in whatever direction it desires.

Question was raised whether banks might not learn to adjust to the new environment if the System backed into it gradually over time rather than making the change-over suddenly. Present institutional arrangements and behavior are conditioned by the fact that under past System policy, money market conditions have been kept relatively stable. Given the wider fluctuations in money market conditions that would prevail under the proposed form of the directive, banks might find it necessary to carry more excess reserves or more very short liquid assets.

In view of the difficulties in evaluating short-run movements in the aggregate, one member of the Committee suggested that it might be possible to develop some form of decision-making rule for differentiating random from trend movements. Another inquired if it might not be necessary to use some sort of average or moving average rather than focusing, say, on week-to-week data.

Another suggestion was that the Desk should not be too concerned about short-run fluctuations in the aggregate, but rather should operate on a somewhat longer time horizon, say, three months. Departures from the target of a couple of weeks or so in duration could be offset later by departures in the opposite direction. However, it was pointed out that if such compensating adjustments were delayed, they might need to be so large as to cause violent shifts in money market conditions.

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Moreover, the optimum target would be likely to change over a period as long as three months. This might be the case, for example, where the short-run departure of the aggregate from target was associated with a change in income behavior. Under these circumstances, continued pursuit of the designated target by offsetting changes in a subsequent period probably would not be appropriate. Instead, the target should be re-examined by the FOMC at its next meeting. With such re-examination monthly, however, the target would not really have a long-run focus.

With respect to compensating adjustments, one member pointed out that there is a basic difference on this score between an aggregate and a market variable as a target. It is not necessary to compensate for departures of market interest rates from target as in the case of an aggregate.

The implications of the proposed change in the directive with respect to the work of preparing supporting estimates and projections were next discussed by Mr. Axilrod. He first outlined the theory underlying present procedures for developing the projections. In the procedures used, the reserve aggregates are taken as the dependent variable. As banks enter a new projection period, they are confronted on the one hand with a set of funds availabilities (demand deposits being beyond their influence in the short run) and costs (reserve requirements, rates on Federal funds and CD's, etc.), and on the other hand with given portfolio policies of banks and demand for loans from banks (reflecting the underlying demands for goods and services together with the costs of various

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alternative methods of financing, including banks' loan rates and terms). Through interaction of these demand and supply forces a certain volume of credit will be extended by banks, and a volume of bank deposits and required reserves will be generated.

In the very short-run, say the first statement week of the projection period, Federal Reserve open market operations can do little or nothing to affect the volume of bank credit, bank deposits, and required reserves, since these are by and large determined by the existing interest rate structure and loan liquidity demand forces in the country at the beginning of the period. The short run choice for the Federal Reserve will be either to supply those reserves through open market operations, or to force banks to cover their requirements through borrowing at the discount window. In either case, total reserves rise; the policy choice is whether the increase takes the form of borrowed or nonborrowed reserves, and whether the increase is accompanied by rising (or declining) market interest rates.

If banks find that they have to resort to the discount window to a greater extent than they expected and/or that interest rates are rising more than expected, with a first reflection in day-to-day money market rates and conditions, they will undertake portfolio adjustments, begin to change loan terms and conditions, alter offering rates on CD's and Euro-dollars, etc. These changes soon will begin to feed back on the rate of growth in bank deposits and credit. For example, a slower growth in deposits may develop, and hence less expansion in banks' required reserves, if individual banks begin selling securities to the

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nonbank public as part of their adaptation to tighter money market conditions.

In making projections of bank credit, deposits, and reserves one month ahead for the Blue Book, and assuming no change in monetary policy, Mr. Axilrod noted that the existing money market conditions and outlook for GNP are taken as given. No change in monetary policy also means that there is likely to be little change in over-all market interest rate relationships except as these may develop from expectational factors, shifts in the composition of credit demands, or Treasury debt management policies. In predicting interest rates, with policy unchanged, account can more readily be taken of the last two causes of shifts in rates than of expectations, which are more subject to unforeseen international and domestic developments. In making alternative projections of monetary aggregates for a change in monetary policy, it becomes necessary to project not only how various forces outside the banking system will affect interest rates but also how bank and public reactions to the tighter money market conditions that initially develop as the System holds back on nonborrowed reserves will feed back and alter expansion in bank credit, deposits, and required reserves. It is assumed that the changes in these variables result from changes in individual bank policies and shifting desires on the part of the nonbank public to hold deposits in the face of changes in interest rates, in the outlook for rates, and in the outlook for GNP.

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Mr. Axilrod stressed that the estimating procedures were most appropriate for making relatively short-run projections covering a period of around 2-4 weeks, or possibly somewhat longer to take account of anticipated developments such as Treasury financings. The reason is that the projections are based largely on the observable behavior of the banking system during the recent past and in process, as it is seen from the reported reserve, deposit, and bank asset figures (such as weekly reporting banks), as well as on current comments from bankers and other active market participants. Over the longer-run, the public's demand for bank deposits and loan demands on banks can best be projected in relation to, and as an aspect of factors affecting other financial assets and other financial markets. That is, a longer-run projection would need to ensure that the assumed behavior of banks is consistent with the behavior of other financial intermediaries, corporate willingness to sell securities in the capital markets, etc. While such elements are considered in the short-run, over the longer run, as you move further away from events in process, projections of the banking system are best made simultaneously with projections of other sectors in the broad context of a flow-of-funds framework.

Short-run projections are, of course, consistent with longer-run projections (of, say, a quarter or half year) embodied in a flow-of-funds model when, as is usually the case, they are based on similar assumptions about policy. The short-run projections are also consistent with the quarterly GNP forecast in the Greenbook in that the economic

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assumptions of that projection are taken as given for projections of bank credit and deposit developments over the next month or so. Successive monthly deposit and/or bank credit figures are some indication of whether you are on the track of the longer-run projection, but they do not and cannot tell the whole story since there may well be offsetting influences affecting other financial variables. To determine whether a deviation of bank credit from earlier forecasts means that financial markets over-all have become more or less restrictive, or expansionary, than desired requires an evaluation of interest rates and other financial variables, with a flow-of-funds matrix being a convenient device for such an analysis.

However, if deviations of bank credit from projections become large enough, it is probably best to permit some offsetting tightening, or easing as the case may be, in money markets as a hedge against the probability that GNP is not behaving as desired or expected, or that financial markets as a whole are moving out of phase with a desired future movement in GNP. This is accomplished through the proviso--with deviations in bank credit, or some aggregate variable that is currently measurable and sensitive to changes in credit demands providing a basis for permitting more flexibility in money market conditions.

If the directive were to be changed as proposed--i.e., by making bank credit or aggregate reserves the primary operating variable and putting money market conditions in the proviso--and if the target rate of change for the aggregate were permitted to fluctuate from month to month in response to shifting demand forces, the short-run projections

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would continue to be developed in the same manner as at present. Under these circumstances, it would still be assumed that interest rate structure and credit demands as they exist at the start of the projection period would pretty much determine total reserves and bank credit developments. In Mr. Axilrod's view, the main difference between the two types of directives here would be in shading and emphasis. The proposed directive implies a preference for seeing relatively little deviation of bank credit from projections and allowing interest rates to absorb more of the variation in credit or liquidity demands, rather than the reverse of this, as under the present system. In other words, the proposed form of the directive implies that we can be more certain of the correct target for bank credit than for interest rates.

However, in case a monetary aggregate were chosen as a target and its desired trend rate of increase was to be attained without variation each month, the short-run projection job would be much more difficult. The short-run behavior of interest rates and monetary variables that were not fixed as a target would then depend importantly on the ability of market participants to foresee the trend of the target and to adapt their current behavior in such a way as to smooth out potential interest rate fluctuations. For instance, if the trend target were a 4 per cent annual rate of growth each month in the money supply, whether interest rates would rise sharply in a month when the money supply would otherwise tend to grow by 10 per cent under a money market conditions target depends on the ability of, for example, borrowers to postpone their demands to the

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following month or two, when a money supply free to fluctuate might otherwise be declining. Such postponements of borrowing, or a hastening of lending, would tend to even out interest rate fluctuations, but, of course, and unfortunately, it is not always possible to postpone borrowing, particularly around tax periods; moreover, investors and lenders cannot be expected to be certain of what will happen in the next month or so, and will not fully adapt their demands and supplies to the fixed monetary aggregate target.

The difficulty all this makes for short-run projections is the introduction of an even greater expectational factor into the calculus. It is difficult enough as it is to project seasonal and other temporary demands, but it becomes even more of a problem to project whether and how the market will find a way to postpone, or hasten, these demands as the Federal Reserve, at pre-existing interest rates, sometimes refuses to accommodate them, and at other times floods the market with money.

Mr. Axilrod concluded that the odds favor a better policy with continuation of something like the present form of the directive than with the proposed form. If we put principal stress on money market or credit conditions as an operating guide, we will tend to accommodate short-run or temporary credit and liquidity demands. While there is a danger that we will be too accommodative for the good of the economy if these demands suddenly spurt, or dry up, this danger is probably less than permitting sharp short-run fluctuations in interest rates in response to unanticipated spurts in these demands. Such interest rate fluctuations are

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more likely than short-run swings in the money supply or bank credit to cause disturbances, and possibly destabilizing ones, in behavior of borrowers and lenders, who to a great extent rely on the interest rate structure as a source of information about current and prospective credit conditions.

Question was raised whether the task of making projections for bank credit and money market conditions would be easier if a complete new model of GNP and the flow-of-funds were available for each meeting. It was Mr. Axilrod's view that this additional information would not necessarily make the short-run projection any better, although it might be helpful in projecting the extent of disintermediation.

Mr. Baker reported on the results of an analysis of the relationship between actual annual rate changes in the credit proxy, time and savings deposits, private demand deposits, and the money supply and the projected changes in those variables shown in the Blue Book and the reserve utilization table. On average, over the period from mid-1966 through January 1968, he found that there was a good correlation between actuals and projections, varying from a difference of 2-1/2 percentage points (disregarding sign and measuring from the nearest end of the projected range) for time and savings deposits to nearly 4 percentage points for the money supply. Most errors reflected underestimation of change, both down and up, with the errors smaller in the period subsequent to April 1967 than previously.

A major factor accounting for the projection "misses" was unexpected behavior of U.S. Government deposits--for example, when expenditure patterns or the timing of Treasury financings differed from those assumed in the

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projections. There were also large differences due to international developments, including the sterling crisis and large flows of Euro-dollars. Also, the magnitude of the errors seemed to vary directly with the time span between the date of the projection and the period covered.

The analysis also had covered the relationship between projected and actual changes in the Federal funds rate and the bill rate. In general, the conclusions were similar to those applicable to the aggregates. Over the entire period, it was noted, the bill rate had fallen outside the projected range on only one occasion.

Following Mr. Baker's summary, Mr. Holmes commented that the proviso clause had brought about some minor shading of policy on two occasions and a significant shift on one occasion over the 19 month period since it was first introduced. In the latter case, it had come into play when the FOMC, having concluded that the staff projection of credit growth was more rapid than desirable, provided for firming of policy in the event that credit growth expanded as fast as projected.

Discussion of the theoretical basis for the proposed form of the directive was introduced by Mr. Andersen. He felt that the directive should be directly geared to carrying out the objectives of the FOMC. Since the Committee now appeared to be mainly concerned about achieving a prescribed rate of growth in bank credit, the major focus of the directive should be on that variable. This would relegate money market conditions to a subordinate role, although the directive might also incorporate a proviso clause specifying an acceptable range for them. In addition, he suggested that the directive specify a longer time horizon than presently.

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On the basis of a review of Desk experience with the proviso clause, Mr. Andersen believed that the aggregates recently have responded to policy faster than was the case earlier (e.g., 1959-60). However, market conditions appear to have lost much of their significance and recently have been criticized as an operating guide in view of the tendency for growth in some aggregates to increase faster than desirable. He agreed that interest rates and demand for credit affect banks, but he did not agree that bank reserves were endogenous, as stated by Mr. Axilrod, since System operations affect bank reserves at the same time that they affect money market conditions.

Some of the theoretical implications of the proposed change in the directive were also discussed by Mr. Kareken. He first commented on the rationale for use of the present proviso clause. Assuming that the bank credit projections are an integral part of an over-all model of GNP, prices, Federal Reserve credit, etc., and that the prescribed money market conditions are maintained, any tendency for the change in bank credit to fall outside the projected range would imply that income and prices also were off target. In effect, then, movements in the credit proxy are implicitly used as a predictor of income several months hence, and the proviso clause automatically adjusts policy when movements in the credit proxy suggest that future income is not on track with earlier projections. Mr. Kareken expressed serious doubts that the credit proxy should be relied upon this heavily as a predictor of income. And since such a proviso could at best speed up a change in policy by a week or two, he would argue for removal of the proviso clause altogether. He would prefer that no modification of policy be made until the over-all

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situation could be re-examined at the next meeting of the Committee, using better measures of future income, such as new orders, etc.

With respect to the choice of a target for the directive, two criteria should be satisfied: (1) it should be unambiguous and (2) susceptible to control by the System in the short run. Thus, the choices are either Federal Reserve credit or interest rates. As between these, Mr. Kareken expressed a preference for interest rates, not only because of feasibility but also because they are the link between the financial and the real sectors and presumably income correlated, they affect the optimum balance sheets of both firms and households, they are important internationally, and have impacts on monetary flows growing out of Regulation Q. Unless attention is paid to interest rates, the economy could be subject to sharp changes in money market conditions.

He recognized that the target would need to be reviewed frequently and possibly changed in the light of economic developments. He was not greatly concerned by the argument that pegging interest rates tends to cover up information that the market might otherwise reveal; whether control is exercised over either price or quantity, the other would be free to move. In his view, the arguments against pegging were largely political--for example, the Federal Reserve would be blamed for any capital losses incurred by the public resulting from policy decisions affecting specific rates.

Question was raised as to why Mr. Kareken would prefer interest rates over bank credit as a target variable in the event target levels could be specified for both that were consistent with full employment,

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sustained growth in GNP, stable prices, and balance-of-payments equilibrium. He acknowledged that with a closed model, in which all elements are inter-related, it is difficult to pick one thing over another. Whichever target is selected, stochastic changes would be reflected in the other. Since interest rates are the point of contact between the financial and real sectors and since rate fluctuation can have undesirable side effects, he indicated a preference for focussing on them and letting stochastic changes be reflected in bank credit.

With respect to the choice of rate to use in the directive, Mr. Kareken felt that so long as open market operations are confined to Treasury securities, rates on these securities should be used--both long- and short-term. However, he also expressed the view that a combination of the prime rate and nonprice rationing might be more suitable than any market rate.

The discussion pointed out that difficulties would be encountered in trying to select an appropriate rate for use as a target. For example, if a particular Treasury bill rate, say, the 3-month rate, had been selected and it was subsequently depressed by a change in Treasury debt management, the resultant tightening action that would be needed to restore this rate to the target level might cause other rates to go higher than desirable, including the prime rate. Thus, it needs to be recognized that there are exogenous forces in the economy and they can behave differently than had been assumed in establishing the target. In the example given, it would be necessary to determine

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whether the change in interest rates stems from factors affecting expectations or factors affecting income in order to decide whether the target needs to be changed.

The proposed change in the directive, he feared, could result in a destabilizing monetary policy. For example, if adherence to a bank credit target should be accompanied by a rise in interest rates above the prescribed range, the Desk would be required to permit bank credit to rise faster than the target rate. However, if the rise in interest rates had developed because GNP was rising faster than projected, it would imply that the target growth rate for bank credit was already too high and should be cut back. This argument was questioned on the grounds that the tendency for interest rates to exceed the prescribed range did not necessarily involve an error in the income projections but could also result from faulty analysis of financial conditions. Under certain circumstances, such as an increased demand for liquidity, the acceleration of credit growth, as required by the proviso, might be stabilizing, not the contrary.

Following presentation and comment on the individual reports, Committee discussion ranged more broadly on the general question of selecting an appropriate policy target. The main points covered in this discussion are summarized below:

(1) Several advantages of the present form of the directive were mentioned. For one thing, by incorporating reference to both an aggregate and money market conditions, it reconciles the differing views

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of the various members of the FOMC. Moreover, since one hazard of that Committee is inertia, the directive flags both rates and quantities, raising them to a high position on the visibility scale. Also, the inclusion of a proviso clause protects against misspecification of the target and might help avoid situations such as occurred in 1959-60, when interest rates declined as desired but the aggregate also declined, and in 1960, when interest rates rose but the aggregate accelerated. With respect to 1959-60, however, it was pointed out that the problem was mainly a failure to understand the limitations of a free reserves target. In 1966, the problem was not a case of misunderstanding; rather, the FOMC was reluctant to have interest rates rise by the amount needed to get greater restraint.

One member, however, questioned the need for a proviso clause in view of the fact that the FOMC meets at least monthly. He questioned the desirability of making it possible for the Manager to change policy in the middle of an open market period without a solid analysis of what current developments imply. On the other hand, it was recognized that some device might be needed to force the Committee always to consider the possible desirability of a change in policy.

(2) Some additional members of the Committee expressed concern about use of a directive that focussed on the aggregates, thereby requiring all the static-type adjustments to be reflected in money market conditions. The shortcomings of bank credit as a target variable were illustrated by reference to experience in early 1966, when rapid growth in bank credit

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reflected in part large shifts of funds from savings and loan associations to banks and heavy borrowing resulting from the tax acceleration program. To have further restrained that growth would have pushed interest rates even higher at a time when the System was under political attack because of the high rates then prevailing. Moreover, policy was already quite restrictive at that time, as indicated by the decline in housing starts underway in the first quarter.

Another difficulty is that so long as our capital account is convertible, this country must pay attention to interest rates, and therefore can't focus only on the aggregates. Small deviations in interest rates at certain levels can mean dramatic changes in capital flows. The Committee was reminded that the Friedman position in support of a fixed rate of growth in the money supply assumes that there are flexible exchange rates and no Regulation Q ceilings.

(3) In view of the shortcomings of bank credit as a target variable, question was raised whether total credit might not be a more suitable target. In particular, it would avoid the deficiency inherent in the bank credit aggregate resulting from switches of funds between banks and other intermediaries. On the other hand, total credit was recognized to be quite volatile, reflecting in part the influence of Treasury financing, and to be uncontrollable in the short run. Moreover, satisfactory current statistics on total credit would be difficult to compile owing to data limitations, although efforts nevertheless already were under way to prepare such a series. Finally, the movements

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in total credit induced by monetary policy are not likely to be very prompt, since they will occur primarily in response to the changes in spending induced by policy. The responses thus would come too late to make this series a usable short-run policy target.

(4) Another target which was suggested is the monetary base, as defined by Brunner and Meltzer. This aggregate represents the asset that the Federal Reserve supplies to the economy and the point of contact between them. Federal Reserve control of it would set a limit to the potential volume of excess reserves, demand deposits, time deposits, and currency, which in turn would constrain the volume of real spending and acquisition of financial assets. It was argued that the FOMC might be better able to determine an appropriate target for this variable than for bank credit or interest rates. Some members of the Committee, however, indicated doubt that an adequate case for use of this variable had thus far been presented.

(5) Question was raised whether the case for use of bank credit as the principal policy target rested in part on the belief that the resultant wider swings in interest rates would be less damaging to the economy than the wide swings in bank credit that result under the present form of the directive. One member of the Committee expressed the view that the crux of the argument for focusing on bank credit was simply distrust of the use of money market conditions, including doubt as to the Committee's ability to pick the right interest

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rate structure. It was pointed out, however, that this distrust possibly represented simply a feeling that the FOMC had moved too slowly in changing its policies. If this were the case, the problem could be overcome to some extent within the present format of the directive by providing for movement of money market conditions in the second paragraph of the directive.

The meeting was adjourned at 4:20 pm.

James B. Eckert, Secretary,
Committee on Banking and Credit Policy