BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D.C. 20551

January 13, 1976

CONFIDENTIAL (FR)
CLASS II FOMC

TO: Federal Open Market Committee

FROM: Arthur L. Broida ALB

Attached is a memorandum from Governor Holland transmitting the preliminary second stage report of the Subcommittee on the Directive.

It is contemplated that this report will be considered by the Committee at a meeting subsequent to that of January 20.

Attachment

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ADDRESS OFFICIAL CORRESPONDENCE
TO THE BOARD

January 13, 1976

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CLASS II - FOMC

To: Federal Open Market Committee

From: Robert C. Holland, Chairman
Subcommittee on the Directive

Attached is the preliminary second stage report of the Subcommittee on the Directive. The report is in the form of a summary of the findings of the Subcommittee at this stage of its work. In the near future, a separate second stage staff report containing an elaboration of the summary report will be distributed to the Committee. The latter document will be lengthy because of the broad scope of the Subcommittee's second stage inquiry and the complexity of the analysis that is involved.

To assist the FOMC and the Subcommittee in appraising these findings, the Subcommittee plans at some point to ask a panel of knowledgable outside economists to review and comment on the Subcommittee's work to date. For this reason, the attached report has been entitled a preliminary report.

CONFIDENTIAL (FR)
Class II-FOMC

To: Federal Open Market Committee
From: Subcommittee on the Directive

Date: January 13, 1976
Subject: Improvements in FOMC Operating Procedures: Preliminary Report (Stage II)

(1) This, the second, phase of the Subcommittee's investigation has consisted of a broad inquiry into the thrust of the FOMC's Directive, its corollary instructions and its attendant operating and policy procedures. The second stage report encompasses a summary of findings and conclusions (which are presented in the following numbered sections), with a staff report to follow related to the principal points and a large number of staff background papers prepared for the Subcommittee.

(2) The Subcommittee on the Directive reported its conclusions and recommendations from the first stage of its inquiry in March 1975. That phase of its inquiry was limited to the evaluation of alternative reserve measures that might serve in place of RPD as a short-term operating target to the extent the FOMC pursues a monetary aggregate-oriented approach to policy. The Subcommittee recommended that the FOMC replace RPD with nonborrowed reserves (NBR) as the monthly operating target.

(3) The second phase of the Subcommittee's work particularly involved the question of what role intermediate targets, such as monetary aggregates or interest rates, could most helpfully play in the formulation

and operation of monetary policy. Investigation of this question has led to consideration of such issues as relationships among operating, intermediate, and ultimate targets; the circumstances under which targets should be altered in response to incoming information; and how best to take account of uncertainties as to the structure of the economy, the current position of the economy, and the likely course of important exogenous variables.

(4) The Subcommittee's studies suggest that FOMC decision-making procedures would benefit in some respects if they were to evolve in ways broadly consistent with a developing branch of economic analysis called optimal control theory.[1/] Optimal control analysis provides a framework within which the process of policy formation, as well as advances in research, understanding and operational refinement, can evolve systematically. Historically, changes adopted by the FOMC have been evolutionary in nature, and in recent years there has been a movement in the direction of greater focus on the behavior of monetary aggregates as

1/ This type of analysis involves a systematic approach to decision-making at discrete intervals over a time horizon under circumstances in which there is uncertainty about the response to policy actions. In essence, it would call for the continuous evaluation of progress toward achieving objectives by, among other things, systematically utilizing incoming information to re-evaluate the extent to which objectives are being attained or are attainable, and to modify the use of policy instruments as needed.

key variables in the monetary policy decision process. Optimal control analysis, on the other hand, focusses on ultimate variables such as the rate of growth of real output, the rate of price change and unemployment. Nevertheless, it need not be inconsistent with optimal control analysis to use monetary aggregates or other intermediate targets since, under conditions of fundamental uncertainty, it is reasonable to shift the focus from ultimate to more knowable and controllable variables. As evidence and research deepen our understanding of economic behavior, optimal control analysis holds forth the promise of a systematic and disciplined framework in which the monetary aggregates, along with information from other variables, can be more fruitfully integrated into the analysis. It is not a retrogression to a system of simply "looking at everything."

Some innovations in FOMC procedures in recent years have been in accord with such an approach. These changes include the adoption of longer time horizons for policy evaluation, the consideration of the meaning and implications of behavior of a sizable number of variables in policy discussions, revisions of policy decisions (and, therefore, of the FOMC's so-called intermediate targets) as information and forecasts change through time, and--although done loosely--the linkage of short-term and long-term considerations. It is the conclusion of the Subcommittee that an optimal control approach provides a conceptual framework which, while not practically operational in the present state of the art, nonthe-less; (a) provides valuable qualitative insights into many aspects of the monetary policy decision-making process, and (b) can serve as a useful guide to the evolution of improved FOMC procedures. Efforts should proceed toward making this conceptual framework more operational, even though it may require some years to make it directly useful for policy purposes.

(5) The Subcommittee believes that ultimate FOMC policy interest lies in real economic activity and the price level. Nevertheless, achieving a consensus on the precise ultimate objectives of monetary policy remains inherently difficult and probably would be unwise, partly because of problems in distinguishing among; (a) objectives that appear practicably attainable given constraints on policy within the policy horizon; (b) those that would be more desirable but do not appear to be attainable (though they might in fact develop); and (c) objectives that are most desirable in some lasting sense (such as price stability with full employment) but would be attainable, if at all, only over a much longer horizon than normally considered. In each of these areas, agreement concerning ultimate objectives would require a greater degree of certainty concerning the structure and behavior of the economy than currently exists, particularly concerning the relationships between the operating instruments of monetary policy and ultimate objectives. If, nevertheless, the FOMC did explain its policy decisions in terms of ultimate objectives rather than in terms of the monetary aggregates, the System would run the serious risk of becoming the focal point of political controversy concerning the goals and priorities chosen in an area surrounded by many unresolved economic and social questions, and where other public policies may have more influence than monetary policy in achieving or falling short of some such goals.

Against this background, it appears wise to us to continue the practice of characterizing monetary policy in terms of intermediate monetary aggregates rather than ultimate economic objectives. But we believe these monetary variables should be interpreted as <u>intended values</u>

subject to modification based on Committee reassessmemt of unfolding economic performance rather than as invariant targets. That is, if intentions about future monetary values are not realized by a significant margin, a reconsideration or recalculation of the policy strategy should be induced based on new information--including the observed forecast errors of the intermediate variables. Depending upon the information that is available, this recalculation might involve either setting new intended values for the monetary variables or, alternatively, the adjustment of reserve targets and interest rate ranges so as to return the monetary variables to the original path. The FOMC would have to decide the scope and extent of adjustments of these kinds in the light of all of the information available to it at the time, enriched by the additional understanding of the meaning of this information flowing from ongoing research and experience.

This recommended approach seems broadly consistent with the manner in which the monetary variables are already in fact being used by the Committee. The precise degree of emphasis that ought to be placed on any particular intermediate monetary variable can properly evolve through time as experience and research improve our understanding. Intermediate monetary variables have key value to the Federal Reserve because; (a) they are an important part of the transmission process by which Federal Reserve actions affect economic performance, and (b) as variables whose values are much influenced by the Federal Reserve, their behavior is important to public understanding of the role and operations of the central bank.

(6) Partly to facilitate such a use of monetary aggregates, our analysis suggests certain evolutionary changes in staff and FOMC procedures that can be introduced now in pragmatic steps in harmony with the above-outlined control principles. These changes should improve the usefulness of analyses presented to the FOMC and strengthen the decision process of the Committee.

(a) The Subcommittee believes that further steps should be taken by the staff to achieve greater integration between the longer-run Green Book projections and the shorter-run Blue Book analyses of financial market variables. The intent of the changes would be to improve the analysis made available to the Committee of the linkage between shorter-term tactics and longer-term strategies. For example, the quarterly interest rate and monetary growth patterns underlying the GNP projections and the longer-run targets for the monetary aggregates should be stated explicitly. The relationship and consistency of shorter-run operating instrument alternatives to these longer-run projections should also be indicated explicitly. The Committee need not believe, of course, that a particular short-run operating strategy is uniquely related to a given longer-run forecast of GNP, but the staff's estimate of the most likely relationship would clearly assist decision-making.

(b) The Subcommittee believes the FOMC would benefit from the presentation of several alternative conditional forecasts of economic performance, based on alternative assumed ultimate objectives or alternative possible policy strategies. Therefore, it is recommended that the staff be asked to present perhaps three alternative Green Book and Blue Book forecasts at each quarterly chart show, or more frequently under special circumstances. Because monetary policy influences some key ultimate variables (e.g. the rate of change of prices) more slowly than others (e.g. unemployment), it is also recommended that the staff be asked to present conditional forecasts over a sufficiently long time horizon to make apparent the major effects of the different assumptions underlying each alternative. Only a limited number of variables should be presented for the alternatives to a central conditional forecast, and the results should be expressed in terms of differences from this central forecast. Means have already been developed to make this process feasible. Finally, the Subcommittee recommends that the staff should be encouraged to develop and present the ranges of probable forecast error in these presentations. Given the conclusion pointed to by staff studies that the greater the uncertainty, the less aggressive policy actions should be, this information would assist the Committee in reaching its decisions.

(c) The more comprehensive economic analyses presented quarterly (or when special circumstances dictate) should provide, in the view of the Subcommittee, the basis for decisions concerning the longer-term conditional objectives for the monetary aggregates. Intervening monthly meetings should focus more upon reviewing performance, analyzing deviations from expectations and deciding upon which, if any, specifications should be changed.

(d) These proposals should not be construed as limitations on the scope of inquiry of individual members of the Committee. Of course, members of the FOMC are not bound by, or limited to, the analyses the staff presents at Committee meetings. All members should be able to obtain, within limitations on staff time, alternative econometric model simulations or other analyses designed to answer pertinent questions of particular interest to individual members. It would be particularly helpful if the staff in its presentation would indicate when significantly different policy implications flow from econometric models that incorporate alternative views of the structure of the economy. Each FOMC member can and should voice disagreements or reservations concerning staff analyses. With this in mind, the Subcommittee suggests that the staff also provide summary results of selected outside analyses and forecasts to the FOMC on a regular basis.

(7) In light of the attention still to be given to the monetary aggregates as expressed in paragraph 5, the Subcommittee reaffirms the Stage I recommendation that the FOMC replace RPD with nonborrowed reserves as the monthly operating target. Although the most recent empirical evidence suggests that a similar improvement in the target's relations to the aggregates could be obtained by shifting to the nonborrowed source base, the Subcommittee continues to believe that the possibility of occasional undue money market disturbance would be lessened by use of nonborrowed reserves.

The possibility of using the Federal funds rate as an operating target was also investigated. The Subcommittee tentatively rejected this possibility, partly on the grounds that the relationship of the funds rate to monetary aggregates or ultimate economic objectives does not appear to be sufficiently stable outside the estimation periods, given limited available evidence. More importantly, past experience seems to suggest that use of a Federal funds rate operating target can lead the FOMC to be more laggard in its policy changes than if greater emphasis is placed on reserve and monetary aggregate movements.

(8) Studies completed for the Subcommittee of the question of the choice of the operating target among various possible reserve and money market measures indicate that the particular choice made is not of very great significance, provided that once the choice is made the possible alternatives--for example, the funds rate--are used as information variables. In the current stage of development, however, we are unable to extract information systematically from short-run Federal funds rate movements with enough precision or enough certainty to aid in determining when changes in the reserve target are called for. In addition, members of the Subcommittee believe qualitatively that substantial variability of short-term interest rates entails market costs that could, at times, be advantageously constrained, even though it has not yet been able to develop quantitative verification and assessment of these costs relative to the benefits of closer control of reserves. Other Committee members may not agree that there are significant costs associated with market interest rate

fluctuations. Even so, the Subcommittee believes the latter would agree that monetary policy procedural transitions should be effected gradually and smoothly. Based on these considerations, the Subcommittee concludes that the Federal funds rate constraint should continue to be a part of the Directive, but that its role should be more that of an information variable that would trigger consideration of the possibility of changing either the operating reserve target or the Federal funds rate range whenever the constraint was reached.

Meanwhile, it is recommended that the staff continue to try to pin down the costs of short-run interest rate variability that are believed to be significant in order that the necessary cost-benefit assessments might be made. The importance of resolving this issue stems from the fact that too narrow a Federal funds rate constraint, in a world of uncertainty concerning the relationships between reserves, the funds rate, the monetary aggregates and economic performance, is likely to translate into avoidable errors in achieving NBR targets, intermediate monetary aggregate intentions and desired ultimate objectives.

The Subcommittee believes the conclusion that greater uncertainty should lead to smaller policy changes corresponds to the intuition of the Committee members and is reflected in FOMC decisions. But small changes in a reserve operating target imply greater variation in the Federal funds rate in response to short-run fluctuations in financial market relationships. It is the judgment of the Subcommittee that we are, in fact, quite uncertain about short-term financial market relationships. Consequently, and in accordance with the discussion in paragraph (7), it is recommended that the Federal funds rate range ordinarily be specified at 2 percentage points. In addition, it is recommended that the full amount of allowable change be used where necessary to achieve the monthly average target level of nonborrowed reserves. Changes during the inter-meeting period should, of course, be effected on an orderly basis. Recent practice indicates that changes of about 1/4 of a percentage point per week in either direction would ordinarily meet this criterion. As experience is gained over time, it seems reasonable to expect that the maximum weekly change in the average funds rate and in the range should be gradually widened,particularly if and when the size and duration of deviations of NBR from its target path grow large. The Stage I recommendation that the Manager be instructed to consult with the Chairman whenever it becomes apparent that the reserves target cannot be achieved within the specified limit on Federal funds rate movements is reaffirmed. This information, along with other relevant information from the behavior of other variables, could then be used to decide whether Committee action would be desirable or necessary to change the reserve target or the limit on the Federal funds rate.

(9) To assist the FOMC in appraising these findings, the Subcommittee plans at some point to ask a panel of knowledgable outside economists to review and comment on the current stage of the Subcommittee's investigations as well as appropriate supporting staff papers. The presentation of these materials would be accompanied by suitable qualifications to insure that they are understood to contain suggestions as to further evolutionary changes in policy procedures that require additional

empirical work and adjustment based on experience. Suggestions concerning the best way to proceed in answering the empirical questions raised in the process of the Subcommittee's inquiry will also be solicited from the panel. A summary of the comments, criticisms and suggestions of these economists will be submitted to the FOMC.

(10) After meeting with the panel of outside economists, the Subcommittee plans to continue working with the staff on the empirical work outlined above. In addition, work will begin on its Stage III studies, which will consider possible regulatory and institutional changes that might produce a more effective execution of monetary policy.