CONDUCT OF MONETARY POLICY

(Pursuant to the Full Employment and Balanced Growth Act of 1978, P.L. 95–523)

HEARING

BEFORE THE

COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS HOUSE OF REPRESENTATIVES

NINETY-SEVENTH CONGRESS

FIRST SESSION

FEBRUARY 26, 1981

Serial No. 97–6

Printed for the use of the
Committee on Banking, Finance and Urban Affairs

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1981

HOUSE COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS

FERNAND J. ST GERMAIN, Rhode Island, *Chairman*

HENRY S. REUSS, Wisconsin
HENRY B. GONZALEZ, Texas
JOSEPH G. MINISH, New Jersey
FRANK ANNUNZIO, Illinois
PARREN J. MITCHELL, Maryland
WALTER E. FAUNTROY, District of Columbia
STEPHEN L. NEAL, North Carolina
JERRY M. PATTERSON, California
JAMES J. BLANCHARD, Michigan
CARROLL HUBBARD, JR., Kentucky
JOHN J. LAFALCE, New York
DAVID W. EVANS, Indiana
NORMAN E. D'AMOURS, New Hampshire
STANLEY N. LUNDINE, New York
MARY ROSE OAKAR, Ohio
JIM MATTOX, Texas
BRUCE F. VENTO, Minnesota
DOUG BARNARD, JR., Georgia
ROBERT GARCIA, New York
MIKE LOWRY, Washington
CHARLES E. SCHUMER, New York
BARNEY FRANK, Massachusetts
BILL PATMAN, Texas
WILLIAM J. COYNE, Pennsylvania

J. WILLIAM STANTON, Ohio
CHALMERS P. WYLIE, Ohio
STEWART B. McKINNEY, Connecticut
GEORGE HANSEN, Idaho
HENRY J. HYDE, Illinois
JIM LEACH, Iowa
THOMAS B. EVANS, JR., Delaware
RON PAUL, Texas
ED BETHUNE, Arkansas
NORMAN D. SHUMWAY, California
JON HINSON, Mississippi
STAN PARRIS, Virginia
ED WEBER, Ohio
BILL McCOLLUM, Florida
GREGORY W. CARMAN, New York
GEORGE C. WORTLEY, New York
MARGE ROUKEMA, New Jersey
BILL LOWERY, California
JAMES K. COYNE, Pennsylvania

PAUL NELSON, *Clerk and Staff Director*
MICHAEL P. FLAHERTY, *General Counsel*
JAMES C. SIVON, *Minority Staff Director*

CONTENTS

STATEMENT

ADDITIONAL INFORMATION SUBMITTED FOR THE RECORD

CONDUCT OF MONETARY POLICY

THURSDAY, FEBRUARY 26, 1981

HOUSE OF REPRESENTATIVES,
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS,
Washington, D.C.

The committee met at 9:40 a.m. in room 2128, Rayburn House Office Building, Hon. Fernand J. St Germain (chairman of the committee) presiding.

Present: Representatives St Germain, Reuss, Gonzalez, Minish, Annunzio, Fauntroy, Neal, Blanchard, Hubbard, LaFalce, Lundine, Mattox, Vento, Barnard, Frank, Patman, W. Coyne, Stanton, McKinney, Hansen, Leach, Paul, Bethune, Shumway, Weber, McCollum, Carman, Wortley, Roukema, Lowery, and J. Coyne.

The CHAIRMAN. The committee will come to order.

The House Committee on Banking, Finance and Urban Affairs meets today for its semiannual hearings on the conduct of monetary policy, pursuant to the Full Employment and Balanced Growth Act of 1978.

Mr. Volcker, I might say that you are this year's first full-fledged witness before the full committee, so you can see the high accord we have for the Federal Reserve Board.

Mr. VOLCKER. I am honored to occupy that position, Mr. Chairman.

The CHAIRMAN. I think we are agreed that the country is facing a period of severe economic strain reflecting high unemployment, high inflation, and high interest rates. Throughout this country, and certainly in this committee, there is widespread agreement that these problems need immediate and effective remedies. We agree with President Reagan that everything should be done to cut unnecessary expenditures from our Federal budget to make it lean and trim, yet effective in meeting the national priorities which we assign to the Federal Government.

Your estimates are much more pessimistic for 1981 than those of the administration. Taking into account reductions in taxes and Federal spending—and I assume your Federal Open Market Committee members used, in whole or in part, the administration's figures—inflation, as you see it, could continue in double digits for the third consecutive year; our unemployment lines could swell by 1 million people to a total of 9 million people in 1981; and we could have the sharpest downturn in real GNP since 1947.

Mr. Volcker, if this is a new economic beginning, I think we should review carefully the proposal of the Federal Reserve and the administration, and their results, before we commit ourselves.

I would like to discuss a few of the major differences between your figures and those of the administration. According to the

Federal Open Market Committee projections, we may experience negative real GNP growth in 1981, with real GNP dropping by as much as 1.5 percent. Although there have been 6 years in which real GNP declined since 1947, none of them have been as severe as you project for 1981. Contrasted to your dire prediction, the Reagan administration predicts a 1.4-percent rise in the real GNP for 1981.

Now, if we look at the years of declining real GNP in 1953, it was minus 1.1 percent; in 1958, minus 0.4 percent; 1970, minus 0.2 percent; 1974, minus 0.6 percent; 1975, minus 1.1 percent; and the preliminary figures for 1980 are a minus 0.2 percent.

According to your predictions, more than 1 million more people may join the unemployment lines by the end of 1981, while the Reagan administration predicts only a slight increase in unemployment. Surely you will tell this committee why your figures allow for much lower economic performance than those reported by the administration.

The priorities of the Federal Government, as spelled out in the Employment Act of 1946, and the Humphrey-Hawkins Act of 1978, include the need to protect those with limited or no income from the ravages of unemployment. We cannot tolerate a policy which violently throws the brakes on the speeding train of inflation, throwing the passengers out on the unemployment line, while at the same time curtailing the programs that protect the unemployed.

Economists refer to this kind of an adjustment as the "Big Bang." The risks from such a solution to inflation are too great. I hope you can assure us today that you will not be a party to such an experiment.

I am concerned about the way monetary policy has been conducted in the last 3 months. On the one hand, your report says that you will pursue a 3.5- to 6-percent growth rate for the coming year; whereas the result of your actions since November has been a 1.1-percent money growth rate, and this includes the growth of NOW accounts.

This leads me to ask whether you might be trying the "Big Bang" experiment with our Nation's workforce. I hope you will reassure this committee, and the country, that the stagnant monetary growth during the last 3 months is an unintended aberration. Indeed, I hope you can tell this committee that we will at least attain the upper limit of your growth rate target of 6 percent, which is already significantly lower than the monetary growth rate achieved last year of 7.3 percent, considering the huge shift of money into NOW accounts.

Mr. Chairman, a 1-percentage-point increase in unemployment from our present levels will, by itself, according to the Congressional Budget Office, cause a $52- to $80-billion reduction in the real gross national product, and increase the Federal deficit by $25 to $29 billion. These projections indicate that the target of a balanced budget cannot be approached without squarely facing the unemployment problem.

You are predicting that the combined effect of your policies and those of the Reagan administration could send 1 million more people into the unemployment lines. Many of these people now earn between $10,000 and $15,000 a year, and pay a large part of

their incomes for high interest mortgages and heat for their homes. These people are the breadwinners of our country, Mr. Chairman. I think these people have a right to the Federal benefits we now provide.

I think it is incumbent on you to tell us what contingency plans you have drawn up in case your experiment to squeeze inflation out of the country produces intolerable costs to these wage earners. How far must the unemployment lines extend?

President Reagan said in his economic message, if I recall correctly, that $1 trillion is a stack of $1,000 bills 67 miles high. Following his analogy, a line of 9 million unemployed people would stretch 5,114 miles, from Providence, past the President's California ranch and far out into the Pacific Ocean.

Mr. Volcker, we look forward to your testimony and to any help you can give us in precisely answering these all-important questions in our fight against unemployment, inflation, and high interest rates.

At this time, our esteemed colleague, the ranking minority member, Mr. Stanton, would also like to make an opening statement. Congressman Stanton?

Mr. STANTON. Thank you very much, Mr. Chairman; and once again, we welcome Mr.Volcker to these semiannual hearings on the conduct of monetary policy.

We are here today pursuant to the Full Employment and Balanced Growth Act of 1978, better known as the Humphrey-Hawkins Act, which requires the Federal Reserve to inform the Congress of its policy goals to promote stable prices, increased production, maximum employment and moderate interest rates.

As we all know, Mr. Volcker, last week we listened with great interest as the new President of the United States outlined his program for economic recovery. Many people welcome this fundamental redirection in the role of the Federal Government, and hopefully this 4-point plan will get the Nation's economy back on the road to lower inflation and greater employment.

After reviewing your report, Mr. Volcker, I am pleased to see that the goals of the Federal Reserve are basically the same as the new administration. It is refreshing to know that the administration will advance economic policies which should help ease the Federal Reserve's task of coping singlehandedly with inflation.

Mr. Volcher, I cannot begin these hearings here today without reminding the committee and all of those interested, that the Federal Reserve Board itself is a creature and a child of the Congress. Since 1913 the system has been entrusted to insure that money and credit growth over the long run is sufficient to provide a rising standard of living for all of our people.

Your presence here today, Mr. Volcker, is witness to the fact that the Federal Reserve is responsible to the Congress, and consequently to the people of America as a whole. You, in fact, function as an independent central bank in the sense that the Federal Reserve's decisions do not have to be ratified by the President or anyone else in the executive branch of our Government.

I am pleased to read in President Reagan's economic message that he reaffirmed and supported the responsibility of the Federal Reserve as an independent agency within the Government. In his

own words, the President stated, "The administration will do nothing to undermine that independence."

Now, Mr. Volcker, I was very pleased to see the statement, because it adheres to the policy that has been followed by previous administrations, and it certainly has been taken into consideration by Mr. Volcker's predecessors, Mr. Martin and Dr. Burns. I think that it should be clearly pointed out that as we proceed along here, that the monetary policy of the U.S. Government, and the United States itself, primarily rests with the Chairman of the Federal Reserve Board and within the Board itself.

The administration and we here in Congress have our responsibilities in the fiscal policies of our country. As we proceed along with the new administration and its support of the monetary and fiscal policies I hope, this will lead to a better, more economically strong and profitable Nation for all of the people of our country.

Thank you.

The CHAIRMAN. Thank you, Mr. Stanton. We have a new chairman of our Subcommittee on Domestic Monetary Policy, from whom I am sure you will be hearing a great deal as the months go by. Congressman Fauntroy has asked to make an opening statement. Congressman Fauntroy?

Mr. FAUNTROY. Thank you very much, Mr. Chairman.

Last July this committee met under what we regarded as grim economic conditions. Today, 7-months later, the circumstances have not improved. Interest rates have reached a new record high last month, with the Fed funds rate exceeding 19 percent in January. Unemployment continues at the absolutely unacceptable level of 7.5 percent. For blacks the rate is approximately twice as great, or about 14 percent. Youth unemployment—and unfortunately, these figures tell only a part of the story, because it is a composite of all youths age 16 through 19—is a startling 19 percent.

Productivity performance is not much better. While capacity utilization has risen from a dismal 75 percent in July to about 79 percent at the end of the last quarter, it is still far from the previous 84-percent peak in December of 1979, and 87 percent of the earlier year.

I recited these dismal statistics, Mr. Chairman, because the report which has now been submitted to us projects an even more dismal picture of our economic health. Unemployment, instead of falling, is expected to rise another full percentage point. Real GNP is expected to fall by as much as 1.5 percent, even as inflation continues unabated.

I know it is unnecessary to tell you that for each 1-percent rise in unemployment, the Federal budget outlays increase from $25 to $27 billion. I ask, therefore, whether it is better to spend that money, or a portion of it, on productive enterprises such as were contemplated by the Humphrey-Hawkins Full Employment and Balanced Growth Act, which would put people to work doing things, making things, and producing goods and services, or spend that money on a variety of unemployment and welfare programs.

Let me make sure we understand what that means in numbers. At the present rate of unemployment, 7.5 percent, that means more than 7,924,000 people are unemployed. An increase of 1-percentage-point means that slightly more than 1 million persons

will be added to the unemployment rolls. That is a number of persons exceeding considerably the population of our Nation's Capital.

If we do not respond positively to the employment crisis, if the Federal Reserve System—at least the Federal Reserve System, even if the administration refuses to be responsible—doesn't actively tilt its policies toward meeting the unemployment needs, we will be facing serious breakdowns in our social structures.

Rising unemployment coupled with the elimination of social programs, as we give tax cuts to the wealthy while consuming the social surplus in war-related efforts, appears to me as a misuse of the trust that was given by the American people to its leaders. I would hope, therefore, that as you, Mr. Volcker, take the words of this committee with you, that you will reexamine what you project will be the future course of monetary action.

Specifically, I would ask that you not lower the monetary targets for this coming year. The continued high unemployment and the remaining low productivity performance suggests to me that lower interest rates are desirable and can be acquired without encumbering the fight against inflation.

I appreciate the need to maintain a steady and consistent monetary policy which would restrain inflation. We ought, however, to be very cognizant of the inherent instability of our present economic situation, and not create false targets which are either too high or too low. A mere mechanical lowering of the monetary targets when economic conditions suggest otherwise, and when, in fact, you have repeatedly missed these targets, makes them much less useful as a tool than they might be.

Studied judgments must be made concerning the money supply; not mere mechanical actions. That position, it appears to me, is one which is supported by even members of the Federal Open Market Committee. Nancy Teeters, for example, clearly suggested in her dissent on the actions taken by the Federal Open Market Committee on December 18 and 19, 1980, that the objectives for monetary growth were unduly restrictive. I would agree with her, and I hope that successive meetings of the Federal Open Market Committee will demonstrate that others agree with her too.

I think we have reached a point in time where increased, serious consideration must be given to the use of an interventionist wage and price policy that would include, as a part of it, an innovative creative credit program. In the report of this committee last July, I said that an interventionist policy was needed then. I am now more convinced of the need for such a policy.

When measured against the needs of our economy, and the alternatives posed by the Reagan administration, controls must surely be much less destructive to our society and hopes and aspirations of our people. I would urge you to consider what might best be done, and be prepared to discuss them with me and the members of the Domestic Monetary Policy Subcommittee at the followup hearings that our subcommittee will hold.

Finally, I want to raise just one other point in these remarks, pursuant to the remarks made by Mr. Stanton. That is my concern for the integrity and independence of the Federal Reserve System.

I call your attention to the fact that the Reagan administration has once proposed what the National Journal said would be called an extraordinary gesture by the administration, that would restore credibility to your policies. They would have you eschew all considerations of extraneous economic variables like housing market and business fluctuations, short-term interest rates, and I would presume employment.

I would hope that you would not agree to such an accord. If such a proposition is made to you, Mr. Volcker, I hope you will call me immediately and personally within the hour, that such an extraordinary intrusion on your independence has been made.

There are many other issues, Mr. Chairman, that I would like to raise with Mr. Volcker, but since my time has now expired, and I see you looking at me with a very serious gaze, let me only say that I would pursue some of these other matters with you and the members of the Federal Open Market Committee during the followup hearings which are now being scheduled.

Thank you, Mr. Chairman. I yield back the balance of my time.

The CHAIRMAN. At this point the ranking minority member of the Subcommittee on Domestic Monetary Policy has asked to be allotted time for an opening statement. He is now recognized. Mr. Hansen?

Mr. HANSEN. Thank you, Mr. Chairman.

I want to join in welcoming Mr. Volcker today. The report he is presenting on behalf of the Federal Reserve System takes on added importance in the context of the changes proposed by President Reagan for the public sector of our economy.

I have had recent conversations with other officials of the Federal Reserve where it was revealed that there is grave concern within the Fed itself about the volatility of the monetary and credit aggregates this last year. Some of your colleagues, and I hope you, also, Mr. Volcker, are coming to a realization that there are limits to the latitude of discretion the Federal Reserve can usefully exercise.

I have no complaint with the targets you have set in the past, nor the ones you are now proposing. My complaint with you, Mr. Volcker, is that in past pronouncements you have failed to distinguish between the roles of the Federal Reserve and Congress. The fact of the matter is that you have tried to do too much through the Fed, and in trying to compensate for the deficiencies of bad congressional fiscal policy, have pursued a horrendous monetary policy roller coaster, and brought great criticism on the Fed itself. It is important for you to point out your own limitations and call for congressional responsibility.

Mr. Volcker, both President Carter and now President Reagan have noted the need for fiscal restraint. It is time for the Federal Reserve to endorse that position strongly if you are ever to achieve a climate where you can implement good and effective monetary policy.

One of your Federal Reserve colleagues told me this week that the Fed is gravely concerned that every time we try to use increased interest rates to induce an inflation-killing recession, the rate necessary for impact just ratchets up higher, and we still don't get the job done. Even the banks that are getting increased earn-

ings from these high rates don't like it. I associate this to an immunity to penicillin that we build over time.

Mr. Volcker, I am sure you and the Fed Board understand your limitations, but your public pronouncements have not indicated this. It is very necessary for the Federal Reserve to admit that it cannot adequately offset bad fiscal policy with extreme manipulations in monetary policy, and that you are going to stop singlehandedly trying the impossible, which has led us to the brink of economic disaster.

You know as well as I that there are forces gathering in Congress that will clean up the monetary policy act by restricting Fed prerogatives if the Federal Reserve doesn't responsibly act first. Many of the proposals would severely curtail the Federal Reserve's discretion in monetary policy, or would institute various sorts of credit allocation, or would even wipe out whole parts of the Federal Reserve's policymaking apparatus altogether. If you will just take a look at the makeup of the Domestic Monetary Policy Subcommittee, you can see the interest demonstrated and firepower available to do some of these things.

My own investigations into monetary policy during the past year as ranking minority member of the subcommittee have demonstrated two things: One is that volatility in policy especially hurts the small businessman and his banker. Another is that the Federal Reserve, in my judgment, has not been sufficiently sensitive to the damage done to this sector.

Mr. Volcker, it is time for you to pay more attention to the needs of the small businessman, the farmer, the small banker, who need above all a stable framework in which to plan and prosper.

The big bankers who so readily have the Fed's ear endorse high interest rates to crush the economy and stop inflation that way; a method profitable to them, but devastating to middle America. If you will get us off this roller coaster and give us stable, moderate aggregate growth, we can whip this inflation and get to interest rates that are not only stable, but much lower than they are now.

The administration is apparently dedicated to doing its part. Hopefully Congress will help. But I urge you not to cover for deficiencies in what Congress does, but to exert leadership in insisting that we act responsibly to bring stability and prosperity to the private sector.

Again, I welcome you and look forward to your testimony.

The CHAIRMAN. Mr. Volcker, you are probably wondering who is testifying here today. I think that the opening statements by some of the members indicate to you the intense and keen interest and concern of the membership of the committee, and I would say of the entire House of Representatives.

We want to express our appreciation to you for agreeing to summarize your statement, in view of the fact that it was given yesterday to the lower body, the Senate. [Laughter.]

That will, indeed, allow for a little more time for the question and answer period; so at this time we will place your entire statement in the record, and you may proceed.

STATEMENT OF HON. PAUL A. VOLCKER, CHAIRMAN, BOARD OF GOVERNORS, FEDERAL RESERVE SYSTEM

Mr. VOLCKER. Thank you, Mr. Chairman. I do feel my statement addresses some of the concerns which have been so clearly expressed here, and I want to read substantial portions of it.

In the light of some of the comments that were made, perhaps I ought to take the opportunity right at the start to clarify some issues. There has been considerable discussion by you and Mr. Fauntroy about the projections that members of the Federal Open Market Committee made. I think most of those comments pertain to the lower end of the range of projections cited in the report. So I think we ought to be clear about what that proces is.

The members were polled in late January or early February as to their opinions. They did not at that point have the administration's program in front of them, but I think most of them thought that they would allow in their projections for some substantial tax reduction this year and a substantial cutback in Government spending, and for rising defense spending as well. In that sense, these projections were not out of keeping with the proposals that have been made since then.

The 12 members of the committee's views cover a substantial range. As you no doubt will note on page 44, that range encompasses the projections of both the old administration that were available at that time, and the projections of the new administration that have been made since that time.

[See "Monetary Policy Report to Congress Pursuant to the Full Employment and Balanced Growth Act of 1978," following Mr. Volcker's prepared statement.]

So there is really no substantial difference. The umemployment rate was projected to be somewhat higher, based upon a somewhat different analysis, I suppose, of what essentially comparable growth would produce in terms of employment.

I should note in that connection there has been a substantial rise in business activity since those days, last summer, to which Mr. Fauntroy alluded, but that in no way means I disagree with his comments that the economic situation is far from satisfactory in a great many respects.

What I would emphasize, which I don't think he mentioned, is the inflationary situation which lies behind so much of our economic difficulties. Certainly my point of departure is that many of those other economic ills—or, to put it positively, the goals of employment, productivity, and growth, which must be the basic objectives of policy—will not be dealt with successfully unless we are successful in dealing with this inflation problem.

That is the lesson of the last decade very clearly—that the inflationary problems go hand in hand with these other problems of rising unemployment, decline in productivity, and declining growth, that preoccupy all of us.

The other comment I would make, Mr. Chairman, is on your comment about the growth in the money supply recently, which has been at a low rate. I would note that that followed a period of about 3 months when it had been at a high rate. We do not have instruments that control the money supply precisely from month to

month. I am not sure that that would be desirable if we had the instruments to do so. In any event, it is impossible.

You have to look at recent slow growth in the context of the period of earlier high growth I think what you will find—and we will get into this later, I am sure—is that if you looked at the money supply figures, let us say, in December, January, and February, we would be well within the ranges that we established for ourselves 1 year ago.

In that sense, monetary policy seems to me broadly on course. I do not think it has been a volatile or unpredictable policy. We will get into that later too. I just want to encourage interpretation of the money supply figures over a period of time—instead of seizing on any particular 1-month period, or even 3-month period.

With those general comments, let me note that we have done a substantial study, which I initiated last September, to examine our operating techniques and their effectiveness, drawing on all parts of the Federal Reserve System, and a variety of viewpoints and a variety of analytic techniques. Those studies now have been completed, to the point that we can make them available to the public and interested observers. We look forward to comments on those technicalities, from interested economists and others. I hope that your staff or any of you that might be interested will participate in that review process, because obviously we want to do as good a job, technically, as we can. I think that these studies add some very interesting, preliminary conclusions at this time, which I have reviewed with some care in the statement itself.

Given the basic intent to control monetary and credit growth within the target ranges over a period of time, the Federal Open Market Committee does continue to believe the present operating techniques are broadly appropriate.

We are examining what modifications and improvements might be made. We will continue to do so, with the benefits of this study and of whatever review of that study seems appropriate. I would emphasize that swings in money and credit aggregates over a month, a quarter, or even longer, should not be disturbing, and indeed, may in some situations be desirable, provided—and the proviso is very important—that there is understanding and confidence in our intentions over more signficant periods of time. A major part of the rationale of present or any other reserve-based techniques is to assure better monetary control over time.

I believe, but I can't prove, that the money supply in 1980 was held under closer control than if our operating emphasis had remained on interest rates themselves. I hope 1980 was instructive in demonstrating that we do take the targets seriously, both as a means of communicating our intentions to the public, and in disciplining ourselves.

I would like to explain the targets for 1981. Those targets were set with the intention of achieving further reduction in the growth of money and credit, returning such growth over time to amounts consistent with the capacity of the economy to grow at stable prices. Against the background of the strong inflationary momentum in the economy, the targets are frankly designed to be restrictive.

They do imply restraint on the potential growth of the nominal GNP. The heart of the problem is that if inflation continues unabated or rises, real activity is likely to be squeezed. But, as inflation begins noticeably to abate, the stage will be set for stronger real growth. Monetary policy is designed to encourage that disinflationary process.

But the success of that policy and the extent to which it can be achieved without great pressure on interest rates and stress on financial markets that have already been heavily strained will also depend upon other public policies and private attitudes and behavior. And I would underscore that point. It is a point we have made consistently.

Abstracting from the shifts in the NOW accounts and other interest-bearing transactions accounts, growth ranges for the narrower monetary aggregates, M_{1A} and M_{1B}, have been reduced by one-half of 1 percent to 3 to 5½ percent, and 3½ to 6 percent respectively.

Growth last year from the fourth quarter 1979 average to the fourth quarter 1980 average, when adjusted for shifts in the NOW accounts, approximated 6¼ percent and 6¾ percent, just about at the top of the target range.

Let me just interject here, Mr. Chairman, that we have a potentially confusing situation—and I want to be as clear about it as I can—arising from an institutional change related to the introduction of NOW accounts and other interest-bearing demand accounts nationwide that followed the Monetary Control Act that this committee and the Congress passed last year. Those transfers distort the figures in the short run.

We attempt to make estimates as we go along of what distortion is involved in those figures. But I can't emphasize too much the importance of interpreting those M_{1A} and M_{1B} figures with extreme caution during this period of transition, when to analyze them on a comparable basis with the prenationwide NOW account situation we have to make some estimates of what the impact is of institutional change that has no economic significance in terms of the assessment of the aggregates.

The CHAIRMAN. Are you saying that there is a question of the volatility of these NOW accounts?

Mr. VOLCKER. This is not a question of volatility at this point. This is a question of the transfer into the NOW accounts and how that distorts these aggregates in terms of earlier patterns.

The problem is that if a transfer into a NOW account comes from a demand deposit, which accounts for the great bulk of transfers, it comes out of M_{1A} and depresses M_{1A}, but it doesn't affect M_{1B}. So M_{1B} is a fine number, to the extent that demand deposits are the source of the transfer. However, you get the opposite effect if the transfer comes from savings accounts, which is the other major source. There may be other miscellaneous sources, too.

A savings account—my mother, for instance, might put the funds in her savings account in a NOW account. If it is a commercial bank, it has the same interest rate—so she has got an incentive to do so. That raises M_{1B}.

We now have a savings-type account included in M_{1B} which didn't used to be included in M_{1B}. If you don't adjust for that factor,

you get an increase in M_{1B}, which is recorded in our statistics. But it hasn't got the same economic significance as it would have before because it is a transfer from an account that was classified earlier in a different category.

We have to make an estimate of what the nature of those transfers are to get a sensible M_{1B} figure during this transition period. We have tried to estimate that from various sources of data such as surveys and analysis of various types of accounts.

That estimate is as good as we can make it, but it is not precise, and that is why I caution you about these figures during this transition period.

Mr. STANTON. Mr. Volcker, do you plan to publish that?

Mr. VOLCKER. Yes, we do. We can go over that in more detail. What we have set forward here—and I would emphasize its tentative nature—is a target which says what we want to do, in substance, but which abstracts from these changes.

We have also indicated an equivalent target here, as best we can judge it now, for what the figures will look like as they are reported in the first instance, counting those transfers, because the reported figures include the transfers. But these figures, are highly tentative and depend on our repeated surveys for what is actually going on.

If we are wrong in our present assumption, we will change that figure to make it equivalent to the underlying target which I just gave you. We estimate now that perhaps 80 percent of those transfers in the month of January came out of demand deposits, and therefore did not affect M_{1B}. That leaves 20 percent that did have this transitional effect on M_{1B} and "artificially" increased M_{1B}. Our assumption is that that percentage will decline over time, but that is an assumption which we will have to keep checking. As we check the assumption, if we are wrong about the assumption, we will report that. We intend to do that, whenever we feel reasonably confident of our grounds.

And this will require continuing——

Mr. STANTON. On a monthly basis?

Mr. VOLCKER. Perhaps we might do it monthly. I am not sure that we will have solid enough information to have a significant change in estimate monthly. If we begin getting information that the earlier assumption is wrong, we will report it very promptly.

But let me make clear that in the end we basically use three sources to estimate this:

First, we ask the banks and other financial institutions, "Where is the money coming from?" They can give us some estimate of where it comes from in the first instance; that is not a complete answer, but it is very helpful when these flows are very big. Second, we can look at what is going on in savings accounts and other accounts and try to see whether there are abnormal movements in those areas. Third, we have also undertaken to survey individuals directly. We ask them, "OK, do you have a NOW account? If you have a NOW account, did you just transfer from your demand deposit? Did you combine your savings account with it? How much, and what was the effect?"

We are trying to look at this from a variety of points of view. As we are able to make some estimate of this impact, we will report it. But it is going to be an estimate, when we are finished.

I might say that in view of this transitional difficulty, there was a view expressed by some in the Federal Open Market Committee that we should put very little or no weight on M_1 for this transitional period, because it is inevitably distorted. That points up the relevance of the M_2 and M_3 targets, which we did not change this year.

We did end up last year a little above on both of those targets, and as we looked at the situation and looked at what has been going on in recent years with M_2 and M_3, we felt that retaining the present target was in line with our general intent this year and was sufficiently restrictive. My statement emphasizes the need to be wary of these distortions in M_{1A} and M_{1B}.

These technical considerations should not obscure the basic thrust and intent of our policy posture. Our intent is not to accommodate inflationary forces; rather, we mean to exert continuing restraint on growth in money and credit to squeeze out inflationary pressures. That posture should be reflected in further deceleration in the monetary aggregates in the years ahead.

That seems to us an essential ingredient in any effective policy to restore price stability. During 1980, despite the pressures arising from sharply higher oil prices and the strong momentum of large wage settlements and other factors, inflation did not increase, but the hard fact is, we as a nation have not yet decisively turned back the tide of inflation.

In my judgment, until we do so, prospects for strong and sustained economic growth will remain dim. In that connection, forecasts by both the administration and the members of the Federal Open Market Committee do anticipate continuing economic difficulties and high inflation during 1981.

I have emphasized on a number of occasions that we now have a rare opportunity to deal with our economic malaise in a forceful, coordinated way. As things stand, the tax burden is rising, yet in principle, the need for tax reduction—tax reduction aimed to the maximum extent at incentives to invest, to save, and to work—has come to be widely recognized. Regulatory and other governmental policies have tended to increase cost excessively and damage the flexibility of the economy. But realization of the need to redress the balance of cost and benefits is now widespread.

Mr. CARMAN. Mr. Volcker, could I just interrupt you for just 1 second? May I just ask him one question in regard to his presentation at this point, or would that be out of order?

The CHAIRMAN. I would appreciate it if he could finish his presentation.

Mr. VOLCKER. Despite efforts to cut back from time to time, Government spending has gained a momentum of its own. Now, the possibility of attacking the problem headon presents itself. We are all conscious of the high levels of interest rates and the strains in our financial system. Yet, there is widespread understanding of the need for monetary restraint.

The new administration is clearly aware of these realities and has set forth a program of action. It has seized the initiative in

moving from opportunity to practical policy. I know that the case is sometimes made that monetary policy can alone deal with the inflation side of the equation. But not in the real world, Mr. Hansen, not if other policies pull in other directions, feeding inflationary expectations, propelling the cost and wage structure upwards, and placing enormous burdens on financial markets with large budgetary deficits into the indefinite future.

That is why it seems to me so critical, if monetary policy is to do its job without unduly straining the financial fabric, that the Federal budget be brought into balance at the earliest practical time. That objective cannot be achieved in a sluggish economy. Moreover, tax reduction, emphasizing incentives, is important to help lay the base for renewed growth and productivity.

For those reasons, the linchpin of any effective economic program today seems to me early, and by past standards massive, progress in cutting back the upward surge of expenditures on and off budget. We know the crucial importance of restraint on money and credit growth.

When I am asked about the need for consistency among all the elements of economic policy, a policy that can effectively deal with inflation and lay the groundwork for growth, I must emphasize the need to combine that monetary restraint with spending control. Cutting spending may appear to be the most painful part of the job, but I am convinced that the pain for all of us will ultimately be much greater if it is not accomplished.

[Mr. Volcker's prepared statement and a report of the Board of Governors of the Federal Reserve System, "Monetary Policy Report to Congress Pursuant to the Full Employment and Balanced Growth Act of 1978," follow:]

Statement by

Paul A. Volcker

Chairman, Board of Governors of the Federal Reserve System

before the

Committee on Banking, Finance and Urban Affairs

House of Representatives

February 26, 1981

I am pleased to be here this morning to discuss with you the Monetary Policy Report of the Board of Governors reviewing economic and financial developments over the past year, and setting forth appropriate ranges for growth of money and credit for 1981. My emphasis this morning will be on the present and future concerns of monetary policy. In that connection, I would like to touch first on some more technical considerations of Federal Reserve operating techniques.

As you well know, 1980 was a tumultuous year for the economy and financial markets. While most measures of the monetary and credit aggregates grew at or very close to our target ranges for the year as a whole, there was considerable volatility from month to month or quarter to quarter. Moreover, interest rates moved through a sharp cycle, and had considerable instability over shorter time spans.

In the light of these developments, I initiated in September a detailed study by Federal Reserve staff of the operating techniques adopted by the Federal Open Market Committee in October 1979, looking, among other things, to the question of whether the particular techniques we employed contributed importantly to the observed volatility. Those techniques, as described in our Report, place emphasis in the short run on following a path of non-borrowed reserves.

The study drew upon the substantial body of staff expertise both at the Board of Governors and at the regional Federal Reserve Banks, thus bringing to bear a variety of viewpoints and analytic approaches. The Open Market Committee has had some discussion of the findings, and we are now at a point where the work can be made available to interested outside experts. To assure full review, Board staff will be arranging "seminars," as appropriate, with economists having a close interest in these matters.

Among the important questions at issue is whether alternative techniques would promise significantly better short-run control over the monetary and credit aggregates, and whether such techniques would imply more interest rate instability. We also examined again the significance for the economy and for basic policy objectives of monthly, quarterly, or longer deviations of monetary growth from established target ranges.

For the convenience of the Committee and others, I have listed in this text some of the technical findings that may be of more general interest.

1. The work confirms that the week-to-week money supply figures are subject to a considerable amount of statistical "noise" -- unpredictable short-run variations related to the inherent difficulty of computing reliable weekly seasonal adjustment factors and other random disturbances. One analysis suggests the random element in the weekly M-1 data, as first published, is about $3 billion, plus or minus. While those variations average out over time, they could amount to $1½ billion on a monthly average basis, equivalent to a change of 4½ percent at an annual rate.

No clear evidence was found that, in the present institutional setting, alternative approaches to reserve (or monetary base) targeting would increase the precision of monetary control. Indeed, in current circumstances, some other approaches would appear to result in less precision in the short run. Perhaps more significant, the linkage between any reserve measure and money in the short run was loose; econometric tests seem to suggest that, even assuming absolute precision in meeting a reserve target (which is not in fact possible), monthly M-1 measures would be expected to deviate from the target by more than plus or minus 8 to 10 percent (at an annual rate) one-third of the time. Those deviations should tend to average out over time, so that much closer control could be achieved over a three-to-six month period, assuming no constraints on operations from interest rates or other factors. Those econometric results are consistent with the actual experience of 1980.

Pursuing the closest possible short-run control of the money supply by any technique entails a willingness to tolerate large changes over short periods of time in short-term interest rates -- greater than were experienced in 1980. The technique actually employed, as expected, contributed to more day-to-day or week-to-week volatility than earlier procedures, but presumably not so much as other, more rigid reserve targeting approaches. Experience in 1980 also strongly suggested that short-run changes in money market rates became more highly correlated with fluctuations in long-term interest rates, which may be of more significance to investment and financial planning. The degree to which that closer association reflected uncertainty and a learning process unique to 1980, or is inherent in reserve-based targeting, cannot be determined at this time.

Interest rate instability associated with the new techniques per se is extremely difficult to distinguish from other sources of interest rate fluctuation. However, the major swings in interest rates during the year -- historic peaks in early 1980, the sharp drop in the spring, and the return to historic highs --

> can be traced to disturbances in the economy itself, to the imposition and removal of credit controls, to the budgetary situation, and to shifting inflationary expectations. Indeed, while much compressed in time, the broad interest rate fluctuations were, in relative magnitude, not out of keeping with earlier cyclical experience.
>
> Money supply fluctuations last year over periods of a quarter or so were probably larger than might have been expected on the basis of econometric analysis of reserve control techniques. The inference from the study is that the credit control program and other external "shocks" could have been responsible. At the same time, the evidence is that the quarterly deviations in money growth from the trend for the year did not have an important influence on economic activity. If money growth had somehow been held constant, short-run interest rate variability would have been still larger.

In analyzing the results of the study, and given the basic intent to control monetary and credit growth within target ranges over a period of time, the Open Market Committee continues to believe present operating techniques are broadly appropriate. Assuming the present institutional structure, alternative reserve control approaches do not appear to promise more short-term precision. We do, however, have under consideration possible modifications and improvements. Without going into technical detail, such matters as more frequent adjustment of the discount rate, more forceful adjustments in the "path" for non-borrowed reserves when the money supply is "off course," and a return to contemporaneous reserve accounting are being actively reviewed. In each case, the possible advantages in terms of closer control of the monetary aggregates need to be weighed

against other considerations, including contributing to unnecessary short-run interest rate volatility.

As a personal observation, I would emphasize that swings in the money and credit aggregates over a month, a quarter, or even longer should not be disturbing (and indeed may in some situations be desirable), provided there is understanding and confidence in our intentions over more significant periods of time. A major part of the rationale of present, or other reserve based techniques, is to assure better monetary control over time. I believe, but cannot "prove," that the money supply in 1980 was held under closer control than if our operating emphasis had remained on interest rates. I hope 1980 was instructive in demonstrating that we do take the targets seriously, both as a means of communicating our intentions to the public and in disciplining ourselves.

In that light, I would like to turn to the targets for 1981. Those targets were set with the intention of achieving further reduction in the growth of money and credit, returning such growth over time to amounts consistent with the capacity of the economy to grow at stable prices. Against the background of the strong inflationary momentum in the economy, the targets are frankly designed to be restrictive. They do imply restraint on the potential growth of the nominal GNP. If inflation continues unabated or rises, real activity is likely to be squeezed. As inflation begins noticeably to

abate, the stage will be set for stronger real growth. Monetary policy is, of course, designed to encourage that disinflationary process. But the success of the policy, and the extent to which it can be achieved without great pressure on interest rates and stress on financial markets that have already been heavily strained, will also depend upon other public policies and private attitudes and behavior.

Abstracting from the impact of shifts into NOW accounts and other interest-bearing transaction accounts, growth ranges for the narrower monetary aggregates -- M-1A and M-1B -- have been reduced by one-half percent to 3-5½ percent and 3½-6 percent, respectively. Growth last year from the fourth quarter 1979 average to the fourth quarter 1980 average (when adjusted for shifts into NOW accounts) approximated 6-1/4 percent and 6-3/4 percent, just about at the top of the target range.* Consequently, the new target ranges imply a significant reduction in the monetary growth rates.

The Committee did not change the targets for M-2 or M-3. In the case of M-2, the upper end of the range was exceeded by about 3/4 percent in 1980, and there seems to have been

---

*Growth, as statistically recorded, was 5% for M-1A in 1980 and 7-1/4% for M-1B. Available evidence suggests about 2/3 of the transfer into interest-bearing checking accounts in 1980 reflected shifts from M-1A, "artificially" depressing M-1A and about one-third reflected shifts from savings or other accounts, "artificially" raising M-1B. The data and the targets cited in the text are calculated as if such shifts did not take place. Both adjusted and unadjusted data are shown in the attached tables.

some tendency recently for M-2, which includes new forms of market-rate savings instruments and the popular money market mutual funds, to grow more rapidly relative to the narrow aggregates. In the past few years, M-2 growth has been much closer to the growth of nominal GNP than has M-1 growth. Should those conditions prevail in 1981, actual results may well lie in the upper part of the range indicated. M-3, which includes instruments such as certificates of deposit used by banks to finance marginal loan growth, is influenced, as is bank credit itself, by the amount of financing channeled through the banking system as opposed to the open market. Changes in those aggregates must be assessed in that light.

I must emphasize that both M-1 series, as actually reported, are currently distorted by the shift into interest-bearing transaction accounts. Those shifts were particularly large in January, when for the first time depositary institutions in all parts of the country were permitted to offer such accounts. As the year progresses, we anticipate the distortion will diminish, as has already been the case in February. However, any estimate of the shifts into NOW-type accounts for 1981 as a whole, and the source of those funds, must be tentative.

Survey results and other data available to us suggest perhaps 80% of the initial shifts during January into NOW and related accounts were from demand deposits included in M-1A, thus "artificially" depressing that statistic. The remaining

20% was apparently shifted from savings accounts (or other investment instruments), "artificially" increasing M-1B. More recent data suggest the proportion shifting from demand deposits, while still preponderant, may be slowly falling. Making allowance for these shifts, M-1A and M-1B through mid-February of this year have remained near the December average level. At intervals, we plan to publish further estimates of the shifts in accounts and their implications for assessing actual growth relative to the targets. But I cannot emphasize too strongly the need for caution in interpreting published data over the next few months.

Once these shifts are largely completed, we plan publication of a single M-1 series. In that connection, I must note that the behavior of an M-1 series containing a large element of interest-bearing deposits, with characteristics of savings as well as transactions accounts, is likely to alter relationships between M-1 and other economic variables. For that and other reasons, the significance of trends in any monetary aggregate even over long periods of time must be analyzed carefully, and, if necessary, appropriate adjustment in targets made.

Those technical considerations should not obscure the basic thrust of our policy posture. Our intent is not to accommodate inflationary forces; rather we mean to exert continuing restraint on growth in money and credit to squeeze out inflationary pressures. That posture should be reflected in further deceleration in the monetary aggregates in the years

ahead, and is an essential ingredient in any effective policy to restore price stability.

During 1980, despite the pressures arising from sharply higher oil prices and the strong momentum of large wage settlements and other factors, inflation did not increase. But the hard fact is we, as a nation, have not yet decisively turned back the tide of inflation. In my judgment, until we do so prospects for strong and sustained economic growth will remain dim. In that connection, forecasts by both the Administration and members of the Open Market Committee anticipate continuing economic difficulties and high inflation during 1981.

I have emphasized on a number of occasions that we now have a rare opportunity to deal with our economic malaise in a forceful, coordinated way. As things stand, the tax burden is rising; yet, in principle the need for tax reduction -- tax reduction aimed to the maximum extent at incentives to invest, to save, and to work -- has come to be widely recognized. Regulatory and other governmental policies have tended to increase costs excessively and damage the flexibility of the economy; but realization of the need to redress the balance of costs and benefits is now widespread. Despite efforts to cut back from time to time, government spending has gained a momentum of its own; now, the possibility of attacking the problem head on presents itself. We are all conscious of the high levels of

interest rates and strains in our financial system; yet, there is widespread understanding of the need for monetary restraint.

The new Administration is clearly aware of these realities and has set forth a program of action. It has seized the initiative in moving from opportunity to practical policy.

I know that the case is sometimes made that monetary policy can alone deal with the inflation side of the equation. But not in the real world -- not if other policies pull in other directions, feeding inflationary expectations, propelling the cost and wage structure upwards, and placing enormous burdens on financial markets with large budgetary deficits into the indefinite future.

That is why it seems to me so critical -- if monetary policy is to do its job without unduly straining the financial fabric -- that the Federal budget be brought into balance at the earliest practical time. That objective cannot be achieved in a sluggish economy. Moreover, tax reduction -- emphasizing incentives -- is important to help lay the base for renewed growth and productivity. For those reasons, the linchpin of any effective economic program today seems to me early, and by past standards massive, progress in cutting back the upward surge of expenditures, on and off budget.

We know the crucial importance of restraint on money and credit growth. When I am asked about the need for consistency

among all the elements of economic policy -- a policy that can effectively deal with inflation and lay the groundwork for growth -- I must emphasize the need to combine that monetary restraint with spending control. Cutting spending may appear to be the most painful part of the job -- but I am convinced that the pain for all of us will ultimately be much greater if it is not accomplished.

* * * * * * *

TABLE 1

PLANNED AND ACTUAL GROWTH OF MONETARY AND CREDIT AGGREGATES
(percent changes, fourth quarter to fourth quarter)

M-1 targets and growth before and after shifts into ATS/NOW accounts

	After adjustments for shifts into ATS/NOW accounts		Before adjustments for shifts into ATS/NOW accounts	
	M-1A	M-1B	M-1A	M-1B
Planned for 1980	3½ to 6	4 to 6½	2½ to 4-3/4[b]	4½ to 7[b]
Actual 1980	6¼[a]	6-3/4[a]	5	7¼
Planned for 1981	3 to 5½	3½ to 6	-4½ to -2[c]	6 to 8½[c]

M-2, M-3 and Bank Credit Targets and Growth

	M-2	M-3	Bank Credit
Planned for 1980	6-9	6½-9½	6-9
Actual 1980	9.8	9.9	7.9
Planned for 1981	6-9	6½-9½	6-9

(a) Reflects current estimates of the impacts on M-1A and M-1B of shifting from demand deposits and other assets into new ATS and NOW accounts not taken into account in 1980 targets. Growth of M-1A is about 1-1/4 percentage points larger than actual recorded data after adding back in shifts out of demand deposits; growth of M-1B is reduced by about 1/2 percentage point after taking out shifts into M-1B from savings accounts and other assets.

(b) Target adjusted to reflect NOW/ATS account shifts referred to in note above.

(c) Reflect tentative assumptions regarding impacts of shifts into new ATS and NOW accounts in 1981. Growth of M-1A is assumed to be reduced by roughly 7-1/2 percentage points by transfer from demand balances to NOW-ATS accounts; growth of M-1B is assumed to be increased by 2-1/2 percentage points by transfer from sources outside of M-1. These assumptions will be reviewed from time to time.

TABLE 2

GROWTH OF MONEY AND BANK CREDIT
(percent changes, fourth quarter to fourth quarter)

	After adjustment for shifting into NOW/ATS accounts		Before adjustment for shifting into NOW/ATS accounts				
	M-1A	M-1B	M-1A	M-1B	M-2	M-3	Bank Credit
1975	4.9	4.9	4.7	4.9	12.3	9.4	4.1
1976	5.8	5.8	5.5	6.0	13.7	11.4	7.5
1977	8.0	8.0	7.7	8.1	11.5	12.6	11.1
1978	7.9	8.0	7.4	8.2	8.4	11.3	13.3
1979	6.7	6.8	5.0	7.7	9.0	9.8	12.3
1980	6.3	6.7	5.0	7.3	9.8	9.9	7.9

Board of Governors of the Federal Reserve System

Monetary Policy Report to Congress Pursuant to the Full Employment and Balanced Growth Act of 1978

February 25, 1981

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., February 25, 1981

THE PRESIDENT OF THE SENATE
THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

The Board of Governors is pleased to submit its Monetary Policy Report to the Congress pursuant to the Full Employment and Balanced Growth Act of 1978.

Sincerely,
Paul A. Volcker, Chairman

TABLE OF CONTENTS

Chapter 1

A Review of Developments in 1980

Section 1.1 Monetary Policy and the Performance of the Economy in 1980

The past year was marked by considerable turbulence in the nation's economy and credit markets. Output and employment experienced extraordinarily sharp swings--generally confounding forecasters inside and outside government--and so, too, did interest rates and financial flows. On balance, the level of the aggregate output of goods and services at the end of 1980 was little changed from that at the beginning of the year, and with a growing labor force, unemployment was appreciably higher. At the same time, inflation continued at about the same unacceptably high rate as in 1979.

Many factors--some of them beyond the realm of the purely economic--combined to produce this distressing performance. At bottom, however, the behavior of the economy demonstrated rather vividly the difficulties of overcoming a deeply entrenched inflation and, particularly, the stresses that arise when necessary monetary restraint is not adequately supported by other instruments of public policy.

As 1980 began, the underlying trend of price increase was approaching a double-digit pace, and a recent further jump in international oil prices threatened to worsen that trend. There was broad consensus that fighting inflation must be the top priority for national economic policy. The Federal Reserve shaped its policy for 1980 with the objective of reining in inflationary forces in the economy and establishing a framework within which decision-makers in both the public and private sectors could look forward over the longer run to a restoration of reasonable stability in the general price level.

The basic premise of the System's policy is the broadly accepted notion that inflation can persist over appreciable spans of time only if it

is accommodated by monetary expansion. The strategy to which the System has committed itself is to hold monetary growth to rates that fall short of such accommodation and thus encourage adjustments consistent with a return to price stability over time. To be sure, the relationships between the growth of money and the behavior of the economic variables of ultimate concern--such as production, employment, and inflation--are not in practice absolutely stable or predictable, especially in the short run. But the crucial fact is that rates of monetary expansion in the vicinity of those specified by the Federal Open Market Committee last February implied a substantial degree of restraint on the growth of nominal GNP--that is, the combined result of inflation and real growth. Put differently, the FOMC's ranges for monetary growth implied that, if inflation did not abate, there would in all likelihood be strong financial restraint on economic activity, reflected in an easing of pressures on markets for goods and services and thence on productive capacity, factors that in turn would help to contain the momentum of inflation. This stabilizing influence was especially critical in a circumstance in which the impulse of an OPEC price hike could easily have led to a ratcheting upward of the trend rate of inflation.

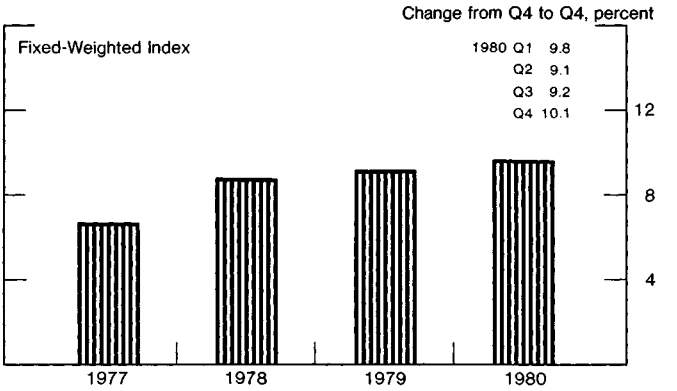
In the event, inflation did not abate in 1980; but neither did it gain new momentum, as many feared it might. Rather, the increases in most aggregate price indexes were about the same as were recorded in 1979. The fixed-weighted price index for gross national product rose 9-1/2 percent last year, a little more than in 1979, while the consumer price index rose 12-1/2 percent, somewhat less than in 1979. Such rates of inflation themselves result in a substantial increase in the amount of money needed to finance transactions. Thus, even though the monetary aggregates generally expanded

at rates near or a bit above upper ends of the FOMC's announced ranges, the steep rise in prices resulted in marked pressures in the credit markets that exerted restraint on economic activity and kept inflationary pressures from worsening.

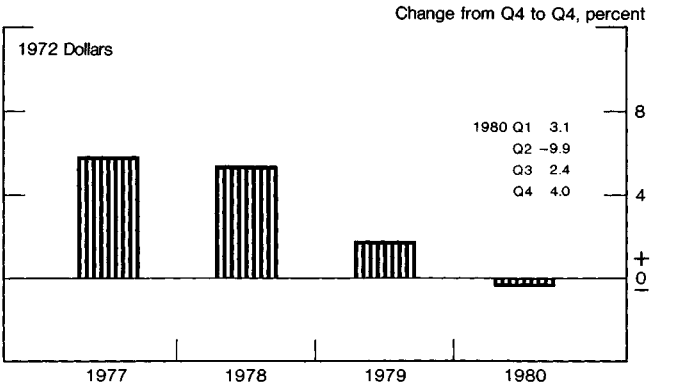
These developments did not occur evenly throughout the year. During the opening months, the late-1979 boost in imported oil prices combined with other factors--including strife in Afghanistan, unsettlement in the Middle East generally, and attendant fears that an escalation of defense spending might greatly enlarge already sizable federal deficits--to aggravate inflationary expectations. These expectations contributed importantly to the upward pressures on interest rates that were associated with the Federal Reserve's efforts to contain growth in the monetary and credit aggregates. Then, in March, President Carter announced an anti-inflation program that included the application by the Federal Reserve of special restraints on credit growth, utilizing the powers of the Credit Control Act of 1969.

The tightening of credit markets and the psychological impact of the credit restraint program on consumers contributed to the sharpness of the economic decline that occurred in the first half of the year, although a decline at some point had long been anticipated in the light of strong pressures on financial positions and other factors. The drop in real gross national product during the second quarter far exceeded the expectations of forecasters; in fact, it was the sharpest of the postwar period. However, with the slump in activity came a pronounced weakening of demands for money and credit and a steep decline in interest rates. The lowering of credit costs, coupled with removal of the special credit restraints, in turn was instrumental in bringing about an rebound in economic activity in the second half of the year which

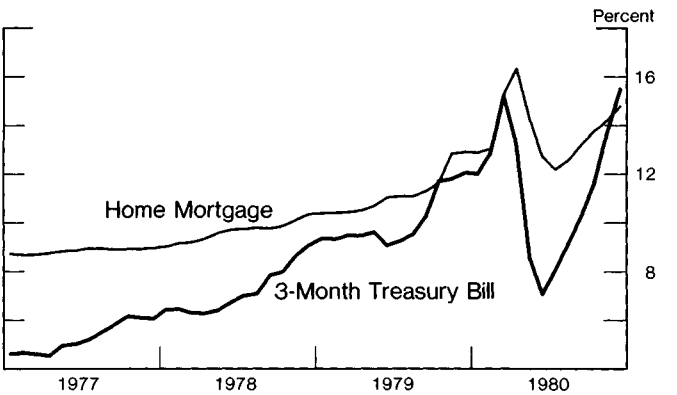
GNP Prices



Real GNP



Interest Rates

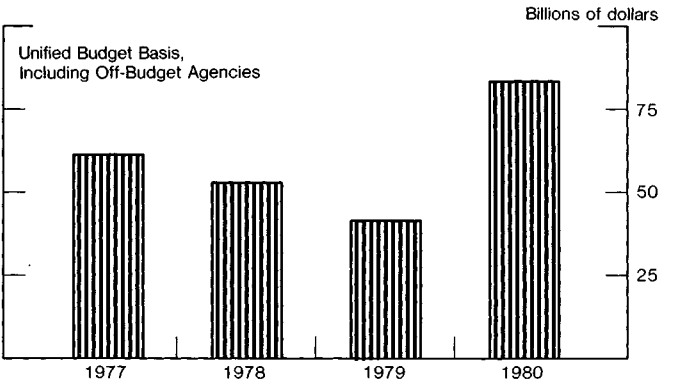


turned out to be unexpectedly early and strong and restored real GNP almost to its yearend 1979 level. During this period of recovery, the public's demands on financial markets grew and interest rates rose as the System attempted to hold monetary expansion within bounds.

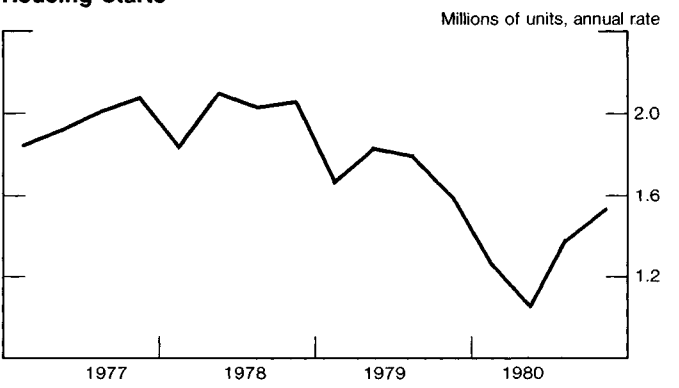
The financial pressures on the private sector of the economy last year were intensified by the competition of the federal government for the limited supply of credit. The federal deficit (unified basis, including off-budget agencies) grew from $41 billion in calendar year 1979 to $83 billion in calendar year 1980. During 1980, moreover, the massive federal deficit and repeated upward revisions in spending forecasts added to the prevailing mood of uncertainty and weakened public confidence in the government's willingness and ability to mount a successful anti-inflation effort.

In 1980, as in most periods of financial tension, it was those types of purchases that involve longer-term investments of large sums that were hardest hit. The residential construction sector, especially, was squeezed by high interest rates and, particularly in the first half of the year, by reduced credit availability. Housing starts fell from a 1.6 million unit annual rate in the fourth quarter of 1979 to a 1.1 million unit rate in the second quarter of 1980; they then snapped back sharply to just over 1.5 million units by the end of the summer, leveling off at that rate as interest rates moved upward again in the final months of the year. The mortgage markets have seen remarkably rapid institutional change in the past year, reflecting an adaptation to recurrent cyclical pressures on key lenders and to the difficulties potential homebuyers face with traditional mortgage instruments. Still, these changes have not insulated the real estate market from the effects of inflated home

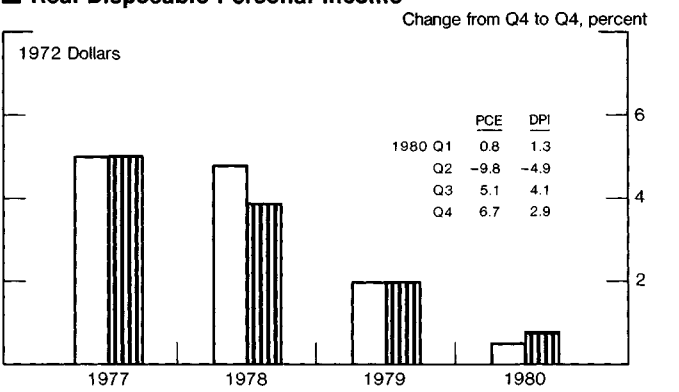
Federal Government Deficit



Housing Starts



☐ Real Personal Consumption Expenditures
▥ Real Disposable Personal Income

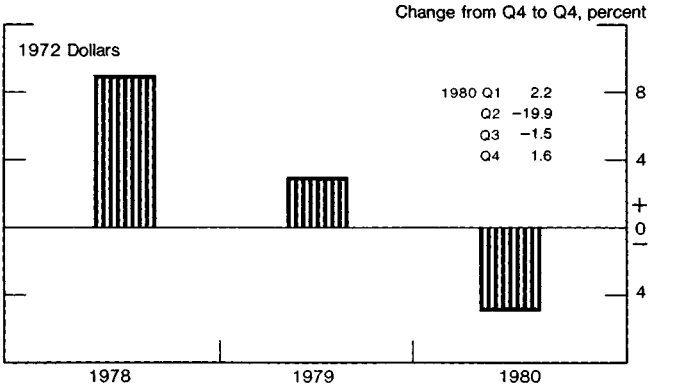


prices and high mortgage rates on the willingness and ability of people to borrow and buy houses.

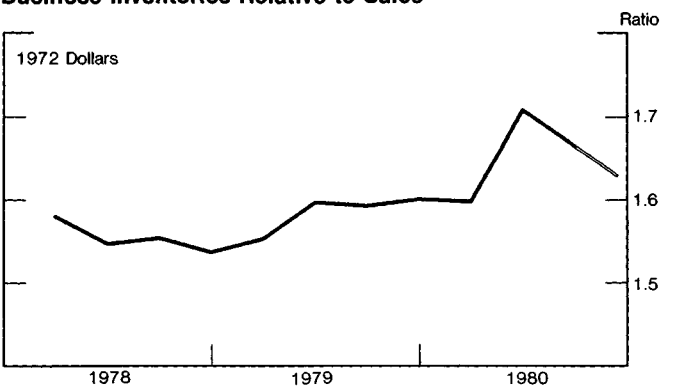
Credit conditions also played a role in damping personal consumption expenditures in 1980--particularly outlays on big-ticket durable goods. However, several other influences militated against a robust pattern of consumer spending. The period leading up to 1980 had been marked by weakness in real disposable personal income and by an erosion of the financial flexibility of households. Faced with budgetary strains caused by relatively rapid increases in the prices of such basic necessities as food and energy, many American families had sought to maintain customary consumption patterns--and in some cases to finance extra purchases in anticipation of inflation--by borrowing. A declining trend in the personal saving rate suggested that consumers were becoming overextended and that some weakening in spending relative to income was quite likely; indeed, the saving rate rose from 4.7 percent in the fourth quarter of 1979 (a 28 year low) to 6.2 percent in the second quarter of 1980. Automobile purchases, which tend to be deferable in the short run, bore the brunt of the consumer retrenchment. Although credit conditions discouraged dealers from financing large inventories and to some extent were a depressant on demand for autos more generally, the steep increases in the prices of cars and gasoline appear to have been more decisive elements in the picture.

Business firms, like households, entered 1980 in a weakened financial condition. The preceding years of expansion had seen a substantial deterioration in aggregate measures of corporate liquidity; many enterprises were heavily burdened with short-term debt, and they thus were exposed to severe cash flow pressures when interest rates rose. The combination of deteriorating balance sheets, a high cost of capital, and slackening demands for final products resulted

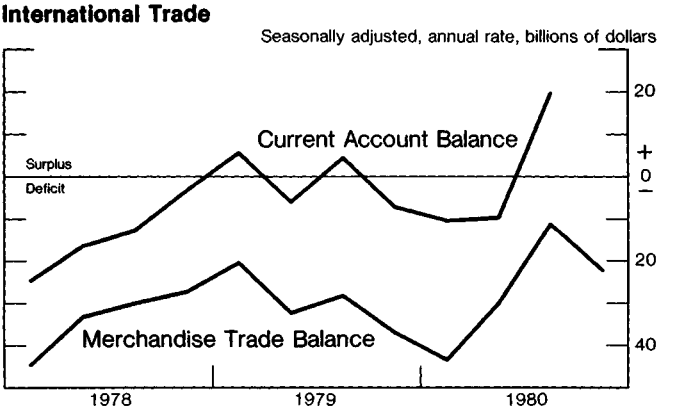
Real Business Fixed Investment



Business Inventories Relative to Sales



International Trade

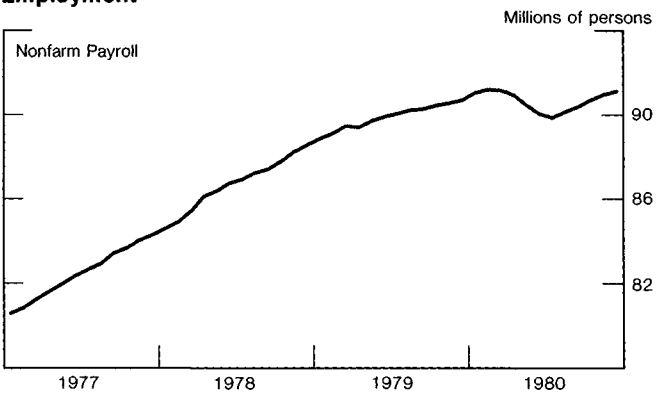


in a 5 percent drop in real business fixed investment during 1980. Some industries--particularly in the defense, energy, and high-technology sectors--did register gains in capital outlays, but those elements of strength were more than offset by declines in most cyclical manufacturing industries. Plant construction spending was especially weak. Meanwhile, businesses kept a tight rein on inventories, encouraged by the high costs of carrying stocks; a moderate accumulation during the first-half recession--concentrated in the automotive and related industries--was largely eliminated in the subsequent rebound.

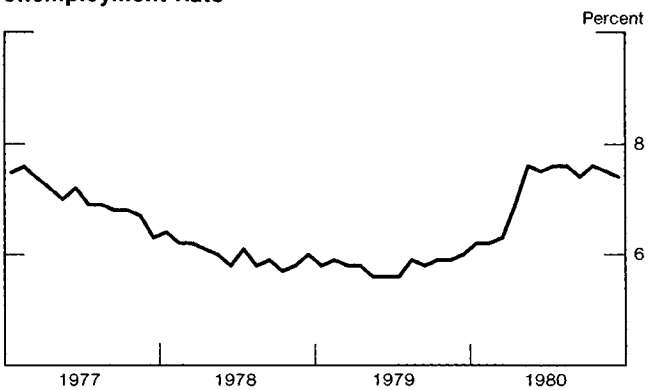
In the government sector, purchases of goods and services by the federal government rose moderately in real terms during 1980, reflecting in part a pick-up in defense outlays. At the state and local level, real purchases were about unchanged, owing to fiscal strains associated with a slowing of growth in tax revenues and cutbacks in federal grants as well as to political pressures for spending restraint.

The slackening of domestic aggregate demand worked to hold down imports; in the case of petroleum imports, the impact of decreased economic activity was reinforced by the incentive for conservation provided by a sharply increased relative price of oil and other energy products. At the same time, U.S. exports--including both agricultural commodities and other products--rose appreciably in real terms. Net exports thus registered a noticeable increase during 1980, and the U.S. current account moved into sizable surplus in the second half of the year. The trade and current account developments contrasted sharply with those of some other major industrial countries and contributed to a substantial appreciation of the dollar relative to continental European currencies over the course of the year.

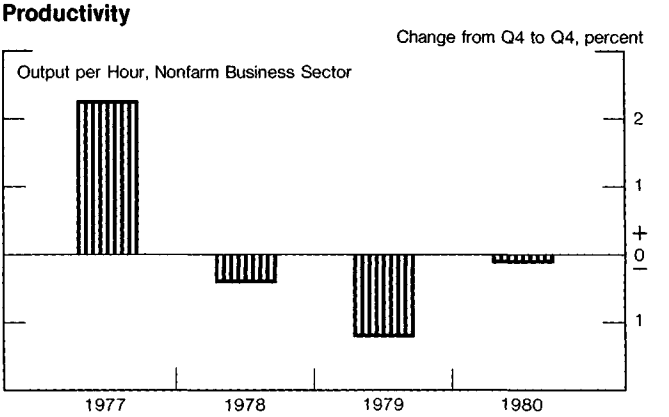
Employment



Unemployment Rate



Productivity

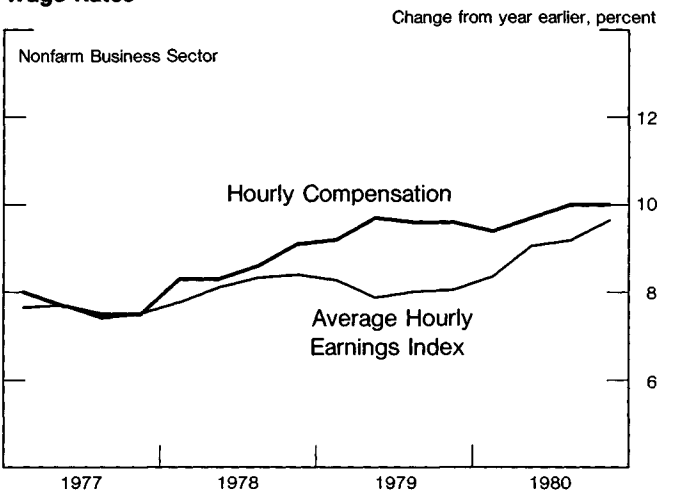


Employment traced a path similar to that of output in 1980--that is, down substantially in the first half and up substantially in the second, with little net change. There was some alteration in the composition of employment over the course of the year, however, with jobs in manufacturing and construction decreasing and those in service industries increasing. The combination of this change in employment mix and a tendency for employers to lag in adjusting their work forces to lower levels of production contributed to a continued disappointing performance of labor productivity--output per hour worked--which showed no gain for the year.

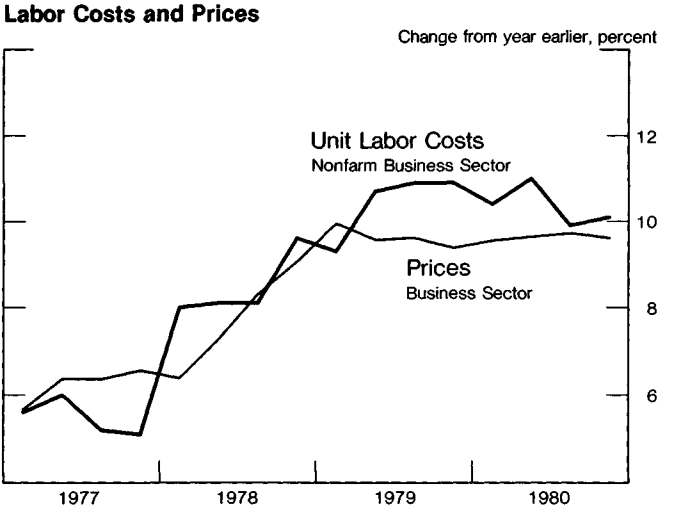
With no moderating influence from the productivity side, the rise in unit labor costs reflected directly the behavior of wages and other labor expenses during 1980. In the nonfarm business sector, average hourly compensation--which includes employer contributions for social insurance and the cost of fringe benefits--rose 10 percent, a bit more than in 1979. However, this measure, because it does not account for changes in the mix of employment or in overtime, probably understates the acceleration in wage rates. For example, the index of average hourly earnings for production and nonsupervisory personnel, which does include adjustments for such factors, increased 9-1/2 percent in 1980 compared with 8 percent in 1979.

Wages typically are slow in responding to economic slack, and, given the large increases in consumer prices in 1979 and 1980, there were strong tendencies toward sizable catch-up wage hikes even in the face of an unemployment that reached 7-1/2 percent last spring. This tendency manifests itself in a direct way when formal cost-of-living escalator clauses exist. Such clauses are most common in the manufacturing sector, especially where there is collective bargaining by large industrial unions, and the acceleration of wage rates was in fact relatively pronounced in that sector.

Wage Rates



Labor Costs and Prices



Section 1.2 The Growth of Money and Credit in 1980

In its report to the Congress last February, the Board of Governors indicated the plans of the Federal Open Market Committee regarding the growth of money and credit in 1980. As in previous years, the FOMC set desired ranges for the growth of several monetary aggregates and of commercial bank credit. Measured from the fourth quarter of 1979 to the fourth quarter of 1980, the growth ranges were as follows: M-1A, 3-1/2 to 6 percent; M-1B, 4 to 6-1/2 percent; M-2, 6 to 9 percent; M-3, 6-1/2 to 9-1/2 percent; and bank credit, 6 to 9 percent.1/ It was recognized that legislative initiatives--then pending--in the area of financial regulation could alter the desired rates of increase, as could any other unanticipated developments that indicated that the prescribed growth rates were inconsistent with the basic objectives of policy. As stated, however, the ranges suggested a clear deceleration of money and credit growth from the pace of 1979--a specification that appeared appropriate in terms of both the near-term and long-term requirements of anti-inflation policy.

As noted in the preceding section, the monetary and credit aggregates grew quite rapidly in the opening part of the year. Then, as economic activity began to fall rapidly, the growth of money and credit slowed markedly. Indeed, the narrow monetary aggregates, M-1A and M-1B, which are measures of the public's transactions balances, actually contracted significantly in the second quarter.

1/ M-1A is currency plus private demand deposits at commercial banks net of deposits due to foreign commercial banks and official institutions. M-1B is M-1A plus other checkable deposits (i.e., negotiable-order-of-withdrawal accounts, accounts subject to automatic transfer service, credit union share draft balances, and demand deposits at mutual savings banks). M-2 is M-1B plus savings and small denomination time deposits at all depository institutions, shares in money market mutual funds, overnight repurchase agreements (RPs) issued by commercial banks, and overnight Eurodollar deposits held by U.S. residents at Caribbean branches of U.S. banks. M-3 is M-2 plus large time deposits at all depository institutions and term RPs issued by commercial banks and savings and loan associations. Bank credit is total loans and investments of commercial banks.

This decline, occurring as it did at the same time that interest rates were falling sharply, was considerably greater than would have been expected on the basis of historical relationships among money, income, and interest rates. The weakness in the M-1 measures tended to restrain the growth of the broader monetary aggregates. Bank credit meanwhile contracted slightly.

At midyear, when the FOMC reassessed the monetary growth ranges for 1980, there were few, if any, signs of the then incipient economic recovery. The monetary aggregates, though again on the rise, were either below or in the lower portion of the previously announced ranges. The Depository Institutions Deregulation and Monetary Control Act of 1980 had been signed into law at the end of March, but there was no clear evidence yet of significant impact on the behavior of the monetary aggregates. In these circumstances, the Committee reaffirmed the ranges for money and bank credit that it had adopted in February, but it did indicate that, if the public continued to economize on the use of cash as strongly as in the second quarter, M-1A and M-1B might well finish the year near the lower end of their respective ranges.1/ Such a proviso was called for because a sustained downward shift in the demand for money implies that a given rate of monetary growth is more expansionary in its impact on the economy than would otherwise be the case.

Over the second half of the year, however, the monetary aggregates and bank credit grew very rapidly. There was a surprisingly swift and strong turnaround in economic activity. And simultaneously the public's demand for money retraced most of the evident downward shift of the first half. Both of

1/ There had been previous episodes, particularly in the mid-1970s, of lasting downward shifts in the demand for M-1 balances following rises in interest rates to new record high levels. Such interest rate movements evidently encouraged greater efforts to economize on holdings of nonearning assets.

these developments may have been associated with the phasing out of the extraordinary credit restraint program at the end of the second quarter. In retrospect, this program seems to have played a greater role than was apparent at midyear in influencing the particular patterns of spending and financial flows that developed in the spring and summer.

Although the Federal Reserve resisted the accelerating growth in money and credit--and did succeed in bringing about a clear deceleration in the latter months of the year--the growth of the monetary aggregates on a fourth quarter to fourth quarter basis in 1980 was generally near or a bit above the upper ends of the ranges announced by the System. Bank credit growth was within the range specified by the FOMC. The movements of the various financial aggregates are charted on the next two pages.

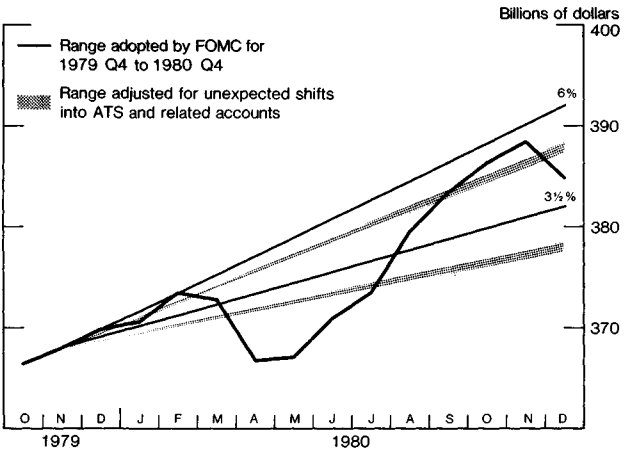
Considerable care must be exercised in assessing the behavior of M-1A and M-1B. Last February, when the ranges for the aggregates were set, it was assumed that the growth rates of the two aggregates would differ only by 1/2 percentage point, based on an expectation that, under prevailing statute, growth in automatic transfer service (ATS) and negotiable order of withdrawal (NOW) accounts would draw few funds from demand deposits (depressing M-1A) and savings deposits (boosting M-1B). With the passage of the Monetary Control Act, however, which authorized NOW accounts on a nationwide basis as of December 31, 1980, commercial banks began to promote ATS accounts more vigorously. As a result, actual growth of ATS and NOW accounts substantially exceeded the amount allowed for in the FOMC ranges for M-1A and M-1B.

As may be seen in the charts, M-1A increased 5 percent over the year ended in the fourth quarter of 1980, close to the midpoint of the FOMC's range for that aggregate; meanwhile, growth in M-1B was 7-1/4 percent, 3/4 percentage

—16—

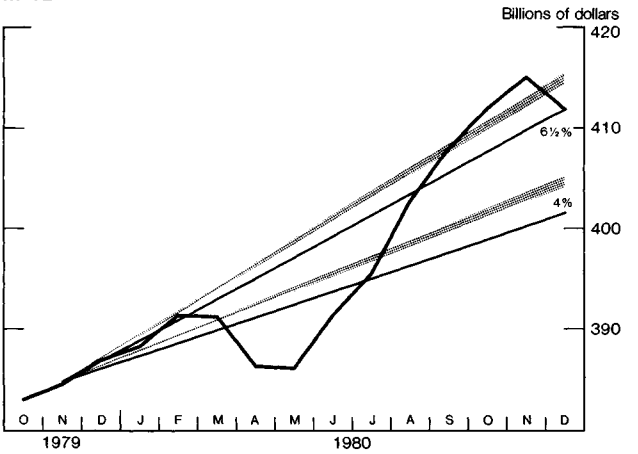
Growth Ranges and Actual Monetary Growth

M-1A



Rate of Growth
1979 Q4 to 1980 Q4
5.0 Percent

M-1B

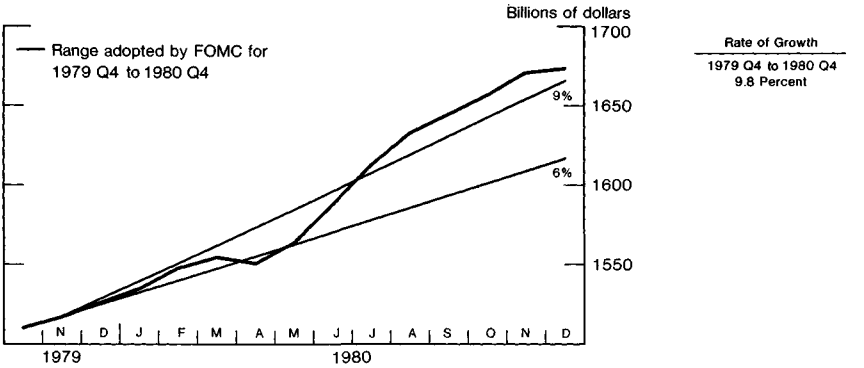


Rate of Growth
1979 Q4 to 1980 Q4
7.3 Percent

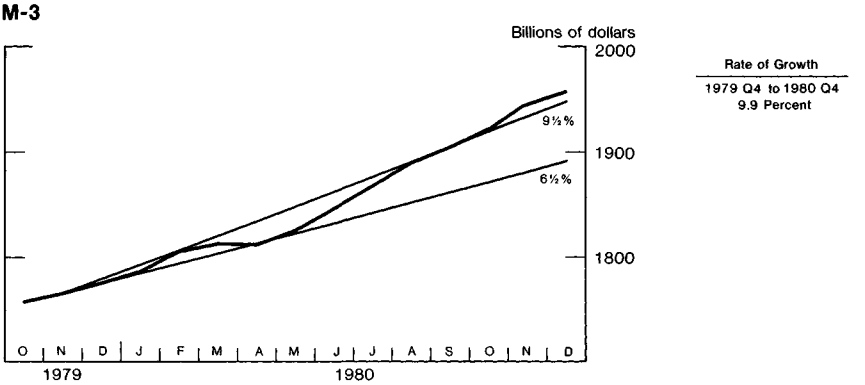
—17—

Growth Ranges and Actual Monetary and Bank Credit Growth

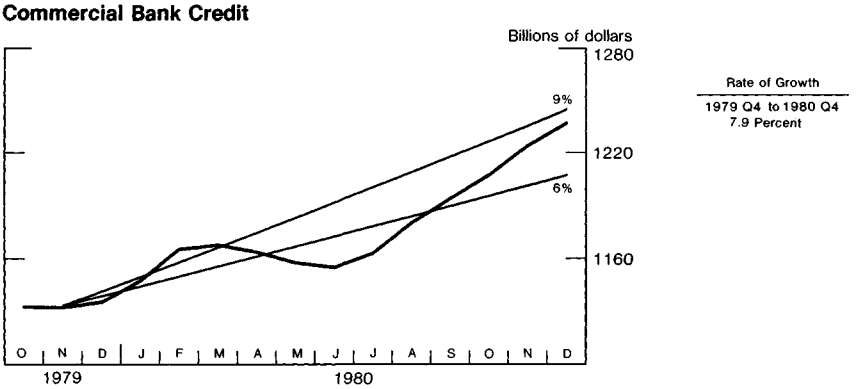
M-2



M-3



Commercial Bank Credit



point above the upper end of its longer-run range. But if the FOMC's ranges are adjusted for current estimates of the actual impact of shifting into ATS and NOW accounts, as shown in the chart by the shaded lines, the increases in both the narrow aggregates are close to the upper bounds of the FOMC's ranges for 1980.

It may be noted that, although conventionally fourth quarter averages have been adopted as the basis for measuring annual growth in the money and credit aggregates, the choice is somewhat arbitrary and is only one of many possible approaches. Moreover, citing figures for any particular calendar period does not necessarily give a clear sense of the longer-term trends, which are more relevant in assessing policy. For that reason, the table on page 19 offers measurements of annual growth on several bases. Owing to the particular monthly patterns over the past two years, the fourth quarter to fourth quarter calculations show a lesser tendency toward deceleration in the growth of M-1A and M-1B than do other measurements of the 1980 experience.

The effects on M-2 of shifting into ATS and NOW accounts likely are minor, since nearly all the inflows to those instruments appear to be from assets within this broad aggregate. For the year as a whole, M-2 grew about 9-3/4 percent, 3/4 percentage point above the upper end of the FOMC's range. All of the growth in the nontransactional component of M-2 occurred in those assets offering market-related yields--primarily 6-month "money market certificates," 2-1/2-year "small saver certificates," and shares of money market mutual funds. As of December, these assets accounted for 45 percent of the nontransactional component of M-2, compared with 28 percent a year earlier. In earlier periods of high interest rates, when such instruments did not exist, M-2 tended to decelerate markedly as disintermediation occurred, with savers shifting funds

Growth of Money and Bank Credit
(percentage changes)

	M-1A	M-1B	M-2	M-3	Bank Credit
Fourth quarter to fourth quarter					
1978	7.4 (7.9)	8.2 (8.0)	8.4	11.3	13.3
1979	5.0 (6.7)	7.7 (6.8)	9.0	9.8	12.3
1980	5.0 (6.3)	7.3 (6.7)	9.8	9.9	7.9
December to December					
1978	7.1 (7.8)	8.2 (7.9)	8.3	11.2	13.6
1979	5.2 (6.6)	7.5 (6.8)	8.9	9.4	11.5
1980	4.1 (5.2)	6.5 (5.8)	9.7	10.3	8.9
Annual average to annual average					
1978	7.7 (8.0)	8.2 (8.0)	8.9	11.7	12.3
1979	5.2 (6.8)	7.8 (7.0)	8.9	10.3	13.4
1980	4.6 (5.6)	6.4 (5.9)	9.1	8.6	8.3

Note: Numbers in parentheses are adjusted for the estimated impact of shifting to ATS and NOW accounts from other assets, and should give a better indication of the underlying trend of monetary expansion.

into market instruments. In 1980, the growing popularity of these relatively new assets may well have drawn some funds into M-2 from market securities such as Treasury bills, causing M-2 to grow somewhat more rapidly than in the preceding two years and also faster relative to M-1B.

M-3 grew almost 10 percent over the four quarters of 1980, 1/2 percentage point above the upper end of its longer-run range. Large time deposits expanded moderately at commercial banks and thrift institutions during the year; in the case of banks, which issue the bulk of these instruments, the borrowing was offset by a reduction of net liabilities to foreign branches.

Bank credit grew about 8 percent in 1980. Fluctuations in this measure followed the general pattern of aggregate credit flows in the economy, but they were exaggerated by changes in the composition of business borrowing. During the first quarter, nonfinancial firms avoided long-term borrowing at record high interest rates and turned instead to the commercial banks for funds. In fact, they appear to have borrowed beyond their immediate needs in anticipation of greater credit stringency. During the second quarter, as bond rates dropped sharply and as banks tightened their lending policies in response to the special credit restraint program, corporations issued an unprecedented volume of long-term securities and repaid outstanding bank loans. During the summer months, as interest rates began to rise, the pattern of financing began to reverse again and in the fourth quarter businesses again deferred long-term borrowing and tapped their banks for credit.

Broader measures of credit flows in the economy also exhibited a considerable cyclical fluctuation in 1980. Total funds raised by all sectors of the economy in credit and equity markets fell by almost one-half in the second quarter and then retraced most of that decline in the third quarter. For the

year as a whole, aggregate funds raised were substantially less than in 1978 and 1979. Commercial banks provided about the same share of total credit flowing to all sectors as in 1979, while the share of thrift institutions rose somewhat.

NET FUNDS RAISED AND SUPPLIED IN CREDIT AND EQUITY MARKETS
(Billions of dollars)

Sector	1978	1979	1980p	1980[1] Q1	Q2	Q3	Q4p
			NET FUNDS RAISED				
Total, all sectors	482	483	434	497	253	454	534
U.S. government	54	37	79	62	67	99	89
State and local government	24	16	21	21	12	24	27
Foreign	32	21	30	24	35	27	33
Private domestic nonfinancial	291	321	234	303	119	231	281
Business	128	156	133	163	79	133	155
Household	163	165	101	140	40	98	126
Domestic financial	81	88	70	87	20	73	104
Private intermediaries	40	36	23	32	-16	33	44
Sponsored credit agencies	23	24	24	34	16	12	36
Mortgage pool securities	18	28	23	21	20	28	24
			NET FUNDS SUPPLIED				
Total, all sectors	482	484	435	498	253	456	534
U.S. government	20	23	26	29	30	24	21
State and local government	15	13	20	18	2	36	23
Foreign	40	-6	22	-8	47	22	27
Private domestic nonfinancial	51	81	29	74	-51	55	39
Business	-1	10	10	8	-10	22	22
Household	52	71	19	66	-41	33	17
Domestic financial	356	373	338	385	225	319	424
Private intermediaries	305	308	285	315	179	293	353
Commercial banking	129	121	104	117	-2	129	171
Thrift institutions	76	56	57	35	27	74	94
Insurance and pension funds	84	90	98	103	108	93	86
Other[2]	16	41	26	60	46	-3	2
Sponsored credit agencies	26	29	25	40	6	24	32
Mortgage pool securities	18	28	23	21	20	28	24
Federal Reserve System	7	8	5	9	20	-26	15

1. Seasonally adjusted annual rates.
2. Includes finance companies, money market funds, real estate investment trusts, open-end investment companies, and security brokers and dealers.
p--Data for the fourth quarter of 1980 are preliminary.

Section 1.3 Issues in Monetary Control

Monetary growth in 1980 was, on balance, fairly close to the ranges specified by the FOMC. And, more important, the Federal Reserve's actions clearly imposed a significant--and essential--degree of restraint on the aggregate demand for goods and services in the economy. Nonetheless, particularly in view of the magnitude of the short-run swings in interest rates and financial flows in the past year, questions have been raised--inside as well as outside the Federal Reserve--about the techniques of implementing monetary policy and, especially, about the efficacy of the new operating procedures adopted in October 1979. These questions have been addressed in an intensive study of the recent period. A staff memorandum presenting an overview of the findings of that study and an evaluation of the new operating procedures is appended to this report.

As a prelude to discussing the key points raised by the staff work, it is useful to describe in broad outline the general approach of the Federal Reserve to monetary policy. For a number of years, monetary aggregates have played a key role as intermediate targets for policy, that is, as variables standing midway in an economic chain linking the proximate instruments of the Federal Reserve--open market operations, the discount window, and reserve requirements--to the variables of ultimate concern, such as production, employment, and prices. Economists have debated extensively the question of the optimal intermediate target variable, with the controversy centering on the virtues of monetary aggregates versus interest rates. The System historically has, in effect, taken an eclectic view, believing that it would be remiss in ignoring the information provided by the movements of any financial or economic

variable. However, it has perceived a clear value in focusing special attention on the behavior of the money stock, especially in an environment in which inflation is such a prominent concern. A special role for the monetary aggregates is, furthermore, dictated by the requirement of the Humphrey-Hawkins Act that the Federal Reserve report to the Congress on its objectives for monetary expansion.

Analysts of all schools agree that, over the long run, inflation cannot persist without monetary accommodation. Thus, careful attention to the trend of monetary expansion is an absolutely essential feature of responsible monetary policy. In addition, however, in a shorter-run context, monetary aggregates are attractive as intermediate targets because they provide a mechanism of "automatic stabilization." When the economy begins to expand too rapidly, the associated increase in the quantity of money demanded for transactions purposes comes into conflict with the monetary target, and this results in a rise in market rates of interest; the rise in interest rates, in turn, damps the aggregate demand for goods and services. Similarly, if there is a recessionary impulse to the economy, the associated reduction in the demand for cash balances leads to an easing of credit conditions that moderates the impact of that impulse. Pursuit of an interest rate target carries with it a greater danger that an unanticipated impulse to the economy will tend to be fully accommodated, with greater inflationary or recessionary consequence.

Open market operations are the major tool of monetary control. Prior to October 1979, the basic approach employed by the System was to supply or absorb reserves through open market operations with an eye to holding short-term interest rates--most immediately, the federal funds rate--within a relatively narrow but changing band thought consistent with the desired growth of the

money stock. This method placed considerable importance on the System's ability to predict the quantity of money the public would wish to hold at given interest rates. This never was an easy matter, but in 1979, particularly as the advance of prices accelerated and inflationary expectations became a more significant and volatile factor affecting economic and financial behavior, predicting the public's desired money holdings at given levels of nominal interest rates became exceedingly difficult. As a consequence, in October the Federal Open Market Committee altered its technique of monetary control, substituting the volume of bank reserves for interest rates as the day-to-day guide in conducting open market operations.

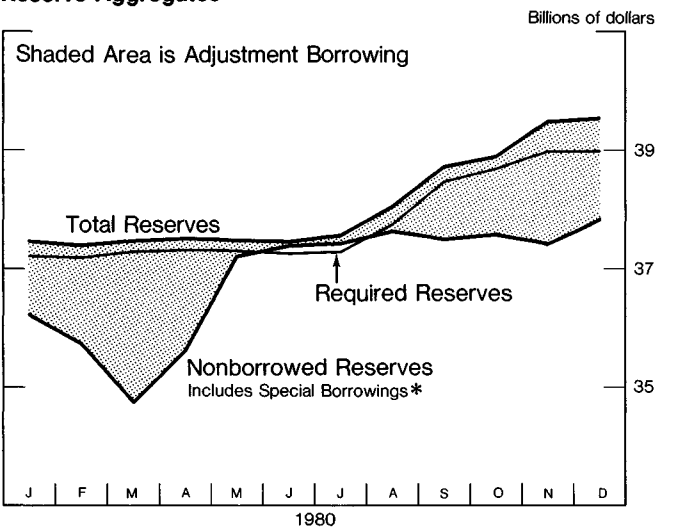
Under the approach adopted in October 1979, the FOMC sets short-run targets for monetary expansion, as it did previously, to guide operations between meetings. The staff then calculates corresponding paths for various reserve aggregates. A path for total reserves is calculated based on the expected relationship between reserves and the money stock--the so-called reserves-money multiplier. This relationship is variable and not known with certainty because of the differences in reserve requirements on various components of the monetary aggregates, which shift in relative importance from week to week; moreover, in addition to required reserves, depository institutions also hold a varying amount of excess reserves. A path for nonborrowed reserves then is calculated by making an allowance for the portion of total reserves expected to be provided through borrowings at the Federal Reserve Bank discount windows.

Between meetings of the FOMC, the Open Market Desk focuses on achieving a given level of nonborrowed reserves, the reserve measure that is controllable through open market operations on a day-to-day basis. If the monetary aggregates deviate from their prescribed growth rates, the resultant movement

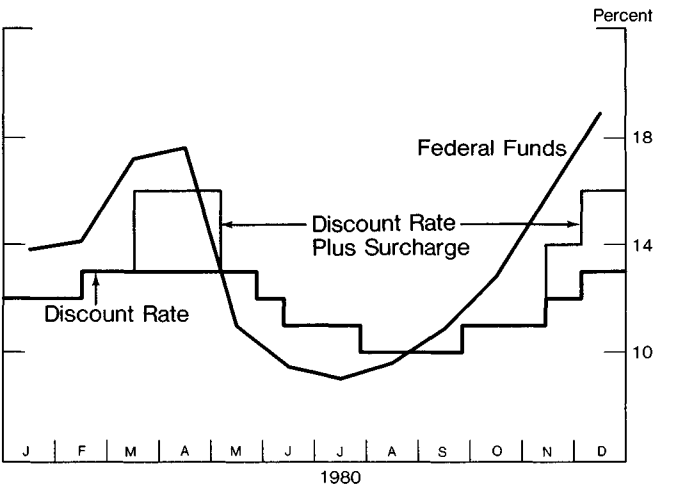
in required reserves is reflected in an increase or decrease in borrowing at the discount window. Owing to administrative limitations imposed by the Federal Reserve on the frequency, amount, and purposes of borrowing, an increase in borrowing puts upward pressure on the federal funds rate as individual depository institutions bid more aggressively in the market for the available supply of nonborrowed reserves in an effort to shift the need to borrow to other institutions. A decline in borrowing has the opposite effect. The resultant movements in short-term interest rates induce portfolio adjustments by depository institutions and the public that tend to move the money stock back toward the targeted level. If it appears that these automatic effects are not going to be prompt enough or strong enough--as evidenced in part by sustained deviations in total reserves from their path--the System can reinforce them by making adjustments in the path for nonborrowed reserves that increase the upward or downward pressures on money market interest rates. Similar effects can be achieved through changes in the discount rate, given the nonborrowed reserves path.

The workings of this mechanism of monetary control are illustrated clearly by the movements in reserves and interest rates during 1980, which are shown in the chart on the next page. During the early part of the year, when the money stock was running above the FOMC's short-run target, the volume of adjustment credit provided by the discount window (the vertical dimension of the shaded area) increased substantially while the amount of nonborrowed reserves provided through open market operations declined, partly as a consequence of reductions in the nonborrowed reserves path to hold down total reserves and restrain the growth of money over time. As can be seen, during this period the federal funds rate rose sharply. Restraint was intensified by increases in

Reserve Aggregates



Interest Rates



*Special borrowings consists of credit provided to institutions through the discount window to assist them in dealing with relatively severe and persistent liquidity problems. Because there is not the same pressure to repay such borrowing promptly as exists with normal adjustment credit, the broader economic impact of special borrowing is similar to that of nonborrowed reserves.

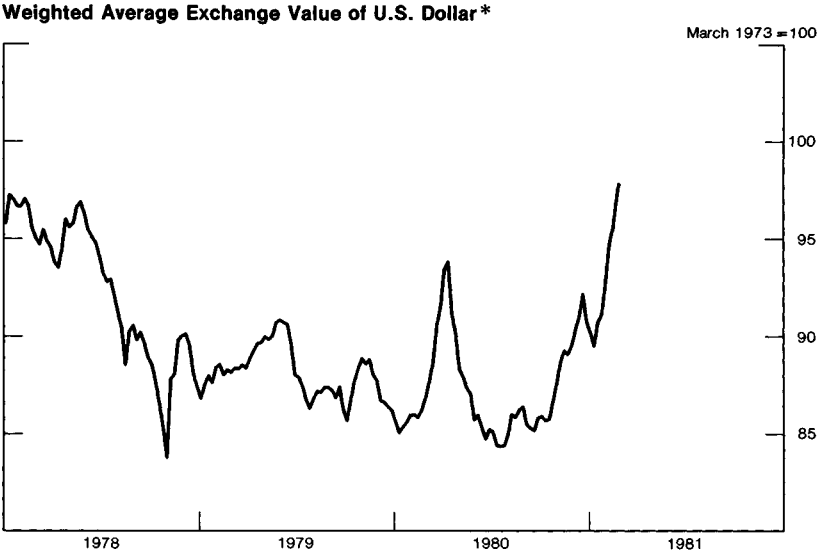
the basic discount rate and the introduction in mid-March of a surcharge on frequent borrowing by large banks.

As the monetary aggregates weakened in the spring, the pattern of the first quarter was reversed. The System countered the weakness of the aggregates by maintaining the supply of total reserves; this required substantial injections of nonborrowed reserves to offset the impact of the repayment of discount window borrowings. The federal funds rate fell very sharply.

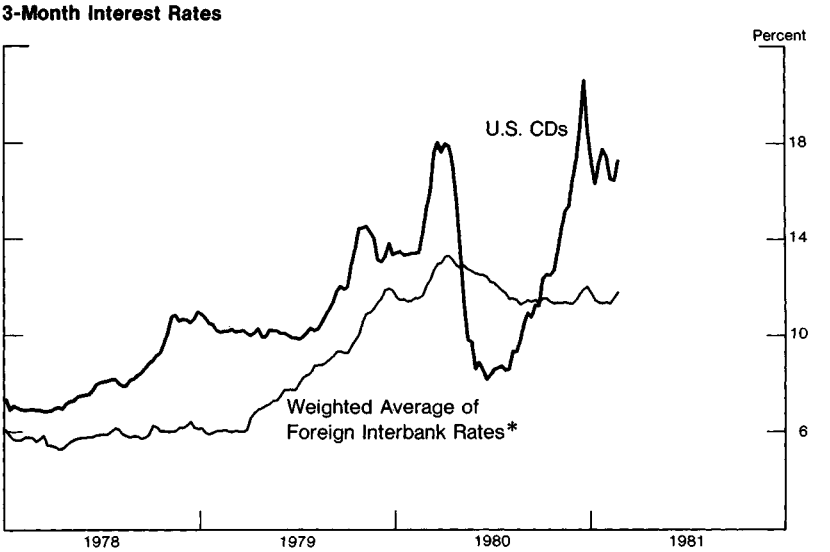
The sharp plunge in interest rates, even though it occurred against a backdrop of marked monetary weakness and steep recession, did arouse concerns in some circles about the System's commitment to anti-inflationary restraint. This nervousness was evident not only in domestic financial markets but in the foreign exchange markets too. By and large, the foreign exchange value of the dollar had fluctuated in a way that represented a fairly direct response to the pronounced relative movement of interest rates on dollar and foreign-currency denominated assets. But as U.S. interest rates reached comparatively low levels, there was a sense of a growing risk that downward pressures on the dollar might cumulate.

In a sense, the Federal Reserve was caught in an expectational crossfire. On the one side, those who concentrate on the money stock in assessing policy feared that the System was being too restrictive because the various measures of money were slowing sharply or contracting; on the other, some of those in the financial markets and elsewhere who view interest rates as the indicator of policy feared that the System was being inflationary because rates were falling sharply. The FOMC, in weighing the risks, decided to exercise some caution in the latter part of the spring by setting its short-run monetary growth targets with a view to a gradual rather than immediate return to the longer-range path for the year.

Weighted Average Exchange Value of U.S. Dollar*



3-Month Interest Rates



* Weighted average against or of G-10 countries plus Switzerland using total 1972-76 average trade of these countries.

The picture soon changed dramatically, however, for by mid-summer the monetary aggregates--buoyed by the surprising strong turnaround in economic activity--were rising rapidly. And as required reserves began to exceed nonborrowed reserves, borrowing and interest rates climbed. As in the first quarter, pressures on money market interest rates were reinforced by reductions in the path for nonborrowed reserves and by increases in the discount rate and imposition of surcharges on frequent borrowing. Borrowing and the federal funds rate continued to rise until mid-December when a drop in the money stock relieved some of the pressure on reserve positions.

The staff study has examined the experience of 1980 in considerable detail in an effort to assess the causes of the extreme variability of money and interest rates in 1980 and the efficacy of the new reserves-oriented operating procedure in achieving the objectives of policy. Certain key conclusions of the study may be highlighted:

(1) Nineteen-eighty was a year of extraordinary variability in money and nominal interest rates. In the case of money, however, it is important to note that comparisons with past years are complicated by the fact that monetary data for those periods have been considerably smoothed as additional information has been obtained on changes in seasonal patterns. If the 1980 figures are compared with the initial figures for earlier years, the difference in monetary variability is substantially reduced. Still, after making such allowances, it appears that money has been somewhat more variable over the past year, especially on a monthly or quarterly basis--though, as far as can be judged from available data, remaining within the range of foreign experience with money stock variability.

(2) Much of the variability--certainly the broad swings--in money and interest rates since October 1979 was attributable to an unusual combination of economic circumstances and not to the new operating procedures per se. The "real" and financial sectors of the economy were subjected to unusual disturbances in 1980. The imposition and subsequent removal of credit controls, especially, appears to have had a major impact on the demands for money and credit and to have strongly affected the behavior of money and interest rates in the second and third quarters.

(3) Simulation exercises utilizing several models of the money market provided no clear evidence that, under present institutional arrangements, alternative operating techniques--using, say, total reserves or the monetary base instead of nonborrowed reserves as an operating target--would improve short-run monetary control.

(4) It appeared clear that efforts to severely limit deviations in money from its longer-run growth path would require acceptance of much more variable short-term interest rates.

(5) Short-run variability in the monetary aggregates does not appear to involve significant impacts on the behavior of the economy. Weekly and monthly changes in the monetary aggregates are inherently quite "noisy." Moreover, available models suggest that, because of the relatively long response lags involved, sizable quarterly (or even semi-annual) fluctuations in monetary growth--if offsetting--do not leave an appreciable imprint on movements in output and prices.

(6) The federal funds rate has been more variable since October 1979, as would be expected with use of a reserves operating target, but in addition very short-run fluctuations in other market rates both--short- and long-term--also have been larger in magnitude than formerly. These rates of interest have exhibited higher correlations than previously with movements in the federal funds rate. The reasons for this closer correlation between the federal funds and other rates in the very short run are not entirely clear, and it is not certain that such a pattern will prevail in the future. But, in any event, there are few signs that the resulting variability has imposed appreciable costs in terms of reduced efficiency of financial markets or of increased costs of capital in the period analyzed by the study. There are considerable difficulties in separating the effects of the new operating technique from those of other factors. However, it does appear that much of the strain on financial institutions and many of the changes in financial practices observed in the past year were related to the broad cyclical pressures on interest rates during the year, caused by accelerated inflation and heightened inflationary expectations, and to the changes in credit demands associated with the behavior of economic activity.

The Federal Open Market Committee has reviewed the staff's work. Fundamentally, the research suggests that the basic operating procedure represents a sound approach to attaining the longer-run objectives set for the monetary aggregates. However, the Committee and the Board of Governors will

be considering the practicability of modifications that might reduce slippages between reserves and money, without unduly increasing the risk of an unnecessarily heightened variability of interest rates. These include the possibility of prompter adjustment of nonborrowed reserve paths or of the discount rate at times when, in association with undesired movements in money, the levels of borrowing and consequently total reserves are running persistently stronger or weaker than projected. In addition, the Board has already indicated its inclination to switch from the present system of lagged reserve accounting to a system in which required reserves are posted essentially contemporaneously with deposits; it is continuing to study the practical merits of such a system, to ensure that the operating problems created for depository institutions and the Federal Reserve and the potentially increased volatility of the federal funds rate would not outweigh the possible benefits in terms of tighter short-run monetary control.

The Committee has continued to set broad ranges of tolerance for money market interest rates--generally specified in terms of the federal funds rate. These ranges, however, should not be viewed as rigid constraints on the Open Market Desk in its pursuit of reserve paths set to achieve targeted rates of monetary growth. They have not, in practice, served as true constraints in the period since October 1979, as the Committee typically has altered the ranges when they have become binding. But, in a world of uncertainty about economic and financial relationships, the interest rate ranges have served as a useful triggering mechanism for discussion of the implications of current developments for policy.

The reserves operating procedure--or any modification of it--needs to be viewed in the context of a number of practical considerations that affect

the basic targets for the monetary aggregates and the process of attaining them. First, targets need to recognize the lags in the adjustment of wages and prices which may limit the speed with which noninflationary rates of monetary expansion can be attained without unduly restraining economic activity. Second, the potential for costly disturbances in domestic financial or foreign exchange markets may occasionally require short-run departures from longer-run monetary targets. Third, precise month-by-month control of money is not possible, nor is it necessary in terms of achieving desirable economic performance. Finally, uncertainties about the relationship between money and economic performance suggest the desirability of a degree of flexibility in the targets--including the use of ranges for more than one measure of money--and the potential need to alter previously established targets.

Chapter 2

Monetary Policy and the Prospects for the Economy in 1981

Section 2.1 The Federal Reserve's Objectives for the Growth of Money and Credit

In its midyear report last July, the Federal Reserve indicated to the Congress that its policy in 1981 would be designed to maintain restraint on the expansion of money and credit. Nothing that has occurred in the intervening months has suggested the desirability of a change in that basic direction. Events have only served to underscore the importance of such a policy--and of complementary restraint in the fiscal dimension of federal policy as well.

Few would question today the virulence of the inflation that is afflicting this economy or the urgency of mounting an effective attack on the forces that are sustaining it. The rapid rise of prices is the single greatest barrier to the achievement of balanced economic growth, high employment, domestic and international financial stability, and sustained prosperity. The experience of the past year--the stresses and dislocations that have occurred--attests to the difficulty of dealing with inflationary trends that have been many years in the making, but it does not indicate that there is any less need to do so. Indeed, the need has become more urgent, for as price increases continue, the public's expectations of inflation becomes more and more firmly embedded, and those expectations in turn contribute to the stubborn upward momentum of wages and prices.

Persistent monetary discipline is a necessary ingredient in any effort to restore stability in the general price level. To be sure, other areas of policy are also important, but it is essential that monetary policy exert continuing resistance to inflationary forces. The growth of money and credit will have to be slowed to a rate consistent with the long-range growth of nation's capacity to produce at reasonably stable prices. Realistically, given the structure of the economy, with the rigidities of contractual relationships and the

natural lags in the adjustment process, that rate will have to be approached over a period of years if severe contractionary pressures on output and employment are to be avoided.

The ranges of monetary expansion specified this month by the Federal Open Market Committee for the year ending in the fourth quarter of 1981 reflect these considerations. They imply a significant deceleration of growth in the monetary aggregates from the rates observed in 1980 and other recent years. The ranges are: for M-1A, 3 to 5-1/2 percent; for M-1B, 3-1/2 to 6 percent; for M-2, 6 to 9 percent; and for M-3, 6-1/2 to 9-1/2 percent. It should be emphasized that, owing to the introduction of NOW accounts on a nationwide basis at the end of 1980, the monetary ranges have been specified on a basis that abstracts from the impact of the shifting of funds into interest-bearing checkable deposits; only by adjusting for the distorting effects of such shifts can one obtain a meaningful measure of monetary growth. The FOMC also adopted a corresponding range of 6 to 9 percent for commercial bank credit.

The ranges for M-1A and M-1B are 1/2 percentage point less than those the Federal Reserve sought in 1980. Since realized growth last year, after adjustment for the impact of shifting into interest-bearing checkable deposits, was close to the upper ends of the stated ranges for the period, the new ranges are consistent with a deceleration of considerably more than 1/2 percentage point.

The actual observed changes in M-1A and M-1B will differ by a wide margin; in fact, it is quite possible that, because of the movement of funds from demand deposits to NOW accounts, M-1A could contract this year, while M-1B could grow more rapidly in reflection of funds moving into NOW accounts from savings deposits and other assets. It must be stressed that valid comparison of actual year-to-year growth has to allow for this institutional change.

The behavior of M-1A and M-1B thus far this year has reflected this pattern, but in an exaggerated degree because of the large initial transfer of funds to NOW accounts. An addendum to this section discusses in some detail the distortions caused by shifting to NOW accounts and the expected behavior of M-1A and M-1B. As the discussion there indicates, any estimates of the extent and character of the prospective shift into NOW accounts must be tentative. The Federal Reserve will be monitoring the shifting into interest-bearing checkable deposits as the year progresses and will be assessing its impact on the expansion of the monetary aggregates. From time to time, the System will report its estimates of the adjusted growth of M-1A and M-1B so that the public and the Congress can better assess the consistency of monetary expansion with the FOMC's stated objectives.

The 1981 range for M-2 is the same as that in 1980; however, the upper end of the range is roughly 3/4 percentage point less than the actual growth recorded in 1980. A reduction in the range does not appear appropriate at this time in light of what is known about the relationships among the various monetary measures, as affected by public preferences for various types of assets and by expected economic and institutional circumstances. In fact, there is a distinct likelihood that, consistent with the planned decline in the growth of the narrower aggregates, M-2 growth in 1981 will be in the upper half of its 6 to 9 percent range. With the changes in regulatory ceilings that have made small time deposits more attractive in comparison to market instruments and with the growing popularity of money market mutual funds, the nontransactional component of M-2 is likely to continue growing quite briskly. Moreover, if the tax cuts proposed by the President result in a marked increase in the proportion of income saved, this may contribute to relatively robust

M-2 growth, which has in any event tended in recent years to approximate the increase in nominal GNP.

The range for M-3 in 1981 is the same as that for 1980, but again is below the actual growth experienced last year. The deceleration would reflect the slower expansion specified for M-2, which accounts for more than three-quarters of the broader aggregate. Large time deposits at commercial banks--the other major component of M-3--likely will expand moderately again this year, but much will depend on the patterns of credit flows that emerge. The growth of bank credit is now expected to be about the same as in 1980. Household borrowing at banks could increase, especially in the consumer installment area, where credit use was severely damped for a time last year by credit controls. However, nonfinancial firms likely will wish to rely less heavily on bank borrowing than they did in 1980, in light of the deterioration of balance sheet liquidity that they have already experienced. Indeed, should credit market conditions be such as to encourage a substantial funding of short-term debt by corporations, commercial banks might play a lesser role in the overall supply of credit and M-3 could be damped by reduced bank reliance on large time deposits. On the other hand, if conditions in the bond markets are not conducive to long-term financing then bank credit and M-3 could be relatively strong.

Addendum: The Impact of Nationwide NOW Accounts on Monetary Growth in 1981

As noted in the preceding section, the behavior of M-1A and M-1B will be greatly affected this year by the advent, under the Monetary Control Act of 1980, of nationwide availability of NOW accounts and other interest-bearing checkable deposits. The phenomenon is qualitatively similar to what occurred in 1980 when growth in M-1A was depressed and growth in M-1B enhanced by the shifting of funds into ATS (automatic-transfer-from-saving) accounts--but the distortions in 1981 will be quantitatively much greater.

With the introduction of a new financial instrument like the NOW account, there may be a broad adjustment of the public's asset portfolios. Under the present circumstances, however, it seems reasonable as a practical matter to expect that the major impact will be a shifting of funds into the new accounts from existing nonearning demand deposits and from the interest-earning assets included in M-2 (especially highly liquid, relatively low yielding savings deposits). The analysis of experience in past years with NOW accounts in the Northeastern part of the country and with ATS accounts throughout the nation indicates that flows from demand and savings deposits have accounted for the great bulk of the growth of interest-bearing accounts. Furthermore, various surveys and other analyses have indicated that in the past roughly two-thirds of the funds flowing into ATS/NOW accounts have come from demand deposits and roughly one-third from savings deposits.

During January, a somewhat larger share of the funds flowing into interest-bearing checking deposits appears to have come from demand deposits--perhaps about 75 to 80 percent, with only about 20 to 25 percent coming from savings deposits (or, to a very limited extent, other sources). This change from past patterns appears to reflect a relatively fast adjustment on the part

of holders of large demand deposit balances at commercial banks. It is expected that the sources of subsequent growth in interest-bearing checkable deposits will be more along the lines of the past two-thirds/one-third break.

Depository institutions have marketed the new accounts very aggressively, many of them lining up a sizable number of customers before the end of 1980. Since December 30, the net growth of interest-bearing checkable deposits already has totaled more than $22 billion. It obviously is extremely difficult to forecast the further growth of interest-bearing checkable deposits over the remainder of the year. A working assumption would be that the net increase in such deposits this year will amount to somewhere between $35 and $45 billion, which would mean that half, or a little more than half, of the funds already have been shifted. If the shares of funds coming from demand and savings deposits move promptly to a two-thirds/one-third proportion, the result will be a 7 to 8 percentage point depressing effect on M-1A growth and a 2 to 3 percentage point increase in M-1B growth. Taking the midpoints of these estimates and applying them to the basic ranges specified by the FOMC for monetary growth this year, the observed change in M-1A from the fourth quarter of 1980 to the fourth quarter of 1981 would be -4-1/2 to -2 percent and that in M-1B would be 6 to 8-1/2 percent.

As indicated above, the growth of interest-bearing checkable deposits in January was extraordinarily rapid. This resulted in an extreme divergence of M-1A and M-1B movements. Observed M-1A contracted at a 37-1/2 percent annual rate in January, while M-1B increased at 12-1/4 percent annual rate. On the assumption that three-quarters to four-fifths of the funds flowing into interest-bearing checkable deposits came from demand deposits, both M-1A and M-1B, on an adjusted basis, showed only small growth in the early weeks of this year.

Section 2.2 The Outlook for the Economy

The economy entered 1981 on an upward trajectory, extending the recovery in activity from last year's brief but sharp recession. January saw further large gains in retail sales, employment, and industrial production. On the whole, the demand for goods and services has continued to prove more buoyant than most analysts had expected. Unfortunately, at the same time there has been no abatement of inflation.

The persistence of intense inflationary pressures jeopardizes the continuity of economic expansion over the remainder of the year. Moreover, unless the rise of prices slows, there can be little hope of an appreciable, sustained easing of interest rates or of a substantial improvement in the balance sheets of the many units of the economy that already have experienced a deterioration in their financial condition.

The near-term prospects for prices are not favorable. In the months immediately ahead, the major price indexes will reflect the effect of poor agricultural supply conditions on food prices and the impact of higher OPEC charges and domestic decontrol on energy prices. Increases in the Consumer Price Index, furthermore, will reflect--in a way that exaggerates the true change in the average cost of living--the rise in mortgage interest rates that occurred in the latter part of 1980.

Aside from these special factors, the basic trend of prices is linked closely to the behavior of unit labor costs, which constitute the largest element in costs of production. As noted earlier, poor productivity performance has contributed to rising costs. It is also quite clear that wage demands have been sizable. Despite the acceleration in wage increases that has occurred,

the wages of many workers have failed to keep pace with the upward movement of prices in the past few years. This development was virtually inevitable in light of the decline in productivity and the adverse terms-of-trade effects of the tremendous increase in foreign oil prices. So long as those conditions continue, the average worker cannot anticipate a rising living standard, and attempts to "make up" losses in real income will be reflected in strong cost and price pressures.

The condition of labor markets is, of course, a factor affecting wage decisions. Despite the fact that the overall unemployment rate stands at 7-1/2 percent, there are scarcities of skilled workers in some sectors of the economy. But, even where there is slack in labor demand, its impact on wages is rather slow in emerging; wages appear to have a strong momentum rooted in inflationary expectations, which are based to a great extent on past experience, as well as in attempts to maintain real income. Workers' wage demands are influenced by expectations about prices, as well as by patterns established in previous wage bargaining. Meanwhile, employers' wage offers are conditioned in good measure by their own sense of the prospects for inflation and of whether they will be able to pass along higher compensation costs by increasing prices.

It is essential that this momentum be turned in a favorable direction. To do so will require a commitment to monetary and fiscal restraint that is firm and credible, and a direction of other governmental policies toward fighting inflation. Labor and management must be persuaded that the inflationary process will not be accommodated--that wage and price decisions based on an anticipation of rapid inflation will prove inimical to their ability to maintain employment and sales volume. Put more positively, they have to be convinced that moderation in their individual wage and price actions will not put them at a relative disadvantage and will in fact produce a better economic environment for everyone.

Such an alteration of the expectational climate will not be easy to achieve. But it is important to do so. For, to the extent that those attitudes can be changed, the short-run costs of restraint on aggregate demand, in the form of economic slack, will be ameliorated. Conversely, prolongation of high wage and price demands would come into conflict with needed monetary and fiscal restraint, aggravating economic difficulties. In any event, once expectations are turned, further progress toward price stability should come increasingly easily so long as excessive pressures on productive capacity are avoided.

The policy of monetary restraint adopted by the Federal Reserve is intended to contribute to the process of breaking the momentum of inflation. Fiscal policy also has a crucial role to play. Cuts in federal taxes potentially can help to invigorate private capital formation and thereby enhance productivity, reduce costs, and pave the way for faster economic growth. But it is important that government spending be held firmly in check at the same time so that aggregate demand does not become excessive and so that the pressures of government demands on the credit markets do not impede the financing of private investment.

The members of the Federal Open Market Committee, in assessing the economic outlook, have recognized the possibility of some reduction this year in business and personal income taxes and some initial steps in the longer-range effort toward the slowing of federal expenditure growth. Given these working assumptions, the individual members of the Committee have formulated projections for economic performance in the current year that generally fall within the ranges indicated in the table on page 44. As may be seen in that table, the FOMC members' projections for output and inflation encompass those that underlie the Administration's recent budget proposal.

Economic Projections for 1981

	Actual 1980	Projected 1981	
		FOMC members	Administration
Changes, fourth quarter to fourth quarter, percent			
Nominal GNP	9.5	9 to 12	11.0
Real GNP	-0.3	-1-1/2 to 1-1/2	1.4
GNP deflator	9.8	9 to 10-1/2	9.5
Average level in the fourth quarter, percent			
Unemployment rate	...	8 to 8-1/2	...

The members of the FOMC see inflation as remaining rapid in 1981, although not as rapid throughout the year as seems likely to be the case early in the period. The failure of inflation to slow more quickly, and the large budgetary deficits in prospect for the year, are seen as resulting in continued strong demands for money and credit and in the maintenance of relatively high interest rates. Against this backdrop, economic activity is likely to show only intermittent strength, and unemployment probably will rise between now and the end of the year.

APPENDIX

Staff Study of the New Monetary Control Procedure: Overview of Findings and Evaluation

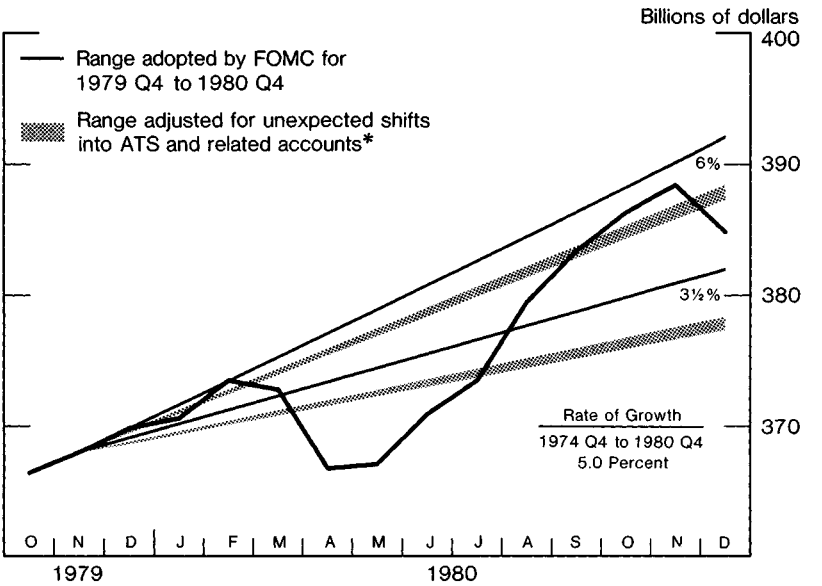
This paper reviews experience with the new monetary control procedure established in October 1979 and evaluates implications for current and alternative control techniques. The new procedure involved employing reserve aggregates--on a day-to-day basis, nonborrowed reserves--as operating tools for achieving control of the money supply. Less emphasis was thereby placed on confining short-term fluctuations in the federal funds rate--the overnight market rate reflecting the demand for and supply of bank reserves. The change in procedure, it should be pointed out, represented a technical innovation rather than a change in the broader objectives of monetary policy or in the monetary targets themselves. Target ranges for various measures of the money supply, together with the actual behavior of money in the course of 1980, are shown in the charts on the next three pages.

The paper is divided into three sections. Section I presents an overview of findings about effects of the new monetary control procedure on economic and financial behavior based on evidence gathered in staff papers.[1/] Because the new control procedure was designed to strengthen the System's ability to control the money supply, section II (page A15) provides certain additional background analysis relevant to assessment of the role of money as an intermediate target for monetary policy. Section III (page A21) then contains an evaluation of the current operating procedure, and alternatives.

1/ A list of staff papers prepared is contained on page A33.

Growth Ranges and Actual Monetary Growth

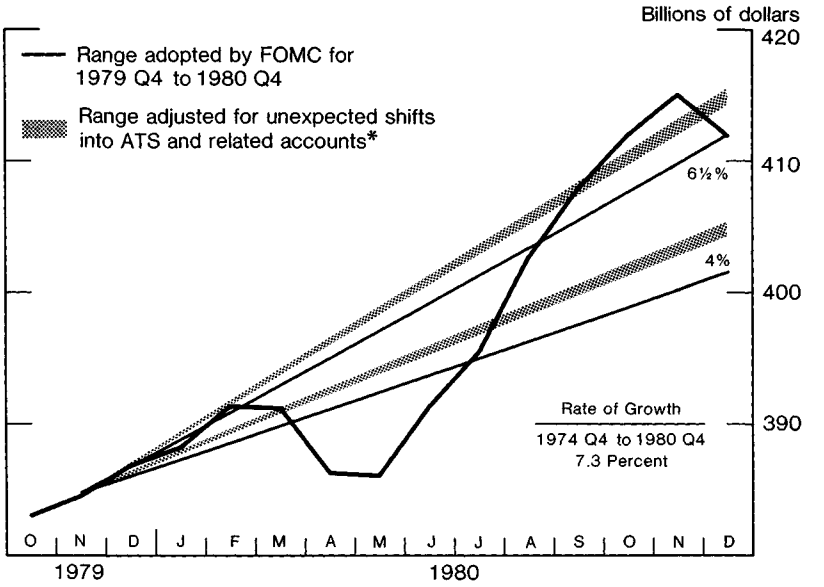
M-1A



* The shaded lines reflect adjustments that should be made for technical reasons to the original range for M-1A to allow for unanticipated shifts of existing deposits from demand deposits to interest-bearing transactions accounts, such as ATS (automatic transfer savings) and related accounts. At the beginning of 1980 it appeared that such shifts would have just a limited effect on growth of M-1A, and the longer-run growth range for M-1A was set only ½ percentage point below the growth range for M-1B. Passage of the Monetary Control Act subsequently altered the financial environment by making permanent the authority of banks to offer ATS accounts and by permitting all institutions to offer NOW and similar accounts beginning in 1981. As the year progressed, banks offered ATS accounts more actively and more funds than expected were being diverted to these accounts from demand deposits. Such shifts are estimated to have depressed M-1A growth over the year 1980 by ¾ to 1 percentage point more than had been originally anticipated. The shaded range allows for these unanticipated shifts, and therefore in an economic sense more accurately represents the intentions underlying the original target.

Growth Ranges and Actual Monetary Growth

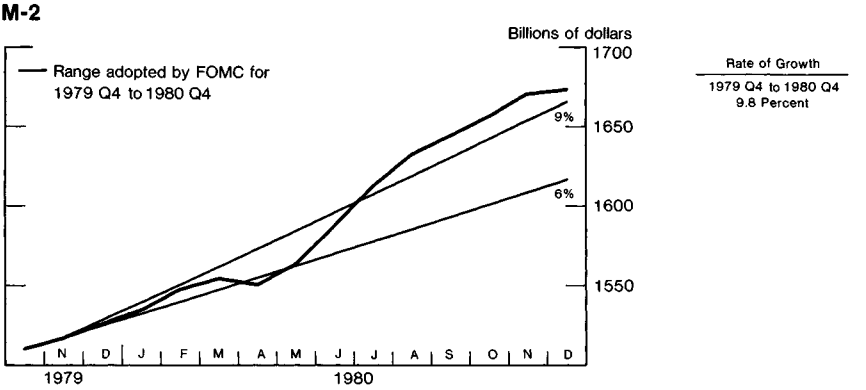
M-1B



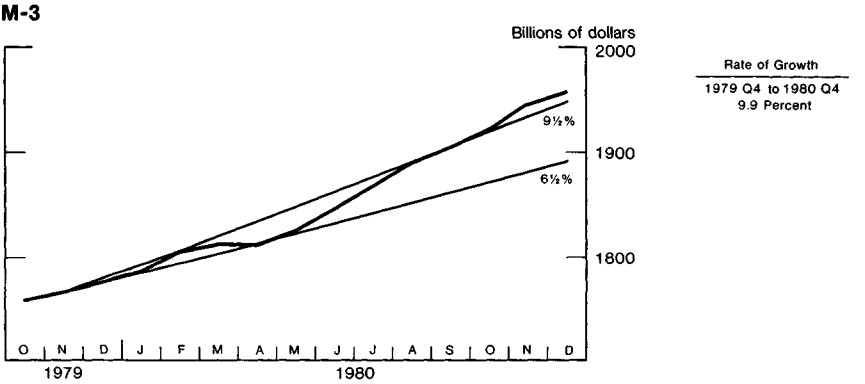
* The shaded lines reflect adjustments that should be made for technical reasons to the original range for M-1B to allow for unanticipated shifts into interest-bearing transactions accounts from savings deposits and other instruments not included in M-1B. At the beginning of 1980 it appeared that such shifts would have just a limited effect on growth of M-1B, and the longer-run growth range for M-1B was set only ½ percentage point above the growth range for M-1A. Passage of the Monetary Control Act subsequently altered the financial environment by making permanent the authority of banks to offer ATS accounts and by permitting all institutions to offer NOW and similar accounts beginning in 1981. As the year progressed, banks offered ATS accounts more actively and more funds than expected were being diverted to the accounts. Such shifts are estimated to have increased M-1B growth over the year 1980 by ½ to ¾ of a percentage point more than had been anticipated. The shaded range allows for these unanticipated shifts, and therefore in an economic sense more accurately represents the intentions underlying the original target.

Growth Ranges and Actual Monetary and Bank Credit Growth

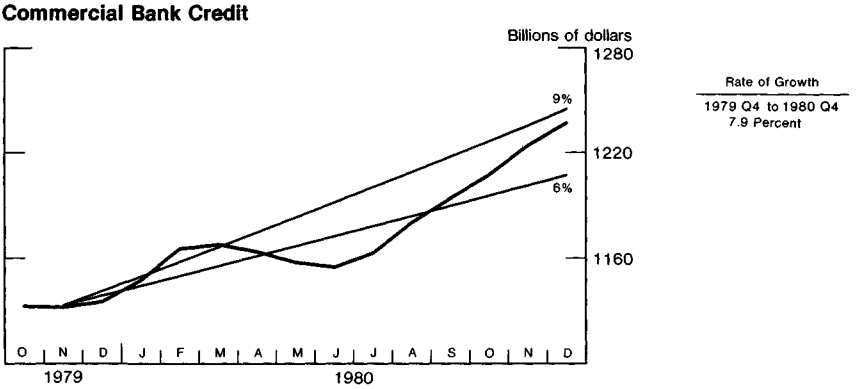
M-2



M-3



Commercial Bank Credit



I. Overview of Findings with Regard to Experience since Adoption of New Procedure

Questions investigated in reviewing experience with the new control procedure included, among others, its impact on precision of money control, volatility of interest rates, the course of economic activity, and exchange market conditions. There were, of course, other influences on financial markets and the broader economy that were surely of far more importance than the particular technical innovations under consideration here. Indeed, a major problem has been to distinguish the impacts of the new procedure per se from larger influences operating on the economy. This difficulty is particularly acute given the relatively short period of time since the new procedure was implemented--a period of time that may have been too short for market participants to have fully adjusted to the new environment and a period of time in which markets were buffeted by changing inflationary expectations, fiscal uncertainties, credit controls, and oil price shocks.

A. Relation between reserves and money

1. Over the operating periods between FOMC meetings, actual nonborrowed reserves fell below the Trading Desk's operating target by about .3 of one percent on average; the average absolute miss was about .4 of one percent. These deviations reflected in part errors in projection of uncontrollable factors affecting reserves (such as float). In addition, the Desk at times accommodated to variations relative to expectations in banks' demand for borrowing in the course of a bank statement week (for example, an unexpected willingness by banks to obtain reserves by borrowing heavily over a weekend). Total reserves came out somewhat above

intermeeting period paths, by about .2 of a percent on average; the absolute miss averaged about .8 of a percent. The individual intermeeting period misses reflected deviation of money stock from short-run targets, variations in excess reserves, and multiplier adjustments to the original path (to take account of changes in required reserves for a given level of deposits) that turned out to be incomplete.

2. Econometric evidence from simulations of monthly money market models carried out with various reserve measures as operating targets (nonborrowed and total reserves and the monetary base), given the existing institutional framework, buttresses indications from actual experience last year that the relationship between reserves and money is relatively loose in the short run. Over the one year period since October 1979, the mean absolute error of misses in the level of M-1B relative to target path during the 4- to 7-week operating periods between FOMC meetings was a little over .6 of one percent. This degree of variability was in line with--in some cases less than and in some cases more than--model simulation results (holding various reserve measures at pre-determined target levels for the simulations).1/ In comparing the models and the reserve technique actually used, it should also be observed that model simulations generally implied more interest rate variability last year than proved to be the product of the technique actually in use.

1/ The root mean square errors of actual misses and simulated model misses ranged around .7 to .8 of a percent over short-run operating periods of a month or so. This would mean that, with disturbances similar to last year's, two-thirds of the time M-1B would generally come within plus or minus .7 to .8 of one percent of the intermeeting target path over approximately a one-month period (or, expressed in annual rate terms, within a range of plus or minus 8 to 10 percentage points over such a period).

3. In the model simulations of the past year, control of money supply through strict adherence to a total reserves or the total monetary base target produced more slippage than control through their nonborrowed counterparts. This phenomenon largely reflects the presence of multiplier disturbances on the supply side that would be generated, for example, in the current institutional environment by changes in deposit mix and hence in required reserves for any given level of money supply. In the model simulations, use of total reserves or the total base as an invariant target over the control period does not permit these disturbances to be cushioned by changes in borrowings.

4. Judgmental predictions of the multiplier relationship between reserves or base measures and money made since the shift in operating procedure were generally superior to, though on a few tests not significantly different from, forecasts derived from econometric models.

5. Over a longer period than a month (or than an intermeeting period) errors in the predicted relationship between money and reserves may be expected to average out--that is, over time, errors in one direction tend to be offset by errors in the other. Simulations of the Board's monthly model suggest that such a process is at work. In actual operations over a one-year period since October 1979, the absolute miss in the level of M-1B when individual misses relative to the short-run target paths are averaged over three or four intermeeting periods was reduced from a little over .6 of a percent (reported in paragraph 2) to over .4 of a percent. This represents a somewhat smaller reduction than would have been expected from certain results, and may have reflected the nature of unusually large, unanticipated successive month-to-month changes in money

demand last year, first in one direction and then in the other. These changes were related in part to identifiable special factors such as the imposition and subsequent removal of the credit control program. Accommodation to such special and temporary factors, as they emerged, might tend to lengthen the period over which deviations from monetary targets could be expected to average out, but would, by the same token, tend to dampen fluctuations in interest rates that would not have contributed to better control of money over time.

B. Variability in money growth

1. Evaluation of the variability of money supply series is importantly affected by the seasonal adjustment process. Seasonal factors applied during a current year are unable adequately to reflect changing seasonal patterns in the course of that year; after a year is over, therefore, reestimation of seasonal factors often tends to smooth variability. Based on current seasonal adjustment factors for the year just past (that is, factors before seasonal revisions that taken account of the influence of actual experience this year), variability in weekly, monthly, and quarterly growth of M-1 (and also M-2) was substantially greater than in any year during the past decade. However, when the variability in money growth during the year from October 1979 to October 1980 is compared with variability in earlier years, with earlier years adjusted using seasonal factors that were current in those years, nearly all of the heightened variability in weekly growth of M-1, and a sizable portion of the monthly and quarterly variability, is removed. While this comparison makes it seem probable that seasonal factor distortions are overstating variability in the year just past, the extent cannot be

assessed with confidence until a number of years have passed. In general, it would appear that money has been more variable over the past year, especially on a monthly and quarterly basis--though so far as can be judged from the available data, still generally well within the range of foreign experience with money supply volatility.

2. The variability in money growth of the past year appears to be related to an unusual combination of circumstances:

a. There were large swings within the year in the demand for money resulting from sharp short-run variations in economic activity caused in large part by factors independent of the new monetary control procedure, such as the imposition and subsequent removal of the credit control program. The imposition and subsequent removal of the credit control program may have also increased the variability of money growth through a more direct channel, as the associated large variation in bank loans was accompanied by temporary changes in demand deposits--for example, as large loan repayments were initially made from existing demand balances.

b. In addition, econometric evidence from a variety of models suggests that there were "unexplained" factors other than economic activity and interest rates causing substantial fluctuations in money demand. In particular, money levels fell considerably short of model simulations (given GNP and interest rates) in the second quarter, when money growth was negative. Relatively rapid growth in subsequent quarters reflected in part a tendency for money levels to move back toward more normal relationships with GNP and interest rates.

3. The money targets on which reserve paths were based reflected the intention to return money over time to the long-run objective following

divergences. In 1980 the target for narrow money in the month following the FOMC meeting typically implied making up about 30 percent of the difference between the projected level of the money stock in the month of the meeting and the long-run target path. If disturbances in 1980 had been more representative of those prevailing in the 1970s, simulations using the Board's monthly model suggest that the reserve operating technique would have kept money closer on a month-by-month basis last year to long-run objectives than actually was the case. These simulations also indicate a distinct trade-off between variability of the federal funds rate--and money market rates generally--and the speed with which attempts are made to return the money stock to its longer-term path once it moves off path. The more rapid the attempted return to path, the larger are the implied fluctuations in money market rates.

4. Interpretation of money supply volatility is complicated by the large amount of noise in weekly and monthly changes in first published figures for the narrow monetary aggregates (and for monthly changes in M-2) resulting from transitory variation and seasonal factor uncertainty. Based on data for the 1973-79 period, the estimated standard deviation of the noise factor for monthly changes in M-1A and M-1B is about $1.5 billion (4-1/2 percent at an annual rate), and about $3.3 billion for weekly changes. For M-2, the estimated standard deviation of noise in monthly growth rates is 3-1/2 percent at an annual rate. The noise factor declines for growth rates over longer periods of time.

C. Variability of interest rates

1. As had been expected, the federal funds rate has been more variable on an intra-day, intra-weekly, and inter-weekly basis since the new procedure was implemented. Intra-day and day-to-day variability has tended

to be at least twice as large as before, as have weekly changes after adjusting for trend. This greater variability of the federal funds rate reflects the role of nonborrowed reserves as an operating guide for the Desk.

2. There has also been heightened variability of interest rates on Treasury securities of all maturities following adoption of the new operating procedure. Based on data from which cyclical movements were removed, the variability in Treasury yields measured on a weekly average basis has been at least twice as large as before October 1979.

3. The relationship over interest rate cycles between the federal funds rate and yields on Treasury securities of all maturities has been essentially the same before and after October 1979, suggesting that the underlying linkage between the federal funds rate and other market rates has remained about unchanged. At the same time, however, correlations between very short-run nonsystematic movements in the funds rate and other market rates have increased substantially since the new procedure was implemented. This higher correlation possibly reflects the sensitivity of market participants to day-to-day changes in the funds rate in the uncertain environment that prevailed last year but possibly also reflects concurrent adjustments in market interest rates generally, particularly short rates, that tend to occur as closer control is sought over the money supply, given variations in money demand.

D. Effects on domestic financial markets

The swings in interest rates last year, and the high levels reached, clearly affected behavior in financial markets. It is difficult, to isolate the role of the new operating procedure, as such, in contributing

to interest rate swings or changes in market behavior. It is likely that large cyclical variations in interest rates would have developed last year in any event if the basic monetary aggregate targets were pursued by other operating techniques in the face of cyclical variations in money and credit demands that were exceptionally large and compressed in time. And adjustments that took place in financial market behavior last year largely represented adaptations that would have been expected on the basis of past cyclical experience--for example, constraints on housing finance--or were related to the special credit control program. Market adjustments that might have primarily reflected adaptations to the new procedure as such are likely to be those more associated with a perceived greater continuing risk of short-term interest rate volatility--adjustments that would be difficult to detect in an environment like that of last last year, which was dominated by cyclical changes in credit flows, a credit control program, and inflationary expectations.

1. Mortgage markets. Greater interest rate volatility since October 1979 may have hastened the trend in process for a number of years toward more flexible mortgage instruments, such as variable rate, renegotiable, and equity participation mortgages. In addition, mortgage bankers and other originators in their commitment policies appear to have attempted to avoid some of the risk of interest rate changes occurring between the time a commitment is made and funds are extended. They have done so by setting rates or points at the time of closing, shortening the period for guaranteed fixed-rate mortgage commitments, and by imposing large nonrefundable commitment fees to discourage cancellation if rates should decline.

2. Dealer market for Treasury and Agency Securities. Wider bid-ask spreads on Treasury bills appear to have emerged last year. Evidence on such spreads for coupon issues is difficult to interpret; spreads rose considerably a few months prior to introduction of the new procedure, and thereafter remained wider than in earlier years. Greater uncertainty about interest rates may have influenced dealers to maintain leaner inventory positions relative to transactions; turnover of dealer inventories rose last year as a very large expansion in gross transactions outpaced the rise in the level of inventories.

3. Underwriting spreads on corporate bonds. Underwriting spreads on corporate bonds issued on a negotiated basis did not widen, on balance, over the year since October 1979. However, data on competitively bid issues suggest that spreads on such issues have widened. This might tend to raise bond costs, but any such effect last year would appear to have been very small relative to the more basic supply and demand conditions affecting markets.

4. Commercial bank behavior. Bank behavior last year was strongly influenced by a number of factors other than the new procedure, such as the imposition and removal of the special voluntary credit restraint program, marginal reserve requirements on managed liabilities, and increasing reliance, especially by small banks, on money market certificates as a source of funds. It is difficult to detect changes in behavior associated with the new procedure per se. There appears to have been some increased reliance on floating rate loans, especially for term loans, but this trend was evident prior to October 1979.

5. Futures markets. Futures market activity expanded rapidly in the period following October 1979, raising the possibility that the new procedure led to an increased desire to hedge against expected greater interest rate fluctuations. However, the expansion in activity represented a continuation of the trend of recent years, as has been the case with other market adaptations noted above. It is virtually impossible to separate growth in futures activity arising from attempts to reduce exposure to interest rate risk in the new environment from underlying trend growth connected with increasing familiarization by the public with the variety of financial futures instruments that are becoming available.

6. Liquidity premiums. An attempt was made to determine whether there was an increase last year in liquidity premiums, manifested by a rise in long-term rates relative to short-term rates. Such a result might be expected if risk-averse financial market participants attempted to protect themselves from a perceived risk that the new procedure would make for greater interest rate variability and hence greater risk of capital loss on holdings of longer-term issues. There appears to be little, if any, evidence that liquidity premiums became greater last year--although as noted in paragraphs 2 and 3 above there may have been some increase of transactions costs in financial markets.

E. Exchange market and other external impacts

1. The spot value of the dollar appreciated by more than 5 percent in the 14-month period subsequent to late September 1979, though there were pronounced cycles that coincided with intermediate-term movements of interest rates in the United States.

2. Day-to-day movement in money market rates related to the new procedure could have had some influence on very short-term exchange rate

volatility. Spot rates have displayed more variability on a daily basis since the new procedure was adopted, reflecting greater daily variability of interest rate differentials between U.S. dollar and foreign currency assets. The evidence on weekly and monthly exchange rate movements also suggests more variability, but the evidence is not so conclusive as that for daily variability.

3. There is little evidence of a significant increase in the variability of foreign interest rates, apart from in Canada, on a monthly basis related to the new procedure as such. Some countries, especially developing countries with currencies tied to the dollar and with inflexible interest-rate structures, appear to have experienced some technical difficulties over this period connected, for example, with the impact of interest-rate variability on financial flows.

4. The evidence does not suggest that the new operating procedure has contributed to the variable nature of gross U.S. international capital flows since the fall of 1979. Significantly greater contributing factors were the credit control program and marginal reserve requirements on managed liabilities.

5. The proposition that more short-term variability of exchange rates could have adverse effects on the domestic price level, because price increases caused by currency depreciation would not be fully offset by the reverse effect of currency appreciation, is not supported by econometric evidence. Therefore, the short-term variability of exchange rates since October 1979 would not itself appear to have raised the domestic price level. Meanwhile, the underlying trend toward appreciation since that time would have had a favorable effect on the price level.

F. Economic activity

1. Assessing the contribution of the new procedure as such to the pattern of economic activity and inflationary expectations is complicated--as noted at other points in this paper--by the force of other factors that were importantly influencing the markets for goods and services over the recent period, including the effect of the basic money supply targets themselves. Certain "fundamentals"--such as the previous sharp increase in oil prices, the relatively low saving rate, and the illiquid balance sheet of the household sector--suggest that economic activity would have contracted in any event in 1980. In addition, prices and real economic activity were strongly influenced by the highly sensitive state of inflationary psychology, the imposition and removal of the credit control program that lasted from mid-March to early July 1980, and erosion of fiscal restraint.

2. Nevertheless, to the extent that the new control procedure encouraged more prompt interest rate adjustments in response to cyclical fluctuations in money and credit demands, it probably exerted some influence on the pattern of economic activity. It may have hastened the slowdown in economic activity--especially in housing and possibly consumer durables--in early 1980 and also hastened the recovery in the summer, as interest rates advanced rapidly to peak levels and then contracted sharply. Psychological reactions to the credit control program, however, may have been an important influence on the depth of the recession and the promptness and strength of the subsequent rebound. There was a sharp contraction in spending following introduction of the program, and relief on the part of both financial institutions and borrowers as the program was phased out probably encouraged a sizable resurgence of spending.

3. In view of the lags in the response of capital spending plans to changes in credit conditions, the new procedure does not appear to have exerted much influence on plant and equipment spending during the past year. The timing of inventory movements, by contrast, may have been altered to the extent that the new procedure had effects on the pattern of final sales and on movements in short-term financing costs.

4. The new control procedure was adopted in part to provide more assurance that inflation would come under control (as money growth was restrained), and thereby to reduce inflationary expectations. It is difficult to measure inflationary expectations, let alone to attribute changes to a technical change in monetary control procedures in so highly unsettled a period as last year. Indirect evidence about inflation expectations based on changes in interest rates is obviously difficult to interpret, since interest rates are also influenced by other factors. Some direct evidence about consumer expectations of inflation can be gleaned from the Michigan survey. No clear improvement in inflationary attitudes is evident until into the spring, probably related in large part to the sharp contraction of economic activity in the second quarter. There did not appear to be any significant worsening of expectations, as judged by the Michigan survey, in the latter part of the year as the economy strengthened.

5. The Board's large-scale quarterly econometric model, as well as two other much more simplified models used for comparative purposes, were employed to help evaluate the extent to which the actual fluctuations in money and interest rates affected economic activity in the course of the year. These models, of course, all suffer from an inability to take account adequately of attitudinal changes and other behavioral factors

related to the special conditions of a particular year, including any attitudinal changes that might be occasioned by the shift in operating procedure. Simulation results suggest that, because of long response lags, the pattern of economic activity last year would not have been particularly sensitive to efforts at smoothing the quarter-to-quarter pattern of either money growth or of interest rate variations, though smoothing money growth had slightly more impact. The smoothing of money growth would have been at the cost of even greater interest rate variability than was actually observed over the last five quarters.

II. General Considerations

Evaluation of the current and alternative operating techniques to be discussed in section III depends very much on the role accorded intermediate targets, particularly the monetary aggregates, in the formulation of monetary policy. This section examines advantages and disadvantages involved in employing monetary aggregates, or for that matter interest rates, as intermediate targets, and also examines certain limitations on the feasible range of target settings.

A. Advantages and disadvantages of monetary aggregates as intermediate targets

1. Advantages

a. Money stock control tends to work toward stabilizing GNP when the economy is buffeted by disturbances to spending on goods and services and shifts in inflation expectations; such factors appeared to be an important influence on economic and financial behavior last year. If spending surges unexpectedly, for example, as it did in the

second half of 1980, adherence to a money stock target would automatically lead to tighter financial markets, tending to offset some of the surge in spending. Similarly, if spending were to weaken unexpectedly, and very substantial weakness developed in the second quarter of last year, efforts to hold to a money stock target would lead automatically to lower market rates of interest, which would tend to partially restore spending to desired levels.

b. Current approaches emphasizing control of monetary aggregates rest on the proposition that planned deceleration in monetary growth will lower inflation over time by limiting funds available to finance price increases and encouraging expectations and behavioral patterns consistent with reduced inflation.

c. By clearly communicating to the public the Federal Reserve's objectives for monetary policy, a monetary aggregates targeting procedure enables private decision-makers to better plan their activities and to make wage and price decisions that are more harmonious with non-inflationary growth in money and credit.

d. Targeting on monetary aggregates involves adjustments of market interest rates, in response to underlying changes in demands for credit, that might otherwise be unduly delayed, either on the down- or up-side.

2. Disadvantages

a. Looseness in the relationship between money demand and nominal GNP reduces the significance of monetary aggregates as a target, particularly in the short run. Unexpected shifts in this relationship lead to undesirable interest rate movements with strict

adherence to money supply targets. Last year, there was evidence of looseness in this relationship. For example, as noted earlier, econometric models suggest a sizable downward shift in the demand for money in the second quarter, given actual GNP and interest rates.

b. Attempts to achieve steady growth in monetary aggregates on a month-by-month or even quarter-by-quarter basis can lead to large interest rate fluctuations, given the high degree of variability in short-run money flows and the relatively interest-inelastic demand for money over the near term. Large fluctuations in interest rates have certain risks; for instance, they might endanger financial institutions that are unable to make timely compensating adjustments in their balance sheets, adversely affect the functions of securities and exchange markets, and lead to confusion about the basic thrust of policy.

c. Money supply targeting procedures might themselves introduce recurrent cyclical responses of economic activity following an economic disturbance. Whether this is a realistic risk depends on the nature of response functions in the economy. It would be a high risk in the degree that: (i) money demand was very insensitive to interest rate changes (and thus interest rates would need to change sharply to maintain steady money growth in response to an exogenous disturbance from the goods market), and (ii) there was no significant current impact on spending from such changes in rates but impacts were felt over later periods. It would be difficult to attribute the cyclical behavior of economic activity over the past year to

such a process, though, given model estimates of the interest-elasticity of money demand and of relatively long lags between interest rates and spending (with such lags implying a longer cycle than observed last year).

d. The concept of money is elusive, and is becoming more so as new substitutes evolve for traditional transactions media, and as improvements in financial technology facilitate the ability of the public to shift funds about for payments purposes.

B. Interest rates as targets

1. Advantages

a. Control over total spending can be strengthened by greater emphasis on stabilizing interest rates when disturbances stem mainly from the monetary sector rather than from markets for goods and services.

b. Control over rates might make for greater short-run stability in financial markets, since market institutions might be relatively certain about the terms and conditions under which they can "safely" meet near-term credit demands.

2. Disadvantages

a. It is very difficult to determine the appropriate interest rate level, particularly in an inflationary environment in which shifting expectations of inflation are continuously altering the relationship between real and nominal market rates of interest.

b. Efforts to stabilize interest rates tend to amplify economic cycles stemming from cyclical variations in the demand for goods

and services, since by stabilizing rates, pro-cyclical growth in money and credit would be heightened. An upswing in the demand for goods and services, for example, would be accompanied by an expansion in the volume of money and credit. By contrast, with a money stock targeting procedure resistance would be introduced automatically through increases in interest rates.1/

c. While interest rate targets could in concept be adjusted promptly so as to minimize the likelihood of a pro-cyclical monetary policy, in practice the institutional decision-making procedure often limits the ability to make sizable adjustments in the target. This could constrain interest rate variations when rates are taken as the intermediate target of monetary policy.

C. Limitations in the targeting process

Regardless of whether monetary aggregates or interest rates are selected as intermediate targets, there appear to be a number of limitations on the monetary authority's range of choice of the particular target setting and the precision with which the target is pursued.

1. The particular target setting must take into account the capacity of the economy and financial markets to adjust to the targets, and the degree to which the implications of those targets can be understood by and are acceptable to the larger public whose behavior patterns are involved. Inflexibilities in wage and price determination, for example, have implications for the degree to which monetary targets can be reduced, without risking unduly adverse implications for economic activity in the short

1/ Even with a money stock procedure such resistance may not be sufficient to hold nominal GNP down to a previously desired level if the upward shock in demand for goods and services involves a rise in velocity—as it well might if it resulted from, say, expansion in Federal spending.

run. This would be less of a limitation to the extent that attitudinal shifts--either in response to announced monetary targets or other factors--brought upward wage and price pressures down in line with monetary targets. Experience of the past year has not yet provided a basis for believing that the lengthy lags between money growth and price changes have been shortened significantly or that inflation expectations have begun to respond more rapidly to the money control procedure per se.

2. The question may arise as to whether disturbances in domestic, or foreign exchange, markets may on occasion require short-run departures from intermediate-term targets of monetary policy. However, these markets appear to have adjusted to a substantial degree of interest rate or exchange rate fluctuation during the past year.

3. Precise month-by-month control of money does not seem possible, given existing behavior patterns in the economy and financial markets and institutional factors. Nor is there evidence that such close control is needed to attain the underlying economic objective of encouraging non-inflationary economic growth. Statistical investigation suggests that "noise" alone accounts for substantial variation in monthly money growth rates. Moreover, model simulations indicate that variations in money growth above or below targets lasting a quarter or so are not likely to have substantial economic effects.

4. Uncertainties involving the relationship between money demand and GNP--as evidenced by unexpected variations in such demand last year--suggest the need for a degree of flexibility in target setting (ranges may be preferable to point estimates), and also suggest the possibility

that, at times, there may be a need for large deviations from predetermined targets or for changes in the targets. On the other hand, deviations from target ranges involve the risk of changes in market expectations that are counter-productive (for example, when money supply runs strong relative to target, inflationary expectations may be heightened, compounding the difficulties of controlling inflation). In general, though, in the degree that there is success in achieving targets over time, expectations are less likely to be adversely affected by short-run deviations in money growth.

III. Evaluation of Operating Procedures

Because the past year was in many ways exceptional--and because a year, or 15 months, in any event is too short a time frame within which to judge whether observed relationships are accidental to the period or are lasting--evaluation of the new control procedure, and possible alternatives, must at best be quite tentative. The choice of operating procedure would be influenced by the predictability of certain financial and economic relationships and by the capacity of markets to adjust to operating techniques without severe distortions--evidence about which was presented in section I. In addition, the desirability of retaining the present reserve procedure (with or without possible modifications), of shifting to an alternative reserve procedure, or indeed of shifting back entirely to a federal funds rate operating guide depends in part on the value to be placed on relatively tight short-run control of money, given uncertainties about the likely sources of potential disturbances in economic and financial conditions.

If there were complete certainty about economic relationships, the choice of operating procedure would not be particularly critical, for a given money stock target would be associated with unique, known values for the federal funds rate, nonborrowed reserves, and the monetary base. And the monetary authority could achieve its objectives no matter which of these instruments was selected for operating purposes.

In practice, however, markets are continually subject to disturbances that are not known in advance. The principal kinds of disturbances are those occurring in overall spending (the market for goods and services), those occuring in the demand for money (independently of GNP and interest rates), and those affecting the supply schedule for money (such as deposit mix or banks' demand for excess reserves). Moreover, such disturbances--all of which were evident last year--can be of a temporary, or self-reversing variety, or they can be permanent.

Alternative operating procedures tend to produce different outcomes for the pattern of interest rates and money growth in the face of these disturbances. With some procedures, and depending on the source of the disturbance, interest rates would be changed more, while with others the money stock and other financial quantities would absorb more of the impact. The choice of operating procedure therefore involves, among other things, judgments about whether there is more risk to monetary policy's ultimate objective of non-inflationary growth from procedures that tend to emphasize interest rates as operating targets with some implication of a relatively gradual change in rates, or from those that tend to work more directly against money supply variations.

A. Assessment of present operating procedure

The present reserve operating procedure proved flexible enough to permit some accommodation in the short run to unexpected shifts in money demand, given GNP and interest rates, that occurred last year. At the same time, the procedure worked to limit the extent to which changes in demands for goods and services (and thus in transactions demands for money) were reflected in actual money growth. Actual money growth deviated from short-run targets last year, but there were large accompanying changes in interest rates that tended, over time, to set up forces bringing money back toward path. Nonetheless, money growth over time deviated more from path than might have been expected relative to the average degree of looseness that seems to exist in reserve-to-money relationships.

While the experience of last year may have been atypical because of the nature of disturbances during the year, still a number of modifications to the operating procedure used since October 1979 might be considered for their potential value in reducing slippage in money relative to reserve paths. These modifications all have certain disadvantages, however, that need to be weighed aginst their varying advantages for more precise monetary control, to the degree that closer control in the short-run is considered desirable.

1. Evidence of the past year suggests that during an intermeeting period relatively prompt downward (or upward) adjustments in the original nonborrowed reserve path may be needed in an effort to offset, over time, increased (or decreased) demand for borrowing when money is strengthening (or weakening) relative to target. As an alternative, more prompt upward (or downward) adjustments in the discount rate would tend to discourage

(or encourage) borrowing over time (in practice the actual level of borrowing will not change until money demand changes sufficiently to alter reserves demanded to meet reserve requirements).1/ These adjustments run the risk of increasing the volatility of short-run interest rate movements in view of the transitory fluctuations often experienced in short-run money demand. However, they could also dampen the amplitude of longer-term swings of interest rates by more promptly leading to adjustments by banks that bring money growth back toward path.

2. More fundamental changes in the administration of the discount window and in the way discount rates are structured and varied could be considered for strengthening the relationship between reserves and money.

a. At an extreme, discount window borrowing might be limited to emergency needs. This is tantamount to adhering to a total reserves or monetary base path. However, this would eliminate the valuable buffering function of the discount window. The window buffers the money stock (and the markets) from disturbances affecting the supply of money (such as changing demands for excess reserves and changes

1/ Experience has demonstrated that it is difficult to determine in advance the appropriate level of borrowing to be employed in constructing the nonborrowed reserve path consistent with the short-run money supply target. This level of borrowing would depend on a projection of market interest rates consistent with the money supply target path and knowledge of depository institutions' willingness to borrow, given the spread between market rates and the discount rate, and could differ significantly from borrowing levels based on or ranging around recent experience. In attempting to forecast borrowings, evidence from models may be usefully weighed along with judgmental assessment of particular conditions at the time. However, in view of considerable uncertainties about interest rate projections, the high degree of year-to-year variability in the success with which models project economic and financial relationships, and in light of the heightened variability in demands for discount window credit evident last year, projections of borrowing demand from interest rate forecasts and past bank behavior are subject to a considerable degree of error.

in the deposit mix affecting required reserves). Its role in that respect was evident from the results of model simulations showing a weak relationship between total reserves or the monetary base and money (when reserves or the base are treated as exogenously determined). In addition, the discount window cushions markets from the full impact of variations in money demand that may be transitory or which the FOMC may wish at least partially to accommodate. Finally, lagged reserve accounting requires access to the discount window in the short run on occasions when required reserves run above the non-borrowed reserve path (if that path is to be maintained).1/

b. Another approach to consider would be to eliminate administrative guidelines at the discount window and to substitute a graduated discount rate schedule for adjustment credit--in contrast to emergency and other longer-term types of discount window credit--based on, say, size of borrowing. This approach would tend to make the relationship between borrowing and short-term market rates more certain by eliminating from the decision to borrow the uncertainties connected with administrative guidelines. It also thereby transforms the highest discount rate on the schedule into an upper limit for the federal funds rate. There are, however, legal questions about the System's ability to use size of borrowing as a criterion, administrative problems in overseeing the adequacy of collateral and the financial condition of a vast number of potential regular borrowers, and difficult questions with regard to the appropriate gradient for the discount rate schedule.

1/ Even with contemporaneous instead of lagged reserve accounting, it is by no means clear that banks would be able to make needed adjustments reducing their required reserves within a statement week--except at the expense of relatively extreme interest rate movements.

Too steep a gradient risks undue market interest rate fluctuations, particularly at times when borrowing demands may be changing for transitory reasons, while too flat a gradient--and at the limit a perfectly flat one--would tend to eliminate the incentive of banks to make portfolio adjustments that would bring money supply back to target.

c. The recent policy of applying a surcharge above the basic discount rate for frequent borrowing (by larger banks) represents a step toward a graduated discount rate structure within the present administrative guidelines and tends, when applied, to speed up the response of market rates to overshoots or undershoots of money relative to path. This approach has the attraction of flexibility, but in practice it has proved difficult to assess, because of the limited experience with it thus far.

d. Another approach to speeding up the response of banks within present administrative guidelines would be to tie the discount rate to market rates, either as a penalty rate or not. However, this approach tends to limit flexibility and raises the danger of upward or downward ratcheting of market rates in the short run that may be excessive for monetary control needs and unduly disturbing to the

functioning of markets.[1] While a tied rate accelerates the response of market rates, the change may be counter-productive--particularly if money behavior was going to reverse itself naturally or if the rise in borrowing was needed to moderate shocks from the supply side--and could intensify short-run money supply and interest rate cycles.

3. A closer short-run relationship between reserves and money could be attained by measures that strengthen the link between required reserves and deposits in the particular money stock that is being controlled. One such measure would be a shift from lagged reserve accounting (LRA) to contemporaneous reserve accounting (CRA), which the Board has already announced that it is contemplating. Such a shift would make the link between current reserves and current deposits stronger, though there still would be relatively sizable slippage between reserves and money from other sources. The monetary control advantages of CRA apply particularly to the short run. They have to be weighed against (i) the benefits of LRA for reducing the cost of reserve management by the banks, (ii) the contribution of LRA to the Trading Desk's ability to assess reserve supply conditions, and (iii) judgments about the adequacy of monetary control under LRA over a longer-term period.

---

1 This danger is greatest in the degree that the discount rate is tied to a current or very recent market rate. If required reserves expand rapidly in the current week, banks will have to borrow the added required reserves that are not being accommodated by the nonborrowed reserve target. As a result market rates must rise to the point where banks are willing to borrow from the discount window. With an attempt to maintain a "penalty" discount rate, the new market rate would therefore have to move temporarily above the discount rate which could not be maintained, in those circumstances, above current market rates. Market rates would go up by the amount needed to re-establish the normal spread of market rates over the discount rate (that emerges from pressures generated by discount window administration and banks' reluctance to borrow). But this rise in rates may well bring about a further rise in the discount rate if an attempt is made to re-establish a "penalty" rate, entailing yet a further rise in market rates, so long as required reserves remain at an advanced level.

4. The present relatively complicated reserve requirement structure, even apart from LRA, makes for considerable slippage in the relation between reserves and money. While the Monetary Control Act has tended to simplify the required reserve structure, it will be a number of years before the new structure is fully phased in. Because of the unpredictability of shifts in deposit mix, in the ratio of currency to deposits, as well as in banks' demand for excess reserves, judgmental multiplier adjustments to original paths were made week-by-week last year as new information was obtained. Model simulations suggest money-reserve relationships would have otherwise been more variable on average. Thus, there is no reason not to continue making such adjustments, though it remains unclear, because multiplier changes are so erratic, whether full adjustment should be made to each week's added information.

5. It appears from tentative results based on the Board's monthly money market model that the faster the FOMC attempts to move back toward the longer-run target for money, once off target, the more likely is the long-run target to be hit, assuming no federal funds rate constraint. However, these results also suggest that the more quickly a return to path is sought, the more substantial fluctuations in money market rates are likely to be. And experience of the past year suggests these more substantial fluctuations would be transmitted broadly through the rate structure. Moreover, for a more rapid return beyond a certain speed--perhaps around 3 months--it seems as if the gain in reducing the chance of departures from longer-term money targets is small compared with the increasing chance of a wider range of variability in money market rates.

B. Assessment of other targeting procedures

1. Monetary base or total reserves

A. The principal reason for adopting these measures as day-to-day operating guides would be to ensure more precise control of money. However, there is no clear evidence that money can be controlled more closely through use of a strict total reserves or monetary base operating procedure under the present institutional framework than through current procedures. Indeed, most of the evidence suggested that these measures could produce more slippage because of supply-side shocks to the money multiplier. These shocks tend to be partially offset by changes in borrowing with a nonborrowed reserves day-to-day operating target. Under a total reserves or base target, there would not automatically be an offsetting tendency. In practice, though, the precision of a total reserve or base target would be improved through judgmental adjustments to the reserve path that offset multiplier shifts. Improvements could also be effected, and the need for judgment reduced, by further simplification of the reserve requirement structure (such as removal of the reserve requirement on nonpersonal time deposits if the FOMC wishes to control mainly narrow money) and by a return to CRA. While such changes would tighten the linkage between reserves and money, shifts between currency and deposits would still tend to be a factor causing slippage--with model simulations indicating greater slippage with the monetary base as the operating target (which is essentially currency plus total reserves) than with total reserves. With a monetary base target, short-run volatility in currency would lead to large variations in

money supply because changes in the public's holdings of currency would need to be offset by equal changes in bank reserves; and these changes in reserves would, given the fractional reserve system, force a multiple change of deposits in the money supply. With a reserves target, the changes in money supply would be no larger than the currency variation; consequently, money supply would be less volatile with a reserves target.

b. In any event, strict adherence to total reserve or base targets appears to be impractical over short-run operating periods in the current institutional setting. With the present LRA system, it is clearly not feasible. If CRA were adopted, such targets might become somewhat more practical, though efforts to attain them would accentuate short-run interest rate fluctuations. Such fluctuations, given the inelasticity of money demand relative to interest rates over the short run, would stem from the inability of the reserve supply to provide at least partial accommodation to transitory money demand variations, and would also result from remaining multiplier slippage. In the process, borrowing at the discount window would fluctuate widely, as banks reacted to efforts by the Open Market Desk to reach the total reserve target.

c. While there are practical questions about the feasibility of targeting on total reserves (or the base) on a day-to-day or week-to-week basis, in a longer-run context a path for such reserve aggregates, properly adjusted for multiplier shifts, could serve as a general guide in helping to make adjustments in the nonborrowed reserve path or in indicating the need for a change in the basic discount rate--as is, in fact, present practice. For example, when total reserves are

running strong relative to its adjusted path, this can be taken as an indication to hold back on the supply of nonborrowed reserves relative to its path (in order over time to offset the rise in borrowing) or to raise the discount rate (in order over time to discourage a rise in borrowing).

2. Federal funds rate target

a. Model simulations, given existing institutional arrangements, indicated that in concept slippage in short-run money stock targets could be little different on the whole under a funds rate targeting regime than under a nonborrowed reserves regime. However, in practice--to be reasonably certain of attaining its long-run target--the FOMC would need to be willing to move the funds rate quite actively when it was the operating instrument and be able to predict fairly well the appropriate extent, and indeed the direction, of the required change. Uncertainties in those respects of course were among the factors leading to a shift toward reserve targeting.

b. A federal funds rate operating target would have advantages if the FOMC wished to provide more scope for being accommodative to variations in money demand, either because of uncertainties about the proper path of money growth within its longer-run target band or because of a belief that money demand disturbances are more likely to occur than disturbances in the market for goods and services.

c. The federal funds rate range under the current reserve operating procedure has been much wider than under the earlier funds rate targeting regime. Moreover, the range under the new procedure has generally been changed as the limits were approached--a practice

that has been consistent with evidence suggesting that a wide range of variation in the funds rate is a by-product of efforts to attain tight control of the money supply. In that context, a relatively narrow acceptable funds rate range would only have advantages in the degree that the FOMC (i) felt more scope could be given in a particular period, for one reason or another, to variations of money from a pre-set target, or (ii) felt that narrow funds rate limits provided a device that, given the need to make judgments about sources of economic and monetary disturbances, would prompt further assessment of underlying monetary and other conditions by the Committee in the interval between meetings.

Monetary Control Project Staff Papers

Davis, Richard. Monetary Aggregates and the Use of "Intermediate Targets" in Monetary Policy.

Enzler, Jared. Economic Disturbances and Monetary Policy Responses.

_____ and Lewis Johnson. Cycles Reulting from Money Stock Targeting.

Greene, Margaret. The New Approach to Monetary Policy--A View From the Foreign Exchange Trading Desk.

Johnson, Dana and Others. Interest Rate Variability Under the New Operating Procedures and the Initial Response in Financial Markets.

Keir, Peter. Impact of Discount Policy Procedures on the Effectivness of Reserve Targeting.

Levin, Fred and Paul Meek. Implementing the New Procedures: The View From the Trading Desk.

Lindsey, David and Others. Monetary Control Experience Under the New Operating Procedures.

Pierce, David. Trend and Noise in the Monetary Aggregates.

Slifman, Lawrence and Edward McKelvey. The New Operating Procedures and Economic Activity since October 1979.

Tinsley, Peter and Others. Money Market Impacts of Alternative Operating Procedures.

Truman, Edwin M. and Others. The New Federal Reserve Operating Procedure: An External Perspective.

The CHAIRMAN. Thank you, Mr. Volcker. At this time, we will begin the question and answer period. We will observe the 5-minute rule. In view of the fact that I consumed time in my opening statement and during Mr. Volcker's presentation, I yield to Mr. Gonzalez for questioning.

Mr. GONZALEZ. Thank you, Mr. Chairman, and thank you, Mr. Volcker, for your time and presentation.

We were informed in this morning's newspaper that the Reagan administration underestimated Federal spending in 1982 by anywhere from $3 to $6 billion. It is reported that David Stockman—and I refer to him as "Stockmanoff," because he is a good stakhanovite, and that was a counterpart in Russia—and we all have to be good stakhanovites at this time—it is reported that David Stockman must now find between $9.6 and $12.6 billion in additional spending cuts in time for the March 10 message.

I assume that the projections you have given us today on page 44 and those of the administration listed on the same page of your report were based on the Reagan program as it was originally announced. Now, we have to ask you, how far off do you think your estimates are on unemployment, and for the possibility of a large decline in real gross national product?

I would like to take this opportunity to ask the administration, How many more welfare programs for the poor will have to be cut because of this miscalculation by the administration? At this point, Mr. Chairman, I think it is fair for us to caution you about proceeding with the extremely strict monetary policy which may drive additional millions of workers onto the unemployment lines before the plans on the administration's drawing board are relatively permanent.

Please, at least, give us your assurance, today, that you will rapidly get back on a monetary growth track which will not cause massive increases in unemployment during 1981.

Mr. VOLCKER. Let me make a couple of comments, Mr. Gonzalez.

From my point of view, I would much rather the administration find and identify any underestimates of spending at this time rather than later.

I think the history of the past decade has been pretty clear that budgetary projections made at any point in time turn out to be underestimates of what the trend has actually been. That has been part of this process of building in enormous momentum in Government spending and much bigger deficits than are projected.

It is important that these projections be as realistic as possible and be dealt with from the standpoint of overall economic policy and of actual and potential strains on financial markets.

I think all the risks are on the side of not doing enough budget cutting rather than doing too much. That is what experience has shown. That is the danger that remains.

I recognize that there are other considerations in dealing with the budget. Spending programs have purposes of their own. But, from the standpoint of economic policy, and the kind of thing that you are concerned about, the risk is on the side of not doing enough.

I wish I could come before you with some easy answer that we could manipulate these money supply figures and suddenly produce full employment or a growing economy.

The fact is, as I said earlier, that those things aren't going to happen, in my judgment, so long as inflation remains in the character that it has been in recent years. Attempts to stimulate the economy without dealing with inflation are bound, in the end, to be self-defeating.

We have to deal with that problem. We can't leave it out of the equation.

Our own approach and policies are designed to recognize what I think is a very hard fact of life: That if we try to ignore the inflation side of the equation, those fundamental and needed objectives for employment and growth will not, in fact, be reached. That is what has happened in the last few years.

Mr. GONZALEZ. In other words, what you are saying is that you have always miscalculated on this, and that, at this time, you project higher rates of unemployment for 1981?

You know, inflation has been the devil for some time, here. You remember 1971, we had everybody from the Secretary of the Treasury to the President, and everybody here, saying we had to have economic stabilization controls, because of the devil inflation.

We are using that as sort of an escape hatch. And, in the meanwhile, those of us that have people who don't have $200-a-month total income—couples that have social security income only, less than $200—they don't understand M_1, M_2, M_3, and all of that fancy talk.

They put it to me this way: "It looks as if Mr. Reagan's program is the same old thing."

That is—that means the Federal Reserve—what you are telling us here: If you are rich and white, you are all right; if you are black, stand back; if you are brown, hang around.

That's M_1, M_2, M_3 in the context of what we get here this morning.

Well, my time is up.

Mr. VOLCKER. I agree with the focus on the ultimate objective of policy, but let us not be misled.

I am not quite sure if this is the right word, but M_1 and M_2 are tools. The objective is as you cited.

I would simply say we are not doing anybody a favor if we think we can deal with these economic problems in a context of rising inflation. I don't think we can. That is part of the problem, not the solution.

Mr. GONZALEZ. My time is up.

The CHAIRMAN. Nonetheless, looking at the projections you have presented this will be very brief—and putting aside the question of whether they would change slightly as a result of the full consideration of the Reagan administration's policy; your January meeting of the FOMC projected an increase in unemployment and an increase in inflation for 1981.

Am I correct in assuming that among the many factors involved, there is a necessary increase of unemployment of between 500,000 and 1,000,000 people in 1981?

Mr. VOLCKER. I don't know how good that projection is, Mr. Chairman.

The CHAIRMAN. You certainly didn't overshoot. I am sure the FOMC was trying to be as conservative as possible on that number, knowing it is a number that scares people.

Mr. VOLCKER. I think economic forecasts—most particularly, in the short run—have not been terribly accurate. I am not talking just about ours. Ours have not been all that good, either, but neither have anybody else's. We are in a situation where I do not want to put too much money on any particular economic forecast.

I do think that there is reason to believe that 1981 could be a rocky year. That is the common forecast, not just by members of the Federal Open Market Committee, but by others. In fact, the economy has been stronger in the first 2 months, as nearly as we can tell, than most people assumed only 2 or 3 months ago, which says something about the fragility of particular forecasts.

But, be that as it may, I still think there is reason to be wary about 1981.

The question is: What do you do about that? What do you do not just about 1981, but about an adverse trend that has taken place over a number of years?

I can only return to the point that it takes a program in a number of directions, I think we have the clear possibility here of putting together a program that will rely not just on the Federal Reserve. The Federal Reserve has one role to play. There are extremely important roles for the Congress and the administration, too, obviously. Those programs ought to be directed at our basic problems. think the intent is to direct those toward our basic problems, but that does not mean that the problems that have accumulated over literally more than a decade, are going to disappear overnight instantaneously.

We have a big economy. We have an economy that has been subject to great strain and difficulty, over a period of time. The sources of those strains and difficulties must be dealt with. If we could snap our fingers, or wiggle M_1, or wiggle M_3, or increase spending a little bit, or decrease spending a little bit, or change taxes a little bit, and by March have the economy in wonderful shape, it would be great. But that magic does not exist.

The CHAIRMAN. What you're leaving out—and obviously, is it a necessary element for us to consider—is a rather drastic increase in unemployment? Is that a necessary element of the overall policy?

Mr. VOLCKER. I wouldn't express it as a necessary element.

The CHAIRMAN. Or a necessary result?

Mr. VOLCKER. All I said here was "a likely prospect"—result, if you will. I don't know what policies you would have to avoid that possibility in the short run. What we want to be sure about, as sure about as we can—and I am sure other people look at it in the same way, in terms of other kinds of policies—is are we undertaking the moves that are best calculated to deal with this problem, graphically reflected in this unemployment rate projection for 1981. Are we undertaking measures that have the best chance of dealing with that problem, in a reasonable time frame?

But we can't undertake a policy now that is going to cure that problem in 1981. There isn't any way to do that. That is the residual effect of what we have been doing in past years.

I think there is a widespread feeling that we wouldn't be facing unemployment rates in the 8-percent area, in 1981, if we had not permitted the inflation to build up over the previous decade.

Now, if you go ahead and say, "Let's gun the economy"—to use the vernacular—and try to avoid any risk of the unemployment rate rising, I feel quite certain that we will be back sitting here with you next year faced with figures for higher inflation and higher unemployment in 1982. That would be a counterproductive policy.

We have got to look beyond the immediate future, and do what we think offers the best prospect for turning the inflation figures, and the unemployment figures, in a favorable direction and not just in the short run. Let us set the stage for a more prosperous, dynamic America in the eighties, that will offer some genuine help and opportunity for the people that Mr. Gonzalez just referred to.

The CHAIRMAN. Mr. Stanton?

Mr. STANTON. Thank you, Mr. Chairman.

Mr. Volcker, you just stated to the chairman of the committee that you would come back next year with possible changes, and so forth.

I would hope, and I would presume, in your next appearance before the committee—under the law, in the middle of July—that you would take that opportunity to revise your thinking, and your targets, and make whatever necessary changes.

Mr. VOLCKER. We will keep them under review, and we will certainly be back here next July.

But, as you know, for some time—and as I have understood, with the very full support of this committee—we have taken the posture that, over a period of time, growth of money and credit should be reduced.

Mr. STANTON. Mr. Volcker, we took the unusual step of interrupting your verbal testimony for the simple reason that financial reporters and newspaper reports stated this morning that you were lowering your 1981 M_{1B} target rate to 3½ to 6 percent.

I wanted to give you the opportunity of commenting on the two targets that you do have, two prescriptions of M_{1B}, once before and once after the consideration of NOW accounts. If you took the average, the question would be: From the fourth quarter of last year, which averaged $413 billion, are we now targeting that to grow at the rate of 3½ to 6, or at a rate of 6 to 8½ percent?

Mr. VOLCKER. In a sense, 6 to 8½ percent. But that is a very tentative figure, which could change, depending upon the results of the surveys and other information that I described to you. That is the way the figures, according to our present estimates, would correspond to the reported figures.

But those figures include a distortion, due to the transfers to which I referred. It may be useful, if you want to clarify this, to go through table 1, if you want to take the time to do that.

Mr. STANTON. I do know we are under a time restraint here. I do have several more questions.

Mr. VOLCKER. It is, unfortunately, a complicated business. The essential point is that we want to allow for those transfers from savings accounts into transactions accounts, which distort the basic trend in the transactions account figure. I think we must do that, in order to understand the reported figure.

Mr. STANTON. Further than that, did I understand you to say, in your verbal testimony a while ago, that during this interim period of flexibility, that the Board had taken under consideration putting greater emphasis on 2, 3, or 4?

Did you decide to do that?

Mr. VOLCKER. That was the feeling of some members of the committee. That was not the decision that was taken. As we analyze this closely, as time passes, we will see how satisfied we are that we can make a good estimate of the shifts that make interpreting the data difficult.

This is a temporary problem. I don't know how long it's going to last. But once this kind of massive shifting period is over, the figures ought to settle down.

Mr. STANTON. Mr. Chairman, I have a couple of other questions on M_{1B}. But, in case of time restraints that we are under, I wonder if it would be possible to ask if we could submit them for the record, within a reasonable length of time.

The CHAIRMAN. Without objection—if there is no objection from any members, we would like to, indeed. I also have some additional questions I would like to submit in writing.

Mr. VOLCKER. We would be glad to do that.

If I can clarify this further, in one sentence, if you compare last year's 4 to 6½ percent target with the 1981 target of 3½ to 6 percent. You will have the substance of what we are trying to achieve.

The reported figure is distorted.

The CHAIRMAN. Mr. Minish?

Mr. MINISH. Thank you, Mr. Chairman.

We've been talking this morning—at least a part of the hearing that I was in here for—about M_1 and other sophisticated numbers and letters that the little people don't understand. So, I have one very simple question:

What is the future for inflation?

Mr. VOLCKER. Our policies are certainly aimed at turning the inflation rate down. I think, in that respect, we may be in for a rocky period for a while, reflected in the recorded inflation figure.

We have had an increase in oil prices, as you know, and gasoline prices. There is some question about the near-term outlook for food prices. The Consumer Price Index—although it did not reflect this in January, due to a decline in housing prices—may for a month or two or three have to absorb the somewhat artificial effect of higher mortgage interest rates.

But I hope we turn the corner toward the end of this year, and we can look forward to some progress in 1982.

My own feeling is that, the hardest part is turning around the momentum that exists. When we turn that momentum around and people can begin to see the inflation rate declining, then I am hopeful that progress will come more rapidly.

Mr. MINISH. Well, let me ask you: We are not going to do much in terms of turning it around, where the energy contribution is concerned, are we?

In terms of OPEC oil, and deregulation, and everything else?

Mr. VOLCKER. There is some inevitable uncertainty there, depending upon what happens to the world price of oil. We had a big price increase not so long ago. We have had the war, and other turmoil in the Middle East. If we didn't have that war, certainly—and Iraq and Iran were producing at higher levels and exporting at higher levels—I think we might find a pretty good balance in the world oil markets, at these prices. In fact, there seems to be not too far from a balance now. So, it is not certain—looking ahead, after the enormous price increases that we have had in past years, that that will be a big shock in the future. But there are many uncertainties in that area. And I think you are quite right in pointing out that that is a contingency we all face.

Mr. MINISH. Thank you, Mr.Volcker.

Thank you, Mr. Chairman.

The CHAIRMAN. Mr. McKinney?

Mr. MCKINNEY. Mr. Chairman, I can't resist the opportunity to make a few remarks.

I have been fascinated, during the 10 years that I have been here, at Congress lack of desire to have a fiscal policy or a governmental policy to control the economy of this country.

We have always said, "Let the Fed do it." Now, when things go wrong, and the inflation rate goes up, we always say it's the Fed's fault.

I think it is only fair to state for your point, and the Fed's point, that although certainly monetary policy has a great deal to do with the problem—and unemployment, inflation and fiscal policy are the responsibility of the Congress, and fiscal damage is the direct responsibility of the Congress.

It is governmental policy, governmental spending, and governmental fiscal policy that is clearly responsible for the unemployment figures that you show in your projection.

It is very comfortable and it is very convenient to blame the Fed. But the blame rests right here, in these three buildings and across the street, in the Capitol of the United States.

I do have one concern, which I have always had, and I think it is a concern of yours.

I guess I just have to state that monetary policy, when used alone, is severely unfair to two of our major industries in the Nation: one, housing; and the other, the second biggest expense, the automobile business.

Congress has already intervened massively with forced credit, in the automotive industry. We have continually intervened with less and less and less success in the housing industry, with forced credit.

Is there anything we can do? Should we do anything? Or how long is it going to take before the impact of monetary policy releases these two major components in our economy, so that they can—in some nature—survive?

I question, very seriously—in the case of the latter, the automotive industry—the survival of Chrysler, or the survival of Ford, which is a pretty serious thing to contemplate.

Mr. VOLCKER. I think you have provided the basic answer in your question, Mr. McKinney.

What you can do is balance the budget. The more you can relieve the pressures on financial markets—the preemption of the flow of credit taken by the Federal Government—the more credit there will be for the automobile industry, the housing industry, and other industries.

I would broaden your point a little further.

It is true that some industries are particularly vulnerable to damage in a tight, constricted financial situation. But the thesis "leave it all to monetary policy," as you suggested, runs very considerable risks in terms of damaging the financial structure, damaging productivity, damaging business investment, and damaging the health of a good many industries. That is why it is so important to get a balanced policy. You can't leave it to monetary policy alone.

Mr. MCKINNEY. Could I ask you, then, a personal question, which is sort of putting you on the spot?

If Congress, as I stated, is ultimately responsible for fiscal policy and governmental policy, taxing, spending, the deficit, and so on, and Congress, as in the past, refuses to act, refuses to face up to the situation, are you and the Fed going to go ahead and attack inflation by stable money growth, no matter what Congress does, and just let the chips fall where they may?

Mr. VOLCKER. I don't think we have much alternative, as we analyze the problem, but it would leave us in an extremely difficult—it would leave the country in an extremely difficult position. But, if everybody gave up, what would happen to that inflation rate?

As I said yesterday, we sometimes have the feeling we are sitting on top of a boiling kettle. It is an uncomfortable position to be in, and we just look for somebody to turn down the gas under the kettle.

Mr. MCKINNEY. That is a very good analogy.

Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Fauntroy?

Mr. FAUNTROY. Thank you, Mr. Chairman.

As you know, the Humphrey-Hawkins Full Employment and Balanced Growth Act establishes a goal that Government policies would seek to achieve 4 percent unemployment, and a 3 percent rate of inflation, by 1983.

Neither your testimony nor the report gives mention of these goals. Indeed, you don't even note how difficult it would be to achieve such goals, as the President did last year.

Where in your philosophical and value scheme does unemployment fall? And how do you relate it to inflation?

Mr. VOLCKER. What I was trying to suggest earlier, Mr. Fauntroy—I think that, in an ultimate sense, the object of economic policy is to achieve high conditions of employment, high conditions of growth, rising standards of living for Americans. The only question, as I tried to suggest earlier, is how you get there.

In that sense, I give it the highest priority, but—it would be counterproductive to conclude, from that priority, that we could ignore inflation, because it is the fact of this inflationary cycle, this inflationary momentum, that has prevented us from getting to those objectives.

We have to deal, in the present timeframe, with the inflationary problem or, in my judgment, we will never succeed in reaching the employment goal.

Mr. FAUNTROY. What timeframe do you suggest for moving toward the Humphrey-Hawkins goal of 4 percent?

Mr. VOLCKER. I would like to think we are moving toward it all the time, in the sense of an ultimate objective. Those goals, particularly for unemployment, you say 4-percent unemployment are extremely ambitious, in terms of the trend of events of the past decade. I think the hard fact is, given the trends of the past decade, that that is certainly not on the immediate horizon.

I think President Carter's Economic Report said he was unable to estimate the timeframe and wasn't going to try to do so. I think it is, indeed, very difficult to estimate that time now, but that doesn't mean we can't make progress on unemployment. I would point out that we had an enormous increase in employment since 1975 to the top of the last cycle, of 10- or 11-million people, as I recall. In 5 or 6 years, we had a really enormous increase in employment, a record number of our people at work in proportion to the population of working age.

Nonetheless, the unemployment rate never got much below 6 percent.

Mr. FAUNTROY. You have properly counseled the Congress to assume its responsibility with respect to fiscal restraint, and I wonder two things about that. One, if you would not agree that we can fine-tune our approach to budget cutting to relieve us of those aspects which would increase the Federal deficit without putting more people, more poor people out of work and more working poor people on the welfare and unemployment compensation rolls. I would hope that you would counsel that as well.

You certainly ought, I think, to also be concerned about fine-tuning the tax relief in a fashion that funds are drawn to the areas of high inflation, energy, housing, food, medical care. For that reason I wonder whether or not, in addition to the advice you have given us about policies which you implemented for a brief period, trying to direct credit into, to increase the portfolio, in the banking institutions of the country, of loans for productivity in those four areas? Can you not reinstitute that kind of program and help us with the inflation in those areas, as well as suggest to us that we cut budgets?

Mr. VOLCKER. Let me make two comments. From the standpoint of economic policy generally in dealing with inflation and the problems of productivity and growth, my emphasis is on the need for cutting back the budget on the one side. The more the budget is cut back, the better conditions will be in the financial markets and/or the more room you will have for tax reduction.

There are enormously difficult political choices to be made, obviously, in where you cut back expenditures. I don't think, coming from the Federal Reserve, I am entitled to or have any particularly

good advice to give you on precisely where the cuts should be. I would emphasize the critical importance of those cuts.

When it comes to the tax side, where you have got to integrate the amount of tax reduction that is possible with what is done on the expenditure side, I would again, from the standpoint of general economic policy, just make the general point that the more effective those tax cuts are in promoting savings, investment, incentives to work, the better off we will be. Again, I would emphasize the general point. The precise decisions you make about the composition of a tax cut involve difficult choices. But I think it is of paramount importance that the general objective be kept in mind.

The other part of your question, I think, refers in a general way to whether some kind of credit control program or some kind of administrative means of redirecting credit would be useful. You mention several areas—housing, small business, and one or two others.

Mr. FAUNTROY. Farming.

Mr. VOLCKER.One of the questions that immediately rises in that kind of a program is, credit diverted from where? We do have a productivity problem. Every seeker of credit assumes that he is the priority user of credit, he has got a worthwhile, productive purpose for the credit. I think it is practically impossible for us in Washington to think that we can decide that one use of credit deserves priority over some other use. You can think about that in concept; applying it in practice is extremely difficult.

Mr. FAUNTROY. Is that why you abandoned the effort last year?

Mr. VOLCKER.We instituted those controls for a particular purpose. We took them off when that particular purpose was achieved. But that experience was very instructive. We attempted to give priority to some areas more than others, and I must say within 1 month, 6 weeks, 8 weeks, I got an awful lot of mail from Congressmen, among others, saying, "Why don't you give more priority to this area?" If I had put together all those suggestions, the net result is that very area would have had priority, except those called speculative loans, which are very hard to identify.

I can illustrate the point by taking just the housing area, an area which everybody typically says deserves priority, for understandable reasons. You have to recognize that even in the housing area there is a lot of speculation, if I may say so. Do we give priority to the fellow buying a second home? Do we give priority to the fellow refinancing his house, because that is a good way to raise cash to buy some speculative investment? We don't have any way to distinguish the ultimate use of the mortgage credit; it is secured by the house, but to determine whether it is a home loan for a newly married person who needs shelter, or whether it is a home loan taken out to buy a yacht, is a little difficult.

Mr. FAUNTROY. Mr. Chairman, I too have a number of questions which I would like to submit, inasmuch as my time has now expired.

Mr. REUSS [presiding]. That submission, as well as any other by any other member, is in order.

Welcome, Chairman Volcker.

Mr. VOLCKER. You look very familiar, Mr. Chairman.

Mr. REUSS. Mr. Leach.

Mr. LEACH. Thank you, Mr. Chairman. Perhaps the one thing that all of us on the committee can agree with is that we are in uncharted economic waters, and the most we may be able to ask from the Fed is a sense of professionalism and integrity. I suspect there would be very few of us that wouldn't come to the conclusion that, sir, you symbolize and embody professionalism and integrity more than anyone in this country in your area of work at this time. We are also very pleased that there seems to be an implicit understanding that the White House is prepared to embrace your leadership and that the Fed is prepared to work cooperatively with the White House within the structures of maintaining its traditional independence.

As far as I can see, your cooperation doesn't represent any wrenching change from past policy. Ever since I have been here, you have been calling for spending restraint, and disciplined growth in the money supply. This is fundamentally the Reagan position, with the major difference from the Fed's perspective with the Carter policy being that there was very little effort or very little ability in the last administration to achieve spending constraint.

It strikes me that the most fundamental change from last year to this in the overall monetary system is in institutional arrangements that have been slowly brought on by inflation. Relatively speaking, this primarily involves the rapid development of money market funds, which in recent months have been growing at about 2½ percent per week.

The money market fund phenomenon is very positive for investors seeking higher yields and difficult for some financial institutions, particularly savings and loans, and perhaps for the Fed in its ability to control the money supply and in its efforst to restrain inflation. Given that the genie is out of the bottle, and I don't think we are ever going to see a time without money market funds, do you think that the time has come to subject money market funds to reserve requirements in order to attempt to establish a level playing field for competition within the financial community and perhaps to better assist you in controlling the money supply?

Mr. VOLCKER. I might just supplement your question by noting that money market funds, many of them anyway, provide essentially a transaction service in principle. However, in practice, they have not been as actively used as an ordinary transactions account. But, noting the phenomenon that you suggest, and given that there is a transactions element here, I think there is a certain logic, and certainly a certain equity, in leveling the playing field.

The philosophy of the Monetary Control Act itself was, among other things, to achieve a level playing field among those offering transactions account services. As you quite rightly point out, when you get into these periods of strain and unprecedented high interest rate levels, new institutions spring up all the time and force a reexamination of this area. There is a strong case to be made for reexamining the decision that was reached consciously or unconsciously last year to leave money market funds out of that leveling.

I don't want to suggest that I think that would make a dramatic change in the pressures which thrift institutions and others face in

competing for money, so long as the general level of market rates remains high.

To the extent that there is a strong incentive for taking saving—not transactions balances—and placing them elsewhere—it could be in Treasury bills, as used to be the case before money market funds arose and still is to a considerable extent—the, basic problem is going to continue. But I do fully recognize the case that is made in terms of equity and logic and some practical effect from the approach that you are suggesting. The Board of Governors has not discussed this to the point of taking an actual position on it at this time.

I think we would have to consider this.

Mr. LEACH. Would you welcome legislative initiatives?

Mr. VOLCKER. I think if we do something, it would take legislative initiatives.

Mr. LEACH. Thank you, Mr. Volcker.

Mr. REUSS. Mr. Neal.

Mr. NEAL. Thank you, Mr. Chairman.

Mr. Volcker, I would like to commend you for continuing to try to restrain growth in the money supply. To the best of my understanding, no economy at no time in history of the world has been able to control inflation without controlling money growth. I commend you for your efforts. I don't want to go to any great depth about the path that that has taken. You commented about the fact that you're going to try to keep that rate of growth steady and clear and consistent in the future. I think that is very important, but I also note in your testimony and from previous comments that you have a deep concern about the level of budget deficits.

If we follow the Reagan economic plan, we will add $100 billion to the budget deficit in 1981–82, and we would, I think, and this is what I would like you to comment on, add considerably more in the years that would follow.

In your own opinion, is it more important to get the kind of tax cuts that the Reagan administration is suggesting, or is it more important to try to bring the budget into balance more rapidly?

Mr. VOLCKER. I think we have to bring the budget into balance. But let me describe under what conditions. I hate to complicate this, but I want to be realistic. You are not going to bring the budget into balance in a very sluggish, recessionary-type economy that pushes up expenditures and cuts revenues. What is critical, it seems to me, is that we achieve what we have not achieved in the past; that we achieve not only balance, but, if the economy is really healthy, a surplus when such conditions reasonably exist. Let us not set a target so high, in terms of our definition of prosperity, that we will never reach it in the shortrun; let's set some reasonable definition of an effectively operating economy, which will take 2 years anyway, and maybe longer. It is important that all of the tax actions and all of the budget-cutting actions—looking at those together—are aimed, in my opinion, at that objective.

How much room you have for tax cutting in that framework depends upon how much you cut expenditures. I think there is some room here for cutting taxes and, indeed, there is validity to the argument that in terms of achieving the healthier economic conditions, we need some tax reduction. The tax burden is very

high and rising, there is no question about that. You can argue about the degree of reduction, or about which taxes are more important to cut, but I don't think there is any arguing with the general proposition that the rising tax burden which has come about either through explicit action such as raising social security or other taxes, or through the forces of inflation itself, are a drag on the economy and a drag on productivity and a drag on savings and investment.

We want to address that side of the equation. How do we address both sides? There is only one way of addressing both sides that I know of, and that is giving as much priority as possible to budgetary cuts, and that is why I put my focus right there.

Mr. NEAL. Well, then you are saying that it is more important to bring the budget into balance than to cut taxes. I know you are saying you would like to see both, but if there has to be a tradeoff, would you lean toward bringing the budget into balance, or would you lean toward stimulative tax cuts?

Let me ask another question in conjunction with that, if I may. It seems to me—and I haven't thought it through completely—that if we are clear to the American public and to the world financial community that we are serious about fighting inflation, that we are going to follow the path that you have outlined for money growth, and that we are going to bring the budget into balance within a reasonable period of time, there not only would be an incentive for those with a lot of money to save, but also incentive for everyone to save. Wouldn't that be a more enticing incentive—a more productive kind of incentive for our economy—than just providing the opportunity for a relatively few to save?

Mr. VOLCKER. If I understand the question, I think I agree that the most important single factor in encouraging productive savings and investment would be to demonstrate convincingly that we will return to budgetary balance, that we will have a responsible monetary policy, and to insure people see some progress toward price stability and become convinced that that is the thing to bet on. That is more important than any particular measure that could be taken.

Mr. NEAL. Is that message going to be clear then, if we face the specter of a $100-billion deficit in the next couple of years and the uncertainty about the outcome?

Mr. VOLCKER. I would worry, if we were going to face the specter of a $100-billion deficit.

Mr. NEAL. That is what the President is recommending.

Mr. VOLCKER. Over a series of years.

Mr. NEAL. No, Mr. Volcker, to 1981–82. With his tax cuts and spending cuts taken into account, it is $100 billion.

Mr. VOLCKER. Yes, adding the 2 years together.

Mr. NEAL. And there is a great deal of uncertainty about the following year.

Mr. VOLCKER. That is right, and if the economy weren't as strong as projected, the deficit would be bigger. I think I agree with what you are saying, but let me state it my way and make sure. I think you have to aim for a balanced budget or beyond that, a surplus. Under the conditions that I described, you are not going to make it unless the economy is performing reasonably well; and you are

looking at a time horizon out a few years. I think you have room for tax cutting in some proportion consistent with that outlook and with restraint on the spending side. The question is, how much? The more spending cutting you do, the more you open up the opportunity for also having some tax cuts also.

So, it is not an either/or, as I see it. It is a question of how much. As to the question of how much, yes, I give great importance to achieving that budgetary balance.

Mr. NEAL. Thank you.

Mr. REUSS. Mr. Paul.

Mr. PAUL. Thank you, Mr. Chairman.

Mr. Volcker, I have two questions. First, I would like to get your opinion about the possibility of changing the rules with regard to interstate banking. The other question I have has to do with the money growth that we saw between May and November of last year.

There are various individuals who make accusations that the Fed at times responds in a political way, especially in election years. And we see that the money growth prior to the election was at the rate of 16 percent during that 6-month period, and we see M_{1B} increasing by $36 billion. What is your answer to those who might make that accusation?

Mr. VOLCKER. I might say, and I am sure you understand, Mr. Paul, that I resent the comment from others that you report. I have heard comments in both directions. That we were trying to expand the money supply for political reasons, because we were interested in influencing the election in one direction. I have heard just as frequently that we pushed up interest rates to assure the election results in the other direction. Neither is true. I do resent that interpretation personally. Last year was an unusual year for more than two reasons, but for at least two very important reasons. We had an unprecedented use of credit controls that had effects on the money supply in the short run. We also had the sharpest decline in the GNP that we have ever had in one quarter in the post-war period, which affects the trend of the money supply in the short run.

Then we had a recovery in the economy of a magnitude and a timing that was predicted by almost nobody. In fact I can take out the almost; nobody predicted it.

One of the things that our studies has shown is that we cannot control the money supply very precisely through any technique in the very short run. The nature of the economy and the financial system is far too complex for that kind of precision. Careful tests that we made seem to come to the conclusion that if we had perfect control over the reserve base, or the reserves—we don't have perfect control, but assuming we did—and we aimed at a particular money figure in 1 month, one-third of the time, the looseness of linkage between reserves and money would produce a change in the money supply at a seasonably adjusted annual rate of 8 to 10 percent different from the target for a single month.

You would expect those to average out over a series of months so you could come much closer on a quarterly basis. I would note that last year while the money supply increased very rapidly from a low level initially, there was no great concern about it for a month or

two because it started from a low level; it did increase very rapidly for a period of 4 or 5 months. But, as you point out, there were only 3 months during the year when we were above our target range for M_1, out of the 12 months of the year.

When you adjust these figures for the institutional transfers, we were above the target range only 3 months out of the year. It happened that 2 months of those 3 months were in the fourth quarter, which is what we use to report to you our targets. But, of course, every quarter is as important as another, and I don't think our record was bad in that light last year.

Mr. PAUL. So you are saying that the money growth comes as a result of the economic activity, rather than the other way around?

Mr. VOLCKER. The impetus for money comes from a variety of sources. Among other things, obviously, from rapid changes in economic activity. Now, we can restrain that or stimulate it, or, assuming economic activity wasn't changing at all, we could take actions that would be an independent impetus on the money supply. But in part, the money supply moves in response to the demands of people for money, which is related to economic activity.

That is one force bearing on the money supply. What happened during the fall is quite clear, in general terms. Let us not look at the precise fluctuations, but the sweep of what happened during the fall. The economy was expanding quite rapidly. Inflation was continuing at a high level. The nominal GNP was rising at a rate of something like 15 percent and maybe higher for a while.

When the nominal GNP is rising by 15 percent or higher, that creates a big demand for money to finance it. We were trying not to provide the reserves; we were not providing the reserves that we directly control. So the force of demand for money impinged upon the restricted supply. The result came out partly in a higher money supply for a while, but it also came out in higher interest rates. That is why interest rates were rising during that period.

We have great difficulty, all of us, in communicating with each other, because two different people looking at that same phenomenon may see different things. If you look at the money supply, you may say, in some sense, policy was easy. It wasn't designed to be easy, but for a while the money supply was going up excessively.

Most people looking at what was going on in the market saw a very high, rapid rise in interest rates, and they said monetary policy is very tight. There are two ways of describing it, but it leads to all sort of semantic problems.

Mr. PAUL. My time is up. But could you make a quick comment about interstate banking?

Mr. VOLCKER. We have not looked at that in an organized way. I think without a doubt it is an issue that needs to be explored and hopefully rationalized a bit. There is a lot of interstate banking de facto, as you well know, so far as wholesale banking is concerned, but the speed of communication, the speed of transportation, the integration of the markets, I think those require a reexamination of the way one handles the political boundaries in the country which have been increasingly swamped by the realities of the marketplace.

We have no particular proposal at this time. I would myself think any changes here would be evolutionary rather than revolu-

tionary. But we will be interested in examining this subject with the Congress as time passes here.

The CHAIRMAN. Mr. Blanchard?

Mr. BLANCHARD. Thank you, Mr. Chairman. I am disturbed by much of what you say, and I am not sure I understand it. And so, I would like you to correct me if I am wrong. Last year, you said that the best way to get interest rates down was to balance the budget. President Carter attempted to do that. We said:

> Well, we don't think you're going to be able to do it, Mr. President. You have been reducing the size of the deficit since you have been in office, but if you try to do it all in one fell swoop, you will throw a lot of people out of work, you will have a higher deficit, it will fan inflation, confidence will drop, and you will be defeated.

And that all happened, by the way. I am not sure if it was because of our reasoning. But now we are back here. Now you are saying that the best thing that we can do for autos and housing and inflation is to balance the budget, but it can't be done rapidly; it will take some time; you have to have a period of economic growth for it to be done, which is the same old new deal argument, the argument, frankly, I was giving for 6 years here in Congress, as to how you balance the budget. You do it in a steady, careful, planned fashion, by not throwing people out of work.

I feel like we are right back to square 1, with supply-side economics being nothing more than Republican excess demand-side economics. I am completely confused, because if you are saying we can't balance the budget for a period of years and yet that is the thing that we need to do—there is really no relief in sight, is there?

Mr. VOLCKER. Let me approach it slightly differently. There are very great dilemmas and difficulties in the situation in which we find ourselves. You say the way to deal with interest rates is balancing the budget. Balancing the budget is important, but let me just start out with a different premise. Ultimately, the way to deal with interest rates, to get them down, and keep them down is to deal with inflation.

The budgetary situation is important in that respect, and it is important in the short run and aggravating the pressures on interest rates. If I knew some way to get the budget balanced the more rapidly you could do it, the better.

I am well aware that some of the analysis and words that I used earlier have been used through the years. Not that the analysis is in any sense invalid, but it becomes a convenient excuse or crutch for not taking any action. You just sit back and say, "Well, growth is going to take care of it, so there is no urgency to the problem," and so on.

The words do seem to me to be valid, but they have to be backed up by real action, and in the past I don't think they have been backed up by sufficient action.

The proof of the pudding is going to be in the eating—in whether enough action is taken this time to be convincing that we can reach balance and surplus under the conditions I described. In making that calculation, we ought to assume—because history shows it—that all the risks are on the side of not doing enough to balance the budget.

In that sense, we must be extremely careful, and I think there is some danger. There has been through the years and there is some danger now that that formula of words, so to speak, can be used as an excuse for action that is not tough enough to balance the budget.

I would be worried about that. It is extremely important that that be given priority in the framework that I mentioned.

Mr. BLANCHARD. Well, as I understand it, nobody's economic plans take into account the heavily indexed, as you refer to it, transfer payments, wage settlements, and so forth. Now, I don't know any economist, other than the dreamers, who really believe we are going to get the kind of handle on inflation we need without tackling the problem of indexing.

It is a problem for Democrats, because we have to deal with unions. It is going to be a problem for Republicans, because it causes pain. Isn't that correct?

Mr. VOLCKER. I think the indexing problem is a serious problem, not just the indexing in Government programs, but the kind of indexing and the mentality that runs with it through the economy overtly or covertly. Again, that is a decision, the Congress has to make, but I think indexing does tend to aggravate our budgetary problems.

Mr. BLANCHARD. One final question regarding allocation of credit. If you sit in Michigan, as I do, oftentimes, or in the Great Lakes industrial belt, you can make a very strong case that high interest rates allocate credit away from our area, because they allocate credit, perhaps not intentionally, to speculative areas of our economy—to glamour industries, away from the industrial belt, and away from housing.

The effect of that, plus a number of other tax cut ideas, is as a form of allocation of credit. Therefore, if we are to survive, and restore normal levels of employment, we must counter with an allocation of credit plan ourselves, such as types of RFC's, tax cuts for the purchase of cars, and a number of other things.

I can't think of any good reason why we shouldn't counter with our own allocation of credit, given the current climate, can you?

Mr. VOLCKER. Let me say, first of all, our purpose is not to have high interest rates; our purpose is to take the restraining actions that are necessary on money and credit. One reflection of that is in the credit markets. And interest rates, in the end, depend upon the supply and the demand.

Obviously, we are trying to affect the supply. I don't want to be totally semantic, but in terms of objectives, there is nothing great about high interest rates, per se. It does have, I am sure, differential effects in different areas, and I can well understand why in observing those effects somebody can say, "Why don't we enter into the market and try to offset some of those effects that we don't like?"

The practical problem is whether that is really possible and effective, and I think what is possible and effective in that area is extremely limited, at best, for the kinds of reasons I suggested earlier. If there is a basic force in newer areas of the economy—the technological areas, and the defense industries for instance—which

are highly profitable and expanding, they are going to attract more credit.

The burden is on the other areas to make themselves more attractive. That is part of the process. Some areas of the economy, some very important industries, industries of very heavy traditional importance, have for one reason or another become less competitive than they should be.

They themselves have a responsibility in their management practices and their labor practices to become more competitive, and they will attract more capital as that is done.

Mr. BLANCHARD. Well, I want to thank you, and I appreciate your efforts. I would simply caution you, as I have before, that I believe you are going to get strung up by the political community if these new voodoo economics don't work. And I know you are trying to cooperate. But I would urge caution in how you cooperate.

The CHAIRMAN. Next, Mr. Lundine, with the graciousness of the minority side.

Mr. LUNDINE. Thank you, Mr. Chairman. And I thank my colleagues.

Mr. Volcker, I am deeply concerned about what I would describe as the plight of small business in this country. It may not have been your purpose, but the fact is that interest rates are at historic highs, and have remained there for disturbingly long periods of time. While I understand some of your objectives, I need not remind you, I don't think, that small businesses do create the marginal jobs that are very important and often create the kind of innovation and competitiveness that we really want in our economy to deal with rising prices. Now, in your January statement before the Senate Banking Committee, you said that far from finding their problems solved by money creation, small businessmen, particularly vulnerable to escalation of interest rates, would find their prospects worsening over time.

Frankly, I don't know how it could be worse. It is like a choice of being shot or burned at the stake. Small businesses—not just unsuccessful ones—are choosing to liquidate, or being forced to liquidate, and I wonder if you see any particular relief if we follow disciplined fiscal policies in this particular regard.

Mr. VOLCKER. Yes, I do, Mr. Lundine. I understand the perspective of a small businessman faced with the problems that he has now; he didn't need higher interest rates adding to them. They are a very real burden. And small businesses do fulfill a role in our economy of the kind that you describe.

I don't want to give any false promises about their situation being relieved overnight. But the point I was trying to make in my statement was that they have an enormous stake in the whole program working, in restoring a more stable economy, and a stable price picture in particular, because they are vulnerable—some of them, anyway, at the end of the whip. They have the most to gain from what we are trying to achieve. But again, I know of no way to bring about that gain easily in the short run.

Mr. LUNDINE. I think this is a related question: In your statement today, I was pleased to note that you said monetary policy, indispensable as it is, is only one instrument. And that relying entirely on that instrument focuses strains on financial markets.

Mr. VOLCKER. And on small businesses, I might have added.

Mr. LUNDINE. Right. I am deeply concerned about the sagging and in fact declining rate of productivity in America, and believe fairly strongly that macroeconomic policies are not the only thing impacting on our declining productivity. And I wonder whether you think microeconomic decisions and factors don't likewise affect this rate of productivity improvement, or lack of improvement, and what other tools, other than fiscal policy—which I think has been well discussed—you had in mind, if any, when you said that monetary policy was only one tool.

Mr. VOLCKER. I had in mind, of course, fiscal policy. I also had very much in mind what I inadequately described as the regulatory policies, the extent to which we are achieving the regulatory gains. I think there have been some real gains in the health and safety area, for instance—but sometimes excessive cost, adding and building upward momentum into the cost structure.

There is also the regulatory behavior toward industries in the more traditional sense, where sometimes prices have been held up. But beyond that, I think we have to have great concern about policies in the broadest scope, about keeping our markets open, for instance. There is nothing to assist innovation and force productivity more than the threat of competition. And a lot of that threat, properly, comes from abroad. We can't take a policy of shutting off competitive forces when they arise, without expecting the result to be more sluggish performance in productivity than we would like to see.

There are other Federal policies that impinge upon productivity. No one of them is of crucial importance, but added together they create problems, problems that increase the rigidities in the labor market or increase rigidities in product markets. All of those things are important.

In another area, in the microarea as it is called, that you are referring to there is research and development. That is crucial.

One wonders whether there isn't something to the point of the nature of management incentives and labor-management relations in the United States that couldn't be improved in terms of productivity incentives and planning and research and development, at the plant level or the company level.

I don't have any feeling about what public policy can do about that, but one wonders whether there isn't some truth in those concerns. I would point out in that connection that declining productivity in varying degrees has been characteristic of most industrialized countries. Most of them started at a higher level; virtually all of them are doing better than we are in the rate of productivity growth now.

But it was not unusual, certainly, to see declines in the rate of growth of productivity during the seventies among most industrialized countries. That does suggest two things. They all more or less have the same kind of inflationary problem, too, and the distortions that are involved, I think, help support the view that there is some connection.

They have also all had an energy problem, and had to make great adjustments to the higher price of energy. What we talk about when we say productivity is labor productivity, and in some

cases improving energy productivity may be, at least in the short run, at the cost of labor productivity.

There are a variety of factors that have entered into this, but I think we ought to be looking at it on all levels.

The CHAIRMAN. Mr. Weber?

Mr. WEBER. Mr. Volcker, you have heard the old cliche that inflation is too much money chasing too few goods. To what extent can we grapple with the problem of inflation by turning to the supply side, and producing more, so that we do have more goods and services than are being provided for all the money that is out there chasing those goods and services around?

Mr. VOLCKER. It is very important. We have a new phrase or slogan which I think is useful in focusing attention on the side of the economy that some of us think has been important for a long time. These incentives, productivity, savings, investment, and what public policy can do to improve that, is important. Looking at it more negatively, examining all of the things public policy has done to damage it is also very important.

Mr. WEBER. Well, looking at the program of economic recovery that President Reagan has presented to the Congress and to the people of America, which includes a mixture of fiscal restraint, spending cuts, tax incentives, tax cutting, regulatory relief—will we have a sufficient money supply to make this economy grow under the goals that you have given to us today?

Can you give us that assurance?

Mr. VOLCKER. I can't give you that assurance, in the sense I think that you want it, which is in the short run. We have an enormous inflationary problem that is, as I have tried to emphasize here, at the very root of many of our economic difficulties. That momentum is continuing.

Our monetary targets, given that development, are restrictive. Our purpose in those monetary targets, is to exert some restraint on the inflationary picture. We think they will do that. We think they will make a contribution to turning inflation down. As inflation turns down, there should be plenty of money to finance growth. If inflation doesn't turn down, there is not going to be plenty of money to finance growth.

That is why it is so important that the whole mix of Government policies face the direction of dealing with inflation, because if we are going to continue to have inflation and rising inflation, we have got a problem.

Mr. WEBER. I think my last question is again speaking for the American people, can you give us a very simple economic lesson? Why is it that inflation inhibits the growth of our economy?

Mr. VOLCKER. Just observe what has been happening, Mr. Weber. What do people like to invest in these days, increasingly? What is the popular kind of investment form to go to? I am talking about gold and diamonds or Persian rugs or, when you get down to the average citizen, buying a second house? You may like a second house, but you also figure that it is going to appreciate over time. Or, you buy a bigger house than you need, because you figure that has been the best investment hedge that you have had in the last decade.

How many people say, well, is it really worth saving my money if I expect inflation to go on at 10 percent, and I can only get a 10-percent rate, and the Government is going to take half of the interest that I earn anyway? Maybe I am a little better off spending something today than I will be in waiting to spend. And what is the use of saving, anyway, under these conditions?

I think it is that kind of mentality that is infecting the country, that is extremely damaging to growth and productivity.

Mr. WEBER. Thank you, very much.

The CHAIRMAN. Mr. Mattox?

Mr. MATTOX. Mr. Volcker, we appreciate your coming over here, to talk to you and ask you questions. I must admit that as a politician, I go to townhall meetings and sometimes have to put up with a little abuse that I don't care to put up with.

If I were to be classed, I would probably be classed as a hostile questioner; and I say that without much hesitation, in a polite sense. You see, I don't agree with many of your actions. I don't agree with many of the actions that the Fed is carrying out, and I think we have a chicken-and-egg type process taking place.

The Fed, somehow, doesn't seem to understand that these really high interest rates are actually causing inflation. You take the homebuilding industry today. When just a small custom-built home is built, somewhere between 20 and 30 percent of the ultimate sales price is the cost of money, that cost of doing business.

If you jack up that cost of causing interest rates to go up through the tight money policies or other manipulations in the money supply, it automatically runs those sales prices up.

I am on the Budget Committee, and yesterday we had a small homebuilder testify. In that testimony, he reported that last year he was hiring 83 people in his building business, building about 15 houses a year. Today he is still carrying a couple of those houses at 22-percent interest. He was operating on about a 10-percent profit margin on those houses, if he sold them immediately. Today he has only two employees, to try to protect the property from being vandalized.

That is happening across this country, and I am not sure that the Fed is very sensitive to the problems, particularly in those industries that are really sensitive to the interest rate changes: homebuilding and automobiles. Our automobile industry is going out of business, and I have a very difficult time dealing with that. I am not asking questions; I am merely making the statement.

But one thing that concerns me, for instance, is that the prime rates the major banks are setting today, are being held artificially high. I honestly believe, based on the fact that so many of the loans that the major banks make are tied directly to the prime rate, banks have a real incentive to hold those rates artificially high. I think when the Fed does not look directly at that prime rate, or at those interest rates, and you kind of disconnect yourself from them, so to speak, and you don't pump more money in, you are causing a heck of a problem for the small businessman that Stan Lundine was talking about, or the automobile companies that Mr. Blanchard was talking about; and it causes me really deep concern.

Frankly, if I were your boss, I would fire you. I would try to start over. I am not sure I would do any better, but you know, when

things are as bad as in this economy today, I would try to make some changes. I am just being very honest about it.

You might want to respond somewhat.

Mr. VOLCKER. I would like to convince you, if I could, that firing me and firing the Federal Reserve Board isn't going to eliminate the real problems that we have, and you wouldn't get any better result. But be that as it may, I think we are very aware of the kinds of problems that you suggest. I think there are elements of the chicken and the egg in this situation as you describe it.

I don't think high interest rates cause the inflation. I think they actually get into the price indexes. Let me put it to you this way. I don't know how to get interest rates down, quite literally, without dealing with inflation and the fiscal situation. I don't know what other tools we have, because if we simply try to get them down by increasing the supply of money and credit, then the result, I believe, will be more inflation and not less.

All the forces in an inflationary economy that produce high interest rates will be acting full speed. I am sure as I am sitting here, that if we exploded the money supply, in a very short period of time you would be facing higher interest rates rather than lower. The real enemy in that sense, of the homebuilder in particular, who is producing a long-range asset that is financed over a long period of time and is heavily dependent upon interest rates, is inflation. I think many homebuilders understand that.

Mr. MATTOX. Well, they honestly don't believe that. They honestly believe that their true enemy, and I agree with them, is the kind of mortgage rates and the interim financing that they have to pay.

Mr. VOLCKER. I agree the enemy is interest rates, in the direct sense. The question is: How do you deal with those interest rates—not just deal with them tomorrow, but deal with them over a long period of time and return to low and stable interest rates? I would submit to you that that is impossible while we are having very high inflation.

Mr. MATTOX. My time has expired, but let me just very briefly say to you that I am on the Budget Committee, and I agree with your statement of our needs to balance this budget. I am going to be working in that direction, but the one thing I would tell you is that if you look at the budget today, the single greatest item that was out of control was the increase in financing in our national debt. Those costs have gone up more dramatically, by a larger percentage, than any other segment of this budget.

For that reason there is a great need, if we are ever going to get this budget under control, to force interest rates back down. If we do that, we probably will balance the budget. Again, it is a chicken-and-egg situation.

Mr. VOLCKER. I would agree with that, but I would express it somewhat differently. I don't think we can force interest rates down. We have to get them down through a total economic program that deals with inflation.

The CHAIRMAN. The Chair would admonish the members to postpone attempting postscripts because then our witness understandably wants to be heard and there are quite a few members to be heard.

Mr. McCollum?

Mr. MCCOLLUM. Thank you.

Mr. Volcker, I have a couple of questions. The first one centers on a problem that I think is very real, in terms of everybody's understanding, and that is the need for us to get more incentives for folks to save capital in this country. I know there has been criticism of the recent administration proposals for cutting taxes because of the idea, or the proposal that some of the tax cuts in the personal area for individuals might go into the marketplace and not go into the savings account.

It occurs to me that there might be some promise for some incentives in a number of areas. But one of them that I haven't heard discussed, and I want to ask you about, is whether or not, in your judgment, a quickening of the phaseout of regulation Q, which might provide higher interest payments by banking institutions, would in fact draw more into savings, more into the checking accounts and so on, which would be more than the drawing power for savings than NOW accounts now have; whether that is something we should do, we could do, or whether it is desirable to do?

Mr VOLCKER. I think it would work in that direction. There has been a lot of freeing up in that area already. There are many accounts that are related to market rates in those savings institutions. There are the money market funds—with all of their problems that we referred to earlier. That moves in that direction.

The extent of the effect, I think, given all of the other ways you can save, would be open to some question. But given the basic desirability of moving in that direction, the constraint at the moment is, I think, pretty clear; that there are very severe earnings problems in the thrift institutions; and they are the ones that pay those rates. You have to balance off those earnings problems against the advantage that you cite.

Mr. MCCOLLUM. We haven't heard much recently from the Depository Institutions Deregulation Committee. Is there any good news or bad news or other news going to come out of there?

Mr. VOLCKER. My conclusion from the actions of the Depository Institutions Deregulation Committee is that every decision that is made is considered bad news by at least one side of the competing factions, so I don't know how to characterize good or bad news. Our next meeting is scheduled for late in March, at which time we will consider some of these questions.

Mr. MCCOLLUM. There is another area that concerns me and that has been expressed to me by a number of constituents recently. As you are well aware, there is an entire market right now going on—it wasn't a few years ago—in the securities area, where we have the cash management accounts of stockbrokers and brokerage houses. A number of folks have expressed concern over the fact that they have been advertising in competition, in essence, with many of the other banking concerns. They have been advertising certain insurance qualities that are existent.

But the fact of the matter is, I am sure, in my understanding, at least, that the value of the money that actually goes into those particular accounts is not insured. That is, the total dollar amount.

In light of that, and in light of the fact that there is sort of a checking account quality to that, and it acts like a bank account in many ways, it acts like a NOW account; can the Fed step in and

require reserves on these accounts? Or should it step in and require reserves on these accounts?

Mr. VOLCKER. We cannot, under existing law. This is the question that Mr. Leach raised. There are equity considerations. There are questions of the level playing field. There are other considerations that are peculiar to this particular point in time. It is something we are looking at.

Mr. MCCOLLUM. One last question, and I believe I still have another minute left here. You have made some excellent suggestions and concern over the budget, and balancing it. You also mentioned in your statement the off-budget matters and the need to control those.

Do you have any suggestions how we can begin to get a handle on the off-budget expenditures?

Mr. VOLCKER. For better or worse, I had something to do, I must confess, with the establishment of the Federal Financing Bank, and that is a vehicle for the financing of many off-budget credit programs now.

To my mind, that development had two rationales, only one of which was carried out. One was to improve the efficiency of that type of financing. In other words, it is all Government credit, in one sense and that institution was supposed to get rates closer to what the Treasury was paying. That objective has been accomplished.

The other objective was to focus congressional attention in particular on the totality of these programs and the fact that they were growing strongly, impinging on the total credit market. I think that objective has been lost through the years. I would hope, out of all of this discussion, that techniques have emerged—they were proposed by the Carter administration, and the present administration is very worried about this area—and that Congress will look at these credit programs, in or out of the Federal Financing Bank, and judge how much it wants to go ahead. Don't just let the programs spring up without surveillance and without control of the totality. They all enter into the credit market, and in that sense, put pressure on credit for others, add to interest rate pressures, and divert money from someplace else. Some of these programs are justified, but I see no excuse for not looking at them and controlling them, and that is what has been my concern.

Mr. MCCOLLUM. Thank you.

The CHAIRMAN. Mr. Vento?

Mr. VENTO. Mr. Volcker, I was interested in your statement with regards to your remark that 1980 was a rather unusual year and that, probably, 1981 won't be. My expectation is quite the opposite. I think we are in for a lot of unusual years, and that the Fed had better gets its act in order.

I thought the most interesting point was your comment with regard to credit controls in terms of their impact. I guess they exceeded what your expectations were, as well as those of your staff. I actually am strongly in favor of that type of exercise. I think it holds out the hope for dealing more explicitly with inflation than perhaps all of the fiscal and monetary jargon that we have heard today.

Frankly, I think that we should not abandon controls. I think there is a great need for refinement; but I don't think we should turn our backs and abandon it, because it does offer hope. I would be the first to admit that it is cumbersome and it is a problem, but I think we have to work in that direction.

Mr. VOLCKER. It certainly had some unanticipated effects last year.

Mr. VENTO. I think in terms of dealing with the overall consumer credit we are going to have to get into targeting. But I guess we are going in on an opposite path now, because the whole policy of the Federal Government is that Government is the problem, and if we get Government out of these things—then I guess that probably doesn't include the Fed. You have been able to shield yourself from that, but we have not.

In any case, I think we are going to be traveling back there, and I look to that as a hope. But I am somewhat dismayed at the Fed's policy. As you know, I don't agree with the Reserve's money multiplier type of controlled monetary policy. I think that insofar as you don't look at interest rates any more, you need an indicator. That is very, very important in the economy. Obviously one that is not accurate today, because of your retreat from dealing with it. So, as we look at the prime rate, you hear 19 percent today, we know that that isn't what that means. The chairman has written and dealt with this. In fact, we know it means a lot less.

You conducted a number of surveys in May of 1980 and found 60.7 percent of the short-term business loans in New York banks were made below the prime rate—about an average of 4¼ percent below. We need those discounts, I suppose, for a variety of things: for auto sales, perhaps for Jim Blanchard's folks in Michigan, for home sales in other areas of the country where we face great pressures in terms of population, and a variety of other things.

So I think, what are we going to do about that particular problem? Don't you think it is time to reevaluate the money multiplier concept and look at that?

Mr. VOLCKER. Let me make two comments. In terms of the basic question about the money multiplier concept, I think your comments illustrate a point which is worth making, and we said so at the time we adopted the new technique; that is in trying to make the money supply, per se, more stable in the short run, there is an expense in interest rate volatility.

I don't think all of the volatility of the last year—and I referred to it as being an unusual year—was due to this technique. It is very hard to distinguish, but I am sure the major swings were not due to the technique. But we had a lot of volatility last year; that is what you are going to get in the short run, as you put more emphasis on stability in the money supply.

We did it because we want to discipline ourselves. We think the money supply is important. But I think it is useful to remember that when you apply completely rigid policies in this respect, there is an expense in the cost of interest rate volatility.

People talk about steady monetary policy. What are they talking about? Are they talking about steadiness in the money supply figure from month to month, or steadiness in the interest rate figure from month to month? They can't be talking about both,

because there is a conflict between the two, and I think it is important to understand that.

On the prime rate question, if I may just make a brief comment. Obviously, we don't control the charges that banks make. But I think it is true that an inspection of those figures over a period of time suggests bank practices have changed quite a lot; they are making a lot of mostly very short-term loans, at rates related to the current money market, rather than at rates related to the prime rate. So the prime rate has changed in meaning, at the very least, in recent years.

Mr. VENTO. But of course, the way it is treated in the media and the way the public treats it, and so forth and so on, are very important. I know that you are an advocate, or at least your staff is, of inflationary expectation. I notice that is a word that is repeated in your document and in the economics today with great emphasis—significantly more than what I have seen it in the past.

I don't think we can make economic decisions based on inflationary expectations. I don't think we have used it much in the past, and I question the wisdom of using it today.

You also talked in your report about the Humphrey-Hawkins Act, and the fact that the financial disintermediation that occurred in the past, didn't in this instance because, apparently, of the change in the nature of financial institutions.

Doesn't that hold some problems for us? For instance, it has raised havoc with the bond market, in terms of long-term interest. It also has meant that there hasn't been investment in a variety of sources. Yet that money has stayed really, in your monetary aggregates, in your figures.

So isn't that really an argument to look more directly at interest rates, in fact, than to try and look at monetary aggregates during a time when we don't have the money being transferred into other investments? Rather, money is staying in disintermediation, is staying in financial institutions, and it shows up. Shouldn't we have a greater growth, then, in these areas than what the Fed is really calling for under these circumstances?

Mr. VOLCKER. Let me accept the substance of what you are saying in this way, that we have to interpret those monetary aggregates that are affected, which are M_2 and M_3. When looking back we have to understand that that earlier pattern of disintermediation has changed, and that affects the interpretation of the figures; they will move in a different way now than they moved before.

I think what the evidence suggests now is that those figures, particularly the M_2 figure, will move more closely in line with nominal GNP. It is a steadier figure than it used to be. The growth rate used to go up and down quite sharply, depending upon whether there was disintermediation. We haven't observed that for the last 3 years, because of these various changes that you have cited, and we have to keep that in mind in interpreting the figures.

Mr. VENTO. Thank you, Mr. Chairman.

Mr. REUSS. Mr. Shumway.

Mr. SHUMWAY. Thank you, Mr. Chairman.

Mr. Volcker, I suppose there is one advantage of having you testify before the Senate prior to coming to the House, which is

that we do get an advance copy of your report. I took it home with me last night and read the report. It makes fascinating bedtime reading. [Laughter.]

I notice that you call our attention again, as Mr. Vento has referred to, to the change in focus by the Federal Open Market Committee which occurred in October of 1979, away from the interest rates and to the monetary aggregates, as indicated by the bank reserves. It seems to me now, given the situation that we now have, with the severe fluctuations in interest and punitive rates at times, that I am wondering why it is we have to look at one to the exclusion of the other. Isn't it possible within the world of economics to somehow combine these two sources of information, given the fact that they are conflicting in many respects, but nevertheless utilize them both as the indicators that the Fed will follow?

Mr. VOLCKER. Of course, it is possible to combine the two sources and reach what you hope is a balanced judgment. I only speak for myself, but one reason we shifted I think, is that through the years, it has been difficult to conduct a restrictive policy, even though that is what the economy needed, for all of the obvious reasons, some of which are evident in the questioning this morning. I suspect the record of the Federal Reserve shows that when the concentration was primarily on interest rates, there was a tendency to underestimate the level of interest rates that was really necessary to achieve the restraint on money and credit growth that was sought.

There was a tendency to make, maybe not large errors, but cumulative errors through the years in the direction of excessive growth of money and credit. The new operating procedure is a device, in part, to discipline ourselves. I think it is helpful in communicating with the Committee. Indeed, this Committee and the Congress as a whole pushed this emphasis very strongly. Historically, much of the impetus arose out of these discussions. But its value is as a discipline in a period in which the interpretation of any particular level of interest rates is particularly difficult. I suppose I can't escape using the word "inflationary expectations" again in this connection, because I think that does affect interest rates and what is happening in the marketplace and how individuals and businesses deal with interest rates.

You also have, as I mentioned earlier, the complications of the tax structure; interest rates are not in a practical sense as high as the nominal interest rate appears, because everybody deducts them from their taxes.

On the other side, high rates are not the same incentive for savings as they appear to be, because half is taxed away. Both sides make the interpretation of what is the "right" level of interest rates very difficult.

I would point out in that connection, taking recent experience, that the level of interest rates that developed in October and November, seemed horrendous. It was horrendous historically. The typical economic projection at that time was that those interest rates couldn't last; the economy would be very severely affected in the near period of time. Particularly, housing would be very severely affected.

I am not about to argue those interest rates don't hurt. But the sustained growth in the economy since that time—in fact, housing hasn't gone down—surprised most observers during this period. I think it probably will go down, but it has had 4 or 5 months of being sustained at a plateau right in the face of these interest rates. I only cite this as an example of the difficulty of judging the precise restraining effect of any particular level of interest rates in a very volatile, difficult situation, in fact and expectationally.

Mr. SHUMWAY. One of the ongoing criticisms that I, and I am sure you, often hear regarding the Fed is that there is some ignorance of the real world, that you become obsessed with the numbers, the rates, the quantitative analyses. It seems to me that if there were some kind of a combination standard that you could evolve, which would look at the real world, which is manifest, most obviously, by interest rates, perhaps some of that criticism would be allayed, and you would find yourself on a sounder track.

Mr. VOLCKER. I understand your comment very well. Many people take the view that you are expressing. However, there are a lot of people who say we are not obsessed enough with the numbers.

Mr. SHUMWAY. Yet many economists right now are saying that the whole crux of inflation is a psychological thing, and we have to convince people's attitudes, we have to convince them about what the future is going to hold for them. If that is the case we are going to get away entirely from the matter of numbers and get into a different kind of a convincing process.

Mr. VOLCKER. Our report, which I hope didn't put you to sleep too early, attempts to describe what we do. I don't think it is appropriate, if I may put it that way, to replace the Federal Reserve with a computer. I think there are elements of judgment that are involved in the application of policy. We have to strike a balance. I think it is very important, as a matter of communication and discipline, that we, pay a lot of attention to the numbers.

Mr. SHUMWAY. I have several other questions, and I would ask unanimous consent that I might submit them for the record.

Mr. REUSS. Without objection.

Mr. Patman.

Mr. PATMAN. Mr. Volcker, I just have a few brief questions. First of all, how much do you estimate that the monetary policy and tight money policies of the Federal Reserve contribute to inflation by themselves?

Mr. VOLCKER. Our polices are aimed at dampening inflation.

Mr. PATMAN. But when you promote policies that cause higher interest rates, do you find that higher interest rates add to inflation or not?

Mr. VOLCKER. I don't think in a basic sense they add to inflation.

Mr. PATMAN. Do you also find that the businessman who has to pay those, necessarily passes that price on in the product and that sort of thing?

Mr. VOLCKER. I think that sort of thing happens sometimes, yes.

Mr. PATMAN. Do you have any calculations which show the inflation which results from higher interest rates?

Mr. VOLCKER. As I say, I don't think inflation results from higher interest rates, so I can't make that calculation. The reason I say

that, Mr. Patman, is that you can make a calculation as to how high interest rates are and what proportion of the GNP that is, but you have to ask yourself what would be the effect of policies of expanding the supply of money and credit.

Mr. PATMAN. But you keep talking in terms of being realistic about our approaches to this sort of thing and budget cuts, and so forth. Don't you think to be realistic, that you should, in fact, recognize that some contribution is made to inflation by virtue of the higher interest rates?

Mr. VOLCKER. I don't think that is realistic.

Mr. PATMAN. You don't think that businesses then pass on these costs?

Mr. VOLCKER. I think businesses sometimes do.

Mr. PATMAN. Sometimes, or always? They do if they can, don't they? They will raise the prices, won't they?

Mr. VOLCKER. A businessman will pass on any cost that he can. The question is whether he can, which goes to the heart of the question. He will pass on a lot of cost and try to increase his profits, if he thinks that he can borrow all the money he wants. If he thinks the inflation rate is going to rise in the future, he will raise his prices today.

That is the source of inflation that we are concerned about. If we pump up the money supply and attempt to get interest rates down, you will get more inflation rather than less.

Mr. PATMAN. Do you make any calculations when you make your calculations on the monetary supply and monetary targets, about what the resultant higher interest rates would be or lower interest rates?

Mr. VOLCKER. To make that calculation or to attempt that calculation, you have to estimate more than what the money supply will be. You have to look at what you think the economic activity will be, what the budget deficit will be, and all the rest. People do try to make such estimates. Sometimes they put them in econometric equations. They are not the most reliable estimates that I have ever seen.

Mr. PATMAN. Well, when you shoot at a monetary target, it just goes right through that target and hits another target for interest rates that you either do or do not acknowledge, don't you?

Mr. VOLCKER. Interest rates fluctuate, that is for sure.

Mr. PATMAN. Some of them are a direct result of monetary targets that you have adopted; right?

Mr. VOLCKER. No; I don't think they are a direct result of the monetary targets we adopt. They are a joint result of what is going on in the economy, what is going on with inflation, what is going on with the budget deficit. In the very short run, our money supply figures may affect it, but if those money supply figures also affect inflation, you have to take that into account.

Mr. PATMAN. Now when you raise the discount rate, does that necessarily result in a higher interest rate?

Mr. VOLCKER. That depends upon the conditions at the time.

Mr. PATMAN. Generally speaking, that is true, though; is it not?

Mr. VOLCKER. Generally speaking.

Mr. PATMAN. If you raise the discount rate, you have a higher rate of interest in the market.

Mr. VOLCKER. Generally speaking, in the very short run, in many circumstances, that will be true.

Mr. PATMAN. Is that not then a higher rate artificially that results from your policy? In other words, can you also determine perhaps what the natural rate of interest would be, were it not for your policies?

Mr. VOLCKER. The impact of the discount rate on the money market in the short run, which may be present in many circumstances, is quite a different thing from the impact of that discount rate change on market rates over a period of time, which may be precisely the reverse of the short run influence at the time the action is taken.

Mr. PATMAN. But obviously, any time you tighten money, you cause higher interest rates, don't you think?

Mr. VOLCKER. No, I don't think that is true.

Mr. PATMAN. As a general rule?

Mr. VOLCKER. That would be the normal expectation in the very short run. Ultimately, the effect should be the opposite of that.

Mr. PATMAN. Mr. Chairman, I have a few more questions. May I present those in writing, or perhaps get to them later on?

The CHAIRMAN. [presiding]. Yes; we are going to accord all the members the opportunity to submit questions in writing, so they can be answered for the record.

Mr. Wortley.

Mr. WORTLEY. Thank you, Mr. Chairman.

Mr. Volcker, thrift institutions are experiencing some enormous difficulties, as we discussed the other morning, such as rising costs exacerbated by inflation and interest rates and assets which are low-yielding, fixed term mortgages. Aside from their earnings problems, they are also facing liquidity problems, which may be even more consequential in the short run.

To what extent is the Federal Reserve prepared to assist these institutions which are experiencing the severe liquidity problems?

Mr. VOLCKER. Let me say, first of all, that the industry as a whole has not had, and it doesn't seem to me in prospect, any severe liquidity problem. They have a very severe earnings problems and there may be some individual institutions that have liquidity problems, but I am not aware of any generalization of a severe liquidity problem. In any event, should that arise, those institutions have access to the Federal Reserve discount window. We are there to lend in those circumstances, and I am confident we have adequate powers to take care of that kind of a situation.

Mr. WORTLEY. Do you view the Federal Reserve as a lender of last resort?

Mr. VOLCKER. Yes, sir.

Mr. WORTLEY. Do you really believe that the credit controls that you imposed last March had any effect on the inflation rate in this country?

Mr. VOLCKER. That is hard to separate out. I would describe last year in its totality, including the credit control period, as a holding action on inflation. The momentum was very strong; the momentum remains strong. In fact, inflation didn't go up much at all last year. About the only way I can describe it is as I did earlier, we were sitting on top of a seething caldron. It didn't move much.

That is the best you can say for it. That is a necessary phase you have to go through before you can actually turn it down. It is a very unsatisfying phase, because you don't see much progress, but it is certainly better than having had inflation explode.

Mr. WORTLEY. Do you think we need to continue the authority of the Credit Control Act of 1969 beyond its current expiration date?

Mr. VOLCKER. No, I haven't felt that that was necessary. There was a particular difficulty in that Act, in that it was an extremely sweeping grant of authority to the President, in the first instance, and to the Federal Reserve in the second.

Mr. WORTLEY. Thank you very much. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Coyne.

Mr. W. COYNE. Thank you, Mr. Chairman.

Recognizing your warning that we may have as much as a 1 million person increase in the unemployment figure in the next year, and also attempting to heed your advice to do away with the Federal deficits, I wonder if you would comment on the validity of the argument that for every 1 percent increase in the rate of unemployment, we add $25 to $29 billion to the Federal deficit.

Mr. VOLCKER. There is a relationship. I don't remember that particular number. I thought I would have used an estimate that is somewhat smaller, but in any event, I completely understand your point that unemployment compensation payments increase if you have a downturn in the economy and a higher rate of unemployment, I think in terms of budgetary planning, you have got to look through that.

I don't know whether it is going to happen or not, but as I suggested earlier, the criterion for budgetary balance has to be whether you would achieve that balance or surplus in reasonable economic circumstances 2 or 3 years ahead. That ought to be the criterion, and when you use that criterion that short-term effect on unemployment compensation payments largely is washed out of the calculation.

Mr. W. COYNE. I know you are not responsible for policy at the Department of Labor. I would only hope that the Secretary of Labor recognizes the possibility of an additional 1 million people being unemployed, when he advocates a maximum of 13 weeks of unemployment.

Thank you.

The CHAIRMAN. Mr. Carman.

Mr. CARMAN. Mr. Chairman, that will teach me to ask questions out of turn. [Laughter.]

Mr. Volcker, I am sorry that I have not been able to be present during your entire bit of testimony, but I will read through all of the materials that you have given. I specifically wanted to ask a question pertaining to your statement presented to the committee, which is on page 9 of your prepared statement, and you don't even have to look at them, because it deals with the importance of having the tax cut to induce savings and induce individuals to invest.

I for one, am very, very concerned about having those moneys find their ways in savings accounts, in savings as well as in investments. It occurs to me that we may very well need to have additional inducements for individuals to save, specifically, in the area

of tax advantages for individual savers, such as exclusions which might go up as high as, in my humble opinion, at least $2,500 to $3,000. Obviously, a country such as Japan, and so forth, have had programs that have been much more extensive, as I understand it.

I would appreciate it if you would comment on that, specifically, as well as the savings in the area that we need any greater tax break for, especially in regard to dividends, for individuals to invest.

Mr. VOLCKER. You are getting outside my immediate area of responsibility, but let me just make a couple of comments. I well understand the point you are making. It is very difficult to devise plans of that sort that are selective and effective. I would have doubts about what Congress did a year or two ago in exempting $200 or $300, simply from its effectiveness standpoint.

Most of the people, almost all of the people you are catching in that exemption have more savings than that, so they are not affected at the margin. They say, "I get my tax refund, lower tax bill, but it doesn't affect what I do." That is the problem that arises more generally. If you make that exemption much bigger, you do begin hitting people at the margin, but you hit a lot of people that aren't at the margin, and, you have to balance the revenue cost against the effectiveness.

There have been discussions of what might be more pointed and, therefore, more effective in getting additional savings.

Why don't we exempt or expand the IRA-Keogh kind of approach or open it everybody, so that you really lock up the money for a period of time? If you do, then you get the exemption as in the present IRA-Keogh concept. Maybe that is worth looking at, but even there you have some problems.

What do you do with the fellow who borrows the money on the one side, and gets a bigger mortgage on his household, let us say. Let us say he borrows, even at today's rate, at 15 percent, and he puts it in an IRA or Keogh account that is, in effect, tax exempt at 12 percent, and he deducts the interest from his tax bill. You never get a net savings.

Mr. CARMAN. I understand what you are saying, Mr. Volcker, but one of the things that really concerns me, is that since we are talking here, and this morning you have been discussing the importance of controlling the money supply, it occurs to me that if we have a tax cut, which I think we have to have, if those moneys are visited upon the marketplace, because there is a great degree of visibility to them, I think we are going to have more difficulty with inflation than not.

Mr. VOLCKER. I don't disagree with the point you are making, but there are several fundamental provisions in our tax code that discourage savings and enhance borrowing. The basic deductability of interest rates on consumer purchases, the taxation of interest, the double taxation of dividends all run in the direction, it seems to me, of discouraging both investment and savings, and I think as a matter of broad principle, you might want to attack any of those. You are doing a lot now. I know how difficult it is to attack these tax provisions. But I think it is relevant to point out that those things have been embedded in our tax system for so long and run directly against the purpose you have in mind.

Mr. CARMAN. The last question I would like to ask you is to comment pertaining to the money market mutual funds, and whether or not you perceive any need—now maybe it is beyond the scope of everything you're discussing here, but whether or not you perceive any need for a way of—I see they have indicated to me, my time is expired.

Mr. Chairman, I would like to have the opportunity to submit in writing any questions at a subsequent time.

The CHAIRMAN. We have already commented on money market funds, and we have it under examination. We are according the privilege to everybody to submit questions in writing.

Mr. Reuss?

Mr. REUSS. Thank you, Mr. Chairman.

Mr. Volcker, there was issued a few weeks ago a paper by then-Congressman and now Budget Director David Stockman, in which he had something to say about monetary policy specifically. As a wind-up to his paper, he refers to the need for a monetary accord and says:

> The markets have now almost completely lost confidence in Volcker and the new monetary policy. Only an extraordinary gesture can restore the credibility that will be required during the next 2 years. President Reagan should meet with Volcker, or the entire Federal Reserve Board, at an early date and issue them a new, informal charter, namely to eschew all consideration of extraneous economic variables, like short-term interest rates, housing market conditions, business cycle fluctuations.

Did President Reagan meet with you and issue you a new, informal charter?

Mr. VOLCKER. I have met with President Reagan. I have been issued no informal charter.

Mr. REUSS. Do you now eschew all consideration of short-term interest rates?

Mr. VOLCKER. Not in the sense that that is stated—nor housing, nor unemployment, and so forth.

Mr. REUSS. You do not eschew?

Mr. VOLCKER. No, we don't eschew any of those things. [Laughter.]

Mr. REUSS. On another subject: As you know, from my last hearing, I am disappointed that the Federal Reserve yesterday reduced the target range on leading aggregates like M_{1B}, which had actually proceeded at an 8 percent rate in 1980; and produced a target range of 3½ to 6 percent.

Mr. VOLCKER. Those figures are not comparable.

If I may just interject, the recorded figure last year was 7½ percent, as I recall, fourth quarter to fourth quarter, but that is before adjusting for NOW accounts.

The target that you cite is adjusted for NOW accounts.

Mr. REUSS. What was the adjusted actual?

Mr. VOLCKER. It was 6¾ percent; it was over the target by one-fourth of 1 percentage point.

Mr. REUSS. As you know, I had hoped—and I know we both agree there is room for a difference of opinion on this—that the Fed could have let well enough alone and, while maintaining its austere monetary targets, not have lowered the figure.

This morning, I see in the paper that Chancellor Schmidt of the Federal Republic of Germany called the Federal Reserve's interest

rate policy "destructive." Many of our friends and allies, as I hear them, are very distressed about our policy.

That being so, wouldn't it have been a fairly reasonable time not to have squeezed the last ounce out of monetary growth; but, instead, just left things where they were, so one could have at least been fairly sure that one would have escaped criticism from our friends and allies abroad?

In short: Why did you do it?

Mr. VOLCKER. We did it because we felt that it was consistent with the priority that we do give to dealing with the inflation problem and the conviction that the other problems are linked to that inflation problem, and that over time, it will be constructive.

I think it fits into what we have often said, and what this committee has often said, about a gradual reduction. I am not sure the difference between no reduction and the reduction we made is terribly significant, in terms of the concerns that you say or think Chancellor Schmidt has made.

There is a lot of concern about interest rates around the world; I am concerned about them.

I was in Europe recently, to get some opinions first hand, and there is undoubtedly concern over interest rates. But I think many people volunteered to me—or, in other cases, even pushed on me—that the biggest priority is doing what is necessary to get the inflation under control.

I think, in general, that is our attitude.

Mr. REUSS. By that, they mean getting our deficit down, very largely?

Mr. VOLCKER. I think these people would certainly like to see our budget deficit down, but they also want to see a firm and restrained monetary policy. It gives them fits, sometimes, in the short run, but we have got to be wise enough to look out beyond the short run and see what policies promise relief down the road.

Mr. REUSS. Are you suggesting that they are talking out of both sides of their mouths? That, for domestic consumption, they are saying, "It is the Americans who are doing us in"? But then, privately, they say, "We don't mind"?

Mr. VOLCKER. I was talking to different people.

Mr. REUSS. Could you be talking to central bankers?

Mr. VOLCKER. I was talking to central bankers and others. I did not talk to Chancellor Schmidt.

Mr. REUSS. Let me hastily change the subject.

When the Federal Reserve Board made its calculation that, despite the displeasure of some of us who respect and follow the Fed closely—when the Fed made its calculation to lower its monetary targets in 1981, did it take into account the fact that, in the last 5 years since the Fed has had targets, it has often as not missed those targets, on the up side? That its doing that has caused considerable concern in monetary circles? According to some, has led to greater inflation? Because people say they can't bank on the future, that the Fed doesn't know what it is doing, or it is out of control.

I have not said that. But others have.

Did you take that into account?

Mr. VOLCKER. I take it into account. I think all of us observe the amount of discussion that hitting the target or not hitting the target generates.

I have always made the point that there is a good deal of natural instability in these figures, that a difference of one-quarter of 1 percent, for instance—by which, in a technical sense, we missed these targets last year—is not in itself a significant number.

Nothing is gravely different between 6 percent and 6¼ percent, or 6½ percent and 6¾ percent. These relationships are not that close. They are not that mechanical.

We do think we need discipline and the monetary system needs discipline at this time. That target fairly represents—as best we can—the amount of discipline that we think is necessary.

But the preoccupation with the short-term fluctuations, and narrow misses of our targeting is, I think, not helpful. If I knew how to avoid some of the very precise numerology, I would do so. But the basic discipline, I think, is a valuable one.

Mr. REUSS. Thank you very much. My time is up.

The CHAIRMAN. Mr. Hubbard?

Mr. HUBBARD. Thank you, Mr. Chairman.

And thank you, Mr. Volcker, for visiting with our full committee. And I regret I was not here earlier.

My name is Carroll Hubbard, from Kentucky. And I would be remiss if I did not mention that, naturally, my constituents—like the constituents of 434 other districts in the House—are very concerned about these high interest rates.

I have, visiting with me this week here in Washington, constituents who are on the verge of bankruptcy; who, 2 or 3 years ago, were prospering financially. Their difficulties, they explain, are these very high interest rates.

These affect the farmers, coal operators, automobile dealers, homebuilders, realtors, and many others I could name.

Mr. Volcker, I will not ask any questions, because earlier you have explained, as best you can, our dilemma regarding these high interest rates.

But I do speak for Kentuckians in saying to you that we hope that, in the very near future, these interest rates can come down.

I just said I wouldn't ask a question about interest rates. But there is one that has puzzled me—and I don't know the answer, and I have been asked this, Mr. Volcker. I am admitting that I could not answer the question, and I am asking you if you can.

These 6-month savings certificates—for people who invest, say, $10,000 for 6 months—let us say they do that today at 15 percent—is that one of the problems that has caused the interest rates to stay up there as high as they are?

Mr. VOLCKER. I think that is a reflection of the problem, not a cause of the problem.

Those institutions have to pay those rates, and those rates are where they are because of the general market conditions.

Mr. HUBBARD. Mr. Chairman, is there anything that could be done to bring to a halt this situation?

Because, for example, if they are 15 percent today, I would assume that interest rates for 6 months certainly cannot come below that. Am I correct?

Mr. VOLCKER. Interest rates could come down in a 6-month time horizon, but that is not a forecast. We have had a lot of fluctuations in interest rates, in both directions, but I don't think you ought to assume that an interest rate in the market today is necessarily going to be there 6 months from now.

Mr. HUBBARD. I am saying, if these 6-month savings certificates——

Mr. VOLCKER. They will have to pay that for 6 months? Yes; you mean it has a maturity of 6 months.

Mr. HUBBARD. They will have to pay that for 6 months. But during that time, interest rates——

Mr. VOLCKER. Whatever interest rates do, they are stuck with paying the 15 percent for 6 months.

Mr. HUBBARD. Does that preclude the possibility that those borrowing money would pay less than 15 percent during that 6-month period?

Mr. VOLCKER. No, because a new loan or a new money market certificate will be in relation to what the market is at the time. On a certificate which they sell at the end of February, they have contracted to pay that interest rate for 6 months. They can contract to pay a different interest rate at the end of March, or next week, but only on a new certificate, not on the old one.

Mr. HUBBARD. Thank you, Mr. Volcker.

I would conclude by saying, and I repeat, I am not a financial expert. I admire you and others who are. But I would say, if it is correct that interest rates were driven up deliberately in order to halt inflation—that, in my own particular district, and I believe elsewhere in this country, these high interest rates of up to 20 percent have actually fueled inflation, unfortunately.

Thank you.

The CHAIRMAN. Mr. Hansen, I understand you have an entry for the record?

Mr. HANSEN. Yes, Mr. Chairman.

Knowing of Mr. Volcker's appearance, I felt it was well to get the Treasury Department on record, regarding interest rates and their intentions. And so, I did write a letter to Secretary of the Treasury Donald Regan, regarding interest rates and monetary policy.

I would like my letter to Mr. Regan, of February 23, inserted into the record at this point, and ask unanimous consent to do so, Mr. Chairman.

The CHAIRMAN. Without objection.

[Congressman Hansen's letter to Secretary of the Treasury Donald Regan dated February 23, 1981, follows:]

GEORGE HANSEN
SECOND DISTRICT, IDAHO

1125 LONGWORTH BUILDING
WASHINGTON, D.C. 20515
TEL.: (202) 225-5531

COMMITTEES-SUBCOMMITTEES:
BANKING, FINANCE AND URBAN AFFAIRS
DOMESTIC MONETARY POLICY (RANKING MEMBER)
FINANCIAL INSTITUTIONS SUPERVISION, REGULATION AND INSURANCE
INTERNATIONAL TRADE, INVESTMENT MONETARY POLICY
VETERANS' AFFAIRS
COMPENSATION, PENSION, INSURANCE AND MEMORIAL AFFAIRS
MEDICAL FACILITIES AND BENEFITS

Congress of the United States
House of Representatives
Washington, D.C.

IDAHO DISTRICT OFFICES:
UPPER SNAKE RIVER VALLEY
211 FEDERAL BUILDING
BOX 740, IDAHO FALLS, IDAHO 83401
TEL.: 523-5341

SOUTHEASTERN IDAHO
250 S. 4TH, SUITE 220
POCATELLO, IDAHO 83201
TEL.: 236-6980

MAGIC VALLEY
1061 BLUE LAKES BOULEVARD NORTH
TWIN FALLS, IDAHO 83301
TEL.: 734-6466

WESTERN IDAHO
442 BORAH FEDERAL BUILDING
304 NORTH 8TH STREET
BOISE, IDAHO 83701
TEL.: 384-1876

February 23, 1981

The Honorable Donald Regan
Secretary of the Treasury
Department of the Treasury
15th Street and Pennsylvania Avenue, N.W.
Washington, D.C. 20220

Dear Mr. Secretary:

As you know, the Chairman of the Federal Reserve Board, Paul Volcker, will testify to the Banking Committees in Congress this week in connection with the Federal Reserve's plans for monetary expansion this year. It is widely reported that the Federal Reserve will reaffirm its plan to decrease the targeted growth ranges for the monetary aggregates, in particular decreasing the upper and lower bounds for M1-B growth by a half percent.

It has also been widely reported that the Reagan Administration has endorsed a "significant tightening" of credit conditions. This report has me somewhat concerned, because the past record of the Federal Reserve shows that it holds a view of the economy that requires a sequence of damagingly high interest rates, followed by recession because of the credit crunch, and then a flagging of inflationary pressures and a steep descent of interest rates, after which the whole cycle starts again. In 1980, the Federal Reserve had appropriate targets and actually managed to hit them for the year as a whole, but got to that position by the wildest cycle of money and credit boom-and-bust that we had seen to that time.

When we met on February 6, I understood you to be against this idea of holding up interest rates in order to kill inflation, and we were in agreement that it was the unpredictability of credit conditions that was so deadly to business. We further agreed that the yearly targets, while good in themselves, should be adhered to with more regularity over the year, instead of the Federal Reserve putting us through such boom-and-bust cycles.

I would appreciate having clarification from you as to whether you are still of the view that interest rates desperately need to be reduced, and can be reduced by a more stable pattern of monetary behavior by the Federal Reserve. And more specifically it is important to know that you continue to reject the idea that interest rates must be held up high in order to bring down the economy. Because of the way in which the press appears to be reading the Administration's endorsement of the Federal Reserve's gradual target tightening, and because of the Federal Reserve's record of wandering all over the map to make a very slight change, I believe it is

important for you to make this clarification promptly. The Federal Reserve should be given a clear idea of what is expected of it -- not just decent yearly targets, but meeting them by a reasonably smooth and straight path -- and the press should be disabused of any notion that the Reagan Administration wants to use high interest rates to kill inflation.

I would appreciate your responding to this request for clarification immediately, because it will give vitally needed background for the report that Mr. Volcker will be submitting to us. It is imperative that the Federal Reserve be given every possible encouragement not only to meet its targets but to engage in reasonably stable and predictable policy actions over the short term. Many persons, both inside the Federal Reserve and outside, would like to blame the erratic behavior of the Federal Reserve on the targets themselves and the attempt to meet them -- hence their claims that the famous change on October 6, 1979 to focus more on monetary aggregates is responsible for the rollercoaster we've been on and we should go back to the old way that brought us so much inflation for so long.

I am convinced that the failure of the Federal Reserve to adopt operating procedures compatible with its targets is responsible for 1980's hair-raising economic rollercoaster ride, and particularly that using a nonborrowed reserves target for open market operations is a formula for failure. To help illuminate this failing and encourage the Federal Reserve to use better procedures to meet its targets in a more stable and predictable way, it is necessary that we know exactly where the Administration stands, whatever the press may say. With Chairman Volcker due to testify, now is the time to make that distinction.

I will appreciate hearing from you immediately.

Sincerely,

GEORGE HANSEN
Member of Congress

Mr. HANSEN. Mr. Chairman, I received a reply from Secretary Regan on February 25, and I would like to read that into the record at this time. It is not very long, but I think it is important, so that we have the correlation between the testimony of Mr. Volcker and the feelings of this administration.

The CHAIRMAN. If you can read rapidly because Mr. Volcker asked to be excused.

Couldn't we just put it in the record?

Mr. HANSEN. Well, I think it is important. And it is not very long. It is just two or three paragraphs. It says:

> You ask whether we continue to reject the view that interest rates must be held up high in order to bring down the economy. We certainly do reject that approach. Interest rates have been driven to their current heights by past economic policy failures and the resultant inflation. Our new program combines fiscal and monetary policies to attack inflation from both the "too much money" and "too few goods" side of the equation. We do not expect interest rates to be driven successively higher. Instead, as our policies become increasingly effective and the rate of inflation is reduced, the entire structure of interest rates will decline appreciably.
>
> In direct response to your request for clarification, we agree with you that interest rates are too high and need to be reduced. Furthermore, the erratic course of the monetary aggregates over the past year was extremely unfortunate and must not be repeated in the future on anything like that scale. The Federal Reserve is also concerned about the wide fluctuations that have taken place and they have been reexamining in detail their operating techniques. We welcome this study and we expect to be working with them in their efforts to achieve a more stable behavior of the monetary aggregates.
>
> As I have stated previously, the administration believes there are some important changes that can improve the Federal Reserve's control over the money supply, and thereby avoid the extreme volatility in the monetary growth path that has prevailed in recent years. These changes will produce monetary results more in line with policy objectives.
>
> Through this effort we hope to assure a slow, steady growth in the money supply. With a program successful in achieving a stable and moderate growth pattern for the money supply, both inflation and interest rates will recede, thereby restoring vigor to our financial institutions and markets.
>
> Thank you for giving me this opportunity to explain our thinking on these matters.
>
> Sincerely,
>
> DONALD T. REGAN,
> *Secretary of the Treasury.*

Mr. Chairman, I have other questions. But since Mr. Volcker's time is limited, I do again want to thank you for making this appearance, and thank you for this opportunity.

The CHAIRMAN. You may submit your questions in writing because Mr. Volcker has agreed to answer written questions.

Mr. Patman, do you have a brief question?

Mr. PATMAN. Just a few brief ones, Mr. Chairman, if I may.

Mr. Volcker, if the Reagan administration policy would result in a Federal deficit for 1981 of $50 billion or more, as predictions now suggest, and the Treasury goes into the market to sell bonds and other obligations to cover that deficit, while the Federal Reserve continues with tight money, what will that do to interest rates?

Mr. VOLCKER. The Treasury going into the market, other things being equal, puts pressure on interest rates. That is not the same as a forecast on interest rates. It depends upon what other market conditions would be, what the economy is doing, and so forth.

Mr. PATMAN. We can reduce Government spending by reducing interest rates. Can we not?

Mr. VOLCKER. All things equal, if interest rates go down, Government spending will go down.

Mr. PATMAN. Obviously. Because of the huge part of our national budget that goes into interest rates.

Now, spending for higher interest rates, and Government spending, is just as much spending for law enforcement and national defense, and cancer research, and other things. Is it not?

Mr. VOLCKER. It is just as much——

Mr. PATMAN. There is just as much Government spending—that you have advocated we reduce, to balance the budget?

Mr. VOLCKER. Yes.

Mr. PATMAN. Every dollar in higher interest rates for the Federal Government is just spending, of course. Isn't it?

Mr. VOLCKER. Yes.

Mr. PATMAN. In the spirit of economy, is the Federal Reserve itself cutting back on its expenditures? Cutting spending in general? Things of that nature?

Mr. VOLCKER. In the past 5 years, the Federal Reserve System has decreased its employment something like 15 percent.

Mr. PATMAN. Are you in consultation with the Reagan administration, on tax cuts and the contributions that those would make to inflation, in advising them whether to accept those, and so forth?

Specifically, will you advise us as to the advisability of passing specific tax cuts, with consideration due to the impact such tax cuts—individually and together—have for inflation?

Mr. VOLCKER. I obviously talk with administration officials, from time to time. I suspect that I will be called to various hearings before the budgetary committees, or the tax-writing committees.

I do not concede that it is my function or responsibility or, really, that it is appropriate for me to advise the Congress on the details of tax programs.

Mr. PATMAN. Would you tell us whether or not you judge them to be inflationary in impact?

Mr. VOLCKER. In terms of the general kind of considerations that I tried to outline a little bit this morning, I would tell you.

Mr. PATMAN. How much will the present Fed policies on tight money add to the national debt in fiscal years 1981 and 1982, as compared to what would be added by lower interest rates resulting from different policies?

Mr. VOLCKER. I can't answer that question, which comes back to the discussion we had earlier, Mr. Patman, about what is inflationary and what isn't.

Mr. PATMAN. You don't regard interest rates as inflationary? And their impact?

Mr. VOLCKER. No.

I think we haven't got anything to add to our earlier discussion. The problem is, of course, that if we——

Mr. PATMAN. This is a different aspect of the same problem, though.

Obviously, the higher interest rates we pay on the national debt will add to the national deficit?

Mr. VOLCKER. Yes.

Mr. PATMAN. Do you not think so?

Mr. VOLCKER. If you just pick out that single item, interest rates going up.

Mr. PATMAN. I am not talking about just interest rates alone. But I mean the interest rates that are higher because of tight money policies.

Mr. VOLCKER. I can't say that that adds to the national debt, because you have to ask yourself what the result would have been otherwise.

Mr. PATMAN. This is a purely mathematical question.

Mr. VOLCKER. Interest is a line in the budget, as an expenditure, yes.

Mr. PATMAN. If it is greater because of the policy of the Fed, then it contributes to a greater deficit. Right?

Mr. VOLCKER. No; I am not going to say that.

You have to ask yourself what else is affected.

Mr. PATMAN. That is not the question, though. It is a simple mathematical result that I am asking you to evaluate.

When you add to interest rates, you add to the national deficit. Do you not?

Mr. VOLCKER. No; my answer to that is no.

If our policy is effective in restraining inflation, the budget as a whole will be less than it otherwise would be. It will not necessarily appear in the interest column immediately. Over time, it will appear even in the interest column.

Mr. PATMAN. Well, the amount that we are paying on the national debt now is higher, by virtue of the higher interest rates, than it was, say, 4 or 5 years ago, percentagewise. Is it not?

Mr. VOLCKER. Yes.

Mr. PATMAN. If we were paying that same rate of interest that was available several years ago, we would be having a lower national debt or lower national deficit?

Mr. VOLCKER. No; I am not sure that is the case.

If we were paying the lower level of interest rates, I have to ask myself what else would be going on in the economy. If we were paying a lower level of interest rates because we exploded the money supply and everything else in the budget was higher, I would have to say the deficit would be higher.

Mr. PATMAN. That is another consideration.

But just the basic mathematics will tell you that it adds to the national deficit, to have higher interest rates paid on the national debt.

Mr. VOLCKER. I am not sure that is true. It is not a question of arithmetic.

Mr. PATMAN. If we are going to have a deficit anyway——

Mr. VOLCKER. It is a question of economics, not of arithmetic.

Mr. PATMAN. Well, think about that, and let us discuss it some other time.

The CHAIRMAN. The time of the gentleman has expired.

Mr. Volcker, I want to apologize to you because of the fact that, unavoidably, House Administration scheduled us to appear before them this morning for our budget. That is rather important. I don't think you would like to see all of our staff unemployed. That is why the subcommittee chairman accompanied me, as well.

I want to thank you for your appearance. We appreciate the fact that you have agreed to answer questions for the record, in writing.

At this time, the committee will adjourn.

[Whereupon, at 12:45 p.m., the hearing was adjourned, subject to the call of the Chair.]

[The following additional written questions were submitted by members to Mr. Volcker and appear along with the response of Mr. Volcker:]

Chairman Volcker subsequently submitted the following responses to written questions from Congressman Stanton in connection with the hearing before the House Banking Committee on February 26, 1981.

Mr. Stanton

1. M-1B

(a) In Table 1 of your testimony, you present two M-1B target ranges for 1981. One is 3-1/2 to 6 percent for 1981 growth after adjusting for ATS and NOW accounts. The other is 6 to 8-1/2 percent before the adjustment. My question is this: For M-1, measured inclusive of ATS and NOW accounts, which is the M-1B you report and we see, and which averaged $413 billion in the fourth quarter of 1980, are you targeting it to grow by 3-1/2 to 6 or by 6 to 8-1/2 percent this year?

Our basic target is for growth in M-1B of 3-1/2 to 6 percent over the year ending in the fourth quarter of 1981, abstracting from the effects on M-1B of shifting into NOW accounts. Based on our staff's projections of the impact of such shifting, we are estimating that achievement of that targeted growth will result in an observed increase in M-1B of between 6 and 8-1/2 percent from the $413 billion fourth quarter level of 1980. The estimate of the impact of NOW account shifts will be reviewed from time to time.

(b) In the White Book that accompanied President Reagan's February 18th message to Congress, it is said that: "the economic scenario assumes that the growth rates of money and credit are steadily reduced from the 1980 levels to one-half those levels by 1986." Assuming that "steadily" means beginning now and continuing until 1986, is it possible that if M-1B grew as much as 8-1/2 percent this year it would be at variance with Administration expectations, or do you think they know that you have in mind some new M--M-1B after adjustment for ATS and NOW accounts?

I believe that the 3-1/2 to 6 percent range is the economically meaningful measure of the targeted growth of M-1B and that our target is thus entirely consistent with the Administration's assumption.

c) Implicit in your decision to target observed M-1B growth at 6 to 8-1/2 percent this year, is the assumption that the rate of rise of its velocity will fall 2-1/2 percentage points this year because of the spread of ATS and NOW accounts. However, if this is a wrong assumption, if ATS and NOW accounts once opened behave like other transactions deposits no matter where they came from, then won't you be preserving rather than fighting inflation?

While we have no "official" economic forecast, and thus no unique velocity forecast, the sense of your assumption that measured M-1B velocity would be expected to slow relative to trend as a result of transfers from savings accounts is correct. I believe it unlikely ATS/NOW accounts will behave just like demand deposits because of the savings component. We will be monitoring closely the behavior of the monetary aggregates throughout the year. If it becomes evident that the growth ranges as we have developed them are inconsistent with the fundamental objectives of policy--fighting inflation being preeminent--then we will adjust them.

(d) Will you publish at least monthly M-1B after you adjust it so that we can monitor its behavior, and tell us how you adjust it?

As I indicated in my testimony, we intend to keep the Congress--and the general public--apprised of our estimates of the adjusted growth of M-1B. We have already begun to do so, presenting data that permit others to construct alternative estimates if they wish to do so.

(e) Will you avail yourselves of the opportunity to revise your thinking and target in July, if the facts then warrant?

We certainly will be reassessing our targets--on both adjusted and unadjusted bases; and for all the aggregates--prior to the July report to the Congress under the Humphrey-Hawkins Act.

Mr. Stanton

2. Suppose there are large tax cuts relative to expenditure cuts, while at the same time the Fed cuts money growth 2, 3, and 4 percentage points. What will happen to interest rates?

In the short run, interest rates presumably would be higher than otherwise, all other exogenous factors being equal. The larger federal deficit would add to Treasury demands on the credit market; it would also tend to expand the aggregate demand for goods and services, and the resultant stronger desire for transactions balances would press against a smaller money stock.

Mr. Stanton

3. How can real interest rates increase very much in the United States from cutting tax rates in view of the demonstrated international mobility of capital?

It is true that with capital free to move internationally there is a long-run tendency toward equalizing of real rates of interest among countries. However, it seems to be the case that divergences among real interest rates can persist for some time, as purchasers and suppliers of goods and services adjust to changes in prices among countries. Moreover, market imperfections, including various controls on capital flows, may prevent a complete equalization of international interest rates. Because the U.S. economy is such a large part of the world economy, however, a rise in real interest rates here, though moderated by the tendency of capital to flow in from abroad, would tend to raise the level of real interest rates in the world economy.

Mr. Stanton

4. There is considerable dispute about the effects of a tax cut on real activity and inflation. Demand management oriented economists tell us cuts in tax rates will operate to increase real activity (at least when, as now, there is plenty of slack in the economy--more than in 1963) and also to increase inflation. Supply siders tell us cutting tax rates will increase real activity and decrease inflation. Thus, there is agreement that real activity will be increased by cutting taxes--but disagreement about the inflationary impact. What do you think? Could it be a stand-off?

Tax cuts, considered in isolation, result in people having more disposable income; some of this is saved, some spent. As a result there is likely to be a tendency to increase consumption. Other things equal (including the money supply) there will also be a tendency to increase interest rates, restraining private investment and spending, as a result of the larger deficit, at least in the short run. The additional consumption can add to inflationary pressures, with the degree of impetus to prices depending in part on prevailing levels of resource utilization in the economy, but if money is held unchanged that effect would be dissipated over time. The question is whether investment would be dampened in the process with long-term adverse effects.

Tax reduction will also have incentive effects tending to add to supply. Whether the net effect will be to improve investment and ease pressures on prices is at issue, and would depend partly on the design of the tax reduction. What does not seem to me at issue is that the effects will be favorable if tax reduction is accompanied by spending cuts--the point I have emphasized.

Mr. Stanton

5. In your statement, you caution observers of monetary policy to avoid placing undue reliance on weekly monetary aggregate figures and you emphasize that short-term swings in the monetary aggregates should not be disturbing provided there is an understanding of the Federal Reserve's monetary control over time. In this regard, should the Federal Reserve consider shifting from weekly to monthly money supply reporting? If the Board and the FOMC feel that weekly monetary statistics tend to be unreliable, would it be reasonable to delay publication of the M-1 statistics until they are final?

In a recent letter to Senators Garn and Proxmire I indicated that the Board is considering several alternatives to its current publication procedures for the monetary aggregate data. These include abandonment of weekly publication or some delay. We have invited public comment on these proposals.

Mr. Stanton

6. The advent of automated teller machines has created a great demand for high quality currency. Given the various services the Fed already performs for depository institutions, has the Fed considered contracting with depository institutions to provide high quality currency to such institutions at an appropriate cost plus profit? It is my understanding that the Fed does not currently provide such a service.

The question of charging depository institutions for high quality currency has undergone intensive review. A proposal addressing this issue is under consideration by the Board of Governors. The proposal, brought to the Board by a special study group set up to make recommendations on this and other cash questions, is that depository institutions should not be charged for receiving automated teller machine (ATM) quality currency. There are several reasons urged by the study group for continuing to provide this service to the depository institutions free of charge.

One, there is a general policy that currency processing activities are deemed to be governmental responsibilities and that governmental responsibilities are not priced. The sorting of currency according to quality would be classified as such a processing activity.

Two, Reserve Banks are now in the process of installing state-of-the-art high speed processing equipment that can provide the type and quantity of high quality currency needed for use in ATM's. These high speed machines are already producing high quality notes at a number of Federal Reserve offices. The ATM quality currency produced by this equipment is regularly distributed to depository institutions as it becomes available. Further, by 1984, each Federal Reserve office which

processes more than 100 million notes annually will run all their machineable currency on this new equipment. This currency, in combination with the distribution of new notes, should ensure that depository institutions receive sufficient quantities of ATM quality currency. Charging for currency processed on high speed equipment in the interim period would not increase the supply of ATM money, but might unfairly alter patterns of distribution that are currently set up on the basis of efficiency and need.

Finally, furnishing only new currency for the rapidly growing ATM market is not recommended as a long term policy because the amount of new currency required for such purposes will soon exceed the amount needed to replace note redemptions in any given year. Since the currency system will only accommodate that quantity of currency which the public demands at any time, the issuance of excess quantities of new currency would eventually strain on Federal Reserve facilities to store ever increasing quantities of reusable fit currency.

I do not know whether the Board will deem these arguments persuasive, as against the alternative you suggest.

Chairman Volcker subsequently submitted the following responses to written questions from Congressman Hansen in connection with the hearings before the House Banking Committee on February 26, 1981.

Mr. Hansen

1. What is the real meaning of a "prime" lending rate at a bank? Is it not misleading to publicize such a rate as the "best" rate, when in fact loans are offered at discounts to everyone? Should the federal government do something to put some definition on the term and make it more uniform and thus more meaningful and useful to the consumer--particularly that small businessman or farmer who only borrows occasionally and who does not engage in overnight loan practices?

The meaning of the term "prime rate" has indeed become obscured by changes in bank lending practices. However, the below prime lending that has occurred has generally involved special categories of credits--usually very large, very short-term loans, which differ in character from the bulk of loans that are tied to the prime rate. Thus, the misunderstanding and possible inequities involved are not so great as might appear the case at first blush. I don't think that it would be useful for the federal government to get directly involved in the matter of trying to define the "prime rate." Bank lending rates to particular customers necessarily and properly involve a variety of credit and customer considerations, and attempts to arrive at and enforce an official definition would, all too likely, tend to create artificialities and distortions of lending practices. Our primary reliance must be on maintaining a highly competitive financial system, with a variety of choices by borrowers. I would also hope, in their own self-interest in maintaining well understood relationships with their clients, banks will consider means of clarifying their use of the "prime rate" terminology.

Mr. Hansen

2. Some question has arisen about whether the various Federal Reserve Banks are really getting detailed and useful information reflecting actual market and credit conditions from different parts of the country. If so, are they responsibly including it in their evaluation process so there is full awareness of such conditions? Are they then, in a systematic way, passing this information on to the Federal Open Market Committee and the Board of Governors? Do you regard this flow of information as an important current justification for the regionalized structure of the Federal Reserve System, which seems to be unique among central banks? If this function is not being fulfilled--and I have evidence that this is sometimes the case--should Congress examine the regional structure with a view to altering it so as to assure that this function is consistently served?

I believe that the Federal Reserve Banks are providing intelligence about economic developments in their regions in a way that is useful for monetary policy. The economic research and other departments of the Banks provide their Presidents with information on economic and financial developments in their districts. They also communicate information to the Board staff and Board members through various channels, including regular formal reports before each Open Market Committee meeting.

I might add the Federal Reserve is not quite unique in a regional structure--the German central bank, for instance, was in certain respects modeled on the Federal Reserve. I would be interested in any specific suggestions you might have about uses of appropriate regional information, or how our intelligence network might be improved in that respect.

Mr. Hansen

3. In your statement and in your report, you refer several times, as you did under oral questioning, to the superiority of present operating procedures in open market operations, especially saying that these procedures are fully adequate for periods of a month or longer. If that is so, why was the growth of money so explosive for six months together in 1980, particularly in view of the statement in your July report that it would not be the aim of the Federal Reserve to move back onto the target path in one extraordinary movement, after the stall-dive behavior of the aggregates early in 1980?

The volatility of the money stock last year--not from month to month but over several months--was largely a reflection of the extraordinary nature of the economic circumstances. Focusing on the developments of the summer and fall, to which you refer, the money stock did indeed grow at a very fast rate over a period of several months. The economy during that time was growing rapidly--much more rapidly than almost anyone had expected or realized at the time--and this was boosting the public's demands for transactions balances. In retrospect, it also appears that the public had abnormally reduced deposit holdings following the introduction of special consumer credit restraints in the spring, and sought to rebuild those balances later.

The Federal Open Market Committee's targets for monetary expansion were much lower than the growth that actually occurred and we did not provide non-borrowed reserves to support the rapid growth. The rapid money growth was clearly reflected in an increase in the need of banks to borrow the reserves required to support the increase in deposits and in a pronounced tightening of the money markets. This tightening

did tend to set in motion adjustments in the behavior of banks and the public that contributed to a deceleration of monetary growth late in 1980 and on into early 1981. The process of restraint indeed took longer to "take hold" than we anticipated, and because the deceleration occurred late in the period, the monetary aggregates did end up high relative to their ranges for 1980 when measured on the conventional fourth quarter average basis. However, taking a broader view and recognizing events around year end, the "misses" were minimal or nonexistent. I believe (and there is a great deal of evidence to support the belief) that it is the general trend of monetary growth over substantial periods that is significant in terms of achieving the fundamental objectives of policy.

Mr. Hansen

4. In addition to moving to contemporaneous reserve accounting, would it be helpful for the Federal Reserve to stagger reserve settlement days over each week?

The advantages and disadvantages of staggering reserve accounting periods have been studied over the years. These studies have suggested that the advantages of reduced reserve management pressures on depository institutions late in the reserve settlement week and the associated smoother day-to-day movements in the federal funds rate under a system of staggered accounting would come at the expense of a looser relationship between the monetary and reserve aggregates and an accompanying deterioration in monetary control.

The source of both outcomes is the characteristic of a staggered system that allows institutions to transfer reserve surpluses or deficiencies among themselves through federal funds transactions across settlement weeks. This characteristic provides an automatic mechanism for smoothing the impact on the federal funds rate of self-correcting, short-run fluctuations in non-controlled factors affecting reserves, such as float. However, the studies suggested it also can lead to the avoidance of systemwide balancing of reserve positions every week. In response to a permanent policy-induced change in reserves, institutions would be able to delay more basic balance sheet adjustments that would affect the monetary aggregates by transferring their reserve position imbalances to other institutions in the federal funds market. Systemwide imbalances could accumulate over time. Once institutions began undertaking

more basic balance sheet adjustments, such as asset purchases or sales, the elimination of the overall accumulated reserve imbalances could even require larger asset transactions and associated deposit changes than would be sustainable in the long run given aggregate reserves.

These complications in the reserves to money relationship would impair the Federal Reserve's ability to predict the consequence for movements in the money stock over time of a particular reserve target. A system of staggered accounting could well overturn the benefits for short-run monetary control potentially available under contemporaneous reserve accounting. The Federal Reserve is currently studying the operational feasibility of contemporaneous reserve accounting, as well as appropriate implementation schedules, and I intend to review again the evidence on staggered settlement days.

Mr. Hansen

5. Is there anything the Federal Reserve can do through monetary policy to predictably affect the division between growth and inflation in the space of, say, a year? If it can, is this in line with the Administration's thinking of what is needed for the next year? If it can't, why should the Federal Open Market Committee particularly worry from week to week about the emerging strength or weakness of the economy and try to react to it?

I don't believe that the Federal Open Market Committee any longer, if it once did, takes the kind of "fine tuning" approach of the sort you suggest. Our continuing effort must be to deal with inflation. We do, of course, feel it is important to keep abreast of short run developments in the economy and financial markets. There is some area of inevitable uncertainty attending the specification of monetary targets and their impacts on the economy, and we constantly assess incoming information that may shed light on those matters, and perhaps help us in adjusting our operations toward the specified targets, or, much more rarely, signal the need for adjustments in targets in order to maintain policy on the correct course with respect to the achievement of the ultimate objective of a stable, growing economy.

There is little the Federal Reserve can do directly, through the ordinary tools of monetary policy, to affect the inflation/growth "trade-off". However, expectations may indirectly affect the outcome, although without predictable precision. Those expectations would be influenced by monetary as well as other public policies in ways not easily distinguishable, but related, I believe, to perceptions of willingness to persist in policies of restraint.

Mr. Hansen

6. The recent behaviors of the consumer price index and the GNP deflator have been very different. Do you judge one index to be better than another for the general purpose of assessing the strength of inflationary pressures and the appropriateness of various possible policy responses?

There is no single price index that is an unambiguous, all-purpose indicator of inflation. The consumer price index has clear problems, particularly in the treatment of housing, that have been quite generally recognized. The GNP implicit deflator has other shortcomings, including a tendency toward some volatility as a result of the shifting weights that characterize its construction. The GNP consumption deflator may give a better reading.

In general, I do believe, in present circumstances of volatile and high interest rates, the consumer price index is often misleading, but a variety of indices, including the producer price index, is necessary to properly assess inflationary developments.

Mr. Hansen

7. The first chart on page 27 of your report shows that nonborrowed reserves were really quite stable from May to the end of 1980. The monetary base, adjusted for reserve requirement changes, increased from May to November by about 10 or 11% (on an annual basis), then turned nearly flat. M-1B likewise increased rapidly from May to November, then went flat. Apparently, stabilizing nonborrowed reserves through the period did not result in stable money growth. In view of the record, would not stabilizing of the monetary base have resulted in much more stable monetary growth?

Under present institutional arrangements, with banks able to borrow from the Federal Reserve, we cannot have assured control over the monetary base (or total reserves) in the short run, in any event, it is not possible to say precisely what pattern of monetary growth might have occurred had the System stabilized the growth of the monetary base over this period. There are considerable dangers in ex post comparisons of the sorts you make in your question, for the monetary base was in fact determined endogenously along with the money stock. The base is most heavily influenced by currency outstanding, rather than deposits which account for the bulk of the money supply. As a general matter, it should be noted that the staff's study of monetary control procedures suggested that nonborrowed reserves are a better operating target than the base under current institutional arrangements.

In the period to which you refer, the money stock was growing rapidly at first and the System did not accommodate that expansion through a corresponding provision of nonborrowed reserves. As banks were forced to turn to the discount window to satisfy their reserve requirements, this put upward pressure on market rates of interest and encouraged adjustments

by banks and the public that contributed to the weakening of monetary growth later in the year. At times, nonborrowed reserves were reduced in the light of the rapid growth in total reserves to speed up the adjustment process. The rise in borrowing was reflected in the growth of total reserves and the base.

If, instead, the System had been attempting to adhere to a path for total reserves or the base, the initial surge in the monetary aggregates would have required a reduction of nonborrowed reserves from what actually occurred. (Absolute adherence to a total reserve or base path in the short run in the face of a surge in money would, for all practical purposes, be impossible because it is necessary to meet the demands for currency and required reserves.) In such a circumstance, money market conditions would have tightened even more abruptly than they did. Such a development presumably would have prompted a quicker deceleration of monetary expansion, but the precise timing and dimensions cannot be estimated with any certainty. Furthermore, it is conceivable that there might have been subsequent oscillation in money, and interest rates as the System attempted to hold total reserves or the base on a steady course in the face of short-run disturbances to money demand and the reserves-money or base-money multipliers.

Mr. Hansen

8. Professors James M. Johannes and Robert H. Racshe of the Department of Economics at Michigan State University have presented extensive evidence (see the Econometrics Workshop Paper No. 7914) to show that, given their forecasting models the forecast errors at the various steps of the procedure are such that the monetary base is the dominant policy guide, compared to nonborrowed reserves. They say "We are unaware of any publicly available forecasting technique that dominates our results, or reverses the rankings of the two policy guides." Does the Federal Reserve's own forecasting technique overthrow these findings? If so, why were the results in actual practice so poor in 1980? If not, why does not the Federal Reserve adopt the superior policy guide? In any case, why does not the Federal Reserve publish its forecasting techniques?

The Federal Reserve staff study on the new monetary control procedures completed in February contained a paper entitled "Monetary Control Experience Under the New Operating Procedures" that addressed in detail the conclusions reached by Professors Johannes and Rasche. This paper first compared the accuracy of forecasts of the various multipliers (ratios of a monetary aggregate to a reserve measure) by the Johannes-Rasche model with the accuracy of multiplier forecasts made judgmentally by the Board staff in deriving reserve targets. Multiplier forecasts by Board and San Francisco Reserve Bank econometric models also were examined. From October 1979 to October 1980 the accuracy of the staff judgmental forecasts was superior on average to the accuracy of the Johannes-Rasche model forecasts, particularly for the nonborrowed and total reserve measures. The Board monthly model, whose equations have been made available to the public upon request, also yielded closer multiplier predictions than the Johannes-Rasche model.

The Board staff paper also examined how closely money could be controlled using alternative reserve measures as fixed operating targets over monthly periods. The Board and San Francisco models were simulated so as to abstract from the effects of movements in reserve measures that

are induced by movements in money and that potentially distort the multiplier results. Thus, these tests focused solely on the relationship going from reserves to money. The results indicated that the short-run connection between nonborrowed reserves and money was more reliable than the connection between the monetary base and money, under the current institutional and regulatory structure. Moreover, under a different regulatory structure embodying more predictable required reserve ratios, total reserves were more reliably connected to money than the monetary base.

The Federal Reserve came very close to attaining its announced ranges for growth of the narrow monetary aggregates over 1980 as a whole, despite sizable gyrations in monthly growth rates. The money stock is inherently noisy in the short run, and not amenable to precise week by week or month by month control.

However, the variability of money growth last year apparently was accentuated by an unusual combination of factors that destabilized the demand for money as the year progressed. These factors included sharp swings in economic activity and the imposition and subsequent removal of the credit control program. Had 1980 been a more "normal" year, money would have been much more likely to have remained within the bounds of the FOMC's longer-run range. This conclusion is documented in detail in another paper in the overall staff study, "Money Market Impacts of Alternative Operating Procedures."

The forecasting procedure used by the Federal Reserve in setting and adjusting its targets for reserve aggregates is predominantly based on judgmental estimates of near-term relationships among financial variables. Unlike an approach utilizing only the Board's monthly model, this forecasting technique, by its very nature, cannot be reduced to a simple set of equations or formulas that might be published.

Mr. Hansen

9. The appendix to the Federal Reserve's report contains results of staff studies, ostensibly showing that no alternative policy procedures, specifically targeting the monetary base instead of nonborrowed reserves, could have resulted in smoother money growth and more stable credit markets in 1980. These results lean heavily on model simulations. These models gave us atrocious instabilities in 1980. Why should their results be trusted to evaluate hypothetical alternatives?

The staff research evaluating alternative reserve measures as potential operating targets relied in part on simulations of the Board and San Francisco Bank econometric models. But these simulations highlighted the impact on the money stock of the errors each month in the models' equations. In other words, the model simulations were designed to estimate the extent to which unexpected developments would disturb money from its predicted level when different reserve measures in turn are maintained at predetermined levels. Thus, the simulations did not ignore that fact that model equations are subject to error, but instead indicated the closeness of monetary control that is possible with different reserve targets in the face of these errors.

The results, which apply only to each model specifically, should be viewed as tentative, because no model perfectly represents the nonrandom, underlying structure of the economy. However, the fact that the results comparing nonborrowed reserves with the monetary base were similar for two models with quite different structures suggests some confidence in the general validity of the results.

In any event, while the two models did suffer rather large errors in several months in 1980, it would be a mistake to blame the observed instabilities last year on the models, which were not relied on to any significant degree in conducting monetary policy. The model errors reflected last year's instabilities, but the cause of these instabilities was the economic factors discussed in the last question, not the models themselves.

Chairman Volcker subsequently submitted the following response to a written question from Congressman Paul in connection with the hearing before the House Banking Committee on February 26, 1981.

Dr. Ron Paul

During a hearing conducted by the Economic Stabilization Subcommittee on February 25, Professor Amitai Etzioni suggested a device to reduce the annual interest payments on the national debt: the sale of gold-backed bonds. He pointed out that three weeks ago a private firm in Europe sold gold-backed bonds at 3.5% interest. I am enclosing a copy of his remarks in which he makes this suggestion. What is your reaction to this idea? Would you endorse it as a way to balance the budget, which you emphasized so much during your testimony?

While I can understand the concerns that prompted Professor Etzioni's suggestion, I have several reservations about his proposal. The essence of the proposal is that the Treasury sell indexed bonds -- in this case tied to the price of gold. I have generally been opposed to most forms of indexing as they reduce support for controlling inflation and in some cases actually help spread price increases. Professor Etzioni's proposal would place the U.S. Treasury in the position of speculating on the future price of gold, and in effect betting against those who buy the bonds -- I think this is inappropriate.

The proposal's overall intent seems to be to reduce the cost of public borrowing now, and shift some of the burden into the future when the bonds would be paid off. However, if we are unwilling to pay the financing cost of the Federal deficit associated with current levels of government spending, a more appropriate response would be to cut the budget. If we wanted to finance current spending at the expense of reducing our assets, we could always sell gold directly. Americans now also have unrestricted opportunities to own gold in the form of bullion, U.S.-produced medallions, foreign coins, claims on gold held in bank vaults, futures contracts, and in other forms. There is no reason to believe the ownership of a claim on the U.S. gold stock could provide, as Professor Etzioni suggests, benefits that are superior to those afforded by available investment opportunities.

Chairman Volcker subsequently submitted the following responses to written questions from Congressman Shumway in connection with the hearings before the House Banking Committee on February 26, 1981.

Mr. Shumway

1. To what extent have the revenues accruing to the Treasury as a result of the Federal Reserve requirement increased in the past two years? What is the projection for FY 1982? In future years?

The primary source of Federal Reserve revenues is earnings on our portfolio of government securities. Most of these revenues are returned to the Treasury each year, after a deduction for Federal Reserve operating expenses. Revenues accruing to the Treasury solely as a result of Federal Reserve reserve requirements represent about one quarter of the System's earnings on its securities holdings. Revenues derived from reserve requirements were $2,080 million in 1978; $2,640 million in 1979; and $2,995 million in 1980. The increase in revenues over the past two years (1978-80) from reserve requirements alone is thus $915 million, or 44 percent. The main source of this rise was the 33 percent increase in the average return on the System's portfolio from 1978 to 1980. Average reserve balances at the Federal Reserve Banks grew 8.5 percent during this period.

The projection for revenues from reserve requirements alone in fiscal year 1981 is $2.5 billion. For future years the projections are: $2.3 billion in fiscal year 1982, $2.0 billion in fiscal year 1983, and $1.8 billion in fiscal year 1984. Reserve requirement revenues fall because of the

reduction in reserve requirements mandated by the Monetary Control Act. However, as you know under the Monetary Control Act we have begun charging for the services provided by the Federal Reserve Banks. Total revenues from reserve requirements and service charges will be higher than if the Monetary Control Act had not been passed. Obviously, these projections of revenues are sensitive to assumptions about the extent and composition of deposit growth and about interest rate movements; consequently, they must be viewed as quite uncertain. Total Federal Reserve earnings will also be affected by other factors such as the growth of currency.

Mr. Shumway

2. What accounts for this rapid rise in revenues, which have apparently more than doubled in only five years?

By 1980, Treasury revenues specifically due to reserve requirements, $2,995 million, had grown by 71 percent from their 1976 level. However, total Federal reserve payments to the Treasury in 1980, $11.7 billion, were $5.8 billion more than in 1976. Most of this rise was due to an increase in the average rate of interest earned on U.S. government securities, which rose from 6.70 percent in 1976 to 9.73 percent in 1980, reflecting the upward trend in rates. The remainder was due to earnings derived from additional holdings of securities, which averaged $128.2 billion in 1980 compared with $96.8 billion in 1976. This substantial increase in security holdings largely reflected the continuing growth of currency in circulation, which in 1980 averaged $38.9 billion more than in 1976. A smaller portion reflected the increase in reserve balances described in question 1.

Mr. Shumway

3. During the protracted debate leading to passage of the Monetary Control Act, the Treasury Department insisted that a minimum acceptable revenue floor existed, and that the reserve requirement had to be sufficient to limit revenue losses. In fact, it is my recollection that the reserve requirements eventually established were based more on this concern with revenues, rather than with the questions of monetary control. Do you think this is an accurate assessment of the situation?

The Treasury was indeed concerned with the potential revenue effects of the Monetary Control Act. To address that concern, the Federal Reserve provided revenue estimates to the Treasury. These were later published in the Congressional Record-Senate (March 27, 1980, pp. S3172-4). These estimates showed that, compared to an environment without the MCA, passage of the MCA should on balance lead to a modest increase in Treasury revenues.

The concerns of the Federal Reserve, naturally, were with the monetary control implications of the MCA. Monetary control is enhanced when more financial institutions are subject to reserve requirements in excess of vault cash holdings. The legislation subsequently adopted by Congress represented a balancing of the need for improved monetary control, the revenue concerns of the Treasury, and other economic considerations. Thus no single concern dominated the final form of the MCA.

Mr. Shumway

4. As a result of the mandatory reserve provisions of the Monetary Control Act, certain competitive burdens are being disproportionately borne by many small and medium banks -- particularly as the deregulation process accelerates. As you are aware, non-member banks were given an eight-year phase-in period in which to reach their required level of reserves, while similar banks, who had been members of the Fed, were forced to meet their full reserve requirements immediately. I have been contacted by several banks who feel this is quite unfair. One way in which the problem of disproportionate reserve burdens might be somewhat mitigated would be to reduce the reserve requirement. In view of recent revenue increases, what are your thoughts?

The reserve requirement provisions contained in the Monetary Control Act reflect detailed and lengthy negotiations among a variety of interested groups. While all similar financial institutions will ultimately have the same reserve requirements, this will not happen until after a prolonged phase-in period. Thus, you are correct that member banks will be required to maintain higher reserves than otherwise similar institutions during the phase in. However, member banks' reserve requirements will be less than would have been the case without the Monetary Control Act. If there was sufficient Congressional interest, it would be possible to amend the Monetary Control Act to have more uniform reserve requirements sooner. The benefit of doing this would, of course, have to be weighed against the cost in terms of foregone revenues to the Treasury as well as any impact on monetary policy.

With respect to institutions that left the Federal Reserve System shortly before the Monetary Control Act was passed, the legislation is quite specific. It specifies that those

nonmembers that left the System between July 1, 1979 and March 1, 1980 are to be regarded as member banks for reserve requirement purposes. The legislative history of the Act indicates that the purpose of this provision was to ensure that member banks that left the System while the MCA was being considered actively by the Congress would not obtain a windfall reserve requirement reduction as a result of the nonmember bank phase-in provision; indeed, it was felt that such former members were better able to restructure their assets to comply with higher reserve requirements than other nonmembers. Although it might be argued that some relief could be granted to these former member institutions by lowering their reserve requirements, the Act requires the Board to establish uniform reserve requirements for all types of depository institutions, thereby precluding selective changes for some types of institutions.

Mr. Shumway

5. Would you briefly describe the process by which monetary targets are set? What specific economic criteria are relied upon? How consistently have monetary targets been reached in recent years?

This set of questions is very broad and might require dozens of pages to treat fully. I shall follow your indication that I may be brief. The Federal Reserve's Report to The Congress on Monetary Policy discusses these issues in much more detail.

The Federal Open Market Committee sets the targets for monetary growth in light of a broad range of analysis and information brought to it by the staff of the Board and the Reserve Banks on all aspects of the economy and financial markets. The FOMC members also, of course, have insights drawn from their own extensive contacts in the private and public sector. It is impossible to pinpoint a set of "specific economic criteria" that are determining in the decision-making process. The broad goals of policy have been laid out repeatedly, including in the Humphrey-Hawkins Act. Our decisions have been framed consistently with a view toward maintaining a stable, predictable policy of applying the monetary restraint needed to fight inflation and restore a stable, growing economy and a sound dollar internationally.

The record over the last few years in achieving monetary growth objectives has been reasonably good. There has been a general deceleration in monetary growth over the past few years. Growth of the narrow monetary aggregates in 1980 was within one quarter percentage point of the target range. Most importantly, we believe we have succeeded in imposing a crucial restraint on inflationary forces.

Chairman Volcker subsequently submitted the following responses to written questions from Congressman Lowery in connection with the hearing before the House Banking Committee on February 26, 1981

Mr. Lowery

Exports and Protectionism

Mr. Chairman, recently Dr. Fred Bergsten, Former Assistant Secretary of the Treasury for International Affairs, warned that continuing high interest rates will erode the competitiveness of U.S. exports, which have been growing at twice the rate of overall world trade for the past three years. He also warned that the U.S. faces massive protectionist pressures in the future. Would you comment on Dr. Bergsten's concerns and what role, if any, the Federal Reserve will play in these matters.

High nominal interest rates are symptomatic of high inflation rates, and consequently, they are likely to be associated with a deteriorating competitive position for U.S. exporters. The efforts of the Federal Reserve to reduce the rate of inflation will, over time, help to bolster U.S. competitiveness and create an environment conducive to a lower level of interest rates.

On the question of protectionist pressures, there is no doubt that they are rising both here and abroad. To a degree this is a reaction to low growth rates and high unemployment rates in most industrial countries. There are probably instances in which exports of some products from some countries are being encouraged by subsidies of one kind or another, and we would support a strong reaction in such cases. More generally, however, we believe that to turn back the tide of protectionism it will be necessary to pursue economic policies in the industrial countries that will support expansion without stimulating inflation. The policy of the Federal Reserve is to foster that kind of environment for the United States.

Mr. Lowery

Mr. Volcker, there has been some discussion of the possibility of establishing an IRA-type account for housing down payments. Should mortgage interest rates continue to stay at present levels, would you favor such an instrument for first-time homebuyers?

No, I would not. As a general matter, one must approach tax deferral and exclusion proposals very cautiously for they tend to involve the certain loss of tax dollars and enlargement of the federal deficit with uncertain benefits to the economy in terms of additional saving. The specialized plan you inquire about addresses a symptom of our current problem--high interest rates discouraging home purchases--rather than the problem itself, inflation. Moreover, it would put into place an additional subsidy program for housing that prove difficult to dismantle when the need had passed. The most effective way to eliminate the housing affordability problem is to curb inflation through consistent application of monetary and fiscal restraint.

Mr. Lowery

Mr. Volcker, there has been much discussion of the fact that mortgage interest rates are included in the CPI, and as is stated in the Report (page 41) the rise in mortgage interest rates in late 1980 included in the CPI "exaggerates the true change in the average cost of living." However, in my District in California, the 30-year, fixed rate mortgage is fast disappearing. Do you feel that with the current trend of VRM's and other less conventional mortgage instruments, interest rates on these types should in fact be included in the CPI, perhaps adjusted periodically?

It is widely recognized that the present treatment of home purchase costs in the Consumer Price Index has significant shortcomings. The index does not reflect in a satisfactory way the fact that homeownership involves both consumption and investment characteristics. There is less agreement, however, concerning the most appropriate treatment of financing and other homeownership costs in the CPI. The proliferation of adjustable-rate home mortgages adds another complicating technical factor in the construction of the index.

In a true cost-of-living index, the owner-occupied housing component would measure changes in the average cost of consuming the flow of shelter services provided by owner-occupied homes. This cost cannot be measured directly, however, since there are not corresponding market transactions for which prices can be collected. The Bureau of Labor Statistics currently is experimenting with a number of housing variants that represent attempts to measure the ideal concept indirectly. These alternatives have been under discussion at the BLS and elsewhere for some time and are being reviewed for the next CPI revision. The BLS is also considering how to deal with adjustable rate mortgages in the current CPI homeownership measure, but appropriate data are quite limited at present.

Mr. Lowery

The Competitive Environment Ahead

What is your response to these competitive pressures faced by all depository institutions? How should we in Congress begin to approach these issues? Isn't it time that we thoroughly review the Glass-Steagall Act with the view toward permitting depository institutions to compete for services similar to those which their competitors in the investment business now offer?

You are certainly correct in indicating that there have been significant changes in the institutional structure of financial markets and that there are strong pressures toward further change. It is important that we not permit outmoded regulations and statutes to impede an evolution of the markets in the directions dictated by fair and constructive competitive forces; we must, of course, at the same time make sure that the financial system remains sound and does not become a chink in our economic armor as we confront the many unpredictable shocks that can arise.

The Board is addressing some of the issues you raise. The question of equitable competition between money market mutual funds and depository institutions is one of these. A variety of Glass-Steagall issues, including revenue bond underwriting, have, as you know, come to the fore in recent years, and I think it is inevitable that many more will.

Mr. Lowery

Lower Inflation Rate

Given, the inflationary forces and the inflationary expectations which are embedded in our economy, is it reasonable to assume that the inflation rate can be cut to 8.3% as early as next year, as has been predicted, even assuming that President Reagan's entire program of tax and spending cuts is enacted? If not, what kind of inflation rate can we reasonably expect?

I see no fundamental reason that the rate of inflation cannot be cut to 8.3 percent next year. I think that such a result could be achieved with the least strain on our financial fabric if the federal deficit is kept to a minimum. But you are quite right in focusing on the inflationary expectations embedded in the economy. Whether we can achieve both a significant deceleration of inflation and strong economic growth is dependent in large measure on our success in turning the expectational momentum of inflation around--and I believe that a firm, credible commitment to monetary and fiscal restraint is essential to achieving an easing of inflationary expectations.

Mr. Lowery

Mr. Chairman, now that the Federal Reserve's discount window is available to all depository institutions, perhaps it is time to examine new ways to have the discount rate set in a manner that would improve monetary policy. Some observers, such as Milton Friedman, have suggested that the discount rate should be linked to a market rate such as the Treasury bill rate, so that it becomes a floating rate which changes continually rather than at uncertain intervals. Perhaps it should be viewed as a penalty rate inthe future.

Has the Federal Reserve given any consideration to such a review of the discount rate? If so, what are you doing in this regard? If not, why not?

The staff of the Federal Reserve recently undertook an assessment of the procedure for setting the discount rate, as part of a more general review of its first year of experience with targeting open market policy on bank reserves. In this review consideration was given to the question whether monetary control would be improved by maintaining the discount rate consistently at a penalty above a pivotal short-term market rate, such as the federal funds rate, or by using a floating discount rate, tied in some fixed spread relationship to a key market rate. The staff's study revealed that the two techniques offer both advantages and disavantages relative to the current approach; these are summarized below. The Board will continue to consider alternatives to present practices with respect to the administration and pricing of discount window credit.

Penalty Discount Rate

A penalty discount rate would tend to limit the discount window to a strict lender of last resort role. As a result, borrowers would be accommodated only when they had lost access to their usual market sources of funds (due to their own management errors), or when there was a more general squeeze on financial liquidity. The present role of

the discount window as a buffer in accommodating temporary bank needs for reserves would thus be largely eliminated, and any tendency for bank reserve demands to exceed or fall short of the supply being provided through Federal Reserve open-market operations would produce quicker and substantially sharper responses in market interest rates.

Where the overshoot or undershoot in demands for reserves resulted from a deviation of money growth from the FOMC's desired target rates, this more rapid response of market interest rates would be helpful, since it would tend to bring money growth back on target more quickly. Unfortunately, however, reserve needs often deviate from expected levels for reasons that have no relation to the underlying demand for money, and sharp interest rate responses to such changes would often be counterproductive.

For example, bank demands for excess reserves may deviate from forecast levels, or the deposit mix that determines required reserves may differ significantly from the projected pattern. With the discount window no longer serving as a buffer, any such stochastic discrepancy between the demand for and supply of reserves would be reflected in a much sharper response of interest rates than is now the case. There would be no guarantee that these rate responses would be consistent with what was needed to keep growth in the monetary aggregates within their desired ranges, and at times they could actually run counter to such needs, thereby exacerbating deviations of money growth from the desired targets.

Finally, it should be noted that under the present system of lagged bank reserve accounting, it would be technically impossible to keep the discount rate consistently at a penalty relative to the federal funds rate. Since required reserves in the current week depend on deposits two weeks before, in any situation where open market operations failed to cover all of the demand for required reserves (as might happen as a result of Federal Reserve misestimates of independent factors like float and currency in circulation that also affect bank reserves), the banking system would have to turn to the discount window to bring the total supply of reserves into equilibrium with demand. Individual banks with reserve shortages would seek first to meet their needs in the federal funds market. But because the supply of federal funds were insufficient to meet the total demand for reserves (due to the Fed's misestimate of the need for open market action), the federal funds rate would be bid quickly up to and above the discount rate. Only then would banks turn to the discount window to bring the supply of total reserves into balance with demand. This process of reaching an equilibrium could thus be expected to increase the volatility of market interest rates.

Tied Discount Rate

Advocates of a tied discount rate have generally suggested linking the discount rate in a fixed spread relationship to the federal funds rate, the 90-day Treasury bill rate, or some more general index of short-term market rates. Like the penalty rate

approach, the objective of a tied rate would be to insulate the volume of borrowed reserves against changes in market interest rates, so that adjustments to persisting deviations from targeted money growth rates would occur more quickly.

If the federal funds rate were selected as the tie, any attempt to link the discount rate to very recent levels of the federal funds rate could produce large, possibly explosive, movements in both the federal funds rate and other market rates. For example, if today's discount rate were tied to yesterday's federal funds rate, anything causing a change in yesterday's funds rate would lead to a further change in today's funds rate because of the tied increase in today's discount rate. This would induce still further changes in tomorrow's discount and funds rate, and so on.

This technical problem of induced interest rate volatility could be damped if the discount rate were tied to some lagged value of the federal funds rate instead of a very recent rate. The rationale for such a backward looking fed funds rate tie would be essentially two-fold. First, it would allow for some variation of the spread of the current fed funds rate over the discount rate and thus, by tolerating some increase in the volume of borrowed reserves, limit the risk of an interaction with the discount rate that ratchets the fed funds rate upward. This in turn would help to minimize the possible pitfall of linking the discount rate too tightly to a current rate series that is heavily influenced by strictly temporary shifts in demands for reserves

and not reflective of a basic trend in the demand for money. At the same time, a lagged tie of this type would help to keep spreads of market rates over the discount rate from reaching the unacceptably large proportions that have developed at critical points under the existing system of establishing the discount rate on a discretionary basis.

However, a tie of this type--with a sufficient lag to avoid too close a linkage to relatively current adjustments in money market conditions--would be quite unwieldy. For example, at times when the federal funds rate was declining, this approach would produce a penalty discount rate (with all its attendant problems) unless a special judgmental adjustment were made.

Use of a 90-day bill rate or a broader index of similar short-term rates as the tie, rather than the one-day federal funds rate, would help to minimize the destabilizing influence of very temporary changes in reserve demands. But it would also introduce certain technical complexities that could prove troublesome. For example, experience shows that in periods as short as the interval between FOMC meetings, most market rate series will frequently show temporary supply-demand distortions relative to the structure of other similar rates. Thus, any series used as an automatic tie would have to be reviewed regularly to determine whether temporary market factors were creating distortions that indicated a need to set the automaticity aside.

Where other central banks have introduced tied rate procedures for setting their discount rates, they have always had to wrestle with the question whether the objective of tieing should take precedence over other policy considerations. Generally, to accommodate other overriding policy needs, the rules for those other ties have had to be breached frequently. After a period of mixed results, the experiments have typically been abandoned.

Chairman Volcker subsequently submitted the following response to a written question from Congressman James K. Coyne in connection with the hearing before the House Banking Committee on February 26, 1981.

Mr. Coyne

What impact does our government's growing credit requirements have on national interest rates? How much, according to your econometric models, could interest rates be brought down if we could maintain a balanced federal budget for a period of 2-3 years or even longer?

All other things equal, a larger federal deficit implies higher market rates of interest. I don't think, however, our econometric model can offer any simple answer to your question regarding the impact of a balanced budget for several years. It would yield a variety of answers depending on the economic circumstances and other aspects of governmental policy--and any quantitative results would, as with all econometric models, be subject to a considerable degree of uncertainty. However, it is fair to say that reduced federal borrowing will result in less pressure on credit markets and in general, significantly lower interest rates.