FEDERAL RESERVE'S FIRST MONETARY POLICY REPORT FOR 1980

HEARINGS

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

NINETY-SIXTH CONGRESS

SECOND SESSION

ON

OVERSIGHT ON MONETARY POLICY REPORT TO CONGRESS PURSUANT TO PUBLIC LAW 95-523

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FEDERAL RESERVE'S FIRST MONETARY POLICY REPORT FOR 1980

MONDAY, FEBRUARY 25, 1980

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, D.C.

The committee met at 9:30 a.m. in room 5302, Dirksen Senate Office Building, William Proxmire, chairman of the committee, presiding.

Present: Senators Proxmire, Stevenson, Riegle, Garn, and Heinz.

OPENING STATEMENT OF CHAIRMAN PROXMIRE

The CHAIRMAN. The committee will come to order.

Today and tomorrow the committee will be considering the Federal Reserve's First Monetary Policy Report for 1980, pursuant to the requirements of the Full Employment and Balanced Growth Act of 1978. Our only witness today is Paul Volcker, Chairman of the Board of Governors of the Federal Reserve System.

Mr. Volcker, we are pleased to have you with us today to discuss the Federal Reserve's monetary policy plans and objectives for 1980. You have been Chairman of the Federal Reserve Board only since last August, but policy actions you have put in place have been aggressive and represent an important shift toward controlling bank reserves as a means to gain firmer control on the growth of money and credit.

Our most pressing economic problem continues to be excessively high inflation which has proven to be impervious to our efforts to constrain it. Many people are now stressing that inflationary expectations are causing inflation to spurt ahead. If people believe that inflation will continue, the conclusion that must be drawn is that the policies we have in place have not been effective and are not expected to be effective in reducing inflation.

Federal spending is too high and many informed observers feel that the President's 1981 budget is excessive and inflationary in the long run. There are doubts that the deficit can be held down in 1981 and the budget balanced in 1982. Monetary policy has been effective in slowing the growth of the monetary aggregates, but still the financial pages reveal concern that credit, especially business credit, is readily available. And, because of past experience with the Federal Reserve, I am sure that in the minds of many economists, businessmen, and financial experts there are continuing doubts that the Federal Reserve will continue to pursue a tight monetary policy in a Presidential election year.

Like it or not, it is very clear to me that the bulk of the fight against inflation has been delegated to the Federal Reserve. We do not have a balanced budget. The administration's wage and price guidelines look ineffective. Productivity is declining. Regulatory reform is proceeding slowly.

So what are our options?

Wage and price controls? No. Why? Well, we know that wage and price controls don't work. While they are in place they result in a build-up of excess demand and then when they arerelaxed we have a price exploson. We don't have any laws on the books that would permit mandatory wage and price controls, so even now as we dare to discuss them we have the strong possibility of businesses making anticipatory price increases. The legislative process needed to enact controls would make inflation worse. Finally, mandatory controls would be used politically to provide a cover for expansionary fiscal and monetary policy.

What about credit controls? We have the necessary law on the books to put them in place. But Korean war type controls on housing and automobiles wouldn't be useful. Those sectors of the economy are already weak. Credit controls might be used to control business credit expansion, but it is questionable if that could be used successfully. Businesses already have learned to get around the Fed's current attempts at restraint. Furthermore, we would not want to restrain capital investment, which is so badly needed in order to increase productivity. So the problem would be to attempt to limit credit for nonproductive purposes, which I understand the Federal Reserve has already tried to limit through moral suasion.

What about monetary policy? If inflation continues unchecked and money and credit growth accelerates, you have little choice but to continue to pursue restrictive policies. But the question is how? First, you can continue to use open market operations to restrict the availability of total reserves for member banks. A more restrictive stance would result in tighter credit and higher interest rates across the board. Second, you can continue to raise the discount rate in a dramatic fashion every several months. This may have its advantages, but I think policy would be more effective if the discount rate floated with the Federal funds rate plus a slight penalty rather than the current large subsidy. This would put banks on notice that you really meant business. Finally, you could increase reserve requirements for member banks, but even though this might be desirable, I personally doubt that it would be done because of the membership problem.

My conclusion is that the Federal Reserve should avoid stop and go policies. You should pursue a set of policies that will provide only moderate growth in money and credit this year, with gradual reductions continuing into future years, until significant progress has been made in reducing both inflation and inflationary expectations.

I might add, Mr. Chairman, last week this committee held hearings on financing the Export-Import Bank. As you know, that Government instrumentality subsidizes exporters by providing credit at 8.3 percent. This is far below market and well below the cost of money to the Government. So, on the one hand, you're limiting bank reserves and shoving up the discount rates so busi-

nesses large and small and homeowners and farmers and others in America have to pay painfully high interest rates or in many cases forego their borrowing—you do this to slow down business activity, it cost jobs and put some marginal firms out of business, but it's necessary, painful medicine. On the other hand, the Eximbank is pushing hard and members of this committee are telling them to push much harder to lend subsidized Government funds to exporters so we can sell goods, not in this country where the production would satisfy our economic needs, but abroad, and the taxpayers have to pay for it. As a result, the American businessman pays more for this policy and our interest rates make credit less available and we have higher taxes.

Much of this anti-inflationary effect is offset by policies such as the Eximbank lending policy such as subsidizing exporters, and I might add this, last week we also passed a bill that could result in $10 billion of additional credit for housing below market rates which again contradicts precisely it seems to me what your policy, painful and difficult as it is, is designed to do, to slow down the economy as a whole; and yet we are proceeding with a policy which contradicts that both in the export industry and with the home builders and it seems to me that we are trying to move in both directions at once.

Chairman Volcker, you are off to a solid start. If you fail to stick with it our inflation outlook will continue to be bleak indeed. Also, failure to continue with monetary policies to reduce inflationary expectations would seriously jeopardize the credibility of the Federal Reserve System.

Senator Garn.

OPENING STATEMENT OF SENATOR GARN

Senator GARN. Thank you, Mr. Chairman.

Chairman Volcker, we are happy to have you with us today to review the adoption and implementation of monetary policy by the Federal Reserve.

During the past 6 months, the Federal Reserve has taken several steps designed to provide it with better control over the Nation's money supply. Last October 6, the Fed disclosed that it was altering its open market operations in order to focus on the growth of bank reserves, thereby replacing the Federal funds rate as its principal guidepost. Recently, the Fed announced the establishment of new definitions for the monetary aggregate categories. The redefinition was needed because of financial developments such as NOW accounts, Automatic Transfer Services, money market mutual funds and a growing similarity between deposits in commercial banks and thrift institutions. These have altered the meaning and reduced the significance of the old measures. In its most recent move, a week ago, the Fed raised the discount rate from 12 to 13 percent. Although committee members may differ with Chairman Volcker as to whether such actions have been tough enough, I believe that at least such actions represent an awareness by the Federal Reserve of the seriousness of our economic problems and the resolve to do something about them..

While I am concerned about the effectiveness of the Fed's monetary policy initiatives, I have a greater concern about the lack of

resolve by this administration and this Congress to take the necessary fiscal actions to insure that the Fed's monetary policy objectives are not completely thwarted. Inflation is seriously draining the economic strength of this country and unless everyone in this Nation faces up to the problem and is willing to make some sacrifices, we will not solve it.

In its recent Monetary Policy Report to Congress, the Federal Reserve summed up very well the need to deal with inflation through a coordinated effort. The report stated the following:

> Prospects for dealing with the inflation problem . . . will be materially enhanced if other elements of government (besides the Fed) also exhibit a firm anti-inflationary commitment and if workers and management recognize that a moderation of their wage demands and pricing policies is in their own long-range interests as well as those of the nation as a whole.

Unfortunately, it is much easier to describe the need for a coordinated effort than it is to accomplish it.

From current economic indicators, it is apparent that the economy is still going full speed ahead, with sharp increases in the inflation rate. In January, the producer price index rose by 1.6 percent, or an annual rate of 19.2 percent; and the Consumer Price Index rose by 1.4 percent, an annual rate of 16.8 percent. Recently revised real GNP figures for the fourth quarter of 1979 indicate that the actual increase was 2.1 percent, not 1.4 percent as the administration had originally reported. Even in light of these indexes, the administration has not developed a plan to deal with current economic problems. Moreover, its economic projections for 1980 already appear outdated; for example, such projections include a consumer price increase of 10.4 percent, hardly realistic in light of the January trend in producer and consumer prices.

I believe it is time that we face the problems before us and develop a national plan to promote economic growth and stability. In addition to actions by the administration, greater efforts must be made by Congress to balance the Federal budget and reduce the cumulative deficit. That will require tough choices on all appropriations items, but Congress will have to make them.

Tax reform is sorely needed to provide a better climate for capital investment. The Senate-House conference committee on the windfall profit tax bill has agreed to a provision exempting from taxation $200/$400 in interest and dividend income. This will provide some long overdue financial relief to small savers, as well as promote capital expansion, but it's only a beginning.

In developing a national economic plan, I would hope that we not forget the lessons of history in our search for solutions. For example, President Nixon's wage and price controls in the early 1970's, all of the phases I-IV of that program, only added to the economic distress of the past 7 years. What we need are controls on the Federal budget, not on the private sector. The administration and the Congress must act to implement a responsible fiscal plan which complements the Federal Reserve's monetary policy, not competes with it.

I would propose an economic summit be called by the President and should be called as soon as possible. What I'm really talking about here is not just another call for a meeting, but I think it's time that if we're not convinced that the problem is so serious at

this point when we're talking about 18 to 20 percent that we don't put aside partisan differences, not be concerned that this is a Presidential election year or an election year for some of us who have to run, quit worrying about Republicans and Democrats and Liberals and Conservatives and get the best minds we can together—and forget all of that partisanship—the best people we can together and say we've got such a problem that it goes far beyond elections in 1980 and Republicans, Democrats, Conservatives, Liberals, and see what we can come up with as a coordinated policy, will not be solved because for 5 years I have been making the same speed, Mr. Chairman, every time we have had the Federal Reserve Chairman here, that the Fed can't do it alone, that we can't have a fiscal policy that is going in an entirely different direction than our monetary policy and people more concerned about whether they are elected or not or whether the Republicans or Democrats are establishing a viable political position for themselves, it won't be stopped. We will be back here 6 months from now listening to you. We will be back here next January, and it will get worse. When I say I call for an economic summit, I'm talking about trying—maybe it's incredibly naive to think that could be done, but I think we have reached that point where it's time the President called for that kind of an economic summit and we put these partisan differences aside and see if we can come up with a coordinated plan, because as long as the policies are going in different directions as they have been for a long time, we are not going to solve it. It's certainly apparent to me the Federal Reserve alone cannot solve the Nation's economic problems. It's up to all of us.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Garn. Senator Stevenson.

Senator STEVENSON. I don't have a statement now, Mr. Chairman.

The CHAIRMAN. Mr. Volcker.

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

Mr. VOLCKER. Thank you, Mr. Chairman.

I don't think there's much for me to add at this point. You have our report; you have the statement that I made before the House committee which is still applicable. I'm conscious that things have happened since we prepared the report only a week or two ago, and that we live in a swiftly moving economy and world. We have had some high price figures, but I don't think those figures in themselves should have been terribly surprising. They were anticipated at this time mainly because of the effects of the oil price increase working its way into those indices. As far as the Consumer Price Index is concerned, it includes the mortgage rates that increased last fall. But the figures certainly do carry the danger of inflationary expectations accelerating further, and we have seen some evidence of that in the reactions in the bond market and elsewhere.

At the same time, the business activity has been strong, as you have pointed out. We mean to continue with the monetary policies outlined in this report. It is a policy of restraint. We have set out targets that we think are inconsistent with accelerating inflation, and I'd like to emphasize that point: We need to do our level best

to keep within those ranges but I would certainly agree with practically all of what you and Senator Garn have said about the need for other policies to accompany monetary policy if we are going to deal with this situation in the most effective kind of way.

The CHAIRMAN. Thank you, sir, and your statement will be printed in full in the record.

[Complete statement follows:]

Statement by
Paul A. Volcker

Chairman, Board of Governors of the Federal Reserve System

I welcome this opportunity -- my first -- to appear before this Committee to discuss the Federal Reserve Board's semi-annual report on monetary policy. As required by the Full Employment and Balanced Growth Act of 1978, that report presents the objectives for monetary growth adopted by the Federal Open Market Committee for the coming year and relates those objectives to economic trends over the past year and to the outlook for the year ahead.

In presenting the report to the Committee, I would like to make a few more personal remarks about the direction that monetary policy is taking and how those policies fit into a broader framework of action to deal with the evident problems of the economy.

The first point that I would emphasize is that the near-term outlook for real economic activity and employment remains highly uncertain. It never has been easy to forecast the direction of aggregate activity around cyclical turning points, and, as one prediction of imminent recession after another has gone awry, the past year has been a particularly humbling experience for economic forecasters.

Important uncertainties continue to cloud the outlook for 1980. One of the most critical questions is whether consumers, faced with lower real incomes and expecting higher prices, will continue to spend an extraordinarily high proportion of their income despite heavy debt burdens and reduced liquidity. Purchasing

power is again being absorbed by sharply higher oil prices, and there is no assurance that that process will quickly come to an end. The President has, of course, submitted his budget for fiscal 1981. But international political developments have raised some new questions about prospects for defense spending in the years ahead, and there are uncertainties about other elements in the budget as it makes its way through the Congress.

In looking ahead and making judgments about these and other questions, most members of the Federal Reserve Board have shared the view of the Administration and most other economists that an economic downturn will probably develop sometime this year. However, such a result is by no means inevitable and many forecasters appear currently to be raising their sights.

Unfortunately, the range of uncertainty with respect to inflation is one of how much prices will rise, not whether. Price increases, at least as recorded in the most widely read indexes, could well accelerate in the first quarter partly because the latest round of oil price increases will be reflected in those numbers. The real question is how much progress can be made in reducing the inflation rate in the latter part of the year.

In the past, at critical junctures for economic stabilization policy, we have usually been more preoccupied with the possibility of near-term weakness in economic activity or other objectives than with the implications of our actions for future inflation. To some degree, that has been true even during the long period of expansion since 1975. As a consequence, fiscal and monetary

policies alike too often have been prematurely or excessively stimulative, or insufficiently restrictive. The result has been our now chronic inflationary problem, with a growing conviction on the part of many that this process is likely to continue. Anticipations of higher prices themselves help speed the inflationary process.

Nor can we demonstrate that the result has been beneficial in terms of other objectives. To the contrary, unemployment has been higher in the 1970's than in earlier decades. Productivity growth has declined. Capital spending has not kept up with the needs of a growing labor force. Financial markets have been disturbed and depressed, and institutions responsible for a substantial share of mortgage financing are coming under strain. The recurrent weakness of the foreign exchange value of the dollar has undercut our economic stability at home and our leadership abroad.

The broad objective of policy must be to break that ominous pattern. That is why dealing with inflation has properly been elevated to a position of high national priority. Success will require that policy be consistently and persistently oriented to that end. Vacillation and procrastination, out of fears of recession or otherwise, would run grave risks. Amid the present uncertainties, stimulative policies could well be misdirected in the short run; more importantly, far from assuring more growth over time, by aggravating the inflationary process and psychology they would threaten more instability and unemployment.

The implications for monetary policy are clear. While there may be legitimate debate about the impacts of monetary policy in

the short run, there is little doubt that inflation cannot persist in the long run unless it is accommodated by excessive expansion of money and credit. Put more affirmatively, restraint on growth in money and credit, maintained over a considerable period of time, must be an essential part of any program to deal with entrenched inflation and inflationary expectations. Accordingly, I see no alternative to a progressive slowing of growth of the monetary aggregates to lay the base for restored stability and growth.

The 1980 growth ranges established by the Federal Open Market Committee for the key monetary aggregates are in line with that basic, continuing objective. In the short run, we believe those targets are fully consistent with an orderly process of economic adjustment and modest growth, provided the inflation rate subsides as the year wears on. We also believe that, should inflationary pressures begin to build more strongly in the context of strengthening demand, those same targets would imply strong financial restraint. In fact, the restraint implied by the new targets would be inconsistent with higher rates of inflation over a significant period of time.

The precise growth ranges are described in the Report that has been distributed to you, and can be seen in the perspective of recent years in an attachment to this statement. I should emphasize that all these data are on the basis of revised definitions for the monetary aggregates, described in detail in Appendix A of the Report. These definitions incorporate some of the recently

developed financial instruments that increasingly have been used in place of more conventional means of payment or claims on well established financial institutions. Because these new forms of "money" or "near money" generally have been expanding rapidly in recent years, the redefined aggregates tend to have somewhat faster growth rates over the past few years than the comparable aggregates as previously defined. (The aggregates as previously defined are shown in Table II attached.) The FOMC's new growth ranges for 1980 should not be directly compared with results based on the former definitions of the aggregates. What is significant is that the ranges for the newly defined aggregates in 1980 are expected to result in further slowing of monetary growth this year, following some deceleration over the course of 1979.

As I implied earlier, the behavior of interest rates and the degree of pressure on financial markets in the year ahead will depend critically on the performance of the economy and the strength of inflationary pressures and expectations. Experience suggests that if real activity in fact weakens, interest rates -- particularly for short-term instruments -- could tend to decline as demands for money and credit moderate. As inflationary forces tend to recede, the decline could be more pronounced, and spread more fully into longer term markets. In those circumstances, such market developments would be constructive, tempering any weakness in real activity, and tending to support investment activity and housing. At the same time, persistent restraint on monetary

growth would be consistent with our resolve to resist inflation. The other side of the coin is that continued strong inflationary forces, accompanied by bulging credit demands, would tend to keep financial markets under strong pressure -- and that pressure should confine and dissipate those inflationary forces. In either case, movements of short-term market interest rates -- such as the federal funds rate -- should not necessarily be taken as harbingers of a fundamental change in the stance of monetary policy; that policy will in any event continue to be directed toward reining in excessive monetary growth.

Let there be no doubt; the Federal Reserve is determined to make every reasonable effort to work toward reducing monetary growth from the levels of recent years, not just in 1980, but in the years ahead.

The policy actions taken on October 6 of last year, which entailed changes in our operating techniques to provide better assurance of containing the growth in the money supply, were one demonstration of that commitment. And I can report that developments since that time with respect to monetary and credit growth have been remarkably consistent with our immediate objectives.

We cannot conclude from those results that our procedures ensure that money growth will always remain tightly on a narrow path over short periods of time, or that that is necessarily wholly desirable. From week to week or month to month, the relationship between bank reserves and the money stock is

influenced by unpredictable shifts between different types of deposits and among institutions. There are transitory shifts in demands for money, associated for example with tax refunds, strikes, or the weather. Nonetheless, our new procedures should continue to give us better control over the monetary aggregates, and we are studying what, if any, other aspects of our institutional arrangements might be changed to enhance the efficacy of those procedures.

The increase in the discount rate announced on Friday is another reflection of our commitment to keep credit expansion under control. The most recent data for overall economic activity have, as you know, been relatively strong, and the inflation rate is currently responding to the new oil price increases. Stimulated in large part by international developments, indications are that inflationary anticipations have tended to rise once again, and in combination, these developments appear to be generating somewhat greater demands for money and credit. In the judgment of the Board, these developments underscore the need to take such measures as may be required to maintain firm control over the growth of money and credit.

Sustained monetary restraint is not an easy, automatic, and painless solvent for our economic difficulties -- the only claim I will make is that it is essential. It works, in part, by limiting the potential growth in nominal economic activity -- that is, growth measured in current, inflated dollars. If other policies are working at cross purposes, the restraint can be blunt, uneven, and decidedly

uncomfortable, with too much of the impact in the short term falling on employment and income rather than on prices.

Our aim must be otherwise. What all of us would like to achieve is as rapid a transition as we can manage to a more stable and productive economy -- an economy in which we can have more real growth and less unemployment because inflation is dwindling away -- an economy in which real incomes are rising even though nominal wages are rising less rapidly -- an economy in which we can compete effectively abroad without a weak dollar.

That transition will be speeded to the extent all of us show, not just in our words but in our deeds, that the fight on inflation is in fact of the highest priority. We cannot expect that workers will long be restrained in their wage demands, or businessmen in their pricing policies, if they feel the consequence of self-restraint will be to fall behind in a race with their peers or their costs. We cannot simply rail at "speculators" in foreign exchange, or gold, or commodity markets if our own policies seem to justify their pessimism about the future course of inflation. We cannot reasonably bemoan low savings, historically high interest rates and congestion in credit markets so long as the return on savings does not reflect the anticipated rate of inflation and the Federal Government itself runs large deficits, adding to borrowing demands.

Rising demands for wages and cost-of-living protection, anticipatory price increases, skyrocketing gold and commodity prices, sharply declining values in the bond markets -- all of

these are symptomatic of the inflationary process and undermine the economic outlook. But *none of them are inevitable, provided* we turn around the expectations of inflation.

To achieve that essential objective will require sustained discipline, not just in monetary policy, but in other areas of public policy. That discipline will certainly need to be reflected in the budgetary decisions of this Congress.

I fully appreciate the need for structural reform and reduction in taxation. Partly because of inflation, the total tax take, relative to GNP, is reaching a new peacetime high, discouraging investment, adding to costs, and blunting incentives. We need to reverse that process. But the President nonetheless seems to me correct in emphasizing that the time has not yet come for tax reduction. Budgetary balance is neither here nor in prospect. Tax cuts, to put the point simply, need to be earned by spending restraint. That is where the challenge lies.

Beyond the broad decisions about monetary and fiscal policy, there is much more that can be done here and now to speed up the process of restoring price stability. For instance:

> We can curtail more decisively our dependence on foreign energy, even at the expense of increased costs in the short-run, because the alternative is to have still higher prices imposed on us by foreign suppliers over the indefinite future.

We can move to eliminate the impediments to competition still imposed in some industries by government regulation.

We can revise legislation that tends to ratchet up wages at the expense of employment.

We can review the mass of environmental, safety, and consumer regulations to make sure these worthy objectives are reached without undue impact on costs.

We can resist pressures to protect industries from foreign competition, particularly those industries with relatively high wage structures and wage settlements which have been sluggish in responding to the changing needs of the American consumer.

The list is neither exhaustive nor new. We have been slow to act because so much of it seems to cut across the grain of political sensitivities and, taken individually, many of the measures will not have a dramatic effect. But taken together, the effect would be large and none of it is out of keeping with our basic objectives in economic and social policy.

I sense we are rightly coming to the conclusion that accelerating inflation, declining productivity, and energy dependence are not sustainable options for the United States. In concept, policies to wind down inflation have wide support. What remains is the challenge of converting intellectual consensus into practical action.

The Federal Reserve has a key role to play in that process. We intend to do our part -- and to stick with it.

Table 1

Growth of the Newly Defined Monetary Aggregates
(Percentage change, fourth quarter to fourth quarter)

	M-1A	M-1B	M-2	M-3
1975	4.7	4.9	12.3	9.4
1976	5.5	6.0	13.7	11.4
1977	7.7	8.1	11.5	12.6
1978	7.4	8.2	8.4	11.3
1979	5.5 (6.8)*	8.0 (7.0)*	8.8	9.5
1980 FOMC range [midpoint]	3.5-6 [4.75]	4-6.5 [5.25]	6-9 [7.5]	6.5-9.5 [8.0]

Table 2

Growth of the Old Monetary Aggregates
(Percentage change, fourth quarter to fourth quarter)

	M-1	M-2	M-3
1975	4.6	8.4	11.1
1976	5.8	10.9	12.7
1977	7.9	9.8	11.7
1978	7.2	8.7	9.5
1979	5.5 (6.8)*	8.3	8.1
1980 FOMC range** [Midpoint]	3.5-6 [4.75]	5-8 [6.5]	5-8 [6.5]

*Adjusted for effects of introduction in late 1978 of NOW accounts in New York State and automatic transfer accounts nationwide.

**Staff estimates of ranges equivalent to those specified by Federal Open Market Committee for the new monetary aggregates.

The CHAIRMAN. Mr. Chairman, in a speech on the west coast on Thursday, Henry Kaufman laid out a very grim view of the economy. As you know, he's a highly respected economist. He's testified before this committee a number of times and he's well thought of in the financial community.

He called for emergency measures to be put in place. I'd like to get your reaction to each part of his program. First, a sharp slowdown in the growth of nondefensive expenditures, and on that score, should we cut spending to balance the budget for 1981? Should we have a binding limit on the share of GNP accounted for by Federal outlays? What's your view on that?

Mr. VOLCKER. I'm now in a position, naturally, where I would greatly welcome all the restraint we can get on spending. The more we can do toward reducing the deficit, the better.

So far as the question of a binding restraint on spending is concerned, I suppose I find my thinking changing along with a good many other people. I want to resist the idea of a constitutional amendment for this kind of purpose. I don't think that's going to help us in the present situation; it seems very rigid. But I have some sympathy for the idea of the Congress at this point setting an overall limit, target—or whatever you want to call it—on spending relative to the gross national product; this may be a very useful device for focusing attention and maintaining discipline in this area.

The CHAIRMAN. What's your response to the argument that if we cut spending sharply it might precipitate a recession?

Mr. VOLCKER. In general—and this is a point that I tried to make in my statement—we ought to appreciate the limitations of economic forecasting on this point and the great uncertainties in the economic outlook. The tendency, historically I think, has been to fear a recession around the corner, and this has been particularly true in the past year. But the past year is only one dramatic example of what has been a rather persistent approach. If we are always fearful of recession around the corner, we tend to devise policies to counter it. In a sense, I think we have been reaping the whirlwind sowed by that approach over a long period of years.

INFLATION AND RISK OF RECESSION

When we look at the economy now, there are some signs of strength. When we look at the inflationary situation, there isn't much doubt that it is an enormously serious problem. I think we have to focus our policies in that direction, on what I think is virtually the certain knowledge that if inflation isn't brought under control, the risks to the economy, the risks of unemployment, the risks of recession—in terms of their severity—increase rather than diminish. The biggest threat to stability and for a really serious recession over a period of time would be to fail to get this inflation under control.

In saying that, I don't say there are no risks to the economy in dealing forcefully with inflation in the short run. I think those risks are less than the risk of procrastination, to the extent we have a coordinated set of policies.

The CHAIRMAN. Now the second part of the Kaufman program was a direct limitation on the creation of domestic credit by putting a lid on the growth of bank credit and imposing capital to asset ratios or liability ratios for all major financial institutions.

Mr. VOLCKER. As you know, we deal with the problem of restraining credit and bank credit in particular all the time. We think our policies are directed to that end.

Mr. Kaufman is fond of looking at the credit figures. I don't know what figures he's using—I didn't read the speech and I didn't see any of the newspaper reports. But, in fact, credit expansion in the fourth quarter—which is the only quarter we have comprehensive figures for—did decline as we expected after our October 6 program. There are some recent indications that bank credit and business loans in particular have been picking up again. Whether that's a lasting change or not, I do not know, but certainly our policies in general are directed toward restraint on that area of credit.

I don't know that I want to comment on the particular techniques Mr. Kaufman suggests.

The CHAIRMAN. Well, let me just interrupt to point out the problem. The Fed has raised its target ranges for bank credit in each of the last 3 years. In 1977, the target was 7 to 10. The actual growth was 11.3. It was above the target. In 1978 the target was 7 to 10. The actual growth was 11.4. In 1979 the target was 7.5 to 10.5 and the actual growth was 12.3. So in every year the actual credit growth substantially exceeded not only the midpoint but even the extreme point of the target.

Mr. VOLCKER. I think that's true in recent years; bank credit has expanded faster than the targets set out, and the discrepancy in general has been bigger than with the monetary aggregates. It was, in a broad sense, concern over making sure that credit was more corralled, so to speak, that led to some of the particular techniques that we adopted in October, particularly the imposition of marginal reserves.

The CHAIRMAN. Do you feel competent you're getting a grip on that so you will be within the target?

Mr. VOLCKER. As I say, credit seemed to be coming under control in the fourth quarter. Now the economy has certainly been stronger than most people expected in the past couple months. Remember that we're looking at a very brief period and nobody should think we can control these things in a space of a month or two. But there were some signs in January and the early part of February that business loans in particular and to some extent total bank credit had picked up. As we resist that, this partly accounts for the pressures on the marketplace now.

The CHAIRMAN. The third part of his program is tighter and more definitive standards for private short-term open market financing, along with limits on the assurance of debt by various federally backed credit agencies.

Mr. VOLCKER. I don't really know what the first part of that recommendation refers to, but the idea of controlling and limiting——

The CHAIRMAN. Well, maybe selective credit controls.

Mr. VOLCKER. Let me deal with the second part first. I fully share and I think the administration shares the idea of getting better control over the Federal credit programs; it has introduced some initiatives in the budget, as you know, in that respect.

Now if we're talking about selective credit controls, I just don't know how they would be workable. I don't have a clear idea of what Mr. Kaufman had in mind, but I'm no enthusiast of using direct controls in this area and think they can be counterproductive in that they lead to anticipation of inability to raise money and thereby actually increase demand.

The CHAIRMAN. Then are you opposed to invoking the Credit Control Act which is on the books now which the President could of course invoke?

Mr. VOLCKER. I haven't had any enthusiasm for that.

The CHAIRMAN. So you're opposed to it?

Mr. VOLCKER. Yes.

The CHAIRMAN. Then the fourth point is limiting the role of the dollar internationally. Would that be helpful?

Mr. VOLCKER. No. I cannot conceive of a control mechanism—if that's what he has in mind—that would be helpful in that respect. We have had some experience with trying to do that in the 1960's and early 1970's, as you know. That experience leads me to believe that it's not very practical or possible and would not have constructive results.

The CHAIRMAN. His fifth point is creation of a national commission for the revitalization of America, to formulate a series of steps to enhance technological growth, to improve cooperation with business, labor and government, improvement in the U.S. trade position, lighter regulatory burdens and other measures that would get us out of our current productivity entrapment.

Mr. VOLCKER. I certainly agree that he's put his finger on some major problems that need work and assistance. Whether the particular device that he proposes is promising or not, I don't know.

The CHAIRMAN. Well, it would seem to work in with Senator Garn's suggestion for emergency action and to step in now.

Mr. VOLCKER. I take it that Mr. Kaufman is looking at a somewhat longer term perspective than Senator Garn.

The CHAIRMAN. That's right.

Mr. VOLCKER. I would be in favor of that kind of thing, if it promises results. I must say, in my experience in Washington I have seen a lot of productivity commissions that were often an excuse for not solving the problems. I suspect that when you can't think of what to do you form a commission and put the problem off to the side a little bit. But we can try again; I'm not opposed to it. I fully agree those problems do exist and should be attacked. I don't understand his proposal to be quite the same as what Senator Garn was talking about; that is, a bipartisan effort right now to deal with this inflationary problem. I think Senator Garn's proposal has a tinge of urgency and potential political effectiveness that some of these commissions historically have lacked.

The CHAIRMAN. My time is up but there was one final point and I hope Senator Garn and Senator Stevenson will permit me to ask about it too.

His final point was the most shocking of all to me and that got the attention in the headlines—a temporary freeze on wages and prices or a simple mandatory control program, and he says it would be of some marginal transitional help toward a better economy. In other words, he indicates it wouldn't do much good, but it might help a little bit.

Mr. VOLCKER. My problem with that, particularly the way he seems to have phrased it, is that it's too easy to think up temporary programs as a substitute for fundamental solutions. You know that's not going to work, and I would think on those grounds alone he was not very wise to propose that; he says it's not very useful.

My fear would be that somebody might think it was very useful and that it was an answer to the problem and in that way divert attention from what needs to be done.

The CHAIRMAN. Senator Garn.

Senator GARN. Thank you, Mr. Chairman.

First of all, let me say as Chairman Volcker mentioned, my proposal has nothing to do with more studies. I'm not talking about more commissions. I'm not talking about studying the problem. We have studied it to death. You're absolutely right, we all tend to create a committee. So your analyzation of what I said was correct. I'm talking about something far beyond that that's action oriented. It's something rolling in the longer term, not just for the immediate but the longer term, and cut this up and down as we sit in these hearings year after year with nothing new really occurring.

Mr. Chairman, as I mentioned in my opening statement, certainly it's evident that the economy continues to go along unabated. In your statement you talk of breaking the ominous pattern of unemployment, low productivity, inadequate capital spending, and the weakness of the dollar in foreign exchange markets. How are you going to solve these problems if the Federal Reserve is the only tight money game in town?

Mr. VOLCKER. It would certainly be easier if we got some of the complementary actions along the lines that I have talked about, that the Chairman has talked about, and that you just mentioned. I think that's very important.

Senator GARN. Have you had any conversations with the administration as far as coordinating their fiscal policies, their recommendations, with the actions you're taking in tight money in the monetary system?

Mr. VOLCKER. I have some contact with the administration; we discuss these matters from time to time.

Senator GARN. What kind of response are you getting? Are they going to let you be out on the end of the limb just tightening money and nobody else helping?

Mr. VOLCKER. I think there is a real appreciation of the problem, Senator Garn. I think the difficulty is what you know it to be implied in your own statement: Some of these actions are very tough; they require political support. There's no use proposing things that are going to be rejected immediately in the Congress or by public opinion. I would hope, myself, that the sense of concern

that has deepened in recent weeks can help create a climate in which effective action can be taken.

Senator GARN. Well, I'm not sure that just because Congress may or may not reject—this is where we get into a consideration of leadership. Do we have some leadership on this issue, somebody that's got the political guts, regardless of elections, to come out and say this is what we need to do and if Congress won't go along then let's put it on their heads? Let's put it on their back. I happen to think that that's where most of the problem is. It lies here with us. But I just can't emphasize enough the need for putting aside political considerations and somebody being tough enough to say what needs to be done, and the interesting thing about that, I think if someone would do that they would find out that the best politics of all were solving the problem and they could be elected for anything forever if they had enough courage to do that. So with the uncertainty of current economic events, it's a little bit difficult for me to understand, Chairman Volcker, how the Federal Reserve intends to adjust its monetary policy if its projections about the economy which are really fairly close to the administrations are incorrect. The concern I have, despite the expectations that there will be a mild recession that will occur this year and that will take some of the steam out of the inflationary trends, we are not prepared for a continued rise in the economy or a continued runaway inflation as we had last year.

So specifically, what happens, for example, if consumer price increases continue at a 16 to 18 percent annualized rate during the next few months in light of your projections that it's only going to be 8 to 12? What are we going to do about it?

AUTOMATIC PILOT

Mr. VOLCKER. We were not projecting 8 to 12 percent in these next few months. I think the Board, in general, has been aware that the price indexes are going to be high during the first quarter in particular. But should an inflation rate of that sort and a strong economy persist, the implication is quite strong that that kind of monetary targets we have would put pressure on the markets which, in turn, will be a restraining influence on the economy and on inflation. The phrase that comes to mind—and I hate to use it because it overstates the position by a considerable margin—is automatic pilot. We meet these kinds of targets; that implies restraint on a bullish economy with high rates of inflation. If, indeed, the economy softened and the inflation rate declined—as was the typical projection, certainly until recently, and as is probably still the projection—that implies quite different conditions in the credit markets and conditions consistent with easing in any period of economic adjustment.

Senator GARN. Let me follow up. The discount rate you have raised to 13 percent but that is still well below the current inflation rate and some people as a result are simply arguing that the discount rate increase will simply not cause banks to slow their borrowings from the Federal Reserve.

With the discount rate, are you merely trying to send a signal that tighter monetary policy will be implemented and, if not, what effect do you anticipate this to gain?

Mr. VOLCKER. It does, of course, increase the cost of member bank borrowing, but it is below the market borrowing rates; there's no question about that. The change in the rate itself had some kind of a signaling function in some circumstances. But let me say in that connection that we are not, of course, writing on a clean piece of paper—we never are. We are operating in an environment of a Federal Reserve history and toward member bank borrowing which is quite clear. As the famous Federal Reserve phrase goes, "Borrowing is a privilege and not a right." In other words, banks don't feel free to borrow at the Federal Reserve for any period of time regardless of what the rate is; they come under surveillance and discipline if that is abused.

So I don't think that rate and its relationship to market rates should be interpreted as a kind of open invitation to borrow. It's not, and I think that's well understood in the banking community.

Senator GARN. You also state very explicitly that restraint on growth in money and credit has to be maintained over a considerable period of time rather than just the short run. I certainly agree with that, but in order for that to be effective and implemented targets for monetary growth should be stated over periods of longer than one year and it seemed to me this would then serve to announce to all that monetary restraint is not only for the short term but for the long term as well.

Do you agree with that approach that we ought to state that for longer than—here we're looking at 6 months or the next year. I think the Fed needs to say this is what we're looking for at 2, 3, 4 and 5 years to get this thing under control.

Mr. VOLCKER. We debated that issue on the Board and in the Open Market Committee repeatedly, and I specifically and pointedly raised it and I will raise it this time around. I think the prevailing view, is that it's unwise to try to be specific for too far a period ahead, but that should not be misconstrued as any lack of determination to get these figures down. The general philosophy of moving ahead over the years to reduce those figures is broadly accepted; the idea of pinning down a specific number, amid all the uncertainties in this world, is generally considered undesirable by the Board members and the Open Market Committee members. They want to reserve to themselves the ability to look at each year afresh, within the context of a general philosophy of reducing the targets over a period of time.

Senator GARN. Well, I understand it's very difficult to set a specific figure even for 1 year, let alone beyond that, but I'm talking about targets. I'm talking about sending signals and perceptions that we really are serious about this fight. Certainly if you picked a particular figure for 1982 and didn't reach it, I'm not going to be one who's going to criticize you.

Mr. VOLCKER. That's part of the concern of the committee: That setting a specific target and then not meeting it might be counterobjective in the way you cite. The most important thing is meeting the targets we set for the immediate period. If we can't do that, then we're not going to have any credibility in the longer run.

Senator GARN. I understand that, but the point I'm trying to make, at least my feeling, a good part of the inflation and solution to that are perceptions of what people think and attitudes.

Mr. VOLCKER. I agree with that.

Senator GARN. We have got to change the perception. We have got to change the attitude that the economy feels that people and institutions are serious about solving this problem and there's no way. As little as I know about economics, there's no way you're going to solve it this year or look at a 12-month period just because that happens to be the way the calendar works. Maybe we ought to forget the calendar, specific dates or times and things like that and talk about sending some very tough signals that over a period of time we are going to continue to work on this, play hard ball and not just go up and down.

Mr. VOLCKER. I fully agree with that. My only disagreement—and the disagreement of the Committee—would be whether it really assists that process to try to be too precise in setting these numbers downward over a series of years. But I agree with the general point.

Senator GARN. I understand. My time is up and I would just close with that. I just hope—I have sat on this committee for 5 years and I haven't seen a great deal changed, and I just hope a few years down the road there isn't some other Senator sitting here questioning some Chairman of the Federal Reserve asking the same questions for the next 5 or 10 years that we have been asking for the last 5, and we are still in financial difficulty. That's why I place so much importance on it.

Mr. VOLCKER. I understand. I expect the difference now is that this inflationary problem has been driven home in a way that it has not before. It is inbred in people's thinking, and once it gets inbred in people's thinking the accelerating process begins and therein lies the danger. It's also bad for the level of business activity. I hope we can take advantage of that understanding and really turn it around this time.

Senator GARN. Thank you.

The CHAIRMAN. Senator Stevenson.

BUSINESS LOANS

Senator STEVENSON. Mr. Volcker, did I understand you a moment ago to say that business loans are picking up?

Mr. VOLCKER. The most recent evidence shows strength again in the business loan picture, yes.

Senator STEVENSON. You're referring to bank loans?

Mr. VOLCKER. Primarily bank loans. We just don't have much up-to-date information on it.

Senator STEVENSON. But with the bottom having fallen out of the bond market, that would be expected, wouldn't it; short-term borrowing as opposed to long-term borrowing?

Mr. VOLCKER.That is a factor. I suspect it's also reflecting the fact that the economy has been pretty strong these last few months. Let me say this followed 3 months of rather modest growth.

Senator STEVENSON. Well, it could also be a function of economic uncertainty with industry borrowing for the short term as opposed to the long term with a very uncertain marketplace and very uncertain expectations.

Mr. VOLCKER. It could be that. I don't want to overinterpret information for a few weeks figures either. These figures have a habit of fluctuating.

Senator STEVENSON. What are the figures? What do you have?

Mr. VOLCKER. The rate of growth for business loans in January, as I recall, was on the order of 20 percent; I guess, it's about 13 percent for bank credit generally now. That January figure was affected by one huge takeover loan which by itself added 3 or 4 percent; that was an extraordinary occurrence. That's the latest data we have on any comprehensive basis, and it tends to be fairly localized among the bigger banks which account for a large part of the banking system. The information for those banks for the first half of February shows a pretty good increase too.

Senator STEVENSON. You have been relying on your own exhortations in the marketplace to allocate credit to productive purposes as opposed to speculative purposes. How is that working?

Mr. VOLCKER. We need, perhaps, to do some surveys to get firmer information, but my impression is that it's not working too badly so far. We did try to do a special survey on how smaller borrowers were faring; while, given the time period, I would not claim statistical precision for the survey, the general evidence seems to be that small business loan rates, in particular, have not gone up as fast as the prime rate, for instance, and that the rate paid by bigger businesses is in accord with what we would have liked to see. That evidence in a qualitative sense, seems to be reasonably good. I do get reports that banks are reluctant, to say the least, to make takeover loans. There was that very large exception; it was an enormous loan. There may be some excuses for it in that this was arranged largely before October, and there is, also the case to be made that the result of that loan will be to increase production of heavy oil; I think that's true from all the evidence I have seen. But it was an enormous loan, and I myself wonder whether it couldn't have been arranged in a somewhat different way. From what evidence I have I do think there has been a genuine effort to respect the general principles we set out.

Senator STEVENSON. Doesn't the Fed have a system for monitoring the allocation of credit by the market and shouldn't it, if it doesn't?

Mr. VOLCKER. I hate to use the word allocation, which implies more precision and more detail than anything that I had in mind. But certainly a review in the areas that you mentioned does seem to be useful. As I said, we have attempted to review the small business picture. We have also attempted to follow the takeover picture, and we can do that more intensively.

Senator STEVENSON. Well, the bottom has fallen out of the bond market, the prime rate is at 16 percent or higher, short-term loan demand is rising as you have indicated, and there are international constraints—many countries now are facing difficulties in financing development as well as their payments deficits, not to mention longer term or speculative possibilities such as curtailed oil produc-

tion for lack of suitable instruments for the investment of OPEC oil surpluses. Aren't we running or beginning to run, a risk of a serious credit crunch which will decrease our capacity for the production of goods and services and decrease our rates of productivity even farther, with higher and higher interest rates adding more to the cost of goods and services? What about it? Are we going to have a credit crunch?

Mr. VOLCKER. The only way I can respond to that, Senator, is by saying that I think the greatest risk we run is of this accelerating inflation.

Senator STEVENSON. That's what I'm concerned about.

Mr. VOLCKER. We have to move against that; that creates pressures.

Senator STEVENSON. And increases the cost of all the goods and services in the economy.

COMPLEMENTARY POLICIES

Mr. VOLCKER. Which in the short run, at least, can have some blunting effects on the economy and emphasizes the importance of complementary policies to help deal with that impasse. But I don't think there's——

Senator STEVENSON. Which, as the chairman mentioned before I came in, helped offset your policy. We had to struggle heroically with the one hand against what the other is doing.

Mr. VOLCKER. I was thinking of the budgetary and the other approaches that the chairman mentioned. The question always arises when particular areas of the economy such as housing are severely hit—they are at the end of the whip so to speak—whether some action is appropriate to moderate the harsh edge without offsetting the main policy thrust. That's a matter of judgment. I cannot sit here and say that I would oppose every action that might be taken to moderate the sharp edges of policy; I don't. But I think you have to recognize that puts the pressures on some other area.

Senator STEVENSON. That's not the only purpose of these countervailing policies. The one the chairman mentioned was not to help some adversely impacted sector. It was to help the United States pay the oil bill and compete in a highly competitive world as Mr. Kaufman mentioned, by supporting our exports with a policy of exporter subsidization through the Eximbank which doesn't nearly equal the comparable policies of other countries.

How do you feel about that as one complementary policy? That's the problem. We all agree that a freeze makes no sense unless it's accompanied by complementary policies, that we shouldn't be relying exclusively on monetary policy; but when it comes to complementary policies we can't agree on anything, even including something as elementary as enhancing the competitive ability of the United States in this highly competitive world in order to pay the oil bill and overcome the trade deficit which is one of the principal causes of the declining dollar and inflation.

Mr. VOLCKER. I don't think any of this is easy, and I don't want to suggest that it is for a moment. But I hope the nature of this inflationary problem and the nature of the market problem tend to

focus people's minds on the importance of getting together a coherent set of policies that together stand the best chance for respecting all these priorities, I hope we recognize the primacy of dealing with this inflationary problem, so we don't slip from one crisis into another.

Senator STEVENSON. Well, I'm going to come back to those complementary policies, but my time is up.

The CHAIRMAN. Senator Riegle.

Senator RIEGLE. Thank you, Mr. Chairman.

I share many of the concerns that Senator Stevenson has just been expressing. Chairman Volcker, is it your view that we've worked ourselves into a financial emergency?

NO DEVIATION FROM OUR APPROACH

Mr. VOLCKER. I think you use inflammatory terms. I think we have reached a point in this inflationary situation where decisive action is necessary. As far as monetary policy is concerned, I don't think that requires any sharp deviation at all from what we have been doing. We have, I hope, recognized this problem; I think we have. What is important in terms of monetary policy is basically that we stick with our approach. Now the crunch arises in a slightly different sense than Senator Stevenson suggested. The demands pile in, the concerns of particular sectors pile in; if we attempt to meet all those demands we are not going to be successful in anything but building in the inflation rate. We have to stand firm.

Senator RIEGLE. Well, the reason I pose the question that way and I can understand your desire not to be needlessly inflammatory or to use that kind of word and I certainly don't have that intention either. On the other hand, it seems to me you're following a monetary policy that is the kind that one follows in an emergency. In other words, you're behaving as if a financial emergency did exist in terms of the need for really record setting monetary restraint, and you made a case for why you think that's necessary. My own view, and I think shared from what I hear from my colleagues is that that can't get the job done by itself. I mean you have a certain reach through monetary policy, but it's very uneven and it's limited and that's why I think we may have to, at the risk of being somewhat inflammatory, make it clear that we are in a financial emergency so that the other things that need to happen can start to happen.

Mr. VOLCKER. I don't disagree with that. I resist the word "emergency" a bit because I think that this current price performance was more or less predictable after the oil price increases. That was the emergency in a sense. But there's no question that we are at a point—and I think it's illustrated by the conditions of the financial markets—that action and coherent action is urgently needed. Now I think we already have that pretty much in place at the Federal Reserve.

I don't want to suggest, on the other hand, that we just strike out in any direction wildly. It's the fundamental approaches that are going to pay off over time. I touched on some of them at the end of the statement that I submitted here. They are not new; they

are widely known. I think they are widely supported in theory. We are at the point where they have to be applied in practice.

Senator RIEGLE. Let me ask you this. I come from the State of Michigan and our unemployment rate in Michigan now is 10.3 percent. It's really a combination of two factors that are cutting deeply. One is the cumulative effect of the higher interest rates taking their toll on different sectors, and the other is the impact of the problems of the automobile industry. But as I talk with small business people throughout the State and others, I'm finding that the monetary policy which applies very unevenly is really beginning to do some serious damage. Now I think one might, from a national policy point of view, view that one way if it were solving the overall problem. To the extent that it's not, to the extent that it only by itself has a limited effect in solving the overall economic problem of the country, I think it's a much less useful tool.

So let me ask you this question: If the President were to take the lead and say, "Look, we are in a financial emergency and I'm prepared to really change direction on fiscal policy at this time and I'm going to target for something close to a balanced budget, as tough as that is, and I'm not going to just sneak it all into the supplementals this fiscal year that we are finishing. I'm going to be honest about that, too, but we are going to really shoot for something a lot closer to a balance with the thought in mind that I'm going to enforce it with my veto power. If I have to send appropriations bills back four or five times, to fall within target levels of spending, I will do it because I would hope to persuade the Fed for some tradeoff, some relaxation of monetary policy in exchange for serious and real demonstrated fiscal restraint, recognizing it's tough, recognizing it's painful and so forth"—if the President were to take that approach, is this something the Fed might respond to in terms of feeling that it could afford at some point to try to work these interest rates down somewhat?

DRAMATIC EFFECT ON INTEREST RATES

Mr. VOLCKER. Let me put it differently. The kind of thing you suggest, with congressional support, could have a dramatic effect on interest rates. I don't think we want to back off our policy and shouldn't; it would be inconsistent in terms of the basic objective of our policy included in this report. But, as those other policies are successful, it would take the pressure off the money markets. In other words, if we don't have that kind of persistent restraint on monetary growth which we think is essential in terms of the long range inflationary problem—not just in 1980 but beyond—we won't deal with the inflationary problem.

The question is, What that does to financial markets and interest rates. To the extent other policies are successful, you won't find the same degree of pressure on the financial markets as you might have had consistent with those money supply objectives. We want to stick to those money supply objectives.

Senator RIEGLE. Let me ask you this. In a more realistic costing out of the budget, the prospective budget would show a deficit of somewhat closer to $25 billion.

If we were to use the veto power as a way to back it up for something closer to a balance for the coming fiscal year and following the line of reasoning you've just expressed, wouldn't it then be reasonable to assume that that would help bring the interest rates down?

Mr. VOLCKER. I don't think there's any question about it.

Senator RIEGLE. How much might it bring them down? Are we talking about 1 percent or maybe 2 or 3 percent?

Mr. VOLCKER. I am just not going to make a projection.

Senator RIEGLE. The direction would be toward a reduction?

Mr. VOLCKER. There's no question that the direction would be to offset these pressures that we now see in the market. Look what's happened overall in the bond market in recent weeks. Nothing that drastic has happened in the economy. What has happened in that brief period of time is that expectations have changed; there's concern about the budget.

Senator RIEGLE. Suppose the President was to take the other tool that he has right now and that is the credit control tool to find some creative way to—very difficult to use that tool as we know, but to try to find some way to intelligently apply some further restraint in some areas. Would that also, if it were done right, help you with your difficulties in starting a downward trend of interest rates?

Mr. VOLCKER. It's awfully hard to judge that. I think it depends upon a lot of dimensions that I find very difficult to appraise. That is, in effect, another way of bringing pressure on borrowers; it can be done through the market or done more directly. It adds to the urgency for borrowers wanting funds. Just what effect it has on interest rates I think would depend, perhaps, on how it was done. It's pretty tough to guess on that direction.

Senator RIEGLE. Wouldn't it help us, though, if we could find a way to channel more of the spending that's being done, the investment spending or the spending in the aggregate, into capital investment, things that could start to work for some improvement on productivity?

Mr. VOLCKER. That suggests the kind of conflicts you run into. What do we really want? Suppose, purely hypothetically, you want to direct credit from where you sit here. You're kind, but you've got a lot of claimants on that credit. There's been some concern expressed here about the mortgage markets; there's been some concern expressed about exports. What do you choose to do?

Senator RIEGLE. Suppose we took the balance-of-payments account and we took the areas where we are under water, whether it's in energy, whether it's in motor vehicles. We've got a $10 billion deficit this year and items like that. And said let's try to target the areas where we know we are hemorrhaging and see what we can do to try to turn things around. Aren't there sort of self-identifying targets it would be smart for us to concentrate on?

Mr. VOLCKER. You've got to pick out those targets for me. Take the area of consumer credit. You noted that the housing and automobile industries are in recession. Are those areas where we want to channel credit right now?

Senator RIEGLE. Probably not, and not just because I come from Michigan, but the problem is if we are not generating the capital

for the retooling we are going to lose further ground to the Japanese. So I think you can make a strategic argument not to do it there.

Mr. VOLCKER. I think there's a very strong and basic case for not impeding the flow of credit to investment through the market process any more than is necessary; the needs are very urgent. But I find it difficult to sit here and decide in numerical terms that so much credit should go to this area or that area, knowing also that these controls never work very effectively and that some people can find a way around them while other people can't.

Senator RIEGLE. Unfortunately, nothing works very effectively. It's sort of a choice between rather——

Mr. VOLCKER. Let me say, as all of the discussion so far has suggested, that a really satisfactory answer can be found in the credit area, whatever tool is used. The way to take the pressure off the credit markets and avoid some of the bluntness is by taking some of these other kinds of actions that also go to solving the inflationary problem, the productivity problem, the expectational problem, the budgetary problem. If we are going to rely upon credit and put the full weight there, by whatever technique, we are going to run into problems and conflicts. You run into problems and conflicts whatever you do, but I think the more we can adopt an across-the-board approach, the better off we are going to be.

Senator RIEGLE. My time is up. Thank you.

The CHAIRMAN. Mr. Chairman, last October when the Federal Reserve took dramatic steps to limit the growth of money and credit you raised the discount rate from 11 percent to 12 percent and said that the rate was to be flexible. The prime rate jumped to 15.5 percent and the discount rate stayed at 12 percent until 10 days ago when you raised it to 13. Now the major banks have raised the prime to 16.5 percent. It looks very much like the banks are setting the prime rate at the discount rate plus 3.5 percent. This gives them a very big subsidy if they are borrowing from the Federal Reserve.

Two questions. First, how is the behavior of the big banks in setting the prime rate at the discount rate plus 3.5 percent justified?

SETTING THE PRIME RATE

Mr. VOLCKER. I don't think that's the way the banks approach it. The prime rate tends to remain in relationship to the market rates that they are paying for federal funds, for CD's, and all the rest. The amount of borrrowing they do from the Federal Reserve relative to the total funding in the banking system is really quite infinitesimal, and I don't think that decision to borrow from us bears directly on the prime rate, although there may be some influence.

Now that influence is worth exploring a bit. The general policy toward bank borrowing that the Federal Reserve has had for 50 years is that it's not an open window; it's there in time of need. But banks are expected to make adjustments when they use the discount window. They're expected to use it for a limited period of time, unless a bank is indeed in some kind of an emergency situation. That means that, to some extent, regardless of what the rate

is, the discount window is there as a restraint on member banks' borrowing. As that rate is raised, it may affect the Federal funds rate and other closely related rates. Therefore, it will affect the total level of market rates and, indirectly, the prime rate.

Now we did not raise the discount rate after October of last year because basically the the money supply was on target. Credit expansion did not seem excessive. There did not seem to be a reason, under those conditions and given the general policy on borrowing from the Federal Reserve anyway, to bring further pressure on market rates under those particular circumstances. That was a particular set of circumstances.

The CHAIRMAN. Well, I realize that the discounting is not used commonly and is not a big source of funds for the banks, although a substantial source. At any rate, why not tie the discount rate slightly above the Federal funds rate and that way eliminate the subsidy and you would increase your control over total bank reserves and make it more flexible?

Mr. VOLCKER. That is an approach that, frankly, has some appeal to me theoretically; it's an approach we are examining, among others. What it does involve, I think, is a rather fundamental change in the way we treat borrowings in general and in the liberality of our policies apart from the rate. In other words, we say you're more or less free to borrow, but we discourage that through a penalty rate mechanism. That's a rather revolutionary change in the way we have managed the discount window in the past, so we want to be pretty sure of our ground before we make that kind of fundamental change. The immediate reaction would be to make the discount rate a penalty rate and the market rate might keep leapfrogging the discount rate; we wouldn't want to do that in a way oblivious of all our other objectives.

The CHAIRMAN. Last October 6, the Federal Reserve put in place an 8-percent supplemental reserve requirement on bank liabilities and according to the financial press these supplemental reserves may be having little or no effect on the ability of banks to raise funds. The front page of the American Banker of February 11 has a column called "Random Thoughts," by Sanford Rose. Let me just read the first two sentences. "According to Bank of California Chauncey Smith, there is no problem whatever in dodging the 8-percent supplemental reserve requirements on managed liabilities, says Mr. Smith. I go down to my trading floor and my people give me at least a dozen ways of avoiding managed liabilities. The Bank of California's experience is apparently fairly representative," the article goes on to say.

Now on Friday when the large banks increased the prime rate to 18.5 percent, they indicated that credit demands were strong. If your policies are designed to limit expansion of credit, they either seem to ignore business credit or businesses don't care how much it costs them to borrow. So I'd like your response to the claims that the supplemental reserve requirements and managed reserves requirements are not effective, and then I've got another question.

Mr. VOLCKER. This is a matter that we obviously keep under review. Let me say it is binding on some banks but not the majority of banks. One fundamental reason why it hasn't been more binding is in fact because bank credit did not expand very rapidly

for 3 months following the imposition of the suplemental reserve. In those circumstances, it was not unnatural that the restraints did not bind, that they hovered below the threshold, so to speak, because credit demands were not expanding. Now in recent weeks we are in a somewhat different situation, and if there are mechanisms that make these requirements ineffective when credit demand is expanding, I think that would deserve review.

The CHAIRMAN. Well, he says, "I go down to my trading floor and my people give me a dozen different ways of avoiding exceeding the basis of managed liabilities."

Mr. VOLCKER. That seems to me——

The CHAIRMAN. Shouldn't that be looked into by the Fed?

Mr. VOLCKER. I agree. We do keep this under constant review, but I think it needs to be tightened up. I think you can presume we will do that.

The CHAIRMAN. I'd like to know whether you're concerned about the ready availability of business credit and what actions you might take to put a lid on business credit.

Mr. VOLCKER.The most general answer I can give to that is that I think the kinds of actions that we have already taken—including that marginal reserve requirement and a review of how effective that is—point in a direction of restraint on business credit. Indeed, this is something you have commented on often which I think has elements of truth in it, but needs an appropriate interpretation; that is, that we do not have a banking system that is easily susceptible to the kind of restraint on availability that people have been used to seeing in past cycles. A lot of attention has been devoted, for instance—partly under your leadership, Mr. Chairman—to moving away from the regulation Q kind of restraint. We have moved away from that kind of approach so now we have a different kind of restraint that comes out more in the rate and less in administrative ratcheting by the banks than used to be the case.

This has pluses and minuses, but I don't think you should interpret what's going on as no restraint at all. The restraint is reflected in substantial part in the interest rate developments. As the business loan demand expanded in the past few weeks, more pressures come into play.

DEMAND FOR FEDERAL CREDIT PROGRAMS

The CHAIRMAN. Given the high interest rates and tight credit situation arising from recent monetary policy measures, there's certain to be greater demand for Federal credit programs. We have talked about some—Export-Import Bank, Brooke-Cranston. It's true for loans and loan guarantees from the Small Business Administration, the Farmers Home Administration, and so forth.

According to the President's fiscal year 1981 budget, the Federal programs are projected to expand substantially in the current fiscal year 1980 and again in 1981. For example, loan guarantees are projected to increase 28 percent in 1980, 28 percent from $26.1 billion to $33.4 billion, and then to grow by another 24 percent in 1981 to $41.4 billion. Federal programs made up about 20 percent of total funds advanced in the U.S. credit markets in 1979 so they are a significant and substantial part of the picture.

Is this likely to make the conduct of monetary policy more difficult to carry out and should there be a cutback in Federal programs in 1980 and 1981 to be consistent with the monetary policy measures?

Mr. VOLCKER. Let me note again that the administration has taken some initiatives that I hope the Congress will respond to toward a Federal credit program budget. There are a lot of exemptions in that proposal, and the biggest exemptions are in the housing area. I can't give you an answer in precise numerical terms, but there's no question that, in total, the more those programs expand, the more pressure is put on other sectors of the credit markets, given any constant monetary policy. In that sense, that expansion creates difficulties and creates pressures.

I think the only question that arises is the one you and Senator Stevenson touched upon earlier; that is, that sometimes there is a justification for, in effect, some Government assistance to one sector or another that seems to be so disproportionately hit as to be counterproductive in terms of the total effort. But when you do that, you have to recognize you're just pushing the pressure off on some other sector and making it greater there; there's no question about it, and it complicates our problems.

The CHAIRMAN. My time is up. I might just say, as I recognize Senator Stevenson, one problem with the Eximbank is that—although Senator Stevenson has made a devastating case and very powerful case throughout the years—we have to recognize that when we sell abroad we satisfy a demand in foreign economies. We increase the pressure on prices in this country. We don't provide any goods that are consumed here. And the result is peculiarly inflationary in that sense. At the same time, I think Senator Stevenson is right. We have to pay for our oil. We live in a tough world. We have to do what we can to defend the dollar, but I think we ought to do all this with our eyes open.

Mr. VOLCKER. I have struggled with that Eximbank problem almost as long as Senator Stevenson has, in various guises. I do think it's an area in which, as he points out, we are dealing with the world as it is, in the sense that other countries put their priority on exports. We have this enormous balance-of-payments problem, which stems in very considerable part from the oil situation. I think there is a case to be made for maintaining continuity of support for our export effort. That leaves you with a difficult question of degree, but as a general philosophy, continuity in that program seems to be important. Our policies are not kind to our exporters in many ways, as you well know, relative to the policies of other countries. You spoke of the effect of shipping goods abroad, helping other countries to have more goods, and in some sense helping their inflationary problem while adding to our own because those goods leave the American economy. While that is true analytically, we run into another analytical necessity, that of maintaining a balance in our overseas payments. You can't expect, in effect, to live off other countries, which is what we're doing when we run a deficit, so it's an unsustainable situation to think that we can just maintain our imports but not do the exporting that's necessary.

The CHAIRMAN. We considered the exports plus the investment income.

Mr. VOLCKER. We were very close to balance last year. We are going for a loss again because of this latest oil price increase, and our exports, I must say, have been doing remarkably well for 18 months or 2 years, but that followed a long period of great sluggishness. In terms of looking at the overall equilibrium, the prospects for the future and the importance of a stable dollar, I don't think we can rest on our laurels in that area. However, the export performance has been quite gratifying in the past 18 months.

The CHAIRMAN. Senator Stevenson.

Senator STEVENSON. Well, it's also a means of reducing international liquidity in those currencies which have a source in the U.S. trade deficit, but I don't disagree with much of what you said, Mr. Chairman. I think it also can be said that if we disarm ourselves, we are not going to be in a strong position from which to negotiate reductions in the export subsidies.

Mr. VOLCKER. That's correct.

Senator STEVENSON. And I sense that governments are shifting to competition partly as a result of changing from import protection to export subsidization. We are not in a strong position to compete and we will neglect an opportunity or at least a need to negotiate a reduction in that competition, which if successful, would mean we would reduce——

Mr. VOLCKER. I think other countries would love us to get out of that business; then they could do all the more. We have been in constant negotiation on these matters extending over several years. It is very difficult to maintain some level of sanity, if you will, on the amount of assistance given to exports.

Senator STEVENSON. They have been unsuccessful so far.

Now, Chairman Volcker, I owe you an apology. I think I prevented you from answering my own question by jumping on you as soon as you suggested that inflation was a greater concern than credit crunch. I approach this from slightly different directions and I think the Fed's monetary policy and the current credit crunch is as much the cause as the result of inflation, but——

Mr. VOLCKER. I don't agree with that, if I may interject.

Senator STEVENSON. You don't agree with it as much as I agree with it, but I know there is, and you indicated a moment ago there is, undeniably some truth in it. But I did prevent you from responding to the concerns that I expressed about the danger of the credit crunch. Do you have more to say about that?

Mr. VOLCKER. I just dislike the term "credit crunch" because I don't really know what it means. I suppose we have what some people would call a credit crunch right now, and in that connection I think the greatest danger to the credit markets through enormous congestion comes from the inflationary process itself. People want to buy and borrow money in anticipation of the future. They want to borrow money to support purchases that are made in anticipation of price increases. That kind of thing brings on a credit crunch.

The markets have been performing in a way such that credit is flowing. In that sense we don't have a credit crunch. I hope that continues to be the case, but I don't think there's any question

we're getting restraint. You could call any restraint a credit crunch—that's the trouble with the word; I don't quite know what the people mean by it. There's certainly restraint out there, in my judgment, but credit continues to flow. It continues to flow even in the housing industry and certainly to businesses and it should be under some restraint.

Senator STEVENSON. Well, I wish you could say more than that. I agree it's a sloppy term and my question ducks the difficulty I have of defining what I mean, but I certainly mean to ask whether we aren't reaching the point at which the unavailability and the cost of credit on a long-term basis aren't becoming a serious source of weakness for the economy? You mentioned housing. Housing is already in a slump. We all, I think, also agree that we need to facilitate the formation of capital in the United States to enhance our productivity and now the bottom has fallen out of the bond market. It's already fallen out of the equity market except for the gambling houses.

Mr. VOLCKER. The equity market has remained in a slough of depression—I suppose that is the way to put it—for 10 years now; it's not extraordinarily worse now than it was before.

Senator STEVENSON. I didn't mean to suggest that.

Mr. VOLCKER. But the real risk you're concerned about and I would be concerned about will come if we fail to face up to this inflationary problem, if we fail to turn the corner on these inflationary expectations. Then, sooner or later, we would run into an impasse and that's not healthy for anybody. But there's no way you can prevent it if you don't turn the corner on this inflationary situation.

INCREASE IN DEFENSE SPENDING

Senator STEVENSON. All right. Then we agree next that we face up to it by adopting—this is quotes—"complementary policy," and the conventional wisdom which supports a restrictive monetary policy follows by suggesting that the most important complementary policy is a restrictive fiscal policy. It's the conventional wisdom also this year to support a real increase of about 5 percent in defense spending, perhaps as much as $20 billion for just fiscal 1981. Now the conventional wisdom always ignores the choices. Are we, in your opinion, to support an increase of some $20 billion, 5 percent or whatever, for defense and offset that by as large or a larger amount in decreases for the nondefense sectors in the budget?

Mr. VOLCKER. In a sense you're getting into an area where I'm not sure my opinion should carry any special weight. But it seems to me we have to spend on defense what is considered appropriate for defense in terms of national security. I can't quarrel if the judgment is that national security requires the 5-percent increase in defense authorizations or appropriations. But I think that we have to make room for that elsewhere, yes.

Senator STEVENSON. All right. Then, if those who do have the responsibility and the information on which to make that judgment conclude that $20 billion or whatever increase in fiscal 1980 or 1981 is necessary, do you, with the benefit of your experience and

from your important position of responsibility, conclude that it ought to be offset by a $15 or $20 billion decrease in other sectors of the budget?

Mr. VOLCKER. I would like to see as much progress as we can make toward balancing the budget. The first thing is to defend the President's present budget and not let that get further out of whack.

Senator STEVENSON. It is getting out of whack. The full defense supplement is not incorporated in that budget. Now we have embargoed food for the Soviet Union. The cost of the agricultural supplement is not in that budget.

Mr. VOLCKER. That budget has a lot of vulnerabilities toward the expansive side, so our No. 1 priority is to hold to that budget not only on paper but in reality.

Senator STEVENSON. All right. That is what I am getting at. Where would you cut it? In housing, production, management?

Mr. VOLCKER. I think you have to face those choices, and I am not sure it is appropriate for me to try to pinpoint that. I recognize the difficulty of the choice, but I would say the economy somehow is going to make choices one way or another. Better to make some of those choices deliberately by fiscal policy, than to let develop the kind of credit market conditions you are concerned with. That may be the choice.

Senator STEVENSON. Well, there is a purpose in this line of questioning. The purpose is first to suggest that this conventional wisdom is not very realistic. It ducks all the hard choices and if Congress is true to form we will not have to make them, which leads me to another line of questioning about——

Mr. VOLCKER. I hope that's not true, Senator. I would rather take what seems to me the more optimistic view that some of your colleagues have expressed this morning that we can face up to these choices. You talk about conventional wisdom; I think perhaps, if some of what you cite as conventional wisdom had been applied earlier we would not face a problem as severe as we face today.

Senator STEVENSON. I think that is right, but I think the problem now and starting in 1973 is a very different one from what we faced in the sixties. We have not said a word about energy conservation as one of the complementary policies. Do you think the Congress will face up to a 50 cent gas tax?

Mr. VOLCKER. I hope they face up to something in that area.

Senator STEVENSON. Would you support that? As far as I know, I am the only one in the Senate who does.

Mr. VOLCKER. I would support that personally, yes. There are other ways of going about it. But I think that is an equally important component.

Senator STEVENSON. Thank you.

The CHAIRMAN. Senator Riegle?

Senator RIEGLE. Thank you, Mr. Chairman.

FINANCIAL EMERGENCY

Chairman Volcker, following the same line of questioning, not to be unduly inflammatory, I think everything that has been said

here today illustrates the fact that we are in a financial emergency and I think it is important that that be said because until we honestly face the seriousness of the problem I doubt that we will see the kind of broad-scale effort to deal with it that's required.

In your previous testimony you made it clear at least to me that monetary policy and restraint is part of the answer but cannot conceivably be the whole answer, that we need a much broader anti-inflation strategy to really get at our problems. At any point that you dissent from what I am saying please say so, but I am leading up to the question that I want to pose to you.

It seems to me unless we acknowledge the fact that we have somewhere along the line graduated into an emergency type situation, until we face that, we are not going to see the kind of serious response that is needed. I would just say to Senator Stevenson, as a member of the Senate Budget Committee, it is not easy to make those cuts, but I think if we are in an emergency and that is the understanding, then I think they can be made and they probably have to be made most everywhere. In other words, every area—there may be exceptions, but I think they have to be kept absolutely to a minimum and essentially you have to have what constitutes some kind of an across-the-board cut. I think you back that up with a hiring freeze and various other things that hold down spending at least for a period of time until you are through what you consider to be your emergency period. But that, too, added to monetary restraint, and hopefully if you do it in a serious way and back it by the veto, if that were to come forward, and some easing of the monetary policy down the line which I think is necessary and which I want to see, even those things do not do it all. I think a lot more needs to be done in terms of additional anti-inflationary steps.

We talked about credit controls. That is a very difficult area to look at and I grant you that it is very tough to decide what might be done in that area, but if you are in an emergency I think you have to respond to it as it is. The same is true with respect to the trade situation and energy conservation.

My concern also goes to the issue now of the degree to which the underlying rate of inflation, the momentum inflation—most people serious about it see it now at or about 10 percent and I do not know how long we can tolerate it being at that level and particularly with the other factors in and out of Government multiplying that rate.

I am wondering, Chairman Volcker, if you were not in the job you are in, if you were, say, in Fred Kahn's job these days, and you tried to step out of the Fed and step over into the notion of inflation fighting generally, what more is there that might be seriously considered in the way of anti-inflation strategy in addition to the things that I just mentioned here?

Mr. VOLCKER. Let me first observe that I did not take up your invitation to interrupt you in your statement because I think you have outlined the problem and the necessities quite clearly.

My own ranking of priorities would touch upon, first of all, the energy and budgetary problems that Senator Stevenson just alluded to. I don't know which of those is most important. They are both very important in stabilizing this situation.

What more could be done on the wage-price front than is being done involves, I suppose, partly a question of philosophy among those active in that area. When you look at just those guidelines you have to be a little concerned.

On the other hand, I recognize the strong point that is made by John Dunlop and others that we not rigidify this too much through specific numbers but rather work on the process in as harmonious a way as we can with the real actors who are setting the prices and wages in the last analysis. I would not make that as high a priority as the other two areas for the simple reason that I do not think that kind of program is going to work very well unless actions on energy and the budget are taken. But if you are in an atmosphere—I wish I could find a better word than emergency—let us say of aggressive national effort focused on this problem, and you are doing the things that are necessary not just with monetary policy but with the budget and energy, you create a climate where that kind of a program can have some supplementary role to play.

The danger today is quite clearly that the climate will go in the opposite direction. You speak of the underlying rate of inflation someplace in the neighborhood of 10 percent. But we have got the Consumer Price Index and other indexes much above that and so there is the momentum———

Senator RIEGLE. I understand the momentum.

Mr. VOLCKER. The primary concern is that the rate will go up. Instead, we have got to get it moving down. We are at a very crucial juncture in that respect which adds to the urgency of moving in all these directions so that we don't backtrack in terms of that underlying rate but rather begin to get it moving down. The danger is that it will move up; I think that's obvious.

Senator RIEGLE. If these other things were done, if we were to move to reduce the deficit and restraint on the fiscal side, if we were to move more aggressively on energy, I take it that you are not ruling out at least a consideration of a price-wage freeze.

Mr. VOLCKER. I did not realize you were going that far. I am not ruling out a look at that program of wage-price restraint.

Senator RIEGLE. You are not ruling it out?

Mr. VOLCKER. I am not ruling out looking at a freeze or a direct control. I refer to reexamination of the situation which has to be an ongoing process.

Senator RIEGLE. I know this is a sensitive area and it is sensitive for all of us, but if we are in an emergency and we are going to talk about doing a lot of things simultaneously and really breaking the back of the inflation momentum, can you really leave out the wage-price issue for very long? I know it is delicate and I know everybody has to tip-toe when they talk about it.

Mr. VOLCKER. I would like to leave out controls. I have had a certain amount of experience———

Senator RIEGLE. I didn't say controls. The way the debate has been phrased just within the last couple weeks by Barry Bosworth and others is in terms of an effort to call for a freeze which would be voluntary as a way to try to slow things down, but I'm only raising that with you in conjunction as if these other steps—these more basic steps were being taken at the same time.

Mr. VOLCKER. Let me make a comment that I may have made before you came in this morning when there was some reference to this matter. I have had a certain amount of direct experience with a wage-price freeze when I was in the Treasury, as you recall. I'm not sure the net result with that experience was entirely a happy one. But among——

DIFFERENT CIRCUMSTANCES

Senator RIEGLE. Well, the circumstances today and then are not exactly the same either.

Mr. VOLCKER. But in some ways they were easier then. We didn't have pressure on the economy. We thought the inflation was bad then, but it wasn't. We could talk realistically about a freeze. Now when you've got this much more inflation you've got another story. But included among all the problems with controls are the administrative problems, the rigidities and so on that—talked about so often and that I know not only from my own experience but from the experience of other countries and from the experience of the United States in the past—is the great danger that they are looked upon as a means of avoiding all those other hard choices that Senator Stevenson and others were referring to. Psychologically I'm not sure it's healthy to think there's an answer in that area when ultimately there isn't, certainly not without doing those other things. Psychologically, it seems to me inconsistent to think all we have got to do is wave a wand and impose a freeze and at the same time take the other hard actions necessary.

Senator RIEGLE. Nobody is saying that. I hope I didn't pose the question that way.

Mr. VOLCKER. You did not pose the question that way, Senator Riegle. But I'm not sure the country as a whole is going to pose it the way you posed it. The temptation is just overwhelming to think that controls take care of the problem, that we can avoid all these other difficult decisions that have been referred to here. If we try to avoid those other decisions, the one thing certain is that's not going to work; it's only going to complicate things and make them worse. We have a lot of experience on this point. That was precisely the theory upon which I supported a freeze in 1971. What happened? We blew it, because the other actions that were necessary to support the effectiveness of that action were not taken. They weren't taken partly because we had that illusion of protection.

Senator RIEGLE. What was our inflation rate at that time?

Mr. VOLCKER. Oh, 4 or 5 percent as I recall it.

Senator RIEGLE. Right. It was roaring ahead at 4 or 5 percent. It's a lot different than 18 percent and we don't have the time now to debate whether the fundamentals of the situation are——

Mr. VOLCKER. The problem is more urgent now. There's no question about it.

Senator RIEGLE. I think that gets back to the issue of whether if we define the situation we're in as an emergency, whether that may force us to have to broaden the debate. I grant you it's easy for this debate to get politicized with coded phrases and makes it very hard to have a serious policy discussion.

Mr. VOLCKER. I'm not thinking so much of political considerations in the partisan sense or the direct sense. It's just that I think it's profoundly inconsistent to marshall the kind of public support that's needed for these other measures and, at the same time, say that controls are really an answer. That's my problem.

Senator RIEGLE. That's exactly right, but the difficulty is if you do part of what's needed and not the rest, either way, if you just do the monetary restraint and you don't do the other things that are needed, or if you were to just do the price and wage effort and not do the other things, you're probably destined for the same end. The problem is you need to do a lot more than one thing at a time. You need a comprehensive strategy right now. We don't have one.

Mr. VOLCKER. A comprehensive strategy is certainly a great assistance. Our only disagreement is whether or not holding out that kind of a hope or prospect is damaging to putting together the kind of comprehensive strategy that's really needed, fundamentally needed. I think we do have a disagreement there.

Senator RIEGLE. Mr. Chairman, could I just ask if Chairman Volcker could supply for the record any information that the Fed has collected or analyzed with respect to areas that are being damaged by the high interest rates at the present time? I'm thinking specifically of the housing industry, construction loans, and small business, to the extent that that's been analyzed, if that could be made available to the committee so we can see what your evidence shows.

The CHAIRMAN. Very good.

Mr. VOLCKER. I'll be glad to do that.

[Chairman Volcker subsequently submitted the following information for the record of the hearing:]

SUMMARY OF DEVELOPMENTS IN CERTAIN SECTORS ESPECIALLY SENSITIVE TO INTEREST-RATE CHANGES

Economic activity has been well maintained since interest rates rose sharply in the aftermath of the Federal Reserve policy announcements on October 6. Real GNP in the fourth quarter advanced at a 2 percent annual rate. Moreover, production and spending have continued to advance in many sectors since the beginning of the year; industrial production rose 0.3 percent in January, and there were sizable gains in spending for consumer goods and business capital goods.

This is not to say that higher interest rates have had no impact on economic activity—aggregate demand pressures likely would have been still stronger if the Federal Reserve had attempted, at the cost of excessive monetary expansion, to hold interest rates down. In response to your request, the paragraphs that follow summarize developments in certain sectors that typically are viewed as especially sensitive to interest-rate changes.

Residential construction.—The most noticeable impact of the recent rise of interest rates has occurred in the housing sector. Interest rates on new commitments for conventional home mortgages at savings and loan associations have increased more than 2 percentage points, on a nationwide average basis, since October. Nonprice terms of lending, such as downpayment requirements, also have tightened. A combination of lender caution and reduced demand for loans has been reflected in a substantial decline in the volume of new mortgage loan commitments extended by thrift institutions. Banks and other institutions also have tightened their terms on construction loans, adding to the downward pressures on homebuilding activity. While government support of various types (for example, government guarantees of pass-through securities and Federal Home Loan Bank advances) has tended to buttress mortgage credit availability compared to what was experienced in past periods of monetary restraint, there has been a considerable drop in housing demand. Sales of new and existing houses have declined, and prices have shown a tendency to level off. Housing starts have fallen from around a 1.8 million unit annual rate last spring and summer to a 1.4 million unit rate in January.

Autos.—The impact of higher interest rates on auto demand is difficult to disentangle from other forces operating on the sector—especially the 60 percent rise in gasoline prices and concern about future fuel availability. However, total auto sales—both imported cars and those built in North America—have been running well below year ago levels, and credit conditions likely have played some part. Extensions of consumer installment credit to purchase automobiles have fallen over 15 percent from the peak level of September 1979. Reflecting the higher costs of funds to lenders, consumers have encountered higher interest rates, shorter loan maturities, and, especially where usury ceilings are relatively low, some problems with respect to credit availability. Dealers also have been finding it increasingly expensive to carry their inventories.

State and local government.—In recent weeks, a number of state and local governmental units have called off bond issues as a result of the rise in interest rates. For example, in February nearly $600 million of proposed bond issues were canceled or postponed—about twice the average amount. In most cases, issues were withdrawn because the offering agencies, exercising their discretion, decided that interest rates were unattractive; in some cases, however, statutory ceilings prohibited financing at prevailing rates. (Bonds issued by 19 states have interest rate ceilings and local governmental units in 29 states have interest rate ceilings; not all of the ceilings are binding at present.) Some state and local governments have removed or are planning to remove interest rate ceilings, which should increase their ability to tap the bond market. However, historically, state and local units have frequently found alternative means of financing planned outlays—for example, by drawing down liquidity or through intra-governmental transactions—so that actual short-run financial impacts have been small. To date, it doesn't appear that higher interest rates have significantly affected state and local spending.

Small businesses.—The Board's staff has made a special effort to monitor the impact of recent interest rate increases on small businesses, focusing especially on commercial bank business lending. The evidence suggests that high interest rates have cut loan demand by small businesses. Although bank interest rates for larger borrowers also have risen rapidly—indeed, apparently faster than for small firms—the increase in rates perhaps has been more burdensome for smaller firms, since these companies may have fewer financial resources and alternative credit sources to fall back on. The non-rate terms of credit to small businesses also have been tightened somewhat in recent months, but the firmer policies are about in line with restrictions affecting large business borrowers. Many banks have instituted special below prime base rates for small customers, and more generally banks have taken account of the more limited flexibility small businesses typically have in their finances and have made special allowances in setting loan terms.

The CHAIRMAN. Mr. Chairman, I have listened to you being lured to say something nice about wage-price controls and I'm very critical of them and I must say—correct me if I'm wrong—you come down absolutely against them under any circumstances at all, flatly, completely? You're opposed to them? You think they have no merit and you think if we did go the wage-price control route it would simply be a way of avoiding taking the tough, serious, painful steps we have to take to combat inflation?

Mr. VOLCKER. That's my great fear, Mr. Chairman.

Senator RIEGLE. Pardon me? I didn't hear the answer.

Mr. VOLCKER. That is my great fear, that it would avoid taking these other actions, Senator.

The CHAIRMAN. I want to get into that again in a minute. Before I do that, I want to go back to the question of the Federal credit programs. The President's budget for 1981 does contain a program for controls on Federal credit programs, including the Eximbank. This is the first time loan guarantees have been brought under specific budgetary controls. However, some major activities are excluded from this new system, including housing programs, some agriculture and energy lending programs, and the activities of Government sponsored agencies such as the Federal National

Mortgage Association (FNMA). It means at least half of all Federal programs are still left outside any budgetary control system.

Do you think it's important to impose tighter controls on all Federal credit programs? Should all of them be subject to budget limitations in your view?

Mr. VOLCKER. Yes, but let me explain the answer. This is an area that I also worked on for some time when I was in Treasury. I think it's very useful and desirable and essential to have control mechanisms in place in this area, and I think the administration proposals are certainly a first step in that direction.

My only qualification when I say budgetary controls is that some of these programs by their nature are in a kind of passive position where the use of the program is demand determined. In some cases, you may want to limit that, just be arbitrary and say you've got to cut the program off at a certain amount; I think that's an entirely appropriate response and the reason they should be brought under control. There are some programs where that may be less applicable, like the FHA.

The CHAIRMAN. Some programs should be and must be continued, regardless of any general need for credit restraint?

Mr. VOLCKER. Continuity is important to the programs. A classic example is the FHA program: in some aspects you may control the terms of the program and therefore control the demand, but you don't want to cut it off in April just because they've used up all the authorizations for the year.

The CHAIRMAN. I understand that, but my question is, Shouldn't they all be brought under the same umbrella?

Mr. VOLCKER. They should all be brought under the same framework of control.

The CHAIRMAN. Do you think Congress should set an overall limit on Federal credit activities as it now does on Federal spending?

Mr. VOLCKER. My answer really goes to that question. There are some programs that are not very susceptible to an overall limit in the same way you set a budget limit. In every program, direct lending program where that's possible—and I think it's possible in the Exim program for instance—it should be done. Some guarantee programs, perhaps, are legitimately exempt, although even there you can have targets.

The CHAIRMAN. I'm surprised at the response, because I thought one of the great reforms we have enjoyed was the October 6 determination of limits on credit in the private sector. We are talking about setting a limit on Federal credit programs, where I think the case should be much stronger. Why not set an overall limit?

Mr. VOLCKER. I think we ought to do that in any area that's susceptible to that kind of limit, which includes a good many of those credit programs. We should also look at the other programs and keep within reasonable bounds. All I'm saying is that we can use the same technique of saying a program should not be above x this year, but cutting off the program if you reach x in May, may not be equally applicable.

The CHAIRMAN. You wouldn't let any program off the hook?

Mr. VOLCKER. No.

The CHAIRMAN. You wouldn't say ignore it and forget it?

Mr. VOLCKER. No. I would review them all.

The CHAIRMAN. So it would be proper to have limits on housing programs as well as the others?

Mr. VOLCKER. Yes.

The CHAIRMAN. Now this committee will begin hearings on the extension of the Council on Wage and Price Stability and a review of our anti-inflationary policies, including proposals for mandatory wage and price controls, next week. As you know, I'm opposed to mandatory wage and price controls, but I think we need to review our experience with controls carefully and debate them, because if we don't they're going to be debated anyway and there may be strong support for them on the floor of the Senate and House. I'd like to know whether the Board has had its staff economists review our experience with controls under President Nixon, including the role played by the committee on interest and dividends. If such a study is available, it would be very useful to the committee. If it has not been done, I wonder if we could get a really serious review from the Board in a relatively short period of time.

Mr. VOLCKER. I'm not sure what we have. Certainly we can see what we have, but I would hate to promise you a——

The CHAIRMAN. You have an excellent economic staff and you can give us a review even if it was fairly summary of the effect, because there's been a lot of controversy about that. Some people say the program under President Nixon wasn't as bad as some people have argued it was and we'd like to get an expert, competent, dispassionate national analysis of what that program in 1971–73 achieved and didn't achieve.

Mr. VOLCKER. Let me see what we can do. I just hate to make that promise if we have to start more or less from scratch and don't have something pretty much in place already.

The CHAIRMAN. Give us what you can because we would like to have something in the next week or so.

OPEN MARKET COMMITTEE REPORT

The Full Employment and Balanced Growth Act of 1978 contains detailed requirements of the Federal Reserve Monetary Policy Reports to Congress. It requires you to report your objectives and plans with respect to the monetary and credit aggregates. Let me emphasize that it says both monetary and credit aggregates. Yet your report indicates that the Open Market Committee has established ranges of growth of monetary aggregates but not for any credit aggregates. The Federal Open Market Committee only projected that bank credit expansion would be between 6 and 9 percent. That's a projection, not a range of growth adopted by the Open Market Committee.

The question is this: The law requires that the Open Market Committee report its plans and objectives with respect to monetary and credit aggregates and you have only done this for monetary aggregates. Why?

Mr. VOLCKER. The Committee prefers to focus on the monetary aggregates, feeling that with the techniques we have that is more directly susceptible to control. But, in doing that, we believe that there is a relationship between those monetary aggregates and

credit growth. I think experience bears that out; the kind of credit figure that you cited is felt to be consistent with the monetary aggregates.

The CHAIRMAN. You're right about the Committee's interest and the interest of the Congress. At the same time, the law requires the credit aggregates and you haven't given them to us.

Mr. VOLCKER. We gave that to you in what you have interpreted as a subsidiary way, which I suppose reflects a difference in focus. But with those broader monetary aggregates you're just looking at the other side of the balance sheet. You can look at the "1" figure, for instance, where we also did not make a specific projection—or even the M-3 figure, where you're looking at the liability side of all the major financial institutions, so you begin to get a figure that can't be very far out of line with the expansion of credit in the economy too.

Now we have felt admittedly less certain about projecting a precise credit figure, but there is a broad correlation between the two.

The CHAIRMAN. But your inability to hit the monetary aggregates hasn't kept you from giving us the goal. In this case you won't give us the range.

Mr. VOLCKER. I think it would be more difficult to meet a credit target because this is less directly under our control, although there is a close relationship between the two.

The CHAIRMAN. Well, I think you should take another look at it because it seems to me the law is specific.

Mr. VOLCKER. We can look at it again.

The CHAIRMAN. I have one other question. I was happy to see your economic report contains a set of economic forecasts. This information is called the Federal Reserve's "Views About the Outlook for the Economy." It represents ranges that encompass the judgment of the individual board members. Since the Open Market Committee is the body that decides on the monetary policy plans and objectives and the board members are only a subset of the full Open Market Committee, I think it would be more useful to have the outlook for the economy reflecting the voting membership of the Open Market Committee, not just the board. Would it be possible to have that reported in subsequent reports?

Mr. VOLCKER. Yes. We do it this way because it was thought to be more in accord with the language of the statute, but we can do it either way. I would note, whichever way it were done, this year most members of the Committee felt there was a good deal of uncertainty in their own projections, and, as you can see, the range of their individual projections is quite wide. It seems to me that reflects the reality of the situation we are dealing with. There is a of range of opinion and uncertainty about what the economy is going to be doing. But we can do it the way that you're suggesting. In fact, I gave the Committee that suggestion, but I was told the law specifically asked for the view of the Board of Governors and that's what we gave.

The CHAIRMAN. If in the future you'll give us the FOMC outlook in addition—we would have the Board of Governors, of course, since they're part of it.

Chairman VOLCKER. No problem.

The CHAIRMAN. Senator Heinz?

Senator HEINZ. Thank you, Mr. Chairman.

Chairman Volcker, I note in your testimony—and I apologize that I wasn't here for the testimony and the questions and the statements by my colleagues. We had an executive session of the Select Committee on Aging, where we were defining our work program for the year, which also met at 9:30, like so many committees.

When there's an opportunity—I note that in your statement you suggest that now is not the time for a tax cut. This I assume you would see as an unnecessarily stimulative reaction by the Congress at this time. But there is something in the larger picture that troubles me, and it is that, particularly during periods of relatively high inflation, Government revenues, as measured as a percentage of the gross national product, keep getting larger and larger and larger.

We will be up to some 22½ percent, roughly, this year, in fiscal 1980—that is, fiscal 1981. And that does not take into account the likely inflation rate. That's an estimate made by the administration of what seems to be an artificially low inflation rate.

And as you look into the years ahead, there are many additional sources of Federal Government revenue. Over 10 years, the estimate of the Joint Tax Committee is that there will be roughly three-quarters of a trillion dollars over 10 years in additional revenues from a combination of windfall profits tax, about a third of that, and additional Federal income taxes, all of which adds up to a pretty healthy figure, taking into account as well the inflation reward to Government.

It seems to me that if the Government continually encroaches into the productive capacity of the United States at an ever-increasing rate, that this in itself will pose different kinds of inflationary pressures. I'd like your thinking on how we should deal with it, because on the one hand it's nice to say that we shouldn't decrease taxes—actually, the question is not so much cutting taxes as, it seems to me, how to hold the line on both spending and taxes so we don't end up with a government that is today at 22½ percent of the GNP and when we wake up 5 years from now is at 32½.

INFLATION BRINGS HIGHER TAX RATES

Chairman VOLCKER. My answer is very simple, Senator Heinz. I agree with your basic analysis that inflation itself brings higher tax rates. In terms of expanding the productive potential of the economy, there is much that could be done and should be done in reducing certain types of taxes anyway. That is indeed an urgent problem.

Unfortunately, we have a deficit at this point, and all the earlier conversation around this table has been in the direction of what can be done to reduce the Government deficit. I think that's appropriate in terms of today's problem.

So the only conclusion I draw from your analysis, an analysis that I share, is that it becomes even more urgent to maintain and sustain control over expenditures. I see no escape from the proposi-

tion that you can only afford tax relief when the expenditures situation permits it.

Senator HEINZ. Do you feel that there is a danger point past which it would be a grave mistake to go in terms of Government expenditures? Would it be possible to express that danger point in terms of a percentage of the gross national product? Is that not a sound way to express it, or not?

Chairman VOLCKER. It's a pretty crude way. As I suggested earlier, out of frustration in part, I would acknowledge that it may be easier to maintain restraint when we have that overall kind of projection in front of us. I am becoming more sympathetic to the idea of Congress specifying as much as it can—I'm not talking about a constitutional amendment—what that limit should be, reaching a consensus on it, and just sticking within it.

The President, in the past I think, has talked to this point—to some percent of the gross national product, if I recall correctly, as being a reasonable outside limit.

What the particular figure should be—whether 20 percent or 19 percent or 21 percent or whatever—one man's judgment, I suppose, is as good as another. One has the feeling that it's too high now, in view of the productive problems of the country. In fact, you know you'd like to see a figure much lower than that.

Senator HEINZ. In the hierarchy of ways to plow back what I will call the inflation rewards to the Federal Government in increased tax receipts, what would be, assuming that there were appropriate limitations placed on spending, your priorities for the best way to recirculate those tax revenues? Where would you cut taxes?

Chairman VOLCKER. Right now, given our problem at the moment, the priority lies in reducing the deficit.

Senator HEINZ. Well, assuming——

Chairman VOLCKER. Now, if you've got the budget into balance and all the rest, I think that the priority should be measures that do a combination of things. First, stimulate investment, which I think has been falling behind the growth in the labor force and is reflected in our productivity performance, which, of course, in turn lies behind the prospects for real growth.

There is a question of what taxes might more directly impact on costs than others. In view of our chronic inflationary process, I think that's important to look at. And more generally and overlapping with the other two points, I think it's a question of incentives at this point.

Senator HEINZ. Which kind of incentives?

Chairman VOLCKER. I think most urgent are incentives for investment, frankly. But I know that a more general case can be made that high marginal tax rates for individuals affect incentives as well. I see the question of more investment incentives the most urgent part of that myself.

Senator HEINZ. In terms of either stimulating investment or incentives for investment, there are a number of schools of thought. Some people argue for a corporate rate reduction. Others argue for capital cost recovery, 10-5-3.

What mechanism or general approach do you think is better?

Chairman VOLCKER. Frankly, I hate to get into that argument, because I think an enemy of progress in this direction is the

argument about precisely which technique to take. I'd take almost any of the ones that are discussed, if a consensus could be reached behind it, because ultimately they all have somewhat similar impacts.

Having said that, I'm not at all allergic to the idea of concentrating, if that's where the consensus seems to lie, on depreciation liberalization—and you can make a quite impressive case in terms of its effectiveness.

Senator HEINZ. Now, the equation I learned in economics 101 is savings equals investment in the national income accounts, and I guess it hasn't changed much.

Chairman VOLCKER. I used to puzzle over that relationship for a long time when I was studying economics. [Laughter.]

Senator HEINZ. I didn't say I understood it.

Chairman VOLCKER. I think it's true.

Senator HEINZ. How can we get more investment unless we get more savings?

Chairman VOLCKER. What I learned not only in economics 101 but also 303, I guess, is that if you get the investment, you get the savings. Now, that's not a full answer. But I tend to think that we will get the investment with more certainty and swiftness if we put the emphasis in tax reform on those things that most directly affect investment decisions; and those actions generally produce some increased savings in and of themselves.

But the economy will otherwise be able to generate the savings if the investment incentive is strong enough. I tend to think this is a matter of priority. A more diffuse measure to increase savings that does not go directly to the investment decision itself is not as effective. I think both kinds of measures have something to be said for them, but as a matter of priority I'd go for the one which would directly impact on the investment decision.

Senator HEINZ. Thank you, Chairman Volcker. I have one or two more questions that I hope there will be time for. My time has expired.

The CHAIRMAN. I want to recognize Senator Stevenson. I'm through with my questioning.

Chairman Volcker very graciously agreed to come this morning. We set a limit of 12 o'clock. That's why we scheduled it for 9:30. So I hope that Senators Stevenson and Heinz can finish their questioning in 15 minutes.

Senator STEVENSON. Thank you, Mr. Chairman. I'll be brief. I just have two areas.

First, to continue where Senator Heinz left off, taxes. How would you feel about a reduction in the rates, income tax rates on unearned income, especially in view of what has happened in the bond market?

Chairman VOLCKER. Here again, what we're talking about are relative priorities. And we're getting into an area where I have—recently, anyway—not sat down and tried to line up one measure against another measure in terms of maximum effectiveness; and that will vary depending upon the particular situation.

But my general view is the one I just expressed to Senator Heinz. It is a matter of relative priority, no more than that. Tax action that more directly impinges upon the investment decision is prob-

ably the first priority. I don't like to exclude these other kinds of measures either. I think we've been very unkind to both our savings and investment process in our tax system for many years, so I think that the whole gamut of measures needs a new look.

Senator STEVENSON. Well, I'm going to skip over those. In your statement you addressed yourself to the nonmonetary, nonfiscal complementary measures that you felt had potential. And most of them deal with Government regulations, including policies which protect industries from foreign competition.

We are reviewing COWPS, as Chairman Proxmire mentioned a moment ago. One of the mandates of COWPS is to mandate Government policy, but it has never done so and it has not been insulated from political and economic repression. You may recall, when Barry Bosworth blew the whistle on a wage settlement, he was promptly made a member of the five-member board of the Council for the Coordination of Public Statements, chaired by the Secretary of Labor. And when Fred Kahn blew the whistle on Chrysler, which may be in one of the industries referred to in your last category, everybody jumped all over him.

So one of the proposals has been to insulate COWPS from political and economic pressure. Give it the mandate, if it doesn't already have it, to review all Government policies and regulations, put the spotlight of public opinion on the inflation and the consequences of those policies and, in doing so, finally put some pressure to bear on the Congress, which otherwise goes along day-in and day-out, yielding to every interest group and rarely to the general interest in cost-effective regulation of the economy.

Now, I hate the institutional ways of getting to action. But in view of our long record of nonaction, maybe we need something like that.

How do you feel?

Chairman VOLCKER. Just hearing your view right now, I agree with it.

Senator STEVENSON. I won't push that one further, then. [Laughter.]

One of your predecessors, Arthur Burns, perhaps in a moment of weakness, suggested that the Council on Wage and Price Stability also be given prenotification authority and the power to temporarily defer price and wage increases, in order to give it time to investigate and possibly time to influence public opinion on unjustified price and wage increases.

How do you feel about those two proposals?

Chairman VOLCKER. I have not been particularly enamored of them in the past, but I don't know as I would completely close my mind to them. I'm not sure that that is a particularly central problem right now.

Senator STEVENSON. Could you think about it some more before these hearings, because there is legislation introduced that would give COWPS prenotification authority. I'm not sure how it would work, either. The fact of the matter is, it can demand and get prenotification, which may be particularly important with respect to wage increases.

Chairman VOLCKER. Let me think about it.

Senator STEVENSON. That would be helpful, plus the deferral authority.

[The following information was subsequently received for the record:]

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

PAUL A. VOLCKER
CHAIRMAN

March 20, 1980

The Honorable Adlai E. Stevenson
United States Senate
Washington, D. C. 20510

Dear Senator Stevenson:

I am pleased to respond to your recent letter requesting additional information in regard to matters raised at the February 25 oversight hearing on monetary policy.

With respect to the first matter you mentioned, namely the composition of bank lending, I can report that the Board, as part of its special credit restraint program, has established a system of reporting that will permit us to better assess the extent to which credit is flowing to productive uses as opposed to the financing of purely speculative and economically unproductive undertakings. At this time, however, we have no data that would permit any submission for the hearing record.

Your letter also requested my views on S. 359, the proposed "Inflation Review Board Act". It may be most useful to comment on the proposals for prenotification and for deferral of price and wage increases specified in the bill in the context of the voluntary standards that we now have. As you know, the President has announced that prenotification of wage and price increases will be an integral part of the anti-inflation effort, but the full details have yet to be worked out. In any plan involving prenotification of price increases, there could be benefits from informing a company in advance that it was not complying with the standard, or from calling public attention to the prospect of a violation. However, the value of these benefits will be diminished somewhat by extra reporting burdens and surveillance costs, and these costs could be substantial if companies were required to report in advance their planned price increases for individual products and services,

as is proposed in S. 359. It seems to me more useful and less burdensome to limit prenotification requirements to the average price adjustments planned for a company's various products--a procedure that would be consistent with the current reporting requirements specified by COWPS.

On the wage side, I might simply note that prenotification of proposed settlements in the collective bargaining sector could seriously disrupt the bargaining process. Furthermore, knowledge of the various offers and counter-offers would provide little information of ultimate value to the monitoring agency. With negotiated agreements, it seems adequate to require immediate notification of the details of a tentative settlement once it is reached so that compliance could be determined prior to membership ratification.

Granting COWPS or some similar agency the authority to establish an effective mechanism for temporarily deferring wage or price increases would clearly be a step in the direction of mandatory controls, which the Administration has already disavowed. I concur in their opposition to mandatory controls, and I am skeptical that deferring wage and price increases would significantly reduce inflationary pressures. Indeed, such deferrals would carry the risk of creating the sorts of distortions and dislocations that outright controls can cause--with the possibility of producing ultimately greater wage/price pressures.

Sincerely,

Finally, you mentioned in these nonfiscal, nonmonetary subjects, legislation that tends to ratchet up wages at the expense of employment. What did you have in mind here?

MINIMUM WAGE LAW COUNTERPRODUCTIVE

Chairman VOLCKER. I really had two kinds of things in mind, both of which I'm sure are quite familiar to you and raise the kind of problems you alluded to earlier. First, it does seem to me a mistake, particularly in this kind of environment, to, in effect I suspect, price out of the market some of the younger and less privileged people coming into the labor force by the way we operate the minimum wage law.

Even if you think the minimum wage law is a good thing, pushing up the minimum wage as it applies to the youngest and least experienced as fast as we have pushed it up seems to me counterproductive, both in terms of inflation and in terms of employment. And one of the things that is rather obvious, of course, in those unemployment figures is that more and more unemployment is concentrated among the young and the least privileged. There are many reasons for that, but I think we've aggravated the problem by the policies in that area.

The other area that I think has been important is the kind of policy incorporated in the Davis-Bacon Act, the Government Services Contract Act, and the like. It does not have the justification it may have had in the Depression and yet continues to spread.

Senator STEVENSON. You would support an exemption for the youth?

Chairman VOLCKER. Yes. I wish somebody would look at that other legislation.

Senator STEVENSON. Davis-Bacon?

Chairman VOLCKER. It's an old story—Davis-Bacon and the Government Services Contract Act. These attempt to create conditions where high-wage companies set the pattern.

Senator STEVENSON. There were efforts last fall. Once again, there are very few of us who supported that.

Chairman VOLCKER. All I can do is bring it up again, in the spirit in which Senator Riegle was speaking; that is, that when you're making a comprehensive attack on many problems, you've got to forget about some of those earlier decisions.

The CHAIRMAN. Senator Heinz?

Senator HEINZ. Yes, Mr. Chairman. I'll be brief.

Chairman Volcker, it seems to me that a major tool to combat inflation, which we were touching on earlier, dancing around the edges of, anyway, would be to channel some of consumer spending into consumer saving. This would appear to be something of a chicken and egg proposition, though, because it's hard to see how money will flow into savings rather than spending, and particularly into savings accounts, until rates are competitive with market yields. Therefore, until regulation Q is changed and probably phased up and out, therefore, how can we encourage more individuals to save in financial institutions rather than spend?

Chairman VOLCKER. The obvious answer to that, by far the most important answer, is begin to get these inflationary expectations

under control. The savings rate has declined to the lowest level in history—postwar history, anyway. The only time it was lower was in the middle of the depression and, for one quarter, I think, during the Korean war period.

Broadly, the explanation seems to me clear enough: The lack of productivity in the economy has been squeezing real income, which tends to reduce the savings rate. Also, the fears of inflation decrease the savings rate. So when you're talking about increases in savings, far more important than any specific measure that can be taken, I think, is to attack those broad problems of inflation and productivity.

This legislation to exempt savings from taxes does not, in contrast, seem to me to be a particularly productive approach. It loses more revenue than we can afford at this point.

Senator HEINZ. Well, I wasn't coming around to that. I was really examining regulation Q as the controls, in a sense, the price controls, controls on the price of money that financial institutions pay to savers.

You, yourself, in your statement, say we can move to eliminate the impediments to competition still imposed in some industries by Government regulation. Well, at least insofar as the consumer is concerned, the biggest economic regulation that is going on in terms of any price I'm aware of, that they face every time they look at their passbook account, is the price controls on money that the Fed and others set.

I mean, don't you feel you should be, if you're advocating deregulation of trucking or railroads—isn't what's good for the goose good for the gander?

Chairman VOLCKER. Yes. My answer is that, partly at the prodding of this committee and others, we have moved a very long way in that direction. The limiting factor on the speed of that movement is the extent to which financial institutions with an asset structure built into their operations from earlier years can adjust.

Senator HEINZ. I think we're all aware of the difficulties many of those institutions have, and I just want to make sure that we have you on record as to direction, not necessarily as to pace.

Chairman VOLCKER. I think that's the only restraint on the speed with which we're moving.

Senator HEINZ. Very good.

HOUSING PRODUCTION DEPRESSED

My last question is: As you know, housing production appears to be becoming quite depressed, and many argue that because housing is so interest rate sensitive, that it bears an excessive burden when restrained monetary activity increases interest rates.

Do you think it is or would be inflationary for the Federal Government at this time to provide additional housing stimulus in the form of purchasing or making available several billion dollars of mortgage purchase authority at below-market interest rates, as has been proposed by the Brooke-Cranston legislation and the Emergency Home Purchase Assistance Act?

Chairman VOLCKER. It's all a matter of degree, timing, and amount.

Senator HEINZ. Was this subject brought up at all? I didn't mean to go over the same thing.

Chairman VOLCKER. I will just repeat very briefly my general answer. With disproportionate effects occurring on particular sectors, I don't think I can sit here and say that no moderating action is feasible, possible, or desirable. But, obviously, you don't want to charge in and try to offset the whole thrust of restraint. You're just pushing it on somebody else and it doesn't work.

But when you have an industry that may be particularly on the end of the whip, as I expressed it earlier, I think some action to moderate the sharpest edges can, in some circumstances, be justified and not inconsistent with the whole plan.

Senator HEINZ. How large an inflationary penalty is there for doing that? Obviously, any intervention probably, given the state of our economy at the present time, implies some kind of inflationary penalty. I mean, is there a significant inflationary penalty, or is it, in your judgment, relatively insignificant?

Chairman VOLCKER. I would think that would depend upon the analysis of a particular situation. If housing, for instance, fell sharply even from its present level—which is down but not down so far as it's gone in the past—you could make an argument that to some degree maintaining a certain level of activity in that industry is not at all inconsistent with an attack on inflation over time.

You don't want to close down a whole industry and then have to build it up again as soon as money becomes more freely available.

Senator HEINZ. Just one very brief comment or question, and that is: The Federal Reserve is quite respected for its economic and analytical capability. That doesn't necessarily mean you're that much righter than anybody else.

Chairman VOLCKER. I agree with both comments.

Senator HEINZ. We unfortunately know it's all a low base of comparison. But, having said that, would the Fed be in a position to analyze a specific proposition at a specific point in time as to whether, let's say, Brooke-Cranston, if invoked in a certain amount at a certain time, the extent to which that would have an inflationary impact?

Chairman VOLCKER. I think we would do that in the ordinary course of our business.

Senator HEINZ. Thank you very much, Chairman Volcker.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

And thank you very, very much, Chairman Volcker, for excellent testimony. We're in your debt.

Tomorrow at 10 o'clock, we have four monetary experts who will comment on the monetary policies of the Fed. We will meet in this room at that time.

Thank you, Mr. Chairman.

[Whereupon, at 12 noon, the committee was recessed, to reconvene at 10 a.m. on February 26, 1980.]

[Additional material ordered inserted in the record follows:]

For use at 10 a.m.,
February 19, 1980

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 19, 1980

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., February 19, 1980

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

The Board 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

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CHAPTER 1

FEDERAL RESERVE POLICY AND THE OUTLOOK FOR 1980

SECTION 1. THE OBJECTIVES OF MONETARY POLICY IN 1980

Frequently in the past the decisions about stabilization policy seemed--perhaps sometimes misleadingly--to come down to a choice of how strongly to encourage recovery or to retard expansion. Decision-makers face a much more complicated set of circumstances today. For some time now, most forecasters have suggested that the economy is on the verge of recession, but the recession has not appeared. Over the same period inflation has continued apace. The outlook for the economy remains obscured by major uncertainties, ranging from the possible economic effects of current international tensions and the prospects for world oil prices and supplies to the attitudes of investors around the world toward the dollar and the threat that inflation may bring increasing distortions of traditional spending and saving patterns. It is not within the powers of monetary and fiscal policy to resolve all of these uncertainties and to ensure a fully satisfactory economic performance.

Nonetheless, the appropriate direction for policy is clear. The greatest contribution the monetary and fiscal authorities can make is to impart a sense of long-range stability in policy and in the economic environment. In present circumstances, that requires an approach that provides assurance that the momentum of inflation will be arrested. Inflation not only represents an imminent threat to the sustainability of the current business expansion, but it also lies at the heart of many of the longer-range problems of the economy, such as the inadequacy of business capital formation, and the related declines in the productivity and real earnings of American workers, and the vulnerability of the dollar in foreign exchange markets.

Monetary policy clearly has a major role to play in the restoration of price stability. Regardless of the source of the initial impetus, inflation can be sustained over the long run only if the resulting higher level of dollar expenditures is accommodated through monetary expansion. The Federal Reserve is determined not to provide that sustenance, but will adhere instead to a course, in 1980 and beyond, aimed at wringing the inflation out of the economy over time.

If recessionary tendencies should develop during 1980--as many expect--the steady anti-inflationary policy stance represented by continuing restraint on growth in the supply of money and credit would be consistent with an easing of conditions in financial markets, as demands for money and credit weaken. That would provide support for economic activity, and would help assure the avoidance of a cumulating, deepening downswing. If, on the other hand, inflationary pressures mount, a policy of restrained growth in money and credit would lead to greater tautness in financial markets, thereby damping the expansion of aggregate demand. In any event, prospects for dealing with the inflation problem without serious economic disruption will be materially enhanced if other elements of government also exhibit a firm anti-inflationary commitment and if workers and management recognize that a moderation of their wage demands and pricing policies is in their own long-range interests as well as those of the nation as a whole.

SECTION 2. THE GROWTH OF MONEY AND CREDIT IN 1980

At its meeting earlier this month, the Federal Open Market Committee established ranges of growth for the monetary aggregates that it believed, in light of the prospects for fiscal policy and for private demands, would impose appropriate restraint on inflationary forces in 1980. Measured from the fourth quarter of 1979 to the fourth quarter of 1980, the ranges are: for M-1A, 3-1/2 to 6 percent; for M-1B, 4 to 6-1/2 percent; for M-2, 6 to 9 percent; and for M-3, 6-1/2 to 9-1/2 percent. These ranges are based on the newly adopted definitions of the monetary aggregates; a description of this redefinition, which was announced on February 7, is included in Appendix A to this report. The FOMC also projected that bank credit will expand between 6 and 9 percent during the current year.

The FOMC's ranges indicate the Federal Reserve's intention to seek an appreciable slowing of monetary expansion from the rates observed in 1979, and thus to move toward non-inflationary rates of growth. The deceleration is especially marked in the case of the narrower aggregates. The midpoint of the range for M-1A, for instance, is 4-3/4 percent; in 1979, M-1A increased 5.5 percent. The difference between these two figures actually understates the degree of deceleration in economic terms, however, since the adjustment of the public to the introduction of ATS and New York State NOW accounts probably reduced the growth of M-1A last year by roughly 1-1/4 percentage points as funds were transferred out of existing demand deposits to such accounts. In setting the range for 1980, the FOMC assumed, in the context of present law, that the public's adjustment process is about completed and that such shifting from demand deposits to ATS and NOW accounts will have little

further impact on M-1A this year. Of course, if NOW accounts were authorized on a nationwide basis, some downward adjustment of the present M-1A range could be needed in order to take account of the accelerated shift out of conventional demand deposits that might result.

The range for M-1B--which includes checkable interest-bearing deposits in addition to currency and demand deposits--also implies a substantial slowing; the mid-point of the range, at 5-1/4 percent, is well below the actual 8 percent expansion in 1979. Of course, because ATS and NOW accounts are included in M-1B, the expansion in 1979 was enlarged by one-time transfers from regular savings deposits and probably other assets to the newly offered transactions accounts--the reverse of the experience with M-1A. For similar reasons, enactment of nationwide NOW account legislation would be expected to raise the growth of this money stock measure this year, and the present range would have to be reconsidered in that light.

M-2 likely would not be affected importantly by NOW account legislation, since it encompasses the major categories of assets that are close substitutes for NOW accounts. Besides M-1B, M-2 includes savings and small denomination time deposits at commercial banks and thrift institutions, plus certain other highly liquid instruments--namely, money market mutual fund shares, overnight repurchase agreements, and overnight Eurodollar deposits at Caribbean branches of U.S. banks. The recently introduced 2-1/2 year certificate, which has no specified minimum denomination and carries a ceiling rate close to that on Treasury notes, should serve to bolster growth of small time deposits. Six-month money market certificates likely also will remain popular. Nonetheless, absent a steep decline in market interest

rates, the total of interest-bearing deposits subject to federal rate ceilings probably will continue in the months ahead to grow slowly by historical standards. However, growth of M-2 should be buoyed in 1980 as in 1979 by sizable flows into the money market funds. On balance, the prospect is that M-2 this year will grow at a rate somewhat below the 8.8 percent increase of 1979.

The final monetary measure, M-3, includes, in addition to M-2, large denomination time deposits of $100,000 or more and term (more than one-day) RPs at banks and thrift institutions. It is thus a very broad aggregate, encompassing most of the liabilities of the depositary institutions plus money market mutual funds. Given the moderation of demands for credit--especially at commercial banks--anticipated for the current year, M-3 appears likely to grow less than the 9.5 percent increase recorded in 1979.

It should be emphasized that, although we view these new monetary definitions as better measures of financial behavior today than the old definitions, the institutional framework is changing rapidly, and this implies an inevitable uncertainty about the behavior of any monetary aggregate. Furthermore, the Committee recognizes that other aspects of financial and economic developments will require careful monitoring in the process of policy determination and implementation. The ranges specified for the monetary aggregates appear adequate to the Committee to provide the necessary degree of flexibility.

SECTION 3. THE OUTLOOK FOR THE ECONOMY IN 1980

It is never an easy matter to project the course of the economy, but the current circumstances pose exceptional difficulties for forecasters. Aside from the uncertainties associated with international political tensions, we find ourselves in an economic environment characterized by historically high rates of interest and inflation, so that past experience may provide only a limited guide to prospective behavior. In order, though, to give the Congress an indication of the Federal Reserve's views about the outlook for the economy, the Board of Governors has assembled in the table, below, ranges that encompass the judgments of its individual members about the most likely outcomes for several key variables.

	Actual 1979	Projected 1980
Change from fourth quarter to fourth quarter, percent		
Nominal GNP	9.9	7-1/2 to 11
Real GNP	0.8	-2-1/2 to 1/2
Implicit price deflator	9.0	9 to 11
Average level in fourth quarter		
Employment (millions)	97.7	97 to 98-3/4
Unemployment rate (percent)	5.9	6-3/4 to 8
Annual rate of change in fourth quarter, percent		
Consumer Price Index	13.2	8-3/4 to 12

The Board members' projections, it must be emphasized, rest on certain important assumptions. It is, for example, assumed that, although the cost of imported oil may rise moderately further over the course of this year, there will not be a repetition of the 1979 price run-up and fuel supplies

will not be disrupted. It is also assumed that overall federal spending in 1980 will generally be in line with the Administration's current forecast and that there is no federal tax cut.

As can be seen, even with these common assumptions, the range of probable outcomes is relatively wide. Even so, there is recognition that, while considered less likely, the actual outcomes could fall outside of the indicated ranges. Such is the nature of the uncertainties in the economic outlook at present.

Most members of the Board believe that a downturn in activity is likely sometime in 1980. Production cutbacks in the auto sector and a drop in residential construction activity already have occurred; meanwhile, a rising oil import bill continues to act as a drag on aggregate demand. With these depressants on employment and income growth, consumer spending is expected to slacken in the months ahead. It is likely that the tighter consumer and mortgage credit conditions now existing and the already high debt obligations of households will encourage some recovery in the abnormally low personal saving rate in coming quarters. The weakening of consumer demand would also tend to damp plant and equipment spending as softer markets tend to deter businesses from outlays that would add to excess productive capacity. Net exports might rise somewhat, however, owing to the impact on import volume of the weakness in domestic spending and production.

In the labor markets, employment may be flat this year, and could well decline somewhat in the goods-producing sectors. At the same time, the growth of the labor force probably will slow, reflecting in part the reduced growth of the working age population but also the usual cyclical response to

slack demand for workers. The unemployment rate, which turned upward last month, is likely to remain in an uptrend over the remainder of the year.

Even in such an economic environment, progress in reducing inflation will be delayed. Indeed, in the first quarter, the rise of the Consumer Price Index could accelerate, owing in large measure to the latest round of oil price increases and to the lagged impact on the index of the rise in mortgage rates last fall. Throughout the coming year, wage demands will reflect efforts of workers to catch up with past inflation, and pressures on unit labor costs may be intensified by cyclical weakness in productivity. Energy prices probably will continue to rise rapidly, as recent increases in OPEC prices are passed through to consumers and as domestic gas and oil markets are gradually freed from controls.

Should aggregate demand prove relatively strong, as some think possible, inflationary pressures across the economy could prove more persistent. For example, it must be recognized that any substantial increase in defense spending beyond what already is contemplated in the Administration's budget could significantly alter the economic outlook. The lag between authorization and actual federal outlay may be quite long in the case of military hardware, but expectational impacts on employment, production, and private spending can emerge fairly quickly.

SECTION 4. THE ADMINISTRATION'S SHORT-TERM ECONOMIC GOALS AND THE RELATIONSHIP OF THE FEDERAL RESERVE'S MONETARY OBJECTIVES TO THOSE GOALS

The President's Economic Report, submitted to the Congress last month, lays out the following short-term goals for the economy:

	1980	1981
Change from fourth quarter to fourth quarter, percent		
Real GNP	-1.0	2.8
Consumer prices	10.7	8.7
Real disposable income	.5	1.1
Productivity	-.3	1.3
Average level in fourth quarter		
Employment (millions)	97.8	99.7
Unemployment rate (percent)	7.5	7.3

These goals, the Economic Report indicates, should be viewed as forecasts rather than as indications of the Administration's desires. The Administration expects a mild recession, not lasting much past the middle of 1980. A recovery then begins and carries through 1981. The Consumer Price Index rises much less rapidly this year than in 1979 (when it increased 13.3 percent), largely in reflection of an expected slowing in the rise of energy prices and of home purchase and financing costs. A broad price measure less affected by these special factors, the implicit GNP deflator, is projected to rise 9 percent in 1980, the same as in 1979, and to slow only to 8.6 percent in 1981.

There is no apparent incompatibility between the Federal Reserve's 1980 monetary growth ranges and the economic forecast of the Administration for 1980. The Administration has projected a rise in nominal GNP of about

8 percent; this figure is well within the capacity of the FOMC's monetary ranges to finance.

With regard to the more distant future, the pattern of developments that appears likely this year would seem to be consistent with the resumption of moderate expansion in economic activity in 1981. However, the chances of sustaining an advance over time would be greatly enhanced, in an environment of continued monetary restraint, if there were greater progress in reducing inflationary pressures than is suggested by the Administration's price forecast. Such progress would depend on, among other things, continued fiscal prudence, moderate wage and price behavior by labor and business, an improved productivity performance, and maintenance of a strong dollar on exchange markets.

CHAPTER 2

A REVIEW OF RECENT ECONOMIC AND FINANCIAL DEVELOPMENTS

SECTION 1. OVERVIEW OF DEVELOPMENTS IN 1979

One year ago, the Federal Reserve reported to the Congress, as required by the Full Employment and Balanced Growth Act, its objectives for 1979. The Board indicated that, in light of growing pressures on resource availability, a moderation in the rate of economic expansion was essential if inflationary forces were to be contained. The pace of price advance had already accelerated over the preceding year, and it was recognized that if this tendency toward faster inflation was not reversed the progress that had been achieved by the November 1, 1978, program to bolster the dollar on foreign exchange markets would be jeopardized and the dangers of serious economic disruption would be heightened. Consequently, at its February meeting, the Federal Open Market Committee had set growth ranges for the major monetary aggregates that would be consistent with reasonable restraint of demands for goods and services in the economy.

The first half of 1979 saw a number of unanticipated, negative developments. Economic activity was depressed by inclement weather, by labor disputes, and by gasoline shortages. More critically, foreign oil producers posted drastic price increases, giving added impetus to inflation and draining income from the U.S. economy. In this environment, the Board reported in July that there appeared a significant threat of a mild recession in the months ahead. It also noted that there was little hope of a near-term slowing of inflation. Under these circumstances, the Federal Open Market Committee reaffirmed the previous monetary aggregates ranges at its July meeting.

Aggregate demand actually proved stronger than generally expected in the second half of 1979, largely because consumers displayed a surprising willingness to spend, reducing their rate of saving to an extraordinarily low level. Real gross national product rose moderately, and the overall unemployment rate remained stable. Inflation, as measured by the implicit GNP deflator, didn't abate, but neither did it accelerate, as labor costs and food prices behaved somewhat more favorably than anticipated.

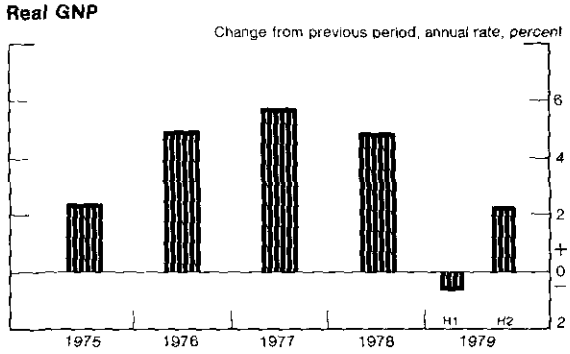
Taking 1979 as a whole, monetary expansion was broadly consistent with the FOMC's objectives--with the major money stock measures falling close to or within the upper halves of the Committee's announced ranges. Meanwhile, real GNP growth was somewhat less rapid and inflation somewhat more rapid than might have been expected last February. Energy supply and price developments provide much of the explanation for this adverse mix of output and inflation; they also represent a major peril to the satisfactory performance of the economy in 1980. Indeed, more secure energy supplies and control of inflation are necessary conditions for the longer-range progress of our economy, and must remain priority matters for public policy until they are achieved.

SECTION 2. ECONOMIC ACTIVITY IN 1979

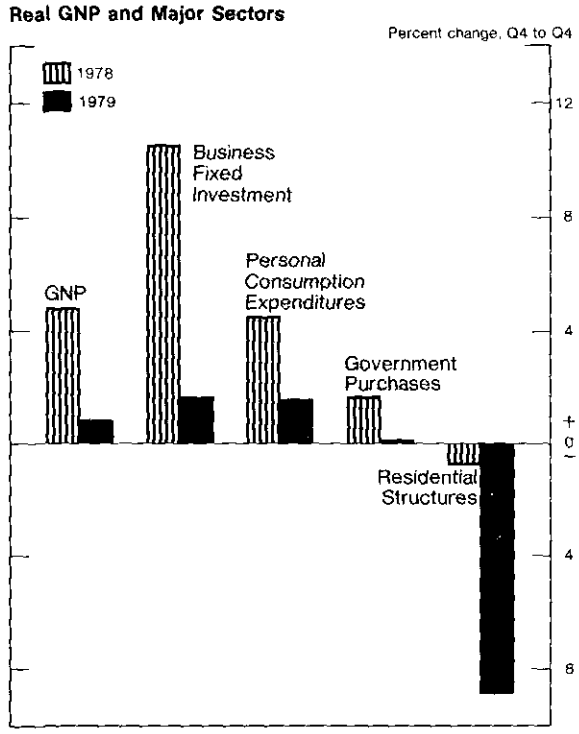
Economic activity registered only a small gain last year, following almost four years of brisk expansion. Real gross national product increased about one percent over the four quarters of 1979; industrial production rose a bit early in the year, but then edged off, finishing the year just marginally above the December 1978 level. Two fundamental factors exerted a pervasive damping influence on aggregate private demand: a near doubling of the average cost of imported oil, which drained income to foreign producers and exacerbated underlying inflationary pressures, and a posture of increasing restraint on the parts of monetary and fiscal policy to contain those pressures and to prevent a worsening of long-range price trends.

While these factors were tending to moderate growth of output and expenditure throughout the past year, quarterly movements in activity were importantly influenced by a series of unexpected shocks. In the winter months, unusually severe weather in many parts of the nation depressed activity in several sectors. In the spring, real GNP declined appreciably in response to strikes that disrupted production and transportation and to shortages of gasoline. As the strikes ended and gasoline lines disappeared in the summer, activity snapped back smartly, especially in the retail sector where auto sales were boosted by price incentives offered by dealers and manufacturers in an effort to cut back inventories. Real GNP growth slowed again in the final months of the year, as the special elements of strength in the third quarter dissipated and the basic restraining influences in the economy dominated.

Real GNP



Real GNP and Major Sectors

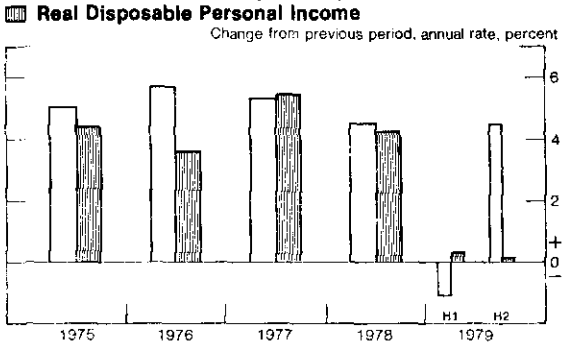


Among the major sectors of the economy, the greatest weakness during 1979 was in residential construction and consumer durables. This pattern is typical of periods when aggregate activity levels off, particularly when there is a tightening of financial markets, as there was last year. In 1979, however, the softness of spending on consumer durables was exacerbated by the effects of gasoline price and supply developments on the demand for automobiles. Consumer spending on other items proved quite robust, and total personal consumption expenditures rose even though real disposable income was virtually flat. Business fixed investment, which normally lags cyclical turning points, posted a small real gain in 1979; at the same time, perhaps because an economic slowdown was widely anticipated, firms maintained a tight rein on stocks, and despite the problems of the auto sector, inventory accumulation was reduced over the year. Governmental outlays were flat in 1979, reflecting at least partly public sentiment for restraint on taxes and spending. The one major area of strength was the international trade sector; in constant dollar terms, the net export balance grew substantially as a result of the relatively faster expansion of foreign economies and the continuing effects on exports and imports of past exchange-rate changes.

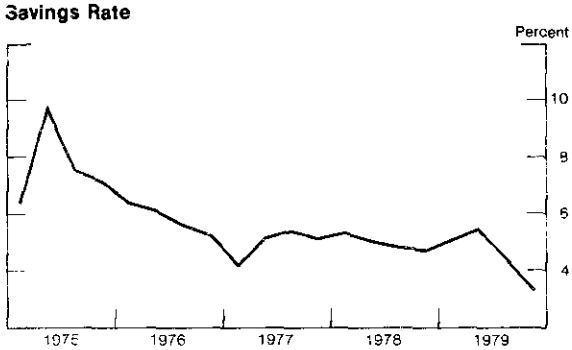
Personal Consumption Expenditures

Real consumer outlays grew 1-1/2 percent during 1979, compared with a 4-1/2 percent gain during 1978. Underlying the weakness in consumer spending was a still sharper deceleration in real disposable income, which rose only 1/4 percent during 1979 after rising 4-1/4 percent in the preceding year. Growth of nominal income slowed significantly, and household buying power was further eroded by accelerating inflation and by the rise in tax burdens

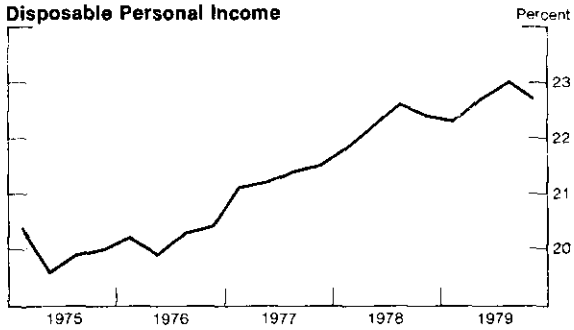
Real Personal Consumption Expenditures
Real Disposable Personal Income



Savings Rate



Household Debt Repayment Relative to
Disposable Personal Income



related to higher social security taxes and to the interaction of inflation and a progressive income tax.

All of the advance in real consumer spending occurred in the second half of the year when the saving propensities of households fell to historically low levels. The personal saving rate in the fourth quarter was about 3-1/4 percent--one percentage point less than the previous post-Korean War record low. The rise in consumer spending after mid-year was to some extent a rebound from the weak second quarter, when gasoline shortages had disrupted normal spending patterns and cut demand for large fuel-inefficient cars. In response to falling sales and excessive inventories, domestic automobile producers instituted major sales promotion campaigns in the third quarter and again near the end of the year. As a result, sales were boosted noticeably; indeed, the higher selling rates may well have involved some "borrowing" from future periods.

Consumer sentiment, as measured by opinion surveys, began to deteriorate in 1978 and worsened in 1979, reaching levels that in the past have been associated with recessionary periods. Previous experience with these surveys suggests that there should have been a cyclical downturn in consumer spending. That such a decline did not occur appears at least partly attributable to the strength of inflationary expectations, which encouraged a buy-in-advance mentality. In the latter part of the year, however, consumers began to exhibit less eagerness to purchase durable goods in anticipation of future price increases and to show greater concern about high interest rates and lessened credit availability. Given the already reduced liquidity of the household sector associated with further heavy borrowing in 1979, a turn toward somewhat more cautious spending patterns would not be at all surprising.

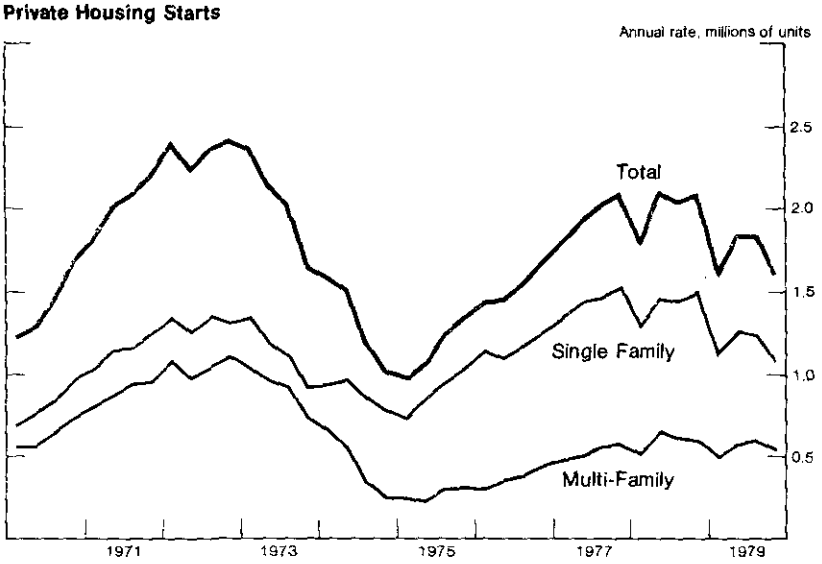
Residential Construction

Expenditures for residential construction, in constant dollars, fell about 8 percent in 1979; given the magnitude of the rise in interest rates over 1978 and 1979, this is a modest decline by historical standards. The demand for housing was sustained by underlying demographic trends--including substantial population migration and rapid household formation--and by the growing interest in homes as an investment and as an inflation hedge. The combined effects of rising house prices and mortgage interest rates caused the monthly carrying costs of homeownership to climb steeply, but buyers were willing to devote an increasing share of their income to housing. At the same time, the potentially disruptive effects of rising market interest rates on mortgage credit availability were considerably ameliorated by such institutional developments as the improved ability of thrift institutions to compete for lendable funds, most notably through issuance of 6-month money market certificates, and the increasing use of mortgage-related securities.

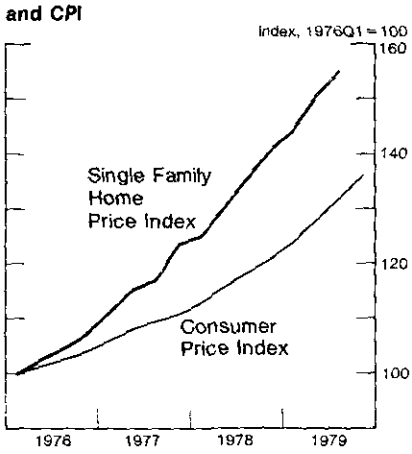
Private housing starts averaged 1.8 million, at an annual rate, during the first three quarters of 1979, down from the 2.1 million pace in the latter part of 1978. Starts fell to about a 1.5 million rate in November and December, however, when the terms and availability of construction and mortgage credit tightened dramatically in response to the October 6 monetary actions by the Federal Reserve. Home sales also fell in the closing months of the year, and prices gave some sign of leveling off. In contrast, though, to the 1973 housing downturn, builders are not saddled with outsized inventories of unsold units and rental vacancy rates generally are very low.

Over the course of 1979, single family starts fell almost a third from the very high level of the preceding year. Starts of multi-family units

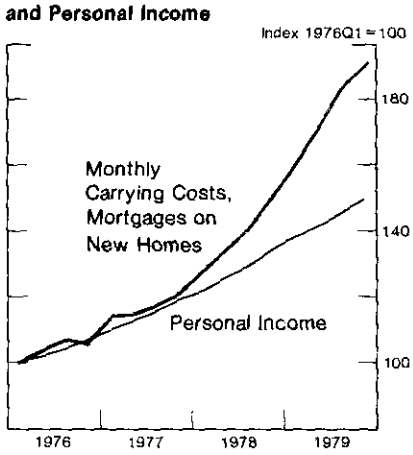
Private Housing Starts



New Home Prices and CPI



Monthly Carrying Costs and Personal Income



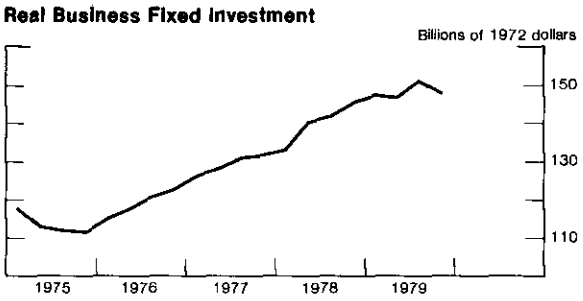
declined only 10 percent. An increase in starts of multi-family units built for sale as condominiums or cooperatives was more than offset by a decline in unsubsidized rental units. Building under the Section 8 rental-subsidy program of the Department of Housing and Urban Development accounted for one-quarter of all multi-family units, about the same proportion as in 1978.

Business Spending

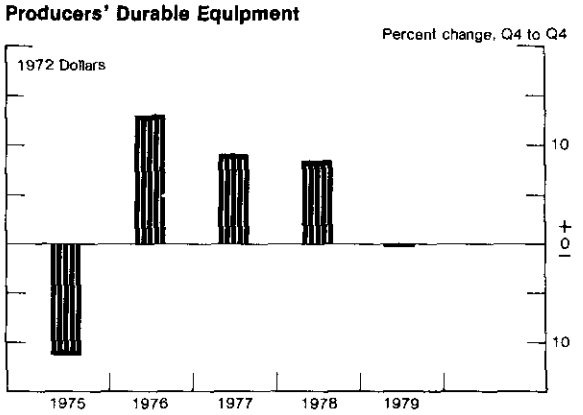
Spending policies of businesses were generally cautious last year as firms, anticipating some slowing of sales, attempted to avoid creating excess capacity or accumulating unwanted inventories. Real business fixed investment rose only 1-3/4 percent during 1979 compared with 10-1/2 percent in the previous year. As has been common in the advanced stages of economic expansions, spending increases were concentrated in structures, for which there is a long lag between the formulation of plans and the completion of new facilities; earlier in the expansion, capital spending had been dominated by shorter-lived producers' durable equipment such as trucks and fleet autos. Most of the advance in nonresidential structures during 1979 was for commercial and industrial buildings. Investment in equipment was little changed over the year, with gains in machinery and aircraft offsetting declines in motor vehicles.

Given the continuing need for new capital to improve productivity, and thereby to alleviate inflationary pressures and to support rising living standards, the level of business fixed investment last year left much to be desired. After allowance for replacement requirements, the net addition to the nation's capital stock was small. At the end of 1979, the ratio of the stock of business fixed capital to the size of the labor force differed little from the 1975 level; in contrast, the capital-labor ratio increased

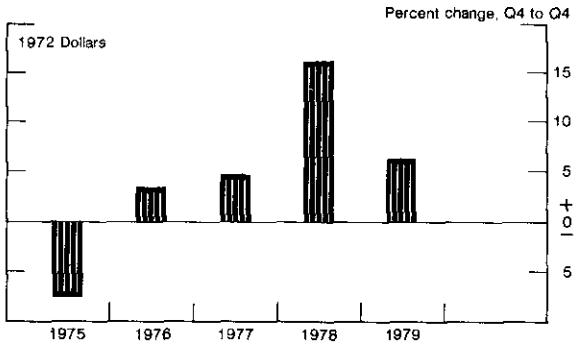
Real Business Fixed Investment



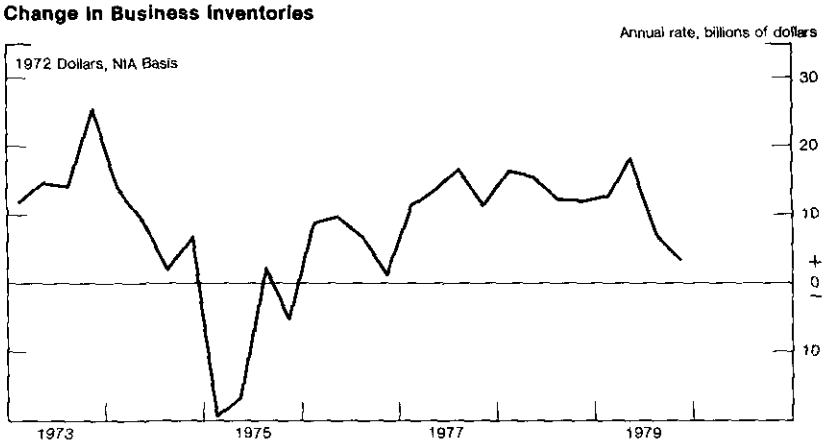
Producers' Durable Equipment



Nonresidential Structures

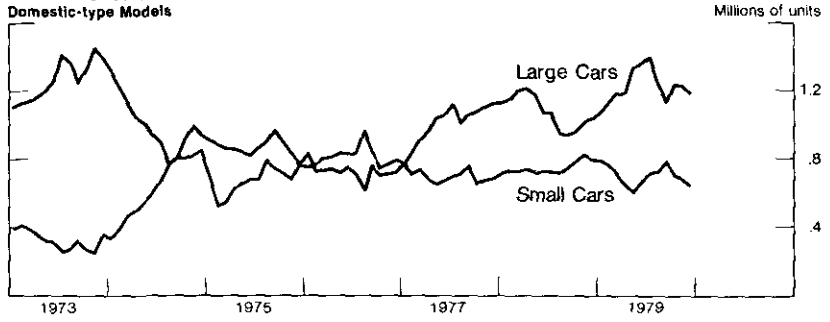


Change in Business Inventories

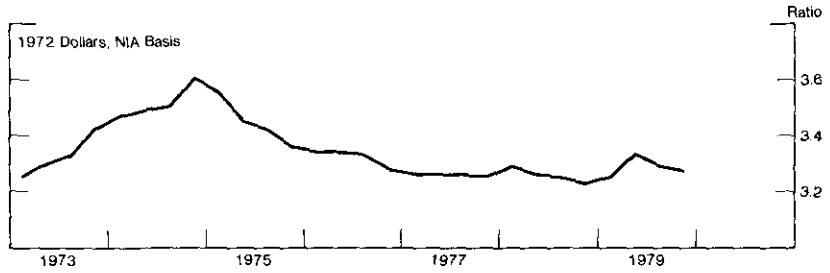


Auto Inventories

Domestic-type Models



Business Inventories Relative to Sales



at an average annual rate of 2.7 percent over the decade of the 1960s, when productivity and real income per capita grew rapidly.

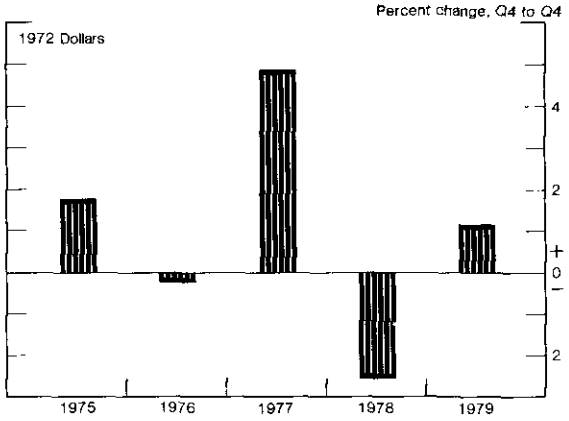
Businesses generally attempted to maintain lean inventories last year. Total inventory investment in constant dollars did accelerate during the first half of the year, however, reflecting primarily an inventory imbalance for large domestic automobiles. After mid-year, however, auto makers combined production cutbacks with price incentives to bring stocks back into line with sales. Outside of the automobile industry, businesses generally succeeded in controlling inventory positions throughout 1979. This goal became especially important toward the end of the year when short-term interest rates rose substantially, increasing inventory carrying costs. By year-end, the real stock-sales ratio for manufacturing and trade was in the normal range, suggesting an absence of the kind of inventory imbalances that frequently have aggravated recessionary tendencies in the past.

Government Sector

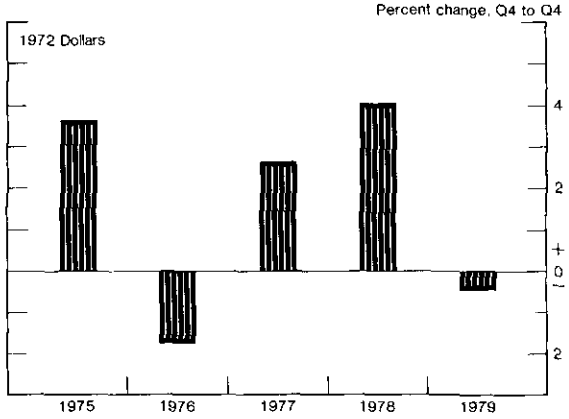
Government outlays for goods and services were about unchanged during 1979 following a moderate rise during the previous year. Public sentiment for spending restraint continued to affect decision-making by all levels of government; federal fiscal policy was additionally influenced by the need to avoid any aggravation of inflationary forces in the economy.

Real federal purchases grew about one percent during 1979, as higher defense spending more than offset slower outlay growth in the strategic petroleum reserve and farm price support programs. Total federal expenditures--including transfers--recorded a faster rate of growth in 1979 than in 1978, owing in part to a large mid-year cost of living increase for social security recipients and to higher interest payments on the public debt. However,

Federal Government
Purchases of Goods and Services



State and Local Government
Purchases of Goods and Services



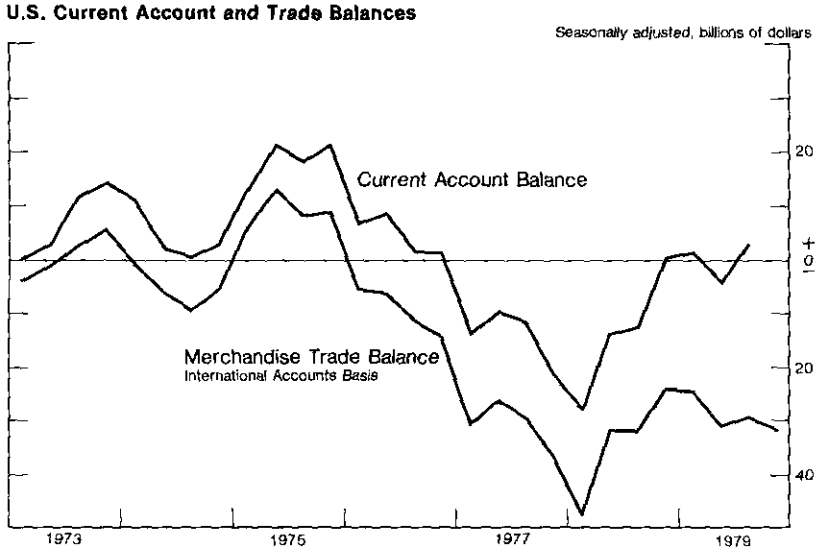
inflation-induced increases in nominal incomes and previously legislated increases in social security taxes resulted in a sizable rise in federal tax collections, and, as a result, the federal budget deficit--on a national income accounts basis--declined considerably over the year. The high employment budget surplus, an indicator of the thrust of discretionary fiscal policy, increased, signaling greater restraint on aggregate demand.

At the state and local level, real purchases of goods and services declined marginally during 1979 following a sizable increase a year earlier. Construction spending was particularly depressed following federal cutbacks in grants for local public works and public employment programs. Moreover, states and localities also attempted to limit spending by holding down employment growth; the increase in employment during 1979 was about the same as in the previous year but was considerably less than the average annual gains recorded earlier in the decade. Despite this slowdown in the pace of spending, the fiscal position of states and localities deteriorated in 1979 as revenue growth fell far short of the gains posted in the previous year. Tax cuts by many governmental units and lower car sales and gasoline consumption limited the growth of income and sales tax revenues. As a result, states and localities showed their first operating deficit (budget position net of social insurance funds) in three years.

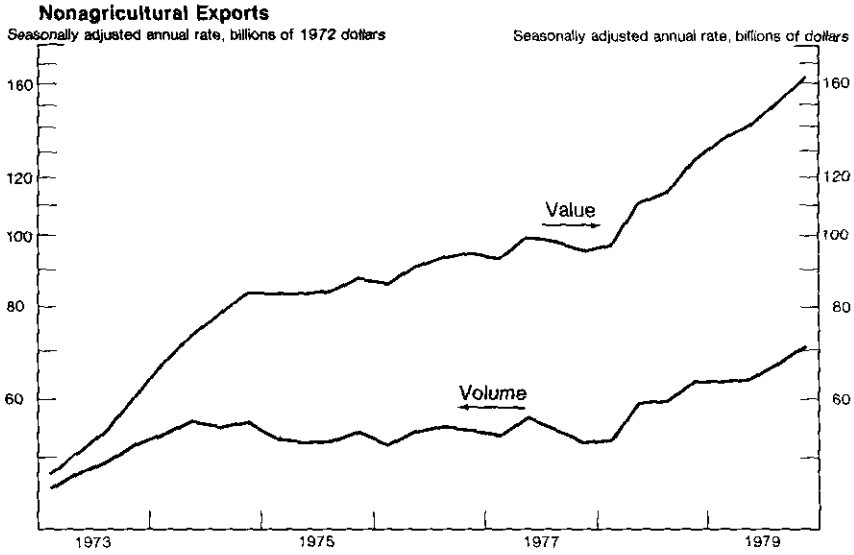
International Trade and Payments

Net exports of goods and services were the only major sector that turned in as strong a performance in 1979 as in 1978. On a GNP basis, real net exports increased about $8 billion last year. The U.S. merchandise trade deficit, although swollen by a $18 billion increase in the cost of imported oil, was $29 billion in 1979, $5 billion less than in 1978.

U.S. Current Account and Trade Balances



Nonagricultural Exports

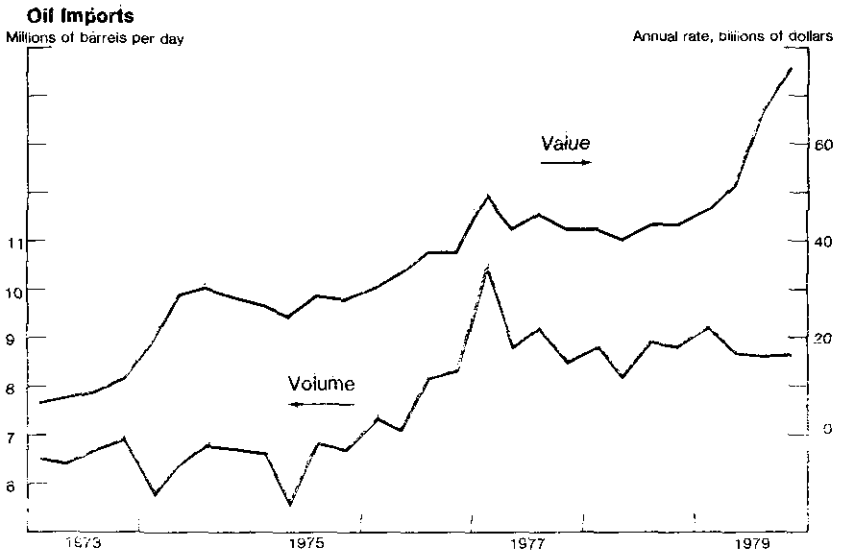


The volume of exports continued to expand rapidly during the past year. Agricultural exports jumped to record rates in the second half as drought in the Soviet Union and Eastern Europe boosted sales. More importantly, the volume of nonagricultural exports rose about 12 percent in 1979; U.S. producers benefited from an improved competitive position brought about by the depreciation of the dollar in 1977 and 1978 and from relatively robust economic growth abroad.

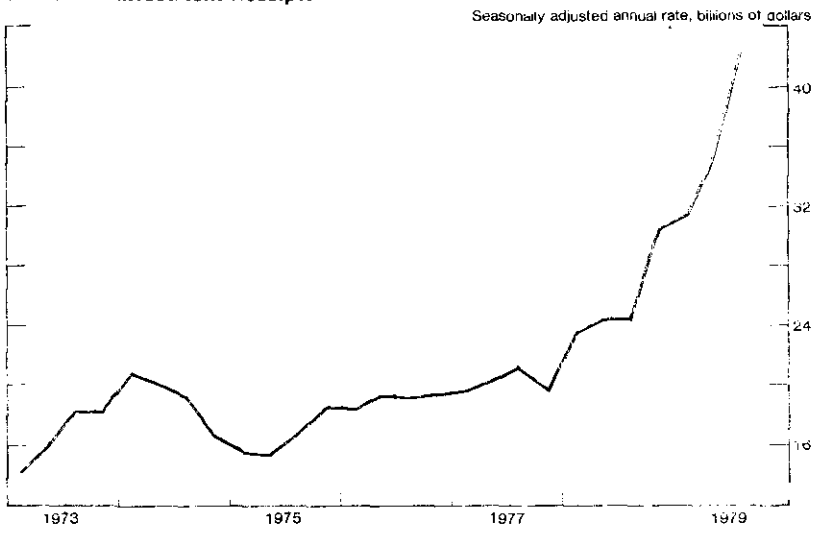
In contrast, U.S. import demand was damped by the sluggish performance of domestic income and industrial production. Imports other than oil rose only marginally in volume terms in 1979, although foreign auto producers captured a record share of the U.S. market as consumer preferences shifted toward fuel-efficient cars. At the same time, the volume of oil imports was virtually unchanged from the 1978 level, with reduced consumption offsetting the impact of a rebuilding of inventories. World oil prices, after remaining flat for two years, jumped sharply. The average cost per barrel of imported oil in December, 1979, was 87 percent above the level at the end of 1978. By the fourth quarter, U.S. oil imports were at an annual rate of $75 billion, compared with a $43 billion rate a year earlier.

The current account, which was in deficit by about $14 billion in each of the two previous years, was roughly in balance in 1979. Net receipts from service transactions, continuing their rapid growth of recent years, offset the merchandise trade deficit. The net return on foreign direct investment was especially strong, reflecting continued economic expansion abroad, the favorable effects of the 1977-78 depreciation on the dollar value of foreign profits, and the surge in overseas earnings of U.S. oil companies. Total earnings on U.S. direct investments abroad were on the order of $37 billion;

Oil Imports



U.S. Direct Investment Receipts



perhaps half of these earnings were reinvested abroad and therefore recorded also as an outflow of U.S. private capital. Earnings of foreign direct investments in the United States also rose, but they are on a much smaller scale.

SECTION 3. PRICES, WAGES, AND PRODUCTIVITY

In 1979 prices advanced at historically high rates, primarily as a result of pressures from energy and labor costs. The fixed-weighted price index for gross domestic business product, a broad measure of aggregate prices, rose about 10 percent during 1979, a pace more than 1-1/4 percentage points above the previous year's rate of increase. Other price measures increased even more: the fixed-weighted price index for personal consumption expenditures rose 10-3/4 percent while the Consumer Price Index increased 13-1/4 percent, the differences between these two indicators reflecting mainly alternative conceptual treatments of homeownership costs. At the producer level, prices of finished consumer goods were up about 12-1/2 percent over the course of last year.

Rapid increases in energy prices, particularly for petroleum products, dominated inflation developments during the year. Imported oil priced under long-term contracts rose steadily, from an official OPEC contract price of $12.91 per barrel in December 1978 to prices ranging from $24 to $30 per barrel one year later. Moreover, the stockpiling of petroleum by some countries and production cutbacks in Iran resulted in spot market prices that were considerably above official OPEC levels. At the same time, in the U.S. market the Producer Price Index for crude oil was up about 50 percent during 1979, reflecting both price increases for domestic uncontrolled oil and the initiation of the Administration's decontrol program on June 1.

The large increases experienced in petroleum prices had significant direct and indirect effects. Retail gasoline prices rose more than 50 percent, and fuel oil prices advanced almost 60 percent despite some softening

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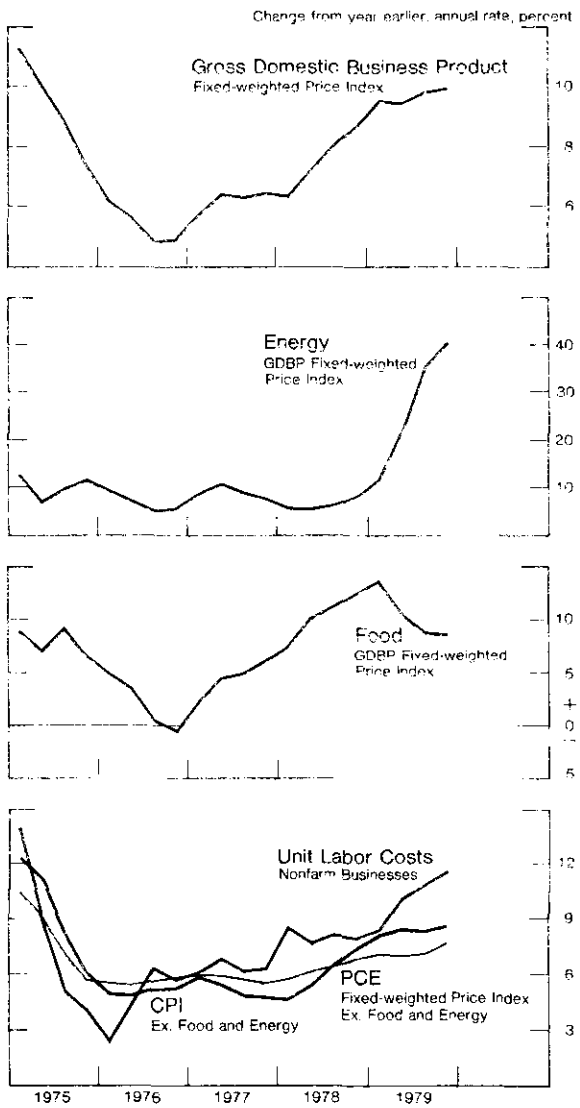
Labor Costs and Prices



in demand that was attributable both to conservation and to mild weather late in the year. In addition, rising energy costs led to faster price increases for a number of other consumer goods, including transportation services and residential rents. At the producer level, prices of goods such as industrial chemicals and plastics also reflected the steep runup in energy costs.

In contrast to energy prices, food prices increased less sharply in 1979 than in 1978. Over the four quarters, consumer food prices rose 10-1/4 percent, following an 11-3/4 percent increase in 1978. Although beef remained in relatively short supply during 1979, the greater availability of other meats and poultry contributed to some deceleration of food prices during the summer.

Inflationary pressures persisted in sectors outside energy and food. Prices of consumer goods excluding food and energy accelerated during 1979: the PCE fixed-weighted price sub-index for such items rose 7-3/4 percent in 1979 compared with 7 percent the previous year, and the corresponding CPI sub-index rose at an even faster rate. Prices of capital equipment and nonresidential structures rose at a faster pace in 1979 than in 1978. Price movements in commodity markets were quite volatile throughout the year and reflected considerable speculative activity related in part to international political and military tensions.

Wage increases in the nonfarm business sector moderated very slightly to 8 percent in 1979, compared with 8-1/2 percent the year before. Compensation per hour, which includes fringe benefits and employer contributions for social insurance as well as wages, rose almost 9 percent, just a shade less than in 1978. The Administration's voluntary pay standard probably restrained the advance in compensation somewhat in the face of accelerated price inflat.

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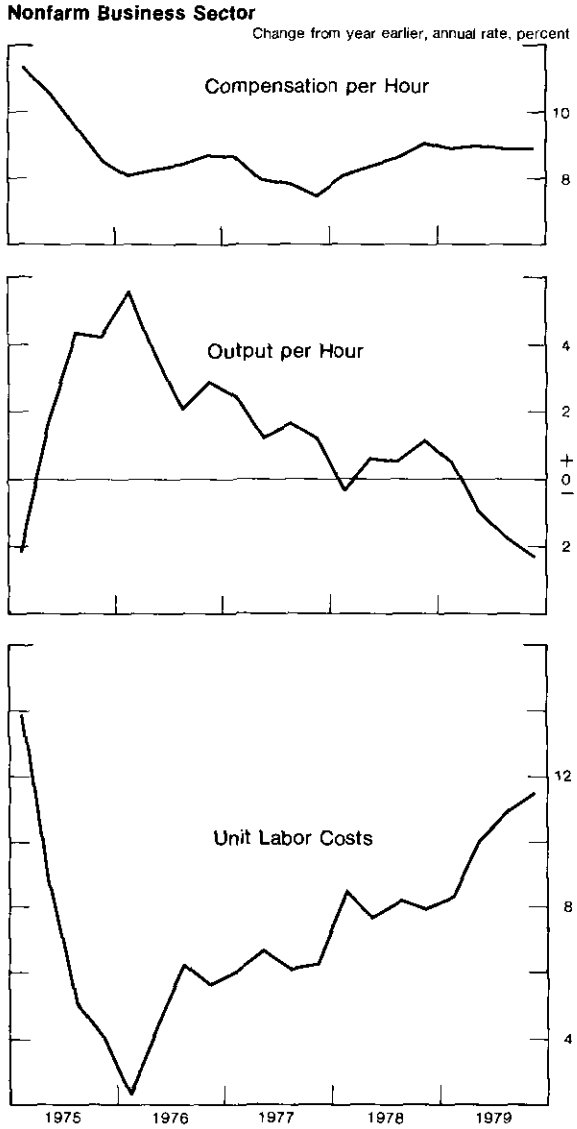
Unit Cost Indicators

Nonfarm Business Sector



however, sectors in which cost-of-living protection is prevalent, such as manufacturing, generally experienced the largest gains even though demand for labor in those sectors was relatively weak.

Labor productivity--that is, output per hour worked--declined 2-1/4 percent in the nonfarm business sector. As a result, despite the slowing of compensation, the rise of unit labor costs accelerated sharply, from 8 percent in 1978 to 11-1/2 percent in 1979. The poor performance of productivity reflected in part the continuation of the weak trend of recent years, associated with sluggish growth of the capital stock, changes in the composition of the labor force, and other long-range factors. In addition, however, there was a cyclical element in the drop in productivity; there is normally a tendency for output per hour to drop when economic expansion decelerates, as employers initially are loath to lay off trained workers for what might prove a short period of slack.

Many workers saw their wage gains outstripped by price increases during 1979. The lack of progress in real wages is not surprising, given the drop in productivity and the adverse terms-of-trade impact of the surge in foreign oil prices. Nonetheless, American workers have become accustomed to an upward trend in their purchasing power, and there are likely to be strong catch-up wage demands this year. The Administrations's 1980 wage standards take this fact into account, permitting somewhat bigger wage hikes for those workers who experienced relatively small gains in 1979.

SECTION 4. LABOR MARKETS

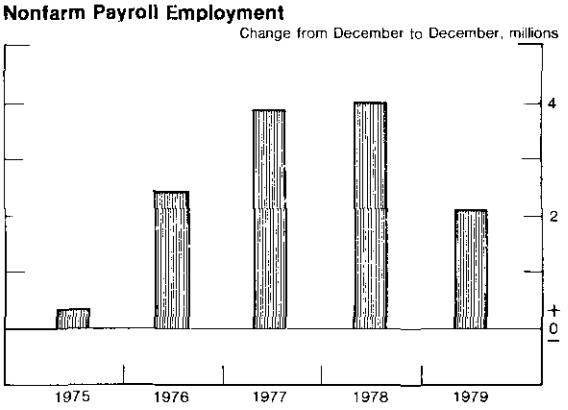
The demand for labor remained quite strong in 1979, despite the sluggishness of output growth. Firms experiencing gains in sales added to their payrolls, while those encountering dips in the demand for their products evidently tended to retain their workers--with the negative consequences for productivity and unit labor costs noted in the preceding section. Over the year as whole, the number of workers on the payrolls of nonfarm establishments increased 2.1 million, less than in 1978, but nonetheless a sizable gain.

The major area of greatest strength in hiring was the service sector, where employment rose fairly steadily throughout the year. Manufacturing payrolls, in contrast, declined slightly in the second half of 1979. This weakness was concentrated among durable goods producers, especially in the motor vehicles and steel industries. By the end of the year, about 130,000 auto workers were on indefinite layoff.

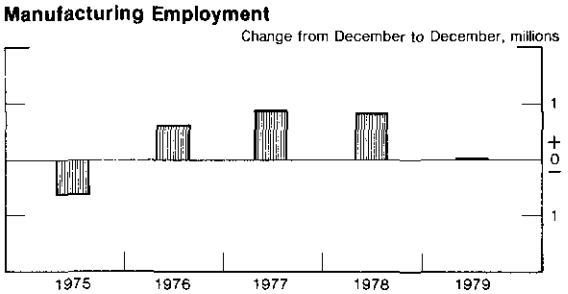
The strength of labor demand in the service sector may help to explain the large increase in the number of women in the labor force last year. Many of the occupational groups in the service sector traditionally have had high proportions of female workers. Adult women have accounted for a large percentage of labor force growth in the past several years, and this pattern continued in 1979, when they accounted for two-thirds of the expansion in both the labor force and total employment.

The overall labor force participation rate grew less rapidly in 1979 so that the smaller increase in employment was still sufficient to hold the unemployment rate almost constant throughout the year, at about 5.8 percent. This is a level that, given the composition of the work force and other

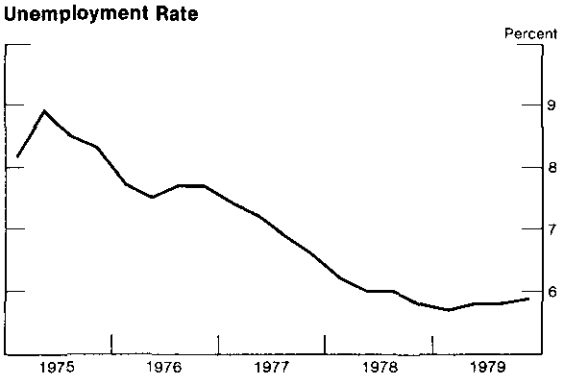
Nonfarm Payroll Employment



Manufacturing Employment



Unemployment Rate



characteristics of the labor market, most analysts agree is today consistent with relatively tight labor supplies. Certainly, the proportion of the population employed remained at an all-time high during 1979, and many employers continued to report difficulty in finding well qualified workers. Some statistical indicators of labor market tautness did, however, begin to move in the direction of greater ease as the year progressed; for example, the share of the labor force on layoff, the unemployment rate for males 25 and over, and the blue collar jobless rate all increased a bit after the first quarter. In January of this year, when the unemployment rate rose from 5.9 to 6.2 percent, the increase largely reflected layoffs of adult male, blue collar workers.

There were no significant changes over the past year in the structure of unemployment. The jobless rates for nonwhites, for teenagers, and for black teenagers have not improved relative to those for other major population groups. This January, the nonwhite unemployment rate was 11-3/4 percent, teenage unemployment was 16-1/4 percent, and black teenage unemployment was 34-1/2 percent. The unemployment rate among nonwhites has remained about twice the level for whites, and teenage unemployment continues to be about three times the rate for adults.

SECTION 5. DOMESTIC FINANCIAL MARKETS

Interest Rates

Market rates of interest rose substantially during 1979, surpassing the previous highs recorded in 1974. As in that earlier year, sharply accelerated inflation created strong demands for money and credit, and correspondingly intense upward pressures on interest rates. These pressures were most evident in the second half of the year, when the Federal Reserve had to adopt an increasingly restrictive posture in order to keep the monetary aggregates within the ranges set earlier and reported to the Congress. On October 6, the System took certain actions aimed at providing greater assurance that its monetary objectives would be achieved. A fundamental change was made in the System's operating procedures, shifting the day-to-day focus of open market operations from the federal funds rate to the growth of member bank reserves.[1] At the same time, the discount rate was raised one percentage point, to 12 percent, and an 8 percent marginal reserve requirement was applied to certain managed liabilities of commercial banks.[2]

Over the course of 1979, interest rates on short-dated money market instruments such as Treasury bills, large CDs, and commercial paper generally rose 2-1/2 to 3 percentage points. In long-term debt markets, taxable bond

1/ Appendix B to this report describes the new operating procedures.

2/ The marginal reserve requirement applies to increases, above a base level, in the total managed liabilities of member banks, Edge corporations, and U.S. agencies and branches of foreign banks. These liabilities include large time deposits ($100,000 and over with maturities of less than a year), Eurodollar borrowings, repurchase agreements against U.S. government and agency securities, and federal funds borrowings from nonmember institutions. (Federal funds borrowings from member banks, Edges, and agencies and branches are exempt to avoid double counting for reserve requirements, and a deduction is permitted against RPs for U.S. government and agency securities held in trading accounts.)

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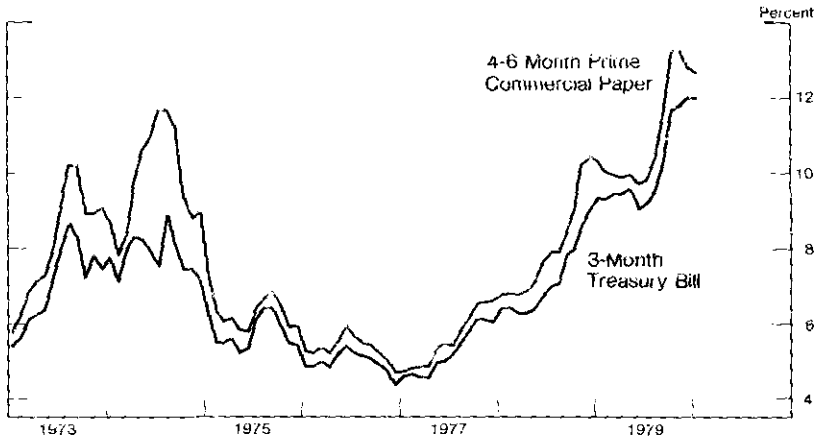
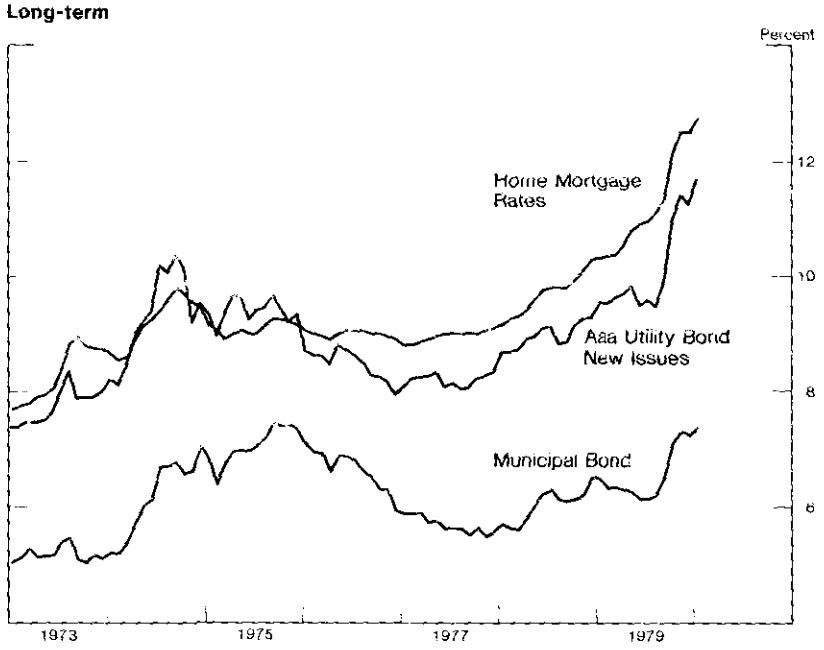
Interest Rates

Short-term



Long-term



yields increased 1-1/2 to 2 percentage points, and interest rates on conventional home mortgage loans increased about 2-1/2 percentage points. Short-term rates have fluctuated around their year-end levels during the past several weeks, but bond yields have risen to new highs, apparently at least partly in reflection of concerns about the consequences of a possible step-up in defense spending on the federal budget and inflation.

Monetary Aggregates[1]

The major monetary aggregates grew more slowly in 1979 than they had in 1978. As may be seen in the chart on page 43, the deceleration was particularly marked in the case of M-1. The Federal Open Market Committee (FOMC) last February established a range of 1-1/2 to 4-1/2 percent for growth of M-1 (currency and demand deposits) in the year ending with the fourth quarter of 1979; this compared with an increase of 7-1/4 percent in the preceding year. As the Board indicated to the Congress in its initial report under the Humphrey-Hawkins Act, it was estimated that growth in M-1 during 1979 might be reduced as much as three percentage points by the shifting of funds from existing demand deposits to newly authorized automatic transfer saving (ATS) accounts across the nation and negotiable-order-of-withdrawal (NOW) accounts in New York State. This meant that the observed growth rate of M-1 might understate by three percentage points its expansion in terms of actual economic impact.

In its midyear report, the Board stated that the FOMC had reaffirmed the 1-1/2 to 4-1/2 percent range, with the understanding that this range would

1/ The discussion in this section is cast in terms of the former definitions of the monetary aggregates, since those were the basis for decisions during 1979.

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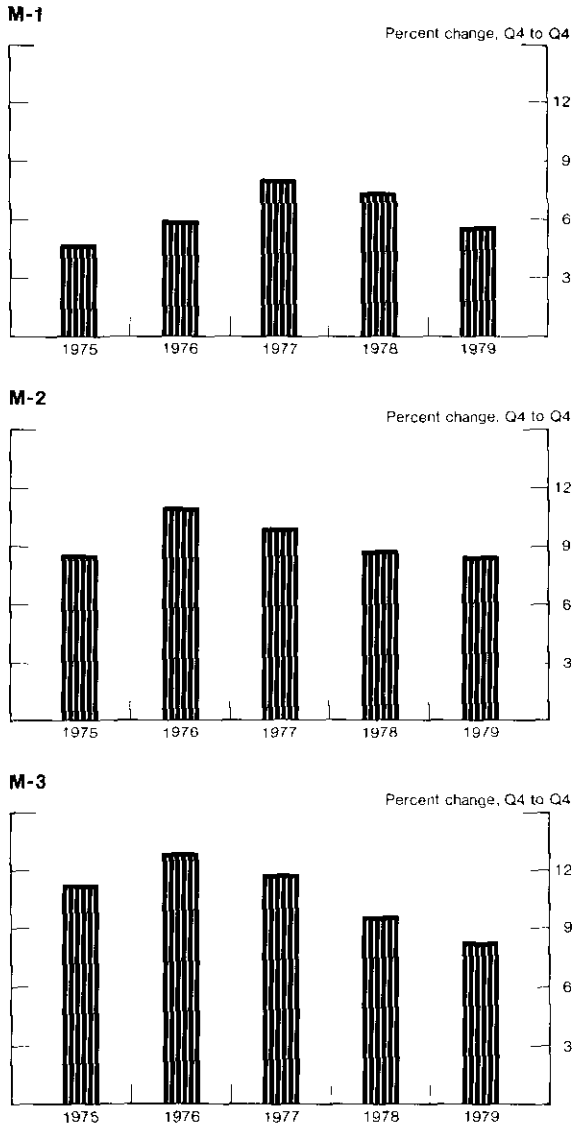
Money Stock Growth
Former Concepts



be adjusted upward to the extent that the impact of ATS/NOW account shifts fell short of the original three percentage point estimate. With inflows to ATS and NOW accounts falling off sharply, the FOMC employed an adjusted M-1 range of 3 to 6 percent during the remainder of the year, based on an expected ATS/NOW effect of around 1-1/2 percent.

In the event, M-1 increased 5.5 percent during 1979, and the estimated depressing effect of ATS/NOW accounts amounted to about 1-1/4 percentage points. The aggregate was approaching the upper bound of its range in the late summer, but its growth moderated in the closing months of the year (see chart on page 45). This slower growth has continued into 1980.

M-2, which includes, in addition to M-1, bank time and savings deposits other than large negotiable CDs, increased 8.3 percent between the fourth quarters of 1978 and 1979. This is slightly above the FOMC's range of 5 to 8 percent, established last February and reaffirmed in July. Expansion of the interest-bearing component was strong, as small denomination time deposits grew at a very brisk pace, offsetting a contraction in passbook savings accounts. Six-month money market certificates (MMCs) accounted for all of the growth in small time and savings accounts; inflows were especially strong after March, when the federal regulatory agencies eliminated (for periods when the 6-month Treasury bill rate exceeds 9 percent) the one-quarter percentage point interest differential that had previously given thrift institutions a competitive advantage in the MMC market. The agencies in March also prohibited the compounding of MMC interest. These actions were taken partly to reduce cost pressures on thrift institutions and partly to help moderate the flow of funds to depositary institutions so as restrain inflationary pressures.

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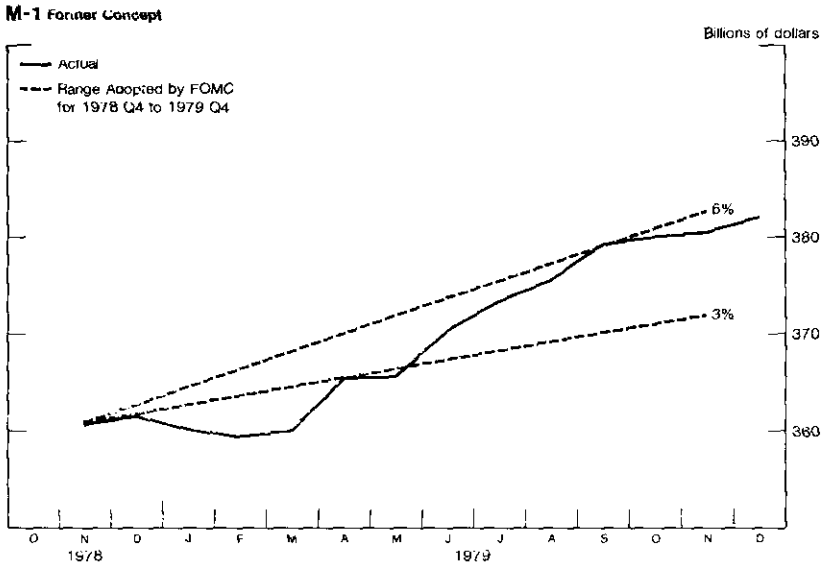
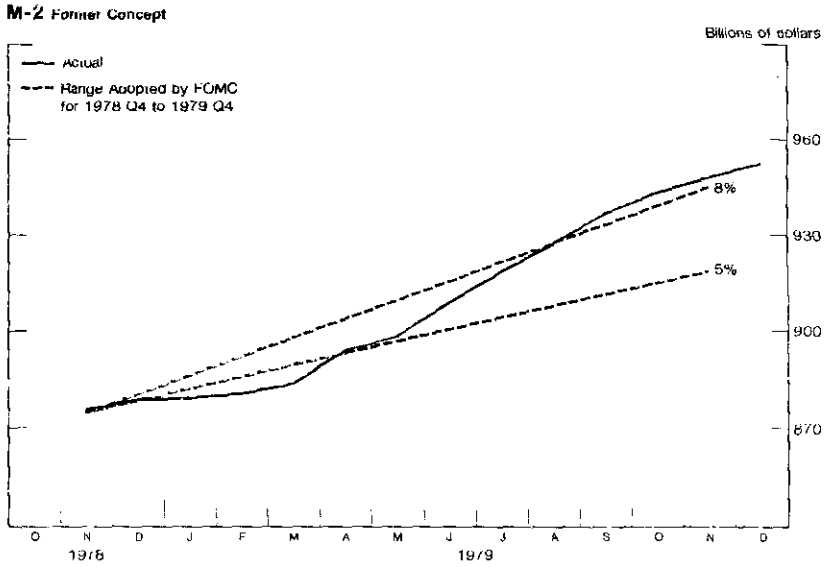
Growth of Money and Credit in 1979

M-1 Former Concept

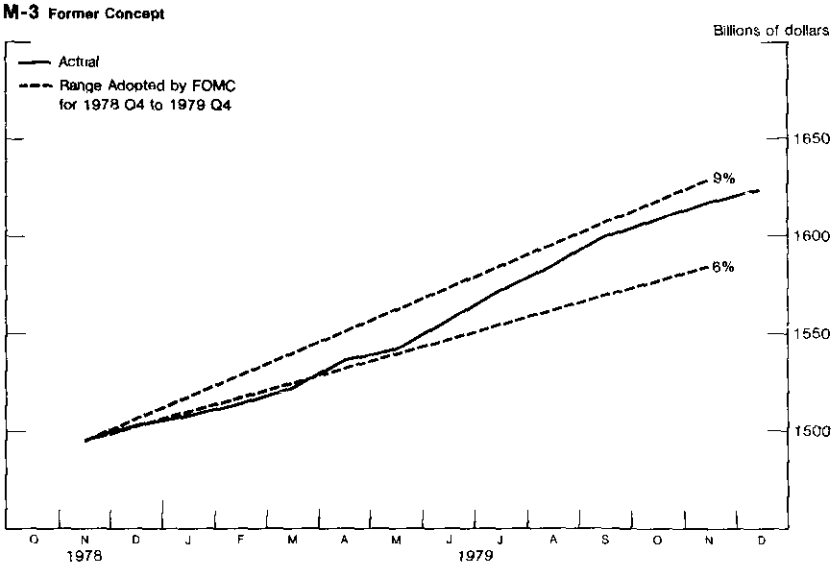


M-2 Former Concept

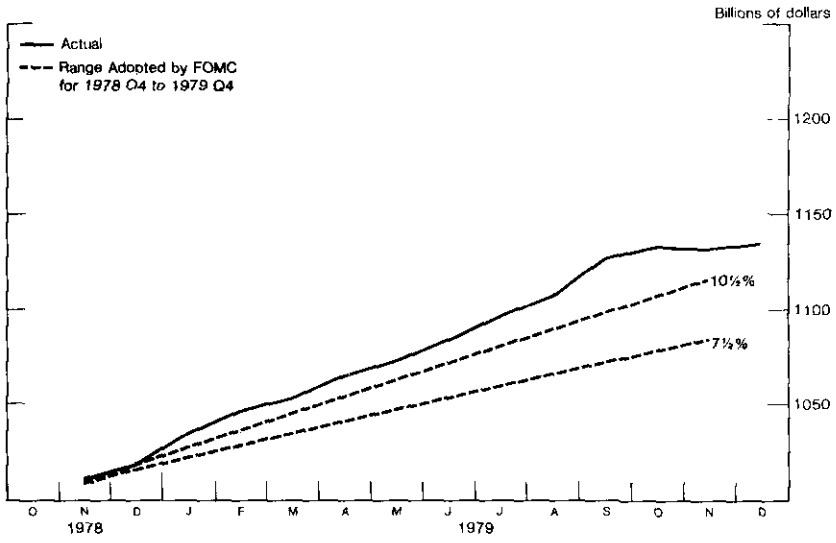


Growth of Money and Credit in 1979

M-3 Former Concept



Commercial Bank Credit

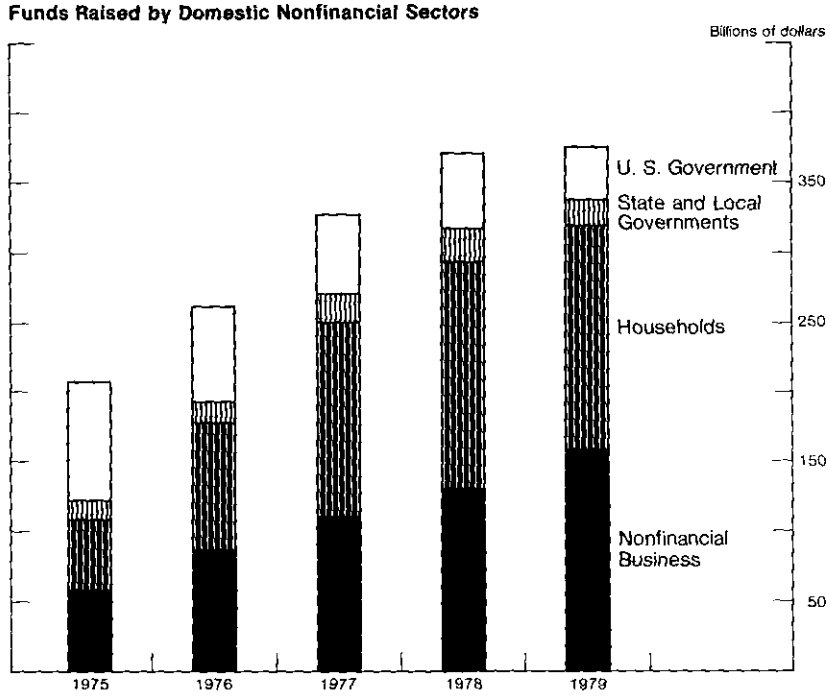


M-3, which is M-2 plus deposits at thrift institutions, rose 8.1 percent in 1979, within the FOMC's range of 6 to 9 percent. Deposits at savings and loan associations, mutual savings banks, and credit unions expanded 7-3/4 percent, down from about 10-1/2 percent in 1978 but still well above rates recorded in previous periods of high market interest rates. The key to the sustained growth of thrift institution deposits--particularly for S&Ls and MSBs--was the MMC; however, there was also a sizable increase in large denomination time deposits outstanding at S&Ls.

Credit Flows

Because market interest rates rose further relative to the returns on fixed interest ceiling time and savings deposits at commercial banks and thrift institutions, a large volume of funds was placed instead in market debt instruments and in mutual funds or investment trusts during 1979. Money market mutual funds registered spectacular growth, their total assets increasing from $10 billion to $45 billion. (A record surge since year-end has boosted their total assets above the $55 billion mark.) However, the depositary institutions, confronted with heavy credit demands, were able to obtain the lendable funds they desired through the issuance of ceiling-free liabilities such as large CDs, RPs, federal funds, and Eurodollar borrowings and, in the case of savings and loan associations, through borrowings from Federal Home Loan Banks. Consequently, depositary institutions continued to account for a large proportion of credit provided to nonfinancial sectors of the economy, in contrast to the pattern observed at other times when market interest rates have been high. Commercial bank credit increased 12.2 percent over the year ending in the fourth quarter of 1979--as compared with

Funds Raised by Domestic Nonfinancial Sectors



the FOMC's projection of 7-1/2 to 10-1/2 percent--despite a leveling off in the fall.

The total volume of funds raised by domestic nonfinancial sectors of the economy in 1979 was about the same as in 1978. Reduced borrowing by governmental units approximately offset an increase in takings by business firms. Aggregate credit expansion was greatest in the first three quarters of the year, as the tightening of financial markets that accompanied the System's October actions contributed to a steep drop in borrowing by households and businesses in the fourth quarter.

The credit needs of the U.S. Treasury declined markedly in 1979 owing to the reduction in the federal budget deficit. The operating budgets of state and local governments meanwhile moved in the opposite direction, from surplus to deficit, but their net borrowing, too, diminished. Although the tax-exempt market was used much more extensively as a source of funds for residential mortgage finance, restrictive IRS regulations brought a virtual cessation of the advance refunding activity that had swelled state and local government bond issuance in the previous year.

The strong demand for housing, both as shelter and as an investment, and an evident desire to maintain past spending levels in the face of declining real disposable income kept borrowing by the household sector at an historically high level during 1979. Over the first three quarters, debt expansion exceeded income growth, and loan repayments as a percent of disposable income moved to a new high. By the latter part of 1979, signs had begun to emerge--in data on loan delinquencies and bankruptcies--that families were encountering some difficulty in meeting their financial obligations.

The heavy debt burdens may have combined with the higher level of interest rates to damp household credit use in the fourth quarter. In addition, however, credit availablity became a significant factor as institutions tightened credit standards or curtailed lending in response to greater uncertainty about financial prospects and reduced earnings margins. Credit supplies were most severely constrained in those parts of the country with low usury ceilings; the year-end federal legislation providing a three month override of state usury ceilings may provide some relief for borrowers in such areas.

Borrowing by nonfinancial business firms increased substantially in 1979, as the growth of outlays for inventories and fixed capital outstripped the advance in internal funds generated. This "financing gap" was particularly large during the first three quarters of the year; in the fourth quarter the gap narrowed somewhat with the slowing of inventory accumulation.

Increases in business loans at banks and in net issuance of commercial paper accounted for most of the growth in borrowing by nonfinancial enterprises. Mortgage loans rose somewhat, reflecting the strength of commercial construction, but corporate bond issuance remained around the moderate 1978 level as companies were reluctant to incur long-term debts at historically high interest rates. The relatively heavy reliance on shorter-term borrowings was reflected in a further deterioration of traditional measures of balance sheet strength. Flow-of-funds account estimates for nonfinancial corporations indicate that their aggregate ratio of short-term debt to total debt has reached a record high and that the ratio of liquid assets to current liabilities has reached a low level seen before only in 1974. Perhaps partly for this reason, the drop-off in business borrowing in the fourth quarter was concentrated in the short-term area.

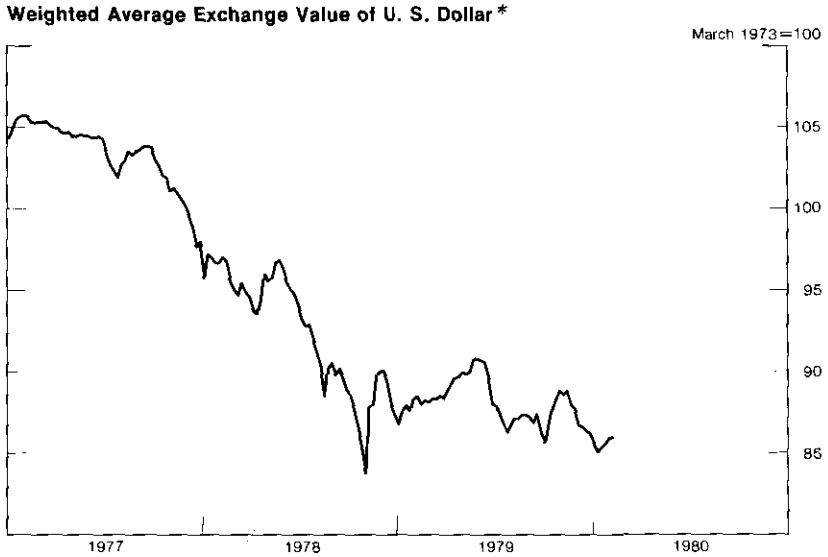
SECTION 6. FOREIGN EXCHANGE MARKETS AND THE DOLLAR

The dollar was quite strong on foreign exchange markets in the first five months of 1979, following the tightening of U.S. money market conditions and the announcement by the Treasury and the Federal Reserve of a dollar support program on November 1, 1978. The dollar rose more than 5 percent on a trade-weighted average basis, gaining 5-1/2 percent against the mark, 7-1/2 percent against the Swiss franc, and 14-1/2 percent against the yen between the end of December and the end of May. During this period, U.S. and foreign monetary authorities entered the markets to moderate exchange rate movements, reversing in the process a large portion of their 1978 intervention purchases of dollars. By the end of May the Federal Reserve had repaid all its outstanding swap debts to other central banks, the Treasury had reconstituted all of the balances it had raised through the issuance of foreign-currency denominated notes, and the Federal Reserve and the Treasury both completed repayment of their pre-1971 Swiss franc indebtedness.

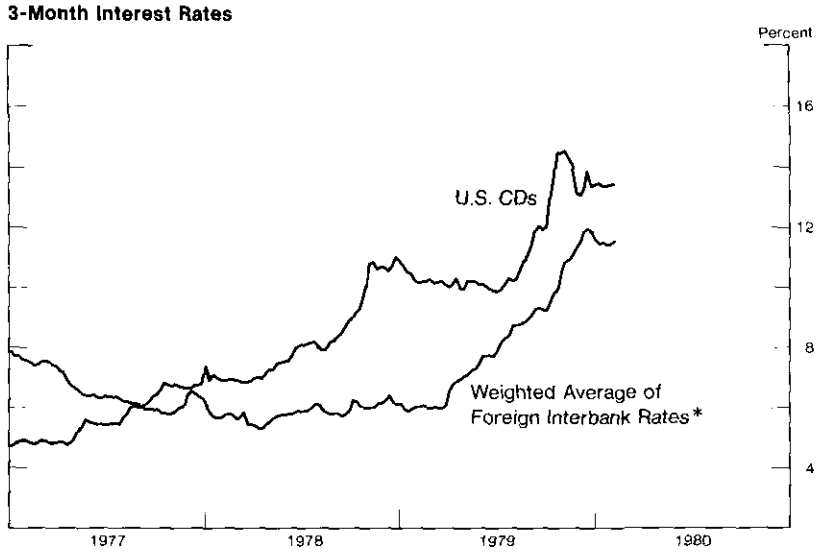
In early summer, however, the dollar weakened, apparently mainly in response to the failure of U.S. inflation to moderate and to the absence of a concerted U.S. program to solve its energy problem. The dollar's weakness intensified in early June and continued into September, despite a series of increases in the Federal Reserve's discount rate, a gradual rise in the federal funds rate, and renewed heavy exchange market intervention in support of the dollar.

By early October the dollar had retraced all of its rebound of earlier in the year, and selling pressures were mounting rapidly amidst accelerating price rises in gold and other commodities and other signs of a

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.

worsening in expectations of inflation. In these circumstances, the Federal Reserve's announcement on October 6 of a series of anti-inflation measures--described in the preceding section--was accompanied by a sharp advance of the dollar on exchange markets. By mid-November, the dollar had risen about 4 percent on a weighted-average basis from its early October lows. Foreign monetary authorities subsequently tightened their policies to deal with similar inflationary pressures abroad, and the dollar lost strength. From mid-November through the end of the year the dollar drifted lower in thin markets unsettled by developments associated with the taking of American hostages in Iran. At year-end, the dollar stood close to its early October lows on a weighted-average basis. The dollar has been relatively stable in recent weeks, with trading rather light in an environment of heightened international political uncertainties.

APPENDIX A

DESCRIPTION OF THE NEWLY DEFINED MONETARY AGGREGATES

A-1

THE REDEFINED MONETARY AGGREGATES

I. Background

The Federal Reserve has redefined the monetary aggregates. This action was prompted by the many financial developments that have altered the meaning and reduced the significance of the old measures. Some of these developments have been associated with the emergence in recent years of new monetary assets--for example, NOW accounts and money market mutual fund shares--while others have altered the basic character of standard monetary assets--for example, the growing similarity of and the growing substitution between the deposits of thrift institutions and those of commercial banks.[1/] In the process of redefinition a set of Board staff proposals was published in January 1979.[2/] Comments on these proposals received from the public and from invited experts, together with deliberations within the Federal Reserve System and further research by Federal Reserve staff, contributed to the Board's selection of the newly defined measures.

Given the changes that have occurred in financial practices in recent years, the new measures should aid both the Federal Reserve and the public in interpreting monetary developments. However, many of the changes in the payments mechanism and in the character of financial assets that have rendered such a redefinition necessary--some of which are ongoing--have also added significantly to the complexity of the monetary system. As

1/ A discussion of many of these developments can be found in, "A Proposal for Redefining the Monetary Aggregates," Federal Reserve Bulletin (January 1979), pp. 14-17.

2/ See "A Proposal," pp. 13-42. The potential need for redefinition, in light of numerous financial innovations, was recognized by the Advisory Committee on Monetary Statistics. See Improving the Monetary Aggregates: Report of the Advisory Committee on Monetary Statistics (Board of Governors of the Federal Reserve System, June 1976), pp. 5-6, 9-12.

a consequence, it is recognized that no one set of monetary aggregates can satisfy every purpose or every user. For this reason, the principal components of the new measures--along with several related series--will be published regularly with the new aggregates. In this way, users will be able to analyze separately the components and to construct alternative measures.

The following section, Section II, presents the new aggregates and compares them to the old measures. This is followed in Section III by a discussion of the rationale underlying the redefinition. The historical behavior of the new aggregates is examined in Section IV. A final section, Section V, discusses some technical issues associated with the redefined measures: consolidation and seasonal adjustment procedures used in constructing the redefined aggregates and new data sources used in the redefinition. Three appendix tables contain annual and quarterly rates of growth of the new measures and their old counterparts.

II. The New Monetary Aggregates

Four newly defined monetary aggregates replace the old M-1 through M-5 measures. In addition, a broad measure of liquid assets has been adopted. The new aggregates are presented in Table I. Two narrow transactions measures--M-1A and M-1B--have been adopted. M-1A is basically the same as the old M-1 aggregate, except that it excludes demand deposits held by foreign commercial banks and official institutions.[1/] The other narrow measure--M-1B--adds to M-1A interest-earning checkable deposits at all depositary institutions--namely negotiable order of withdrawal (NOW)

1/ The removal of demand deposits due to foreign commercial banks and official institutions follows a recommendation of the Advisory Committee on Monetary Statistics. See Improving the Monetary Aggregates: Report, pp. 15-19.

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Table 1

New Measures of Money and Liquid Assets

Aggregate	Component	Amount in billions of dollars (not seasonally adjusted) November 1979
M-1A		372.2
	Currency	106.6
	Demand deposits[1/]	265.6
M-1B		387.9
	M-1A	372.2
	Other checkable deposits[2/]	15.7
M-2		1510.0
	M-1B	387.9
	Overnight RPs issued by commercial banks	20.3
	Overnight Eurodollar deposits held by U.S. nonbank residents at Caribbean branches of U.S. banks	3.2
	Money market mutual fund shares	40.4
	Savings deposits at all depositary institutions	420.0
	Small time deposits at all depositary institutions[3/]	640.8
	M-2 consolidation component[4/]	-2.7
M-3		1759.1
	M-2	1510.0
	Large time deposits at all depositary institutions[5/]	219.5
	Term RPs issued by commercial banks	21.5
	Term RPs issued by savings and loan associations	8.2
		2123.8
	M-3	1759.1
	Other Eurodollars of U.S. residents other than banks	34.5
	Bankers acceptances	27.6
	Commercial paper	97.1
	Savings bonds	80.0
	Liquid Treasury obligations	125.4

Note: Components of M-2, M-3 and L measures generally exclude amounts held by domestic depositary institutions, foreign commercial banks and official institutions, the U.S. Government (including the Federal Reserve), and money market mutual funds. Exceptions are bankers acceptances and commercial paper for which data sources permit the removal only of amounts held by money market mutual funds and, in the case of bankers acceptances, amounts held by accepting banks, the Federal Reserve, and the Federal Home Loan Bank System.

1/ Net of demand deposits due to foreign commercial banks and official institutions.

2/ Includes NOW, ATS and credit union share draft balances and demand deposits at thrift institutions.

3/ Time deposits issued in denominations of less than $100,000.

4/ In order to avoid double counting of some deposits in M-2, those demand deposits owned by thrift institutions (a component of M-1B) which are estimated to be used for servicing their savings and small time deposit liabilities in M-2 are removed.

5/ Time deposits issued in denominations of $100,000 or more.

accounts, automatic transfer from savings (ATS) accounts, and credit union share draft balances--as well as a small amount of demand deposits at thrift institutions that cannot, using present data sources, be separated from interest-earning checkable deposits.[1/] The new M-2 measure adds to M-1B overnight repurchase agreements (RPs) issued by commercial banks and certain overnight Eurodollars held by U.S. nonbank residents,[2/] money market mutual fund shares, and savings and small-denomination time deposits at all depositary institutions.[3/] Also, in order to avoid double counting of some deposits in this aggregate, the construction of the new M-2 involves subtracting a consolidation component--an estimate of those demand deposits thrift institutions use in servicing their savings and time deposit liabilities included in this aggregate.[4/] Redefined M-3 is equal to new M-2 plus large-denomination time deposits at all depositary institutions (including negotiable CDs) plus term RPs issued by commercial banks and savings and loan

1/ M-1B is the same as the M-1 measure that was proposed by the Board staff in January 1979. See "A Proposal," pp. 17-20.

2/ Overnight Eurodollars in M-2 are those issued by Caribbean branches of member banks. Other overnight Eurodollars and longer-term Eurodollars of U.S. residents are included in the broad measure of liquid assets, L. Data on overnight Eurodollars included in M-2 are available on a timely basis, but data on other Eurodollars--at both U.S. and non-U.S. banks abroad--are available only with a lengthy lag and do not permit a separation of overnight from term Eurodollars. As improved data sources become available, adjustments may be made to the new measures. For example, the possible inclusion of Eurodollars held by nonresidents other than banks and official institutions could be reviewed. Moreover, with Eurodollar data on a more timely basis, consideration could be given to including Eurodollars of longer than overnight maturities in a broader monetary aggregate, rather than only in L.

3/ Small-denomination time deposits are those issued in denominations of less than $100,000. Depositary institutions are commercial banks (including U.S. agencies and branches of foreign banks, Edge Act Corporations, and foreign investment companies), mutual savings banks, savings and loan associations, and credit unions.

4/ At present, because of the small amount of checkable deposits at thrifts, this M-2 consolidation adjustment removes all demand deposit holdings of mutual savings banks and savings and loan associations. See Section IV for a further discussion of consolidation procedures.

associations.[1] Finally, the very broad measure of liquid assets--L--equals new M-3 plus other liquid assets consisting of other Eurodollar holdings of U.S. nonbank residents,[2] bankers acceptances, commercial paper, savings bonds, and marketable liquid Treasury obligations.[3]

The relationship between the redefined and the old monetary aggregates is shown in Table 2. As already noted, the new M-1A measure is very similar to the old M-1 and differs in excluding demand deposits owned by foreign commercial banks and official institutions.[4] M-1B thus differs from the old M-1 by excluding these deposits, on the one hand, and, on the other, by including other checkable deposits at both commercial banks and thrift institutions. New M-2 is closer in concept to old M-3, which included savings and time deposits liabilities at all depositary institutions (other than negotiable CDs at large commercial banks), than it is to old M-2, which excluded the public's holdings of savings and time deposits at thrift institutions. The major differences between the new M-2 and old M-3 measures are that new M-2 includes money market mutual fund shares and overnight RPs and Eurodollars--none of which appeared in any of the old monetary aggregates--and that it excludes all large-denomination time deposits. The only large-denomination time deposits removed from the old M-3 (and the old M-2) measure were negotiable CDs at large commercial banks--amounting to $95.9 billion in November 1979--while, as the table shows, it contained $151.2 billion of other large-denomination time deposits at both commercial banks and thrift institutions. By including all large-denomination time deposits at all depositary institutions, the new M-3 is closer in concept to the old

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1/ Large-denomination time deposits are those issued in denominations of $100,000 or more.

2/ See footnote 2, page 4.

3/ In general, the components of M-2, M-3, and L exclude amounts held by depositary institutions, money market mutual funds, the Federal government (including the Federal Reserve), and foreign commercial banks and official institutions. Marketable liquid Treasury obligations are those with remaining maturities of 18 months or less.

4/ The new M-1A also includes a very small amount of M-1-type balances at certain U.S. banking offices of foreign banks outside New York City, which are not in the old M-1.

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Table 2

Relationship Between New and Old Monetary Aggregates

Aggregate and Component	Amount in billions of dollars (not seasonally adjusted) November 1979
Old M-1	382.6
Less demand deposits of foreign commercial banks and official institutions	10.4
Equals: New M-1A[1/]	372.2
Plus other checkable deposits	15.7
Equals: New M-1B	387.9
Old M-2	945.3
Plus savings and time deposits at thrift institutions	664.2
Equals: Old M-3	1609.5
Plus overnight RPs and Eurodollars	23.4
Plus money market mutual fund shares	40.4
Plus demand deposits at mutual savings banks[2/]	1.0
Less large time deposits at all depositary institutions in current M-3	151.2
Less demand deposits of foreign commercial banks and official institutions	10.4
Less consolidation component[3/]	2.7
Equals: New M-2	1510.0
Plus large time deposits at all depositary institutions	219.5
Plus term RPs at commercial banks and savings and loan institutions	29.8
Equals: New M-3	1759.1
Memo:	
Old M-2	945.3
Plus negotiable CDs at large commercial banks	95.9
Equals: Old M-4	1041.2
Old M-3	1609.5
Plus negotiable CDs at large commercial banks	95.9
Equals: Old M-5	1705.4

1/ Also includes a very small amount of M-1-type balances at certain U.S. banking offices of foreign banks outside New York City which were not in the old M-1 measure.

2/ Demand deposits at mutual savings banks were not included in any of the old monetary aggregates.

3/ Consists of an estimate of demand deposits included in M-1B that are held by thrift institutions for use in servicing their savings and small time deposits liabilities included in the new M-2.

M-5 measure than to the old M-4 (both shown as memo items on Table 2). Of course, the new M-3 aggregate is more inclusive than the old M-5, since it contains RPs, certain overnight Eurodollar deposits, and money market mutual fund shares.

Some of the new aggregates and their components will continue to be published on a weekly basis while others will be available only monthly. The publication schedule calls for publication of weekly and monthly data on the new M-1A and M-1B measures.[1/] Data on redefined M-2 and M-3 will be available only on a monthly basis, on a schedule similar to that of old M-3.[2/] In addition, data on the domestic commercial bank components of the new measures, together with currency, money market mutual fund shares, and overnight Eurodollars, will be published on a weekly basis, while the other components will be available only on a monthly basis.

III. Underlying Rationale

The organizing principle underlying the redefined monetary aggregates is that of combining similar kinds of monetary assets at each level of aggregation. This principle has the largest impact on the new M-1B, M-2, and M-3 measures. Thus M-1B combines checkable deposits at thrift instututions--NOW deposits, credit union share draft balances, and demand deposits at mutual savings banks--with demand, NOW, and ATS balances at

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1/ The Federal Reserve intends to publish M-1A and M-1B on Fridays (except occasionally when holiday periods are involved), for the statement week ending nine days earlier.

2/ Monthly data on the new M-2 and M-3 measures normally will be published about 10 to 15 days following the end of the month. Because of lengthier delays associated with some of the other components of L, this aggregate will be published about 6 to 8 weeks following the end of each month.

commercial banks.[1] Ordinary savings and small-denomination time deposits at commercial banks and thrift institutions are included in the new M-2. Moreover, money market mutual fund shares, whose liquidity characteristics are most like those of savings accounts, are also included in this measure, as are overnight RPs and Eurodollars. M-3 includes large-denomination time deposits at both commercial banks and thrift institutions, as well as term RPs.[2]

Two M-1 measures were adopted primarily because of uncertainties that would arise during a transition period should legislation be enacted that permits NOW accounts to be offered nationwide. NOW accounts have properties of both a transactions-type account and a savings-type account, and thus newly opened NOW accounts would tend to attract funds both from household demand deposits and from savings accounts and other liquid assets.[3] Evidence based on the NOW account experience in New England and New York State clearly indicates that during the transition period, when the bulk of NOW accounts was opened, growth in total NOW balances was buoyed by shifts from savings balances and other liquid assets. This suggests that during a

1/ The Federal Reserve intends to include the volume of travelers checks of nonbank issuers at the M-1 level at some future time, once all major issuers begin submitting such data regularly to the Federal Reserve and once these data have been thoroughly reviewed. Travelers checks likely will be added to the new aggregates in conjunction with a benchmark or annual revision.

2/ Available evidence indicates that savings and loan associations are the only thrift institutions with a significant amount of RP liabilities outstanding. Moreover, nearly all of the savings and loan RPs are believed to be of the term variety.

3/ Turnover data on NOW accounts corroborate this point. The turnover rate of NOW accounts at both commercial banks and thrift institutions is approximately 10 per year; for comparison, the turnover rate for ordinary savings accounts is about 3 per year and that of consumer demand deposit accounts is estimated to be about 35 per year.

conversion period associated with nationwide NOW accounts, growth in M-1B could significantly overstate underlying growth in the public's transactions balances.[1/] M-1A, by contrast, would tend to understate such growth, as households converted demand deposit balances into NOW accounts. In practice, since the extent of shifting from demand deposits or other accounts to NOW accounts is uncertain, the availability of both M-1 measures is expected to help in the interpretation of narrow money stock growth during the transition period, should NOW accounts be offered nationwide.

Some other financial assets have been recommended for inclusion at the M-1 level, but for several reasons were not added in the new M-1A or M-1B measures. The most common recommendations have involved shares in money market mutual funds, RPs, and certain Eurodollars owned by U.S. residents. Each of these assets has transactions-related characteristics. Many money market mutual funds offer their customers check-writing privileges--subject to a minimum amount per check which has typically been $500--while balances placed in overnight RPs and in certain overnight Eurodollars are available for spending the next business day.[2/]

1/ The problem of seasonal adjustment would also be magnified by nationwide NOW accounts; the currency and demand deposit components of M-1A can be seasonally adjusted using historical data but historical data on NOW accounts and these other checkable balances appearing in M-1B are not yet sufficient for reliable seasonal adjustment. Conversions from demand deposit accounts to NOW accounts could also influence the seasonal behavior of the demand deposit component of M-1A, should the funds shifted from demand accounts and those remaining have different characteristics.

2/ Only Eurodollars settled in same-day or immediately available funds meet this condition. By contrast, an overnight Eurodollar deposit arranged in clearing house funds is not available for spending for two business days. Because of time zone considerations and other conveniences, it is believed that the bulk of overnight Eurodollars arranged in immediately available funds is at Caribbean branches.

However, these instruments also have attractive characteristics as liquid investments and their behavior in many portfolios appears to be influenced by such considerations. Evidence on turnover rates indicates that balances in money market funds turn over much like balances in ordinary savings accounts--about three times per year--and thus on the average are not being actively used for transactions purposes.[1/] Professional opinion currently is divided over whether RPs are mainly liquid investments or transaction-type balances. Some observers hold that RPs are very similar to demand deposits and that the unexpected weakness that has emerged in the public's demand for M-1-type measures at times since the mid-1970s can be traced largely to the behavior of RPs. Others stress that in practice RPs are qualitatively different from demand deposits--that they are more like other short-term investments--and that recent weakness in the public's demand for the narrow money stock was not mirrored in any single liquid asset, including RPs.[2/]

1/ Furthermore, empirical research by the staff indicates that the addition of money market mutual fund shares to M-1B has not on balance enhanced the performance of this aggregate since mid-1974.

2/ For those studies emphasizing the transactions properties of RPs, see Peter A. Tinsley, Bonnie Garrett, and Monica Friar, "The Measurement of Money Demand," (Board of Governors of the Federal Reserve System, Division of Research and Statistics, Special Studies Section, November 1978; processed); Gillian Garcia and Simon Pak, "Some Clues in the Case of the Missing Money," American Economic Review, 69 (May 1979), pp. 330-34; and John Wenninger and Charles Sivesind, "Changing the M-1 Definition: An Empirical Investigation" (Federal Reserve Bank of New York, April 1979; processed). An alternative interpretation can be found in Richard D. Porter, Thomas D. Simpson, and Eileen Mauskopf, "Financial Innovation and the Monetary Aggregates Brookings Papers on Economic Activity 1: 1979, pp. 213-29; Richard D. Porter and Eileen Mauskopf, "Cash Management and the Recent Shift in the Demand for Demand Deposits" (Board of Governors of the Federal Reserve System, Division of Research and Statistics, Econometric and Computer Applications Section, November 1978; processed); and Thomas D. Simpson, "The Market for Federal Funds and Repurchase Agreements," Staff Studies 106 (Board of Governors of the Federal Reserve System, July 1979), pp. 43-58. A summary and evaluation of some research on this subject can be found in John H. Kalchbrenner, "Recent Innovations in Financial Markets and Their Relationship to Money Demand," paper presented at the XI Meeting of Technicians of Central Banks of the American Continent, Port-of-Spain, Trinidad, November 19-24, 1978 (Board of Governors of the Federal Reserve System, November 1978; processed).

Nevertheless, in recognition of the increasingly prominent role played by these assets and their potential tranactions-related features, data on overnight RPs and Eurodollars and money market mutual fund shares will be conveniently shown in conjunction with figures for M-1A and M-1B on the first page of the weekly money stock release containing the money stock measures. Also, these items will be included in the new M-2 measure, as noted above.

In addition to money market mutual funds and overnight RPs and Eurodollars, savings and small-denomination time deposits are included at the M-2 level. Savings deposits and small-denomination time deposits have different liquidity characteristics.[1/] Nevertheless, recent innovations--most importantly the six-month money market certificate and more recently the two-and-one-half year variable-ceiling certificate--have substantially added to the availability of attractive alternatives to holding savings balances, and have led to shifts from savings to these new time deposits at all depositary institutions. In addition, the six-month money market certificate has tended to reverse a trend toward longer maturities of small-denomination time deposits and thus to increase the overall liquidity of such deposits.

The share of small-denomination time deposits at commercial banks has been affected by regulatory changes applying to the ceiling rates that commercial banks have been able to offer on certain time accounts relative to

1/ Customers can normally withdraw funds from ordinary savings accounts when they wish, often by telephone, although depositary institutions have the right to require a 30-day notification prior to withdrawal. Time deposits, by contrast, are subject to a substantial penalty for withdrawal prior to maturity.

ceilings applicable to thrift institutions.[1/] As a consequence, the historical relationship between the public's demand for small-denomination time deposits at commercial banks and at thrift institutions has been altered in ways that cannot be fully determined at this time. Because small-denomination time deposits at both commercial banks and thrift institutions are combined in the M-2 aggregate, along with the savings deposit liabilities of both, shifts of these kinds affect only the composition of M-2 and not its size or rate of growth. Similarly, the growing availability of money market mutual fund shares has tended to reduce the public's demand for savings and small-denomination time deposits at commercial banks and thrift institutions, but such shifts are captured within the new M-2 aggregate, inasmuch as it includes money market mutual fund shares.[2/] Furthermore, growth in new M-2 likely would not be affected much by conversions to NOW accounts, should they become available nationwide, because funds absorbed by these accounts would be drawn mainly from other kinds of accounts included in this aggregate.

1/ Thrift institution shares of small-denomination time deposits were augmented following the introduction of the six-month certificate by a regulatory ceiling that permitted them to offer the auction rate on six-month Treasury bills; by comparison, the ceiling rate on these deposits at commercial banks was 25 basis points below the auction rate. However, in March 1979 the differential on money market certificate ceiling rates was removed--for aution rates on six-month bills in excess of 9 percent--and the commercial bank share of these deposits subsequently tended to expand.

2/ Empirical analyses by the staff indicate that the behavior of new M-2 in recent years has generally not departed far from what would be expected on the basis of longer-term historical relationships, in contract to old M-2 and some other measures of money. See David J. Bennett, Flint Brayton, Eileen Mauskopf, Edward K. Offenbacher, and Richard D. Porter, "Econometric Properties of the Redefined Monetary Aggregates" (Board of Governors of the Federal Reserve System, Division of Research and Statistics, Econometric and Computer Applications Section, February 1980; processed).

By including large-denomination time deposits, the new M-3 is most comparable to the old M-5 measure. The new M-3 aggregate also includes term RPs which have some similarities to large time deposits. The new M-3 definition is based on the view that large-denomination time deposits and term RPs substitute for each other in many portfolios and that these items, especially negotiable CDs, are relatively liquid.

The liquid assets, or L, measure adds to M-3 other liquid assets held by the public. Some of these are liabilities of depositary institutions--term Eurodollars held by U.S. nonbank residents and bankers acceptances--while others are obligations of the U.S. Treasury--savings bonds and liquid marketable debt.[1/] The commercial paper component consists of obligations of a variety of issuers, both financial institutions and nonfinancial corporations. Some observers note such a broad measure of liquid assets is especially meaningful because many financial innovations in recent years have altered the public's demands for narrower measures. They argue that these kinds of shifts are absorbed in a very broad aggregate, such as L, because reductions in demands for narrower measures of money are mirrored in increases in the demands for other components of the broadest measure, leaving demand for the total unaffected. Others who focus on the volume of credit view such an aggregate as better reflecting the amount of credit extended to the economy, both through the commercial banking system and through other channels.

1/ Eurodollar deposits of U.S. nonbank residents other than those overnight Eurodollars that are already incorporated at the M-2 level might appropriately be included in the new M-3 measure, since they share many characteristics with domestically issued, large-denomination time deposits. However, lags on obtaining data on such Eurodollars are much longer than for the other components of this aggregate, and staff work suggests that estimations of this component based on information that might be available on an earlier schedule would be subject to large revisions.

IV. Historical Behavior of the New Aggregates

An examination of the growth rates and velocities of the new measures affords a better understanding of their behavior and their relationship to the old measures.[1/] Chart 1 shows growth rates of M-1A and M-1B in the upper panel, and old M-1 in the lower panel.[2/] All three narrow measures have generally moved closely together. In recent years, though, M-1B has tended to increase more rapidly than either M-1A or old M-1, because of growth of NOW and ATS accounts. During 1979, for example, with shifts in monetary asset holdings in response to the availability of new deposit services, M-1B expanded at a rate that was 2-1/2 percentage points faster than M-1A and old M-1; this difference reflected conversions to NOW accounts in New York State and to ATS accounts nationwide.[3/] Average rates of growth of these measures over two long time periods and several cycles are shown in Table 3. The growth rates for all three have been very similar, both on a trend and a cyclical basis, except in the most recent expansion when, because of adjustment by the public to new deposit services, average annual growth in M-1B exceeded growth in M-1A and old M-1 by slightly more than 3/4 percentage points. Should NOW account powers be extended to depositary institutions nationwide, a more substantial differential in rates of growth between M-1A and M-1B could persist for some time.

1/ For econometric evidence on the new aggregates, see Bennett and others, "Econometric Properties."

2/ Appendix Table 1 contains growth rates for these aggregates annually over the 1960 to 1979 period and quarterly for the years 1973 to 1979.

3/ A portion of this differential in growth rates can be attributed to conversions from demand deposit accounts to ATS and NOW accounts, and the remainder represents shifts from ordinary savings accounts and other liquid assets.

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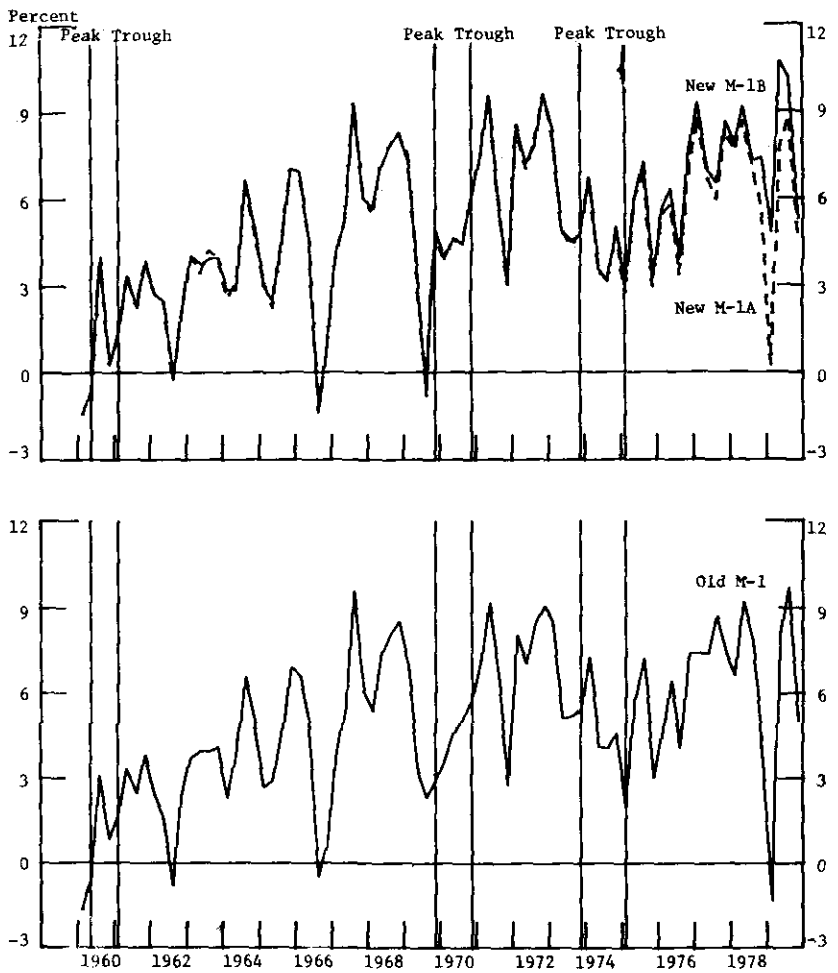
Chart 1

Rates of Growth of New and Old M-1 Measures
(Quarterly, seasonally adjusted at annual rates)



Note: Peaks and troughs as designated by the National Bureau of Economic Research.

Table 3

Trend and Cyclical Behavior of Growth Rates of New and Old Measures of Money
Average annual rates of growth in percent

Period	New M-1A	New M-1B	Old M-1	New M-2	Old M-2	Old M-3	New M-3	Old M-4	Old M-5
1960-1979	4.9	5.1	4.9	8.3	7.6	8.5	9.0	8.1	8.8
1960-1969	3.7	3.8	3.8	6.9	6.2	7.0	7.2	6.5	7.2
1970-1979	6.0	6.4	6.1	9.6	8.9	9.9	10.8	9.6	10.3
Peak to trough[1/]									
1960:2-1961:1	1.9	1.9	1.9	6.5	5.6	7.1	7.0	5.7	7.2
1969:4-1970:4	4.8	4.8	4.8	5.7	7.1	7.2	8.7	9.8	8.9
1973:4-1975:1	4.2	4.3	4.4	6.2	7.3	7.3	8.2	9.7	8.8
Trough to peak[2/]									
1961:1-1969:4	4.2	4.2	4.2	7.2	6.7	7.3	7.5	7.0	7.5
1970:4-1973:4	6.8	6.8	6.9	10.8	10.1	11.4	12.9	11.8	12.5
1975:1-1979:4[3/]	6.2	7.1	6.3	10.6	9.1	10.3	10.6	8.1	9.7

1/ Averages of annualized quarter-to-quarter rates of growth. The base quarter for each calculation is the quarter following the peak (peak is first quarter shown).
2/ Averages of annualized quarter-to-quarter rates of growth. The base quarter for each calculation is the quarter following the trough (trough is first quarter shown).
3/ Data for 1979:4 are most recent quarterly data available, and this quarter may not be a cyclical peak.

The public's demands for these M-1 measures relative to the gross national product vary inversely with their velocities, which are shown in the upper panel of Chart 2. Shown in the lower panel is the Treasury bill rate, representing the return on a money market alternative to holding M-1 balances. Since growth in all three of these aggregates has been very similar, movements in their velocities have been very close, although the velocity of M-1B has risen less rapidly in recent years than the velocities of M-1A and old M-1, reflecting shifts to NOW and ATS accounts of funds held in demand deposit accounts and in relatively inactive savings accounts. Average rates of increase in these velocities over longer intervals of time and over cycles are presented in the first three columns of Table 4. During economic expansions, the velocities of all three measures have tended to expand at annual rates in excess of 3 percentage points while in economic contractions levels of velocities of all three measures tend to decline or their growth at least slackens. Further, in more recent cycles the velocities of all three measures have expanded at successively more rapid rates.

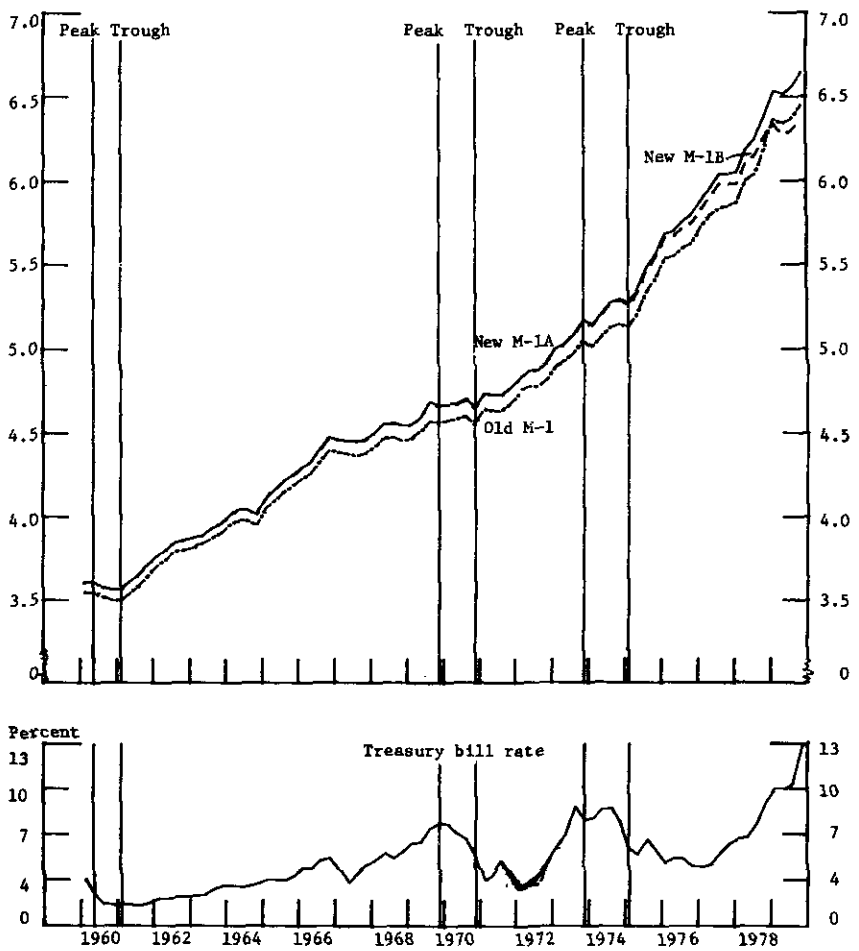
Growth in the new M-2 measure is shown in Chart 3 (upper panel), along with growth in the old M-2 and M-3 aggregates (center panel).[1/] The bottom panel displays the differential between the yield on Treasury bills and the ceiling rate on passbook savings accounts at commercial banks which can be viewed as an indicator of the attractiveness of money market instruments relative to the interest-earning deposit components of these aggregates. This chart illustrates that growth in new M-2 has tended to vary closely with that of old M-3 and, to a lesser extent, of old M-2. In addition, growth in

1/ Appendix Table 2 contains annual and recent quarterly growth rates for these measures.

A-18

Chart 2

Velocities of New and Old M-1 Measures
(Quarterly, seasonally adjusted at annual rates)



Note: Peaks and troughs as designated by the National Bureau of Economic Research.

Table 4

Trend and Cyclical Behavior of Velocities of New and Old Measures of Money
Average annual rates of growth in percent

Period	New M-1A	New M-1B	Old M-1	New M-2	Old M-2	Old M-3	New M-3	Old M-4	Old M-5
1960-1979	3.2	3.0	3.2	-0.1	0.5	-0.3	-0.8	0.1	-0.6
1960-1969	2.9	2.9	2.9	-0.2	0.4	-0.3	-0.6	0.1	-0.5
1970-1979	3.6	3.1	3.5	0.0	0.6	-0.3	-1.1	0.0	-0.7
Peak to trough[1/]									
1960:2-1961:1	-1.7	-1.7	-1.7	-6.3	-5.3	-6.8	-6.7	-5.5	-6.9
1969:4-1970:4	-0.3	-0.3	-0.3	-1.2	-2.6	-2.5	-4.1	-5.2	-4.3
1973:4-1975:1	1.5	1.4	1.3	-0.5	-1.5	-1.4	-2.4	-3.9	-3.0
Trough to peak[2/]									
1961:1-1969:4	3.1	3.1	3.1	0.1	0.6	0.0	-0.2	0.3	-0.2
1970:4-1973:4	3.6	3.5	3.5	-0.4	0.3	-1.0	-2.4	-1.4	-2.0
1975:1-1979:4[3/]	4.9	4.1	4.9	0.6	2.1	0.9	0.6	3.0	1.5

1/ Averages of annualized quarter-to-quarter rates of growth. The base quarter for each calculation is the quarter following the peak (peak is first quarter shown).

2/ Averages of annualized quarter-to-quarter rates of growth. The base quarter for each calculation is the quarter following the trough (trough is first quarter shown).

3/ Data for 1979:4 are most recent quarterly data available, and this quarter may not be a cyclical peak.

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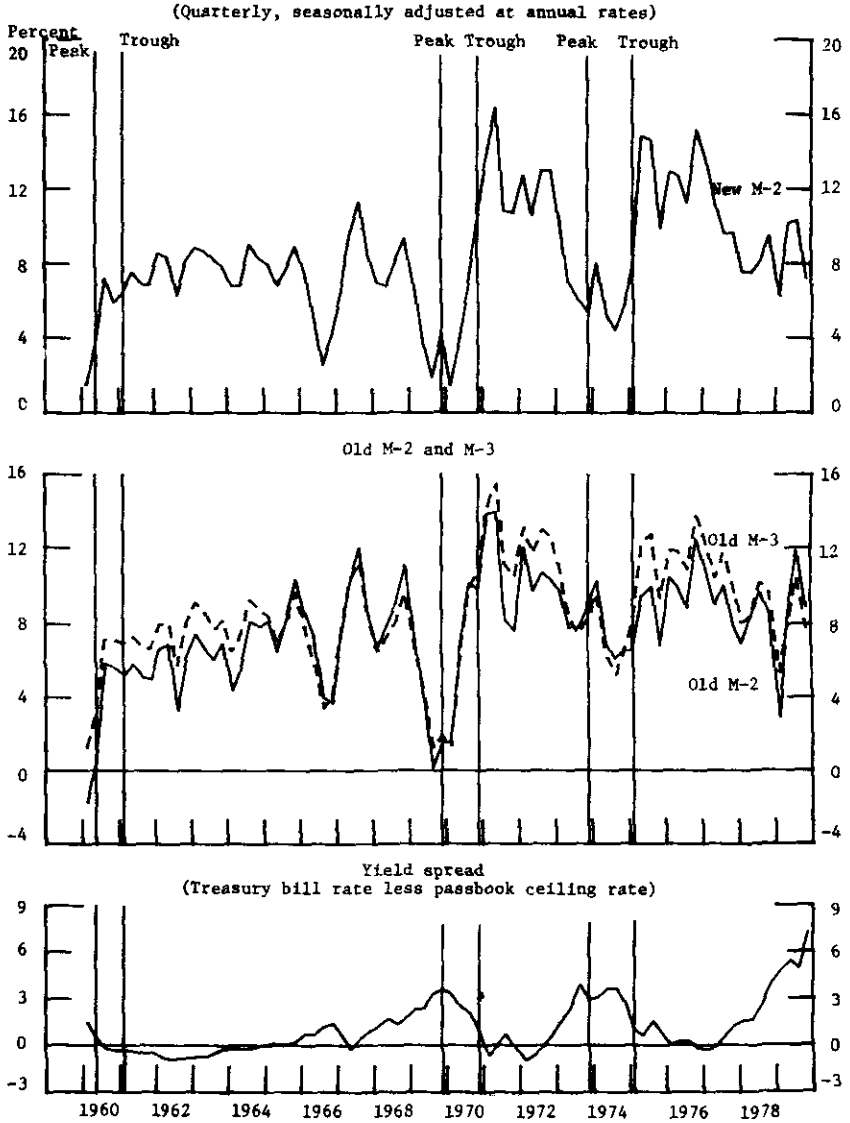
Chart 3

Rates of Growth of New M-2
and Old M-2 and M-3 Measures
(Quarterly, seasonally adjusted at annual rates)



Note: Peaks and troughs as designated by the National Bureau of Economic Research.

new M-2, along with growth of the two other measures shown, has been sensitive to the yield spread, tending to slow as market rates have advanced above deposit ceiling rates. The interest sensitivity of new M-2, however, can be expected to moderate in the future, if the proportion of this aggregate accounted for by components with yields that vary with money market conditions continues to expand. As shown in Chart 4, the share of new M-2 in money market certificates has risen sharply since these accounts were introduced in mid-1978 and the money market mutual fund and overnight RP and Eurodollar shares have also increased in recent years. By contrast, the M-1A and ordinary savings account shares have generally declined.

Trend and cyclical growth rates of new M-2 and old M-2 and M-3 are shown in the middle three columns of Table 3. Over longer periods of time, especially during economic expansions, growth in new M-2 has been faster than old M-2. In comparison with old M-3, growth in new M-2 has been moderately slower, except during the most recent economic expansion when sharp increases in money market mutual fund shares and expansion in overnight RPs and Eurodollars contributed to somewhat more rapid growth in new M-2.[1/]

The velocity of new M-2, along with velocities of old M-2 and M-3, is shown in Chart 5. New M-2 velocity has shown very little trend movement over the past two decades, although it has displayed a tendency to vary directly with the spread between market rates of interest and regulatory ceilings. By contrast, the velocity of old M-2 tended to increase, especially in recent years, while the velocity of old M-3 has shown a very slight tendency to decline over the 1960s and 1970s.[2/]

1/ During economic contractions, new M-2 has tended to weaken relative to old M-2 and M-3, mainly because growth in old M-2 and M-3 was buoyed by their large-denomination time deposit components.

2/ Trend and cyclical rates of growth of the velocities of these three measures are shown in the middle three columns of Table 4.

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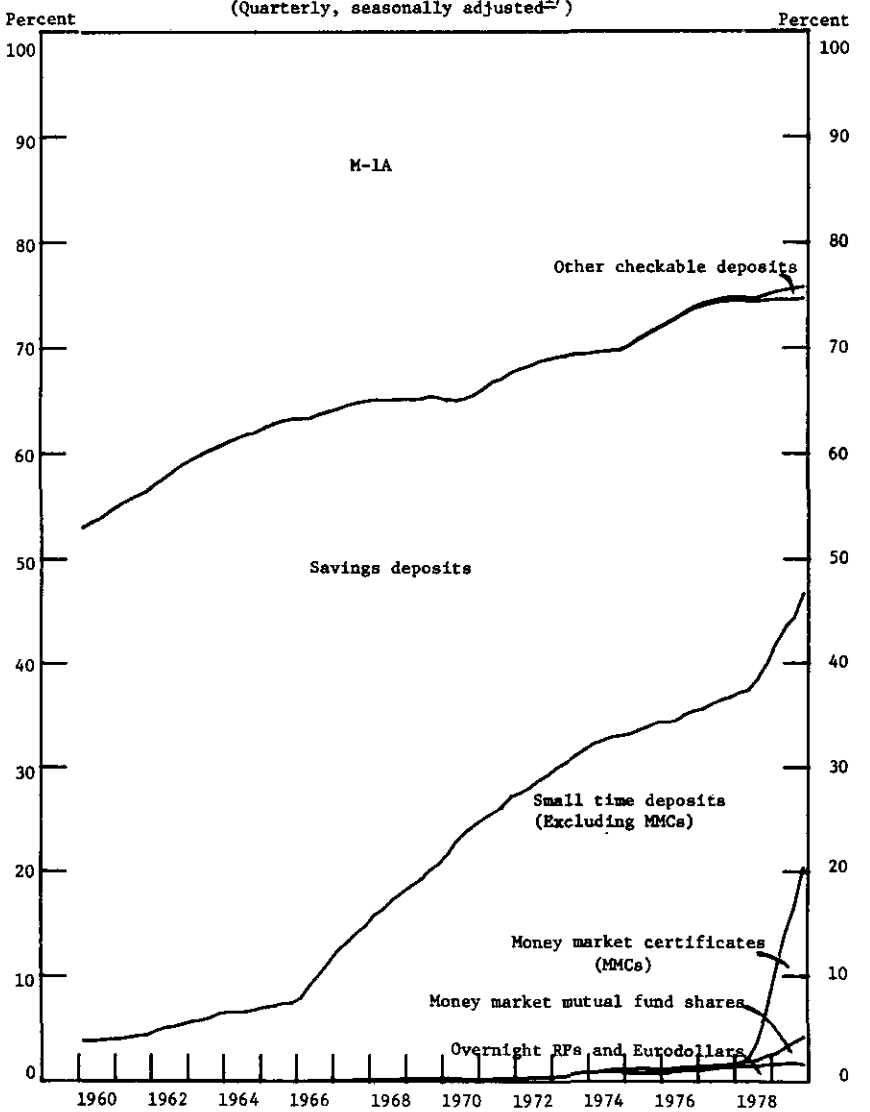
Chart 4

Principal Components of New M-2
As a percent of total
(Quarterly, seasonally adjusted 1/)

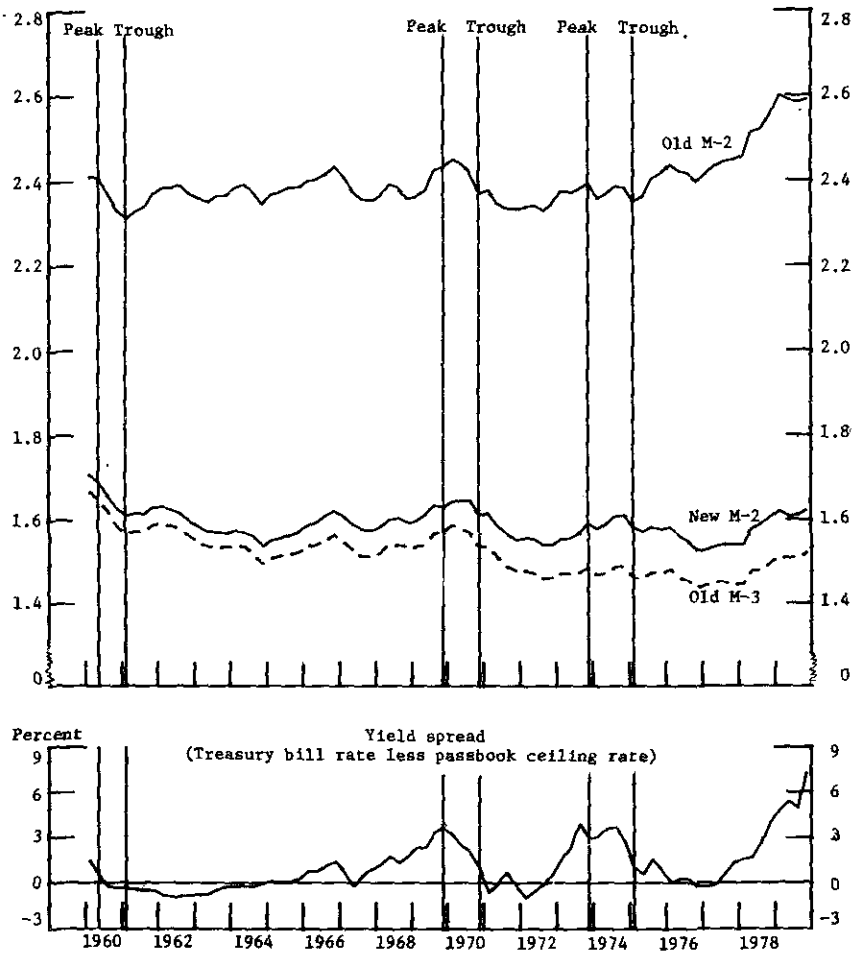


1/ Other checkable deposits, MMCs, money market mutual fund shares, and overnight RPs and Eurodollars are not seasonally adjusted.

A-23

Chart 5

Velocities of New M-2 and Old M-2 and M-3 Measures
(Quarterly, seasonally adjusted at annual rates)



Note: Peaks and troughs as designated by the National Bureau of Economic Research.

The rate of growth of new M-3 is shown in Chart 6 (upper panel), along with rates of growth of the old M-4 and M-5 measures (center panel). Also shown in the upper panel of Chart 6 is the rate of growth of L, the broad measure of liquid assets.[1/] Chart 6 illustrates that growth rates of new M-3 and old M-5, which are similar in content, have moved closely together, although expansion in new M-3 has generally exceeded that of both of its old counterparts. The disparity between growth in new M-3 and old M-4 and M-5 widened in the late-1970s with sizable increases in RPs, money market mutual fund shares, and overnight Eurodollars; these items are components of the new M-3 aggregate but were not included in the old M-4 and M-5 aggregates.

Growth in total liquid assets, L, has been similar to--although somewhat steadier than--that of new M-3. In recent years, there has been a tendency for L to grow more rapidly than M-3 and other broad monetary aggregates, reflecting a growing proportion of liquid assets that is being issued outside domestic depositary institutions.

The velocity of new M-3 is shown in Chart 7, together with velocities of L and of old M-4 and M-5. While the velocity of the new M-3 has generally declined over the period shown, in recent years it has displayed some tendency to level off. The responsiveness of new M-3--and the old M-4 and M-5 measures--to changes in the interest rate spread was dampened by the removal of regulatory ceilings on some large-denomination time deposits in 1970 and on the remainder in 1973. The velocity of L has also declined over the period shown.

1/ Annual and quarterly rates of growth of the new M-3 and L measures and the old M-4 and M-5 measures are presented in Appendix Table 3, along with rates of growth of their velocities.

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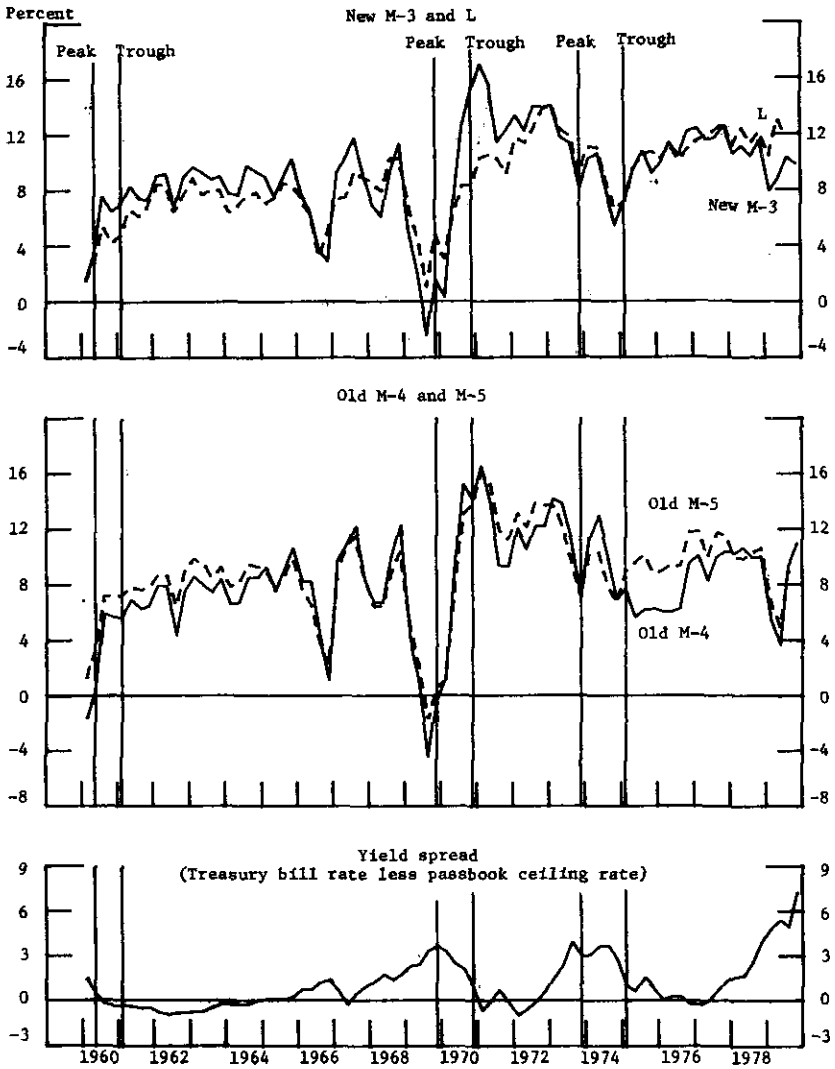
Chart 6

Rates of Growth of New M-3 and L and Old M-4 and M-5 Measures
(Quarterly, seasonally adjusted at annual rates)



Note: Peaks and troughs as designated by the National Bureau of Economic Research.

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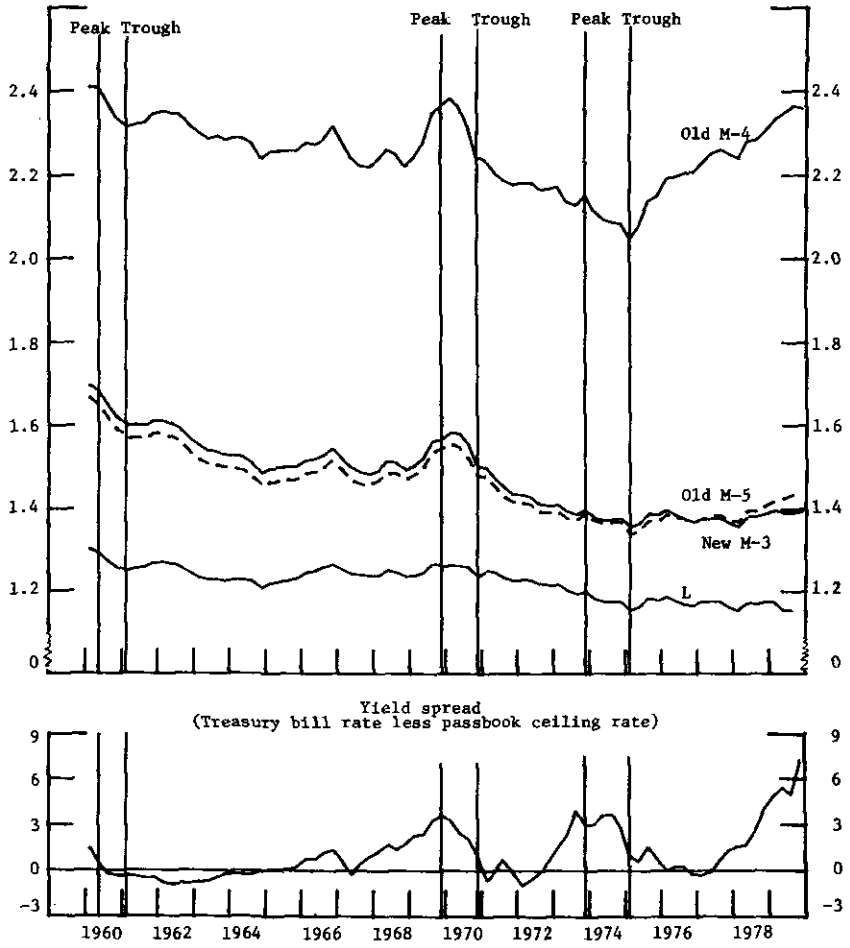
Chart 7

Velocities of New M-3 and L and Old M-4 and M-5 Measures
(Quarterly, seasonally adjusted at annual rates)



Note: Peaks and troughs as designated by the National Bureau of Economic Research.

IV. Some Technical Issues

The new aggregates incorporate consolidation and seasonal adjustments. In addition, several new data sources are being used or will be used in their construction.

A. Consolidation

Consolidation adjustments have been made in the construction of each of the new measures, in order to avoid double counting of the public's monetary assets.[1/] A major consolidation adjustment involves the netting of deposits held by depositary institutions with other depositary institutions. In constructing M-1A, demand deposits held by commercial banks with other commercial banks have been removed. The procedure also calls for the removal from M-1B of those demand deposit holdings of thrift institutions that are estimated to be used in servicing their checkable deposits, although at present the amount is negligible. Similarly, at the M-2 level all other demand deposit holdings of thrift institutions are deducted; currently that means all such demand deposits are netted from M-2.[2/] Savings and time deposits held by depositary institutions are also appropriately netted at the M-2 and M-3 levels.

The other major kind of consolidation adjustment involves removing the assets held by money market mutual funds from several components appearing in the M-2, M-3, and L measures.[3/] These institutions issue shares to the public and use the proceeds to acquire a variety of liquid assets that are

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1/ A discussion of consolidation issues can be found in Advisory Committee on Monetary Statistics, Improving the Monetary Aggregates, pp. 12-14, 31-27, and in "A Proposal," pp. 32, 40-41.

2/ It has been assumed that all demand deposits owned by thrift institutions are held to service their checkable deposits and their ordinary savings deposits. The portion of thrift institution holdings of demand deposits to be removed at the M-1B level is determined by the ratio of checkable deposits at thrift institutions to the sum of their checkable and savings deposit liabilities.

3/ In general, the components against which a money market mutual fund adjustment is made exclude holdings by depositary institutions, the U.S. Government (including the Federal Reserve), and foreign commercial banks and official institutions.

components of the new M-2, M-3 and L measures. In order to avoid first counting these amounts as money market mutual fund shares and then counting them again as money market fund holdings of RPs, CDs, commercial paper, and so forth, holdings of each of these assets by money market funds are subtracted from the relevant components. Thus money market fund holdings of RPs are deducted in the construction of the public's overnight RPs that appear in M-2, holdings of domestic CDs are deducted from the large time deposit component of M-3, and holdings of each of the assets appearing in L are appropriately netted.

Each of the principal components of the new aggregates will be published on the money stock release on a consolidated--and not a gross--basis, as it appears in the new aggregates. Thus differences between the published M-1B and M-2 aggregates and the sum of their published components will equal the consolidation components associated with thrift institution demand deposits.

B. Seasonal Adjustment

The procedure for constructing the new seasonally adjusted aggregates has been to seasonally adjust each component--wherever possible--and then to sum each component in deriving the appropriate total. Some components, however, have not been seasonally adjusted because of insufficient historical data.[1/] They will be seasonally adjusted once adequate data are available. The most important of the components that have not yet been seasonally adjusted (and the aggregate in which they first appear) are as follows:

1/ In some cases, even though data are available for a sufficiently long period to technically perform a seasonal adjustment, the series are dominated by strong trend and thus it is unlikely that actual seasonal patterns can be measured accurately.

1. Other checkable deposits (M-1B)
2. Overnight RPs and Eurodollars (M-2)
3. Money market mutual fund shares (M-2)
4. Term RPs at both commercial banks and savings and loan associations (M-3)
5. Other Eurodollars held by U.S. residents (L).

A standard option of the Census X-11 program was used in the seasonal adjustment of the separate components of the new aggregates, following an examination of several alternative options. However, it should be noted that the overall issue of seasonal adjustment of the monetary aggregates has been under review by a panel of outside experts, The Committee of Experts on Seasonal Adjustment Techniques, under the chairmanship of Geoffrey H. Moore, which is scheduled to report to the Board in a few months.[1/]

C. New Data Sources

Several new data sources are being used in connection with the redefined aggregates. Most of these new sources are associated with components that are either new or appear separately for the first time, and they have been obtained in order to improve the accuracy and the timeliness of the redefined measures. It is felt that with them the quality of monetary statistics for the new measures will be at least comparable to that of the old measures.

1/ Other members of this committee are George Box, Hyman Kaitz, James Stephenson, and Arnold Zellner.

A number of new data series began around year-end 1979 and some others are scheduled to begin in early 1980.[1/] The most important new data sources are shown in Table 5. Most of these are collected on a sample basis, and are then benchmarked to less frequent reports of condition in order to obtain timely estimates of the total volume of each item. A sample of nonmember banks is being used to estimate demand deposits, other checkable deposits, and small and large-denomination time deposits on a weekly basis. Similarly, a sample of mutual savings banks, which began to be surveyed in early 1980, is being used to construct the various components of deposits at these institutions. In 1979, the Federal Home Loan Bank Board started collecting sample data three times a month from savings and loan associations on the various components of the new aggregates. A new sample of credit unions is scheduled for implementation in the spring of 1980 and should provide timely data on several components for these institutions. Data on money market mutual fund shares are being collected in a new weekly survey by the Investment Company Institute. In addition, in a monthly survey this institute collects data on the industry's holdings of various assets, for use in the consolidation process. Data on overnight Eurodollars at offices in the Caribbean are now being collected on a daily basis from all member banks with significant amounts of these deposits. Finally, a new daily report on selected federal funds and RP borrowings of 123 large member banks serves as the basis for the overnight and term RP series.

1/ Other data sources are discussed in "A Proposal," pp. 33-40.

Table 5

New Data Sources Being Used or Scheduled to be Used in Constructing the Redefined Monetary Aggregates

Component (Aggregate first appearing in)	Coverage	Frequency	Lag
Demand deposits (M-1A)			
Nonmember banks 1/	sample	weekly (daily avg)	2-3 weeks
Other checkable deposits (M-1B)			
Member banks (ATS & NOW)	universe	weekly (daily avg)	1 week
Nonmember banks (ATS & NOW)	sample	weekly (daily avg)	2-3 weeks
MSBs (NOW & demand deposits)	sample	weekly (Wednesday)	2-3 weeks
S&Ls (NOW)	sample	thrice-monthly	1 week
Credit unions (share drafts) 2/	sample	weekly (Wednesday)	2-3 weeks
Savings and small-denomination time deposits (M-2)			
Nonmember banks	sample	weekly (daily avg)	2-3 weeks
MSBs	sample	weekly (Wednesday)	2-3 weeks
S&Ls	sample	thrice-monthly	1 week
Credit unions 2/	sample	weekly (Wednesday)	2-3 weeks
Overnight repurchase agreements (M-2)			
Member banks	125 large member banks	weekly (daily avg)	1 week
Overnight Eurodollars at Caribbean branches (M-2)			
Member banks	approx. universe	weekly (daily avg)	1 week
Money market mutual funds shares (M-2)	universe	weekly (Wednesday)	1 week
Large-denomination time deposits (M-3)			
Nonmember banks	sample	weekly (daily avg)	2-3 weeks
MSBs	sample	weekly (Wednesday)	2-3 weeks
S&Ls	sample	thrice-monthly	1 week
Term repurchase agreements (M-3)			
Member banks	125 large member banks	weekly (daily avg)	1 week

1/ In addition, data on demand deposits of U.S. branches and agencies of foreign banks would be collected on a regulatory report of deposits with an application of reserve requirements to these institutions under the International Banking Act. At present, all U.S. branches and agencies of foreign banks report their deposits once each month and large institutions in New York City report deposits on a daily basis.

2/ Scheduled to begin in March 1980. Weekly sample consists of approximately 70 of the largest credit unions. In addition, a sample of smaller credit unions will be collected once each month, as of the last Wednesday of the month.

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Appendix Table 1

Rates of Monetary and Velocity Growth for New and Old M-1 Measures

Year[1/]	Rates of Monetary Growth			Rates of Velocity Growth		
	New M-1A	New M-1B	Old M-1	New M-1A	New M-1B	Old M-1
1960	0.6	0.6	0.4	1.7	1.7	1.8
1961	2.8	2.8	2.8	4.3	4.3	4.2
1962	1.8	1.8	1.4	4.0	4.0	4.4
1963	4.0	4.0	4.0	2.6	2.6	2.6
1964	4.3	4.4	4.5	1.4	1.4	1.3
1965	4.4	4.4	4.3	5.8	5.8	5.8
1966	2.7	2.7	2.9	5.3	5.3	5.1
1967	6.4	6.3	6.4	-0.3	-0.2	-0.3
1968	7.4	7.4	7.6	1.8	1.7	1.6
1969	3.8	3.8	3.9	2.6	2.6	2.5
1970	4.8	4.8	4.8	-0.3	-0.3	-0.3
1971	6.6	6.6	6.6	2.7	2.7	2.8
1972	8.5	8.5	8.4	3.0	3.0	3.1
1973	5.7	5.8	6.2	5.2	5.1	4.6
1974	4.7	4.7	5.1	2.4	2.4	2.0
1975	4.7	4.9	4.6	5.1	4.9	5.2
1976	5.5	6.0	5.8	4.2	3.7	3.9
1977	7.7	8.1	7.9	4.2	3.9	4.0
1978	7.4	8.2	7.2	5.6	4.8	5.8
1979	5.5	8.0	5.5	4.2	1.8	4.2
Quarter[2/]						
1973--1	8.2	8.4	8.5	6.7	6.5	6.4
2	4.9	4.9	5.1	2.4	2.4	2.2
3	4.4	4.5	5.2	4.6	4.5	3.8
4	4.8	4.8	5.4	6.5	6.6	5.9
1974--1	6.7	6.7	7.3	-2.6	-2.6	-3.1
2	3.6	3.6	4.1	5.4	5.4	4.9
3	3.1	3.1	4.1	5.4	5.4	4.5
4	4.9	5.0	4.6	1.4	1.2	1.6
1975--1	2.6	2.9	2.0	-2.0	-2.3	-1.3
2	5.9	5.9	5.8	6.0	6.1	6.2
3	7.0	7.3	7.2	10.3	10.0	10.0
4	2.9	3.2	3.0	5.7	5.4	5.6
1976--1	5.4	5.7	4.6	8.4	8.1	9.2
2	5.8	6.3	6.4	1.3	0.8	0.7
3	3.4	3.9	4.1	4.3	3.8	3.6
4	7.0	7.6	7.4	2.4	1.8	1.9
1977--1	8.8	9.3	7.4	5.6	5.2	7.0
2	6.7	6.9	7.4	5.5	5.3	4.8
3	6.0	6.5	8.6	5.6	5.0	2.9
4	8.4	8.7	7.4	0.1	-0.2	1.1
1978--1	7.6	7.9	6.6	0.5	0.2	1.4
2	8.7	9.1	9.2	9.6	9.1	9.0
3	7.1	7.3	7.9	3.4	3.2	2.6
4	5.6	7.4	4.3	8.3	6.5	9.6
1979--1	0.2	4.8	-1.3	9.9	5.3	11.6
2	7.8	10.7	8.1	-1.2	-4.0	-1.5
3	8.8	10.1	9.7	2.6	1.3	1.7
4	4.7	5.3	5.0	5.1	4.6	4.8

1/ Fourth quarter over fourth quarter growth rate.
2/ Annualized growth rates based on seasonally adjusted data.

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Appendix Table 2

Rates of Monetary and Velocity Growth for New M-2
and Old M-2 and M-3 Measures

Year[1]	Rates of Monetary Growth			Rates of Velocity Growth		
	New M-2	Old M-2	Old M-3	New M-2	Old M-2	Old M-3
1960	4.6	2.6	4.8	-2.3	-0.3	-2.4
1961	7.1	5.4	7.1	0.0	1.7	0.0
1962	8.0	5.9	7.7	-2.0	-0.0	-1.7
1963	8.6	7.0	8.7	-1.8	-0.3	-1.9
1964	7.9	6.7	8.3	-2.0	-0.8	-2.2
1965	8.0	8.6	8.6	2.2	1.7	1.7
1966	4.9	6.0	5.4	3.1	2.0	2.7
1967	9.3	9.9	9.7	-2.9	-3.4	-3.3
1968	8.0	9.0	8.1	1.2	0.3	1.1
1969	4.2	3.2	3.6	2.3	3.2	2.8
1970	5.8	7.2	7.2	-1.2	-2.6	-2.5
1971	13.5	11.3	13.5	-3.5	-1.6	-3.5
1972	12.9	11.2	13.3	-1.0	0.5	-1.3
1973	7.3	8.8	9.0	3.5	2.1	1.9
1974	6.0	7.7	7.1	1.1	-0.5	0.1
1975	12.3	8.4	11.1	-2.0	1.5	-1.0
1976	13.7	10.9	12.7	-3.3	-0.9	-2.5
1977	11.5	9.8	11.7	0.7	2.2	0.5
1978	8.4	8.7	9.5	4.6	4.3	3.6
1979	8.8	8.3	8.1	1.0	1.4	1.6
Quarter[2]						
1973--1	10.3	9.8	10.9	4.7	5.2	4.1
2	6.9	7.7	8.3	0.4	-0.4	-1.0
3	6.0	7.7	7.4	3.0	1.3	1.6
4	5.4	9.0	8.2	6.0	2.4	3.1
1974--1	8.0	10.3	9.6	-3.9	-6.1	-5.3
2	5.2	7.0	6.4	3.8	2.1	2.6
3	4.4	6.1	5.2	4.2	2.4	3.3
4	5.8	6.6	6.4	0.5	-0.4	-0.2
1975--1	7.8	6.4	8.2	-7.1	-5.7	-7.5
2	14.9	9.5	12.4	-2.7	2.5	-0.3
3	14.6	10.0	12.8	2.8	7.2	4.5
4	9.9	6.8	9.4	-1.1	1.9	-0.7
1976--1	13.0	10.5	12.0	0.9	3.3	1.9
2	12.7	10.0	11.9	-5.4	-2.8	-4.7
3	11.3	8.9	11.0	-3.4	-1.1	-3.1
4	15.2	12.6	13.8	-5.6	-3.1	-4.3
1977--1	13.7	10.9	12.4	0.9	3.6	2.1
2	11.2	9.0	10.5	1.0	3.2	1.7
3	9.6	10.1	11.8	1.9	1.5	-0.2
4	9.7	7.9	10.1	-1.2	0.5	-1.6
1978--1	7.5	7.0	8.1	0.6	1.1	0.0
2	7.5	8.4	8.4	10.8	9.9	9.8
3	8.2	9.8	10.3	2.3	0.8	0.3
4	9.5	8.5	9.8	4.4	5.4	4.1
1979--1	6.3	2.8	5.3	3.9	7.3	4.8
2	10.2	8.8	7.9	-3.5	-2.1	-1.3
3	10.3	11.9	10.5	1.1	-0.5	0.9
4	7.2	8.9	7.8	2.7	1.0	2.1

1/ Fourth quarter over fourth growth rate.
2/ Annualized growth rates based on seasonally adjusted data.

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Appendix Table 3

Rates of Monetary and Velocity Growth for New M-3 and L and Old M-4 and M-5 Measures

Year[1/]	Rates of Monetary Growth				Rates of Velocity Growth			
	New M-3	New L	Old M-4	Old M-5	New M-3	New L	Old M-4	Old M-
1960	4.8	3.5	2.6	4.8	-2.5	-1.2	-0.3	-2.4
1961	7.7	6.2	6.5	7.9	-0.5	0.9	0.6	-0.7
1962	8.8	8.0	7.1	8.5	-2.7	-2.0	-1.2	-2.4
1963	9.5	8.4	8.3	9.6	-2.6	-1.6	-1.6	-2.7
1964	8.9	7.3	7.8	9.0	-2.8	-1.4	-1.8	-2.9
1965	9.2	8.1	9.5	9.1	1.1	2.2	0.9	1.2
1966	5.2	5.5	5.5	5.0	2.8	2.5	2.6	3.0
1967	10.4	8.5	10.7	10.3	-3.9	-2.2	-4.2	-3.8
1968	8.7	9.5	9.3	8.3	0.6	-0.2	0.0	0.9
1969	1.5	4.4	0.1	1.5	5.0	2.0	6.4	4.9
1970	8.9	6.5	10.2	9.2	-4.1	-1.9	-5.1	-4.3
1971	14.8	10.4	12.8	14.3	-4.6	-0.8	-2.9	-4.2
1972	14.0	12.9	12.3	13.9	-2.0	-1.0	-0.5	-1.9
1973	11.7	12.3	12.0	11.0	-0.5	-1.1	-0.8	0.1
1974	8.7	9.6	10.7	9.0	-1.4	-2.2	-3.1	-1.7
1975	9.4	9.8	6.6	9.7	0.6	0.2	3.3	0.3
1976	11.4	11.0	7.1	10.2	-1.3	-1.0	2.6	-0.3
1977	12.6	12.6	10.1	11.7	-0.3	-0.3	2.0	0.5
1978	11.3	12.3	10.6	10.6	1.9	1.0	2.5	2.5
1979	9.5	n.a.	7.5	7.6	0.3	n.a.	2.2	2.1
Quarter[2/]								
1973--1	14.0	14.0	14.2	13.7	1.0	1.1	0.9	1.3
2	11.7	12.3	13.8	12.2	-4.3	-4.8	-6.3	-4.7
3	11.2	11.8	11.0	9.6	-2.2	-2.7	-1.9	-0.6
4	8.0	9.1	7.0	7.1	3.3	2.2	4.4	4.3
1974--1	10.1	11.0	11.4	10.2	-5.9	-6.7	-7.1	-6.0
2	10.6	11.1	12.8	10.3	-1.5	-1.9	-3.6	-1.2
3	7.7	8.4	9.9	7.8	0.9	0.1	-1.3	0.8
4	5.4	6.6	6.9	6.7	0.8	-0.3	-0.7	-0.4
1975--1	7.2	7.1	7.6	8.9	-6.4	-6.4	-6.9	-8.1
2	9.4	9.5	5.5	9.5	2.6	2.5	6.5	2.5
3	10.7	10.5	6.2	10.1	6.5	6.8	11.1	7.1
4	9.1	10.7	6.2	8.8	-0.4	-1.9	2.4	-0.1
1976--1	9.9	10.1	6.0	9.0	4.0	3.7	7.8	4.8
2	11.3	11.1	6.0	9.4	-4.1	-3.9	1.0	-2.2
3	10.3	10.0	6.3	9.2	-2.5	-2.2	1.5	-1.4
4	12.1	10.8	9.5	11.8	-2.6	-1.4	-0.1	-2.3
1977--1	12.4	11.5	10.1	11.8	2.2	3.0	4.4	2.7
2	11.4	11.8	8.3	10.0	0.8	0.4	3.9	2.2
3	11.7	12.2	10.0	11.7	-0.1	-0.6	1.6	-0.1
4	12.5	12.8	10.4	11.5	-3.9	-4.2	-1.9	-2.9
1978--1	10.5	11.2	10.2	10.0	-2.3	-3.0	-2.1	-1.8
2	11.1	12.4	10.6	9.8	7.2	5.9	7.6	8.4
3	10.3	11.3	9.9	10.4	0.2	-0.7	0.6	0.2
4	11.5	12.2	10.1	10.7	2.4	1.8	3.8	3.3
1979--1	7.9	10.4	5.4	6.8	2.3	-0.2	4.7	3.4
2	8.8	13.1	3.7	4.9	-2.2	-6.3	2.9	1.7
3	10.3	11.7	9.2	8.9	1.1	-0.3	2.2	2.5
4	9.8	n.a.	11.0	9.1	0.1	n.a.	-1.0	0.8

n.a.--Not available as data for December 1979 are incomplete.
1/ Fourth quarter over fourth quarter growth rates.
2/ Annualized growth rates based on seasonally adjusted data.

APPENDIX B

DESCRIPTION OF THE NEW PROCEDURES FOR CONTROLLING MONEY

B-1

The New Federal Reserve Technical Procedures
for Controlling Money

As part of its anti-inflationary program announced on October 6, 1979, the Federal Reserve changed open market operating procedures to place more emphasis on controlling reserves directly so as to provide more assurance of attaining basic money supply objectives. Previously, the reserve supply had been more passively determined by what was needed to maintain, in any given short-run period, a level of short-term interest rates, in particular a level of the federal funds rate, that was considered consistent with longer-term money growth targets. Thus, the new procedures entail greater freedom for interest rates to change over the short-run in response to market forces. 1/

This note describes the new technical operating procedures and how the linkage between reserves and money involved in the procedures is influenced by the existing institutional framework and other factors. This linkage is relatively complicated and variable, particularly over the short-run, so that, for example, it does not necessarily follow that rapid expansion of reserves would be accompanied by, or would presage, rapid expansion of money. The exact relationship depends on the behavior of other factors besides money that absorb or release reserves, and consideration must also be given to timing problems in connection with lagged reserve accounting.

In setting reserve paths to control money under existing conditions account must be taken of: (i) the prevailing reserve requirement structure, with varying reserve requirements by type of deposit (some of which may not be included in targeted money measures) and by size of deposit; (ii) the public's demand for currency relative to deposits; (iii) availability of reserves at bank initiative from the discount window; (iv) lags in response

1/ Consistent with this, the federal funds rate range adopted by the Federal Open Market Committee for an intermeeting period has been greatly widened.

on the part of the public and banks to changes in reserve supply through open market operations; (v) the growing amount of money-supply type deposits at institutions not subject to reserve requirements set by the Federal Reserve; (vi) lagged reserve accounting. To help insure that operations are undertaken most effectively, the Federal Reserve has the new operating technique and related factors under continuous examination in light of experience gained. At present, studies are under way on such elements as lagged reserve accounting and the role of the discount window. Possible changes in other elements involved with the technique would require Congressional action--such as extending reserve requirements to nonmember institutions and certain aspects of simplifying reserve structure.

The principal steps in the new procedure are outlined below.

(1) The policy process first involves a decision by the Federal Open Market Committee on the rate of increase in money it wishes to achieve. For instance, at its October 6 meeting, taking account of its longer-run monetary targets and economic and financial conditions, the Committee agreed upon an annual rate of growth in M-1 over the 3-month period from September to December on the order of 4½ percent, and of M-2 of about 7½ percent, but also agreed that somewhat slower growth was acceptable.

(2) After the objective for money supply growth is set, reserve paths expected to achieve such growth are established for a family of reserve measures. These measures consist of total reserves, the monetary base (essentially total reserves of member banks plus currency in circulation), and nonborrowed reserves. Establishment of the paths involves projecting how much of the targeted money growth is likely to take the form of currency, of deposits at nonmember institutions, and of deposits at member institutions (taking account of differential reserve requirements by size of demand deposits and between the demand and time and savings deposit components of M-2).

Moreover, estimates are made of reserves likely to be absorbed by expansion in other bank liabilities subject to reserve requirements, such as large CD's, at a pace that appears consistent with money supply objectives and also takes account of tolerable changes in bank credit. Such estimates are necessary because reserves that banks use to support expansion of D's, for example, would not be available to support expansion in M-1 and M-2. Thus, if the reserves required behind CD's were not provided for in the reserve path, expansion in M-1 and M-2 would be weaker than desired. The opposite would be the case if the reserve path were not reduced to reflect contraction of large CD's. For similar reasons, estimates are also made of the amount of excess reserves banks are likely to hold.

(3) The projected mix of currency and deposits, given the reserve requirements for deposits and banks' excess reserves, yields an estimate of the increase in total reserves and the monetary base consistent with FOMC monetary targets. The amount of nonborrowed reserves--that is total reserves less member bank borrowing--is obtained by initially assuming a level of borrowing near that prevailing in the most recent period. For instance, following the October 6 decision, a level of borrowing somewhat above that of September was initially assumed. Following subsequent meetings, the assumed level of borrowing for the nonborrowed path was always close to the level prevailing around the time of the FOMC meeting, though varying a little above and below that level.

(4) Initial paths established for the family of reserve measures over, say, a 3-month period are then translated into reserve levels covering shorter periods between meetings. These paths can be based on a constant seasonally adjusted rate of growth of the money targets on, say, a month-by-month basis, or can involve variable monthly growth rates within the 3-month period if that appears to facilitate achievement of the longer-run money targets.

(5) Total reserves provide the basis for deposits and thereby are more closely related to the aggregates than nonborrowed reserves. Thus total reserves represents the principal over-all reserve objective.[1/] However, only nonborrowed reserves are directly under control through open market operations, though they can be adjusted in response to changes in bank demand for reserves obtained through borrowing at the discount window.

(6) Because nonborrowed reserves are more closely under control of the System Account Manager for open market operations (though subject to a small range of error because of the behavior of non-controlled factors affecting reserves, such as float), he would initially aim at a nonborrowed reserve target (seasonally unadjusted for operating purposes) established for the operating period between meetings. To understand how this would lead to control of total reserves and money supply, suppose that the demand for money ran stronger than was being targeted--as it did in early October of last year. The increased demand for money and also for bank reserves to support the money would in the first instance be accompanied by more intensive efforts on the part of banks to obtain reserves in the federal funds market, thereby tending to bid up the federal funds rate, and by increased borrowing at the Federal Reserve discount window. As a result

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1/ In the control process, the monetary base in practice is given less weight than total reserves. This is principally for a technical reason. If currency, the principal component of the base, is running stronger than anticipated, achievement of a base target would require a dollar-for-dollar weakening in member bank reserves. But, because of fractional reserve requirements, the weakening in reserves would have a multiple effect on the deposit components of the monetary aggregates (it could weaken the demand deposit component by about 6 times the decline in reserves). Achievement of a base target in the short run could therefore lead, in this example, to a much weaker money supply than targeted. If a total reserve target were achieved, the money supply would be stronger than targeted, but only by the amount by which currency is stronger than expected. Thus, the variation from a money supply target would be less under total reserves than under a monetary base guide. Of course, should currency persistently run stronger or weaker than expected, compensating adjustments could be made to either a total reserves or monetary base target.

of the latter, total reserves and the monetary base would for a while run stronger than targeted. Whether total reserves tend to remain above target for any sustained period depends in part on the nature of the bulge in reserve demand--whether or not it was transitory, for example--and in part on the degree to which emerging market conditions reflect or induce adjustments on the part of banks and the public. These responses on the part of banks, for example, could include sales of securities to the public (thereby extinguishing deposits) and changes in lending policies.

(7) Should total reserves be showing sustained strength, closer control over them could be obtained by lowering the nonborrowed reserve path (to attempt to offset the expansion in member bank borrowing) and/or by raising the discount rate. A rise in the discount rate would, for any given supply of nonborrowed reserves, initially tend to raise market interest rates, thereby working to speed up the adjustment process of the public and banks and encouraging a more prompt move back to the path for total reserves and the monetary base. Thus, whether adjustments are made in the nonborrowed path--the only path that can be controlled directly through open market operations--and/or in the discount rate depends in part on emerging behavior by banks and the public. Under present circumstances, however, both the timing of market response to a rise in money and reserve demand, and the ability to control total reserves in the short run within close tolerance

limits, are influenced by the two-week lag between bank deposits and required reserves behind these deposits.[1/]

(8) Other intermeeting adjustments can be made to the reserve paths as a family. These may be needed when it becomes clear that the multiplier relationship between reserves and money has varied from expectations.. The relationship can vary when, for example, excess reserves and non-money reservable liabilities are clearly running higher or lower than anticipated. Since October 6 such adjustments during the intermeeting period have been made infrequently. Given the naturally large week-to-week fluctuations in factors affecting the reserve multiplier, deviation from expectations in one direction over a period of several weeks would be needed before it would be clear that a change in trend has taken place.

A variable relationship between expansion of reserves and of money is implicit in the description of procedures just given. This is illustrated by experience in the fourth quarter, as shown in the table on the next page. It can be seen from panel I that M-1 increased at only a 3.1 percent annual rate (seasonally adjusted) in that period and M-2 at a 6.8 percent rate. At the same time, as shown in panel II, nonborrowed reserves, total reserve and the monetary base rose at substantially more rapid rates--by annual rates of about 13, 13¾, and 8 percent, respectively.

There were a number of reasons for the much more rapid growth in reserves and the base than in the monetary aggregates. Only about 1 percentage point of the 13¾ percent annual rate of increase in total reserves

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1/ Under lagged accounting, banks are not required to hold reserves against deposits until two weeks later. With required reserves fixed at that time, the Federal Reserve in its operations is limited in its ability to control total reserves within a given week (since the total of reserves is determined by required reserves and banks' excess reserves), but can more readily determine whether the banking system satisfies its reserve requirement through the availability of nonborrowed reserves, or is forced to turn to the discount window (or to reduce excess reserves, though most banks are usually close to minimal levels in that respect).

B-7

Changes in Reserve and Monetary Aggregates
September to December 1979
(Seasonally adjusted)

		Percent Annual Rate 1/	Change in Millions $
I.	Changes in Monetary Aggregates:		
	A. M-1	3.1	2845
	1. Currency outside banks	5.3	1400
	2. Member bank demand deposits	2.3	972
	3. Nonmember bank demand deposits	2.1	473
	B. M-2	6.8	15961
II.	Changes in Reserves and Related Items:		1309
	A. Nonborrowed reserves	12.9	
	B. Borrowings	--	131
	C. Total reserves (A + B)	13.8	1430
	D. Currency 2/	5.9	1606
	E. Monetary base (C + D)	8.1	3046

		Percentage Points Contributed Towards Growth of Total Reserves	Change in Millions $
III.	Total Reserves Absorbed by:		
	A. Private demand deposits	1.1	111
	B. Interbank demand deposits	2.7	280
	C. U.S. Government demand deposits	0.0	3
	D. Large, negotiable CD's	3.6	378
	E. M-2 time and savings deposits	4.5	466
	F. Nondeposit items	0.0	-3
	G. Excess reserves	2.0	205

Addendum:

Impact of lagged reserve accounting on:	
1. Total reserves	287 3/
2. Reserves against private demand deposits	-64
3. Reserves against M-2 time and savings deposits	121
4. All other items subject to reserves	230

1/ Growth rates of reserves adjusted for discontinuities in series that result from changes in Regulations D and M.

2/ Includes vault cash of nonmember banks.

3/ Reflects change in total reserves during period attributable to fact that required reserves are based on deposits two weeks earlier, rather than on deposits contemporaneous with reserves. Thus, adjusted to a basis contemporaneous with deposit growth from September to December, total reserves would have expanded $287 million, or 2.8 percentage points, less than they actually did.

supported growth in the member bank demand deposit component of M-1 (as may be seen from line III.A of the table). An additional 4½ percentage points supported the member bank interest-bearing component of M-2 (line III.E). Thus less than half of the increase in reserves supported expansion in targeted monetary aggregates. More than half of the reserves supported expansion in interbank demand deposits, excess reserves, and large negotiable CD's. If these reserves had not been supplied, growth in M-1 and M-2 would have been much slower. In fact, actual growth in M-1 and M-2 was a bit slower than targeted, though not less than the Committee found acceptable.1/

As this example from recent experience helps demonstrate, the behavior of reserve measures in relation to money can be expected to vary with shifts in the currency and deposit mix, with changes in bank demands for excess reserves and borrowing, and with timing problems related to lagged reserve accounting. But even in evaluating money growth itself, which the Federal Open Market Committee sets as a target in the policy process, recognition has to be given to the likelihood that money growth can vary substantially on a month-to-month basis in view of inherently large and erratic money flows in so vast and complex an economy as ours.

1/ Moreover, the relatively rapid expansion in reserve measures was not associated with strength in bank credit, which in the fourth quarter grew at only about a 3 percent annual rate, well below its earlier pace. The slow expansion in bank credit during the fourth quarter reflected, on the liability side, a sharp reduction in the outstanding amount of borrowing by banks through Euro-dollars, federal funds, and repurchase agreements.

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by

F. Jean Wells
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Specialists in Money and Banking
Economics Division

February 21, 1980

BRIEFING MATERIALS FOR MONETARY POLICY OVERSIGHT

This briefing document has been prepared to assist the Senate Committee on Banking, Housing, and Urban Affairs in monetary policy oversight conducted purusant to P.L. 95-523. It presents selected indicators for the economic setting in which monetary policy operates as well as indicators of the direction of monetary policy itself.

The first two sections of the report deal with monetary and fiscal policy variables. Several presentations relating to 1980 Federal Reserve targets for the growth of money and credit are included in Section I of the report. The money growth targets are in terms of the new official definitions for measures of the money supply. A table showing the Federal Reserve System one-year target ranges and actual growth rates from 1975 through 1979 for various measures of the money supply using the old definitions is also included in this section.

Sections III through VI of the report present forecasts for the economy and trace past behavior of selected economic variables. This information is provided to assist the Committee in reviewing the Federal Reserve's plans and objectives for monetary policy as they relate to prevailing economic conditions and to short-term economic goals set forth in the Economic Report of the President.

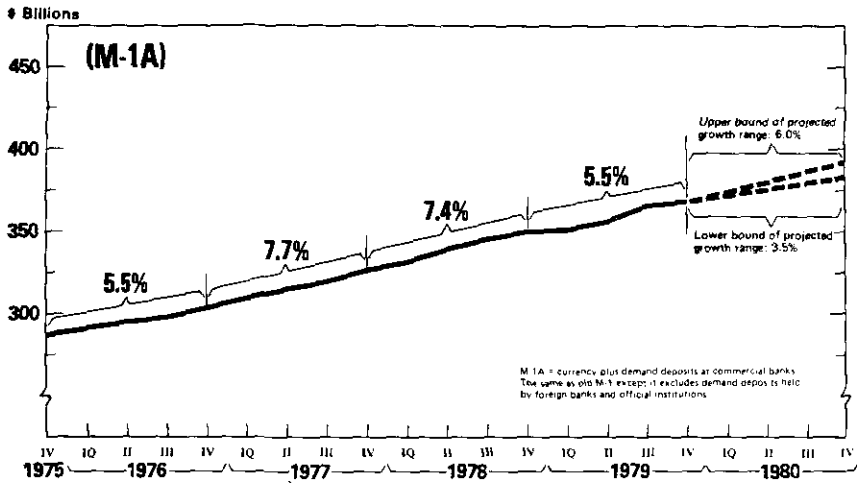
Assistance in preparing this report was obtained from Barbara L. Miles, Specialist in Housing, Barry E. Molefsky, Analyst in Econometrics, Arlene E. Wilson, Analyst in International Trade and Finance, and Philip D. Winters,

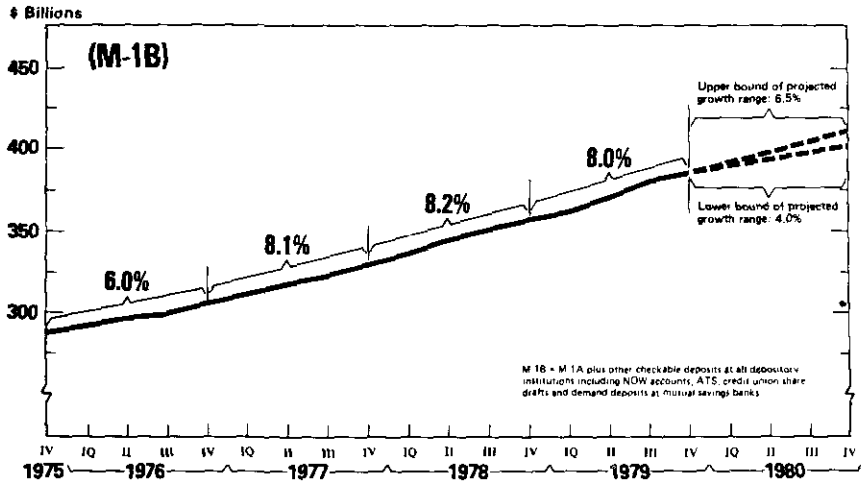
Analyst in Regional Economics, all of the Economics Division. Secretarial production assistance was provided by Nancy Drexler.

Listing of tables and graphs

MONEY SUPPLY (M-1A) & (M-1B)

Actual Levels and Fourth Quarter to Fourth Quarter Growth Rates from Fourth Quarter 1975

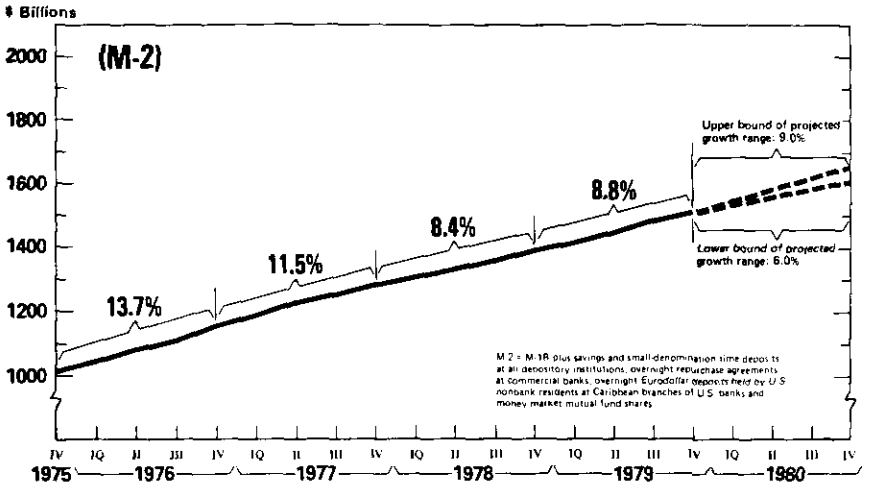


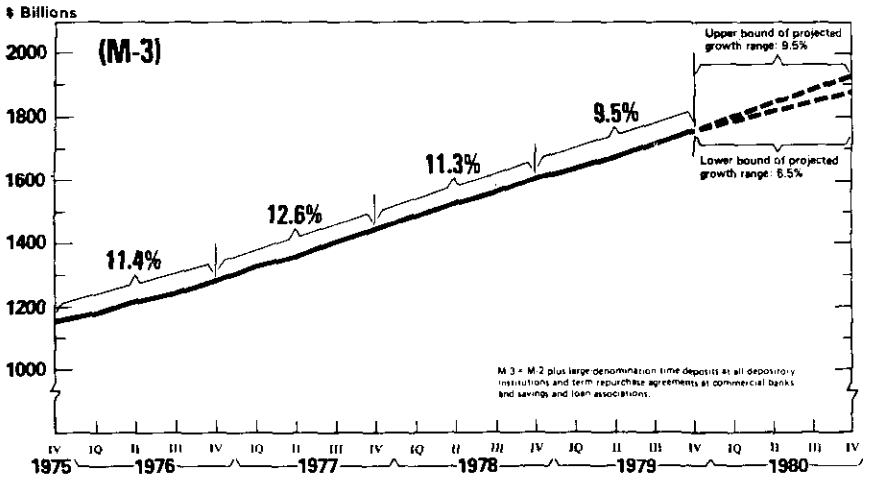


Data Source. Quarterly observations and growth rates are calculated from seasonally adjusted data series of the Board of Governors of the Federal Reserve System as revised in February 1980.

MONEY SUPPLY (M-2) & (M-3)

Actual Levels and Fourth Quarter to Fourth Quarter Growth Rates from Fourth Quarter 1975

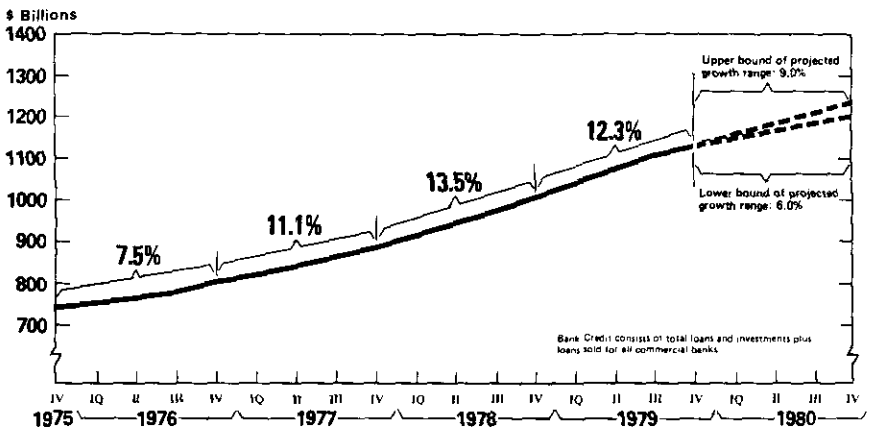




Data Source: Quarterly observations and growth rates are calculated from seasonally adjusted data series of the Board of Governors of the Federal Reserve System as revised in February 1980

BANK CREDIT

Actual Levels and Fourth Quarter to Fourth Quarter Growth Rates from Fourth Quarter 1975



Note: The target range for Bank Credit growth for the period IVQ 1978 to IVQ 1979 was 7.5% to 10.5%.

Data Source: Quarterly observations and growth rates are calculated from seasonally adjusted data series of the Board of Governors of the Federal Reserve System.

FEDERAL RESERVE SYSTEM ONE-YEAR TARGET RANGES AND ACTUAL GROWTH RATES
FOR MONETARY AGGREGATES UNDER OLD DEFINITIONS FOR MONEY
(Growth rates in percent)

Period	M1		M2		M3	
	Target	Actual	Target	Actual	Target	Actual
Mar. 1975 to Mar. 1976	5.0 - 7.5	5.3	8.5 - 10.5	9.7	10.0 - 12.0	12.2
1975: Q2 to 1976: Q2	5.0 - 7.5	5.3	8.5 - 10.5	9.6	10.0 - 12.0	12.1
1975: Q3 to 1976: Q3	5.0 - 7.5	4.6	7.5 - 10.5	9.3	9.0 - 12.0	11.5
1975: Q4 to 1976: Q4	4.5 - 7.5	5.8	7.5 - 10.5	10.9	9.0 - 12.0	12.7
1976: Q1 to 1977: Q1	4.5 - 7.0	6.5	7.5 - 10.0	11.0	9.0 - 12.0	12.9
1976: Q2 to 1977: Q2	4.5 - 7.0	6.8	7.5 - 9.5	10.8	9.0 - 11.0	12.5
1976: Q3 to 1977: Q3	4.5 - 6.5	8.0	7.5 - 10.0	11.1	9.0 - 11.5	12.7
1976: Q4 to 1977: Q4	4.5 - 6.5	7.9	7.0 - 10.0	9.8	8.5 - 11.5	11.7
1977: Q1 to 1978: Q1	4.5 - 6.5	7.7	7.0 - 9.5	8.8	8.5 - 11.0	10.5
1977: Q2 to 1978: Q2	4.0 - 6.5	8.2	7.0 - 9.5	8.6	8.5 - 11.0	10.0
1977: Q3 to 1978: Q3	4.0 - 6.5	8.0	6.5 - 9.0	8.5	8.0 - 10.5	9.5
1977: Q4 to 1978: Q4	4.0 - 6.5	7.2	6.5 - 9.0	8.7	7.5 - 10.0	9.5
1978: Q1 to 1979: Q1	4.0 - 6.5	5.1	6.5 - 9.0	7.6	7.5 - 10.0	8.7
1978: Q2 to 1979: Q2	4.0 - 6.5	4.8	6.5 - 9.0	7.7	7.5 - 10.0	8.6
1978: Q3 to 1979: Q3	2.0 - 6.0	5.3	6.5 - 9.0	8.2	7.5 - 10.0	8.7
1978: Q4 to 1979: Q4	1/	5.5	5.0 - 8.0	8.3	6.0 - 9.0	8.1

For notes see next page.

Old definitions for money:

M1 = private demand deposits plus currency.
M2 = M1 plus bank time and savings deposits other than large negotiable CD's.
M3 = M2 plus deposits at mutual savings banks, savings and loan associations and credit unions.

1/ The M1 range initially announced for this period, 1.5% to 4.5%, was based on an assumption about the rate at which the public would shift balances from bank checking accounts to new interest earning transactions accounts. The FRS estimated that use of new account forms would dampen M1 growth by 3 percentage points over the year. During the year, the FRS noted that use of these accounts as alternatives to M1 deposits was more moderate than initially anticipated and accordingly adjusted the growth range for M1 upward. As of October 1979, the FRS's adjusted range for M1 was 3.0% to 6.0%.

Source: Actual growth data are based on seasonally adjusted money supply series of the Board of Governors of the Federal Reserve System as revised in January 1980. Target ranges are those announced before House and Senate Banking Committees beginning in May 1975 according to procedures developed under H. Con. Res. 133 of the 94th Congress and later under P.L. 95-188. Beginning in 1979, target ranges were announced in accordance with provisions of P.L. 95-523.

FEDERAL BUDGET RECEIPTS AND OUTLAYS
(In billions of dollars) 1/

Fiscal year or period	Budget receipts	Budget outlays	Budget surplus or deficit
1977	357.8	402.7	-45.0
1978	402.0	450.8	-48.8
1979	465.9	493.7	-27.7
1980 (estimates)			
Second Concurrent Resolution, November 1979 2/	517.8	547.6	-29.8
January Budget 3/	523.8	563.6	-39.8
1981 (estimates) 3/	600.0	615.8	-15.8
Cumulative totals, first 3 months:			
Fiscal year 1979	99.4	123.4	-24.0
Fiscal year 1980	114.0	138.7	-24.6

1/ Unified budget basis.

2/ Second Concurrent Resolution on the Budget--Fiscal Year 1980, November 28, 1979.

3/ Estimates from Budget of the United States Government, Fiscal Year 1981.

Source: Economic Indicators, January 1980.

FEDERAL FINANCES AND THE GROSS NATIONAL PRODUCT, 1958-1983
(Dollar amounts in billions)

Fiscal year	Gross national product	Budget receipts		Outlays						Federal debt held at end of year			
				Unified budget		Off-budget Federal entities		Total		Total		Held by the public	
		Amount	Percent of GNP	Amount	Percent of GNP	Amount	Percent of GNP	Amount	Percent of GNP	Amount	Percent of GNP	Amount	Percent of GNP
1958	442.1	79.6	18.0	82.6	18.7	.....	.....	82.6	18.7	279.7	63.2	226.4	51.2
1959	473.3	79.2	16.7	92.1	19.5	.....	.....	92.1	19.5	287.8	60.8	235.0	49.7
1960	497.3	92.5	18.6	92.2	18.5	.....	.....	92.2	18.5	290.9	58.5	237.2	47.7
1961	508.3	94.4	18.6	97.8	19.2	.....	.....	97.8	19.2	292.9	57.6	238.6	46.9
1962	545.9	99.7	18.2	106.8	19.5	.....	.....	106.8	19.5	303.3	55.5	248.4	45.4
1963	576.3	106.6	18.5	111.3	19.3	.....	.....	111.3	19.3	310.8	53.9	254.5	44.2
1964	616.2	112.7	18.3	118.6	19.2	.....	.....	118.6	19.2	316.8	51.4	257.6	41.8
1965	657.1	116.8	17.8	118.4	18.0	.....	.....	118.4	18.0	323.2	49.2	261.6	39.8
1966	721.1	130.9	18.1	134.7	18.7	.....	.....	134.7	18.7	329.5	45.7	264.7	36.7
1967	774.4	149.6	19.3	158.3	20.4	.....	.....	158.3	20.4	341.3	44.1	267.5	34.5
1968	829.9	153.7	18.5	178.8	21.5	.....	.....	178.8	21.5	369.8	44.6	290.6	35.0
1969	903.7	187.8	20.8	184.5	20.4	.....	.....	184.5	20.4	367.1	40.6	279.5	30.9
1970	959.0	193.7	20.2	196.6	20.5	.....	.....	196.6	20.5	382.6	39.9	284.9	29.7
1971	1,019.2	188.4	18.5	211.4	20.7	.....	.....	211.4	20.7	409.5	40.2	304.3	29.9
1972	1,110.5	208.6	18.8	232.0	20.9	.....	.....	232.0	20.9	437.3	39.4	323.8	29.2
1973	1,237.5	232.2	18.8	247.1	20.0	.1	*	247.1	20.0	468.4	37.9	343.0	27.7
1974	1,359.2	264.9	19.5	269.6	19.8	1.4	.1	271.1	19.9	486.2	35.8	346.1	25.5
1975	1,457.3	281.0	19.3	326.2	22.4	8.1	.6	334.2	22.9	544.1	37.3	396.9	27.2
1976	1,621.0	300.0	18.5	366.4	22.6	7.3	.4	373.7	23.1	631.9	39.0	480.3	29.6
1977	1,843.3	357.8	19.4	402.7	21.8	9.3	.5	413.4	22.3	709.1	38.5	551.8	29.9
1978	2,060.4	402.0	19.5	450.8	21.9	10.3	.5	461.2	22.4	780.4	37.9	610.9	29.7
1979	2,313.4	465.9	20.1	493.7	21.3	12.4	.5	506.1	21.9	833.9	36.0	644.6	27.9
1980 estimate	2,518.0	523.8	20.8	563.6	22.4	16.8	.7	580.3	23.0	892.8	35.5	688.9	27.4
1981 estimate	2,764.4	560.0	21.7	615.8	22.3	18.1	.7	633.9	22.9	939.4	34.0	722.0	26.1
1982 estimate	3,107.6	691.1	22.2	686.3	22.1	15.1	.5	701.4	22.6	972.5	31.3	731.3	23.5
1983 estimate	3,513.0	798.8	22.7	774.3	22.0	12.9	.4	787.2	22.4	988.8	28.1	718.5	20.5

* 0.05% or less

Source: Budget of the United States Government, Fiscal Year 1981. p. 612.

1980 ECONOMIC PROJECTIONS OF THE BOARD OF GOVERNORS
OF THE FEDERAL RESERVE SYSTEM

Item	Year	
	Actual	Projected
	1979	1980
	Level, fourth quarter	
Employment (millions)	97.7	97 to 98 3/4
Unemployment rate (percent)	5.9	6 3/4 to 8
	Percent change, fourth quarter to fourth quarter	
Nominal gross national product	9.9	7 1/2 to 11
Real gross national product	0.8	-2 1/2 to 1/2
Implicit price deflator	9.0	9 to 11
	Annual rate of change in fourth quarter, percent	
Consumer price index	13.2	8 3/4 to 12

Source: Board of Governors of the Federal Reserve System, Monetary Policy Report to Congress, February 19, 1980, p. 7.

1980 ECONOMIC FORECASTS AND ADMINISTRATION GOALS

	Administration Goal Forecast	CBO Current Policy Forecast	Current Chase Forecast	Current DRI Forecast
Humphrey-Hawkins Act Goals				
	Level, fourth quarter 1980 1/			
Employment (millions)	97.8		97.6	97.7
Unemployment rate (percent)	7.5	7.2 to 8.2	7.9	7.4
	Percent change, fourth quarter 1979 to fourth quarter 1980			
Real gross national product	-1.0	-2.3 to -0.3	-1.6	-1.6
Real disposable income			-0.5	0.3
Productivity				
total economy 2/			--	--
private business			0.0	--
private nonfarm		--	-1.5	-2.0
Consumer prices	10.7	8.6 to 10.6	9.9	10.6

1/ Seasonally adjusted.

2/ Based on total real GNP per hour worked.

Source: U.S. Council of Economic Advisers. Economic Report of the President. Washington, U.S. Govt. Print. Off., 1980, p. 94. U.S. Congressional Budget Office. Entering the 1980s: Fiscal Policy Choices, U.S. Govt. Print. Off., 1980, p. XIII, 56. Chase Econometrics Associates, Inc. Standard Forecast of January 22, 1980. Data Resources, Inc. Control Forecast of January 21, 1980.

1981 ECONOMIC FORECASTS AND ADMINISTRATION GOALS

	Administration Goal Forecast	Current CBO Policy Forecast	Current Chase Forecast	Current DRI Forecast
Humphrey-Hawkins Act Goals				
	Level, fourth quarter 1981 1/			
Employment (millions)	99.7		99.5	99.8
Unemployment rate (percent)	7.3	7.5 to 8.5	7.6	7.3
	Percent change, fourth quarter 1980 to fourth quarter 1981			
Real gross national product	2.8	2.0 to 4.0	3.3	4.8
Real disposable income	1.1		2.4	3.7
Productivity				
total economy 2/	1.3		--	--
private business			1.4	--
private nonfarm		--	1.1	1.7
Consumer prices	8.7	8.3 to 10.3	9.2	9.1

1/ Seasonally adjusted.

2/ Based on total real GNP per hour worked.

Source: See preceding table.

SUMMARY OF ADMINISTRATION'S ECONOMIC GOALS CONSISTENT WITH THE OBJECTIVES OF THE HUMPHREY-HAWKINS ACT 1/

Item	YEAR					
	Goal Forecasts		Goal Requirements			
	1980	1981	1982	1983	1984	1985
	Level, fourth quarter 2/					
Employment (millions)	97.8	99.7	102.5	105.3	108.0	110.7
Unemployment (percent)	7.5	7.3	6.5	5.6	4.8	4.0
	Percent change, fourth quarter to fourth quarter					
Real gross national product	-1.0	2.8	5.0	5.0	4.8	4.6
Real disposable income	.5	1.1	4.7	4.7	4.6	4.4
Productivity 3/	-.3	1.3	2.3	2.5	2.5	2.5
Consumer prices	10.7	8.7	7.9	7.2	6.5	5.8

1/ Among the provisions of the Humphrey-Hawkins Act are those setting an unemployment goal of 4% among individuals aged 16 and over in the civilian labor force by 1983 and an inflation rate of 3% as measured by the consumer price index, also by 1983. The Act requires that beginning in the 1980 Economic Report the President review the numerical goals and timetables for reducing unemployment and inflation and report to the Congress on the degree of progress being made in these areas. From this time, if the President finds it necessary, he may recommend modification of the timetable(s) for achieving the unemployment and inflation goals.

According to the 1980 Economic Report:

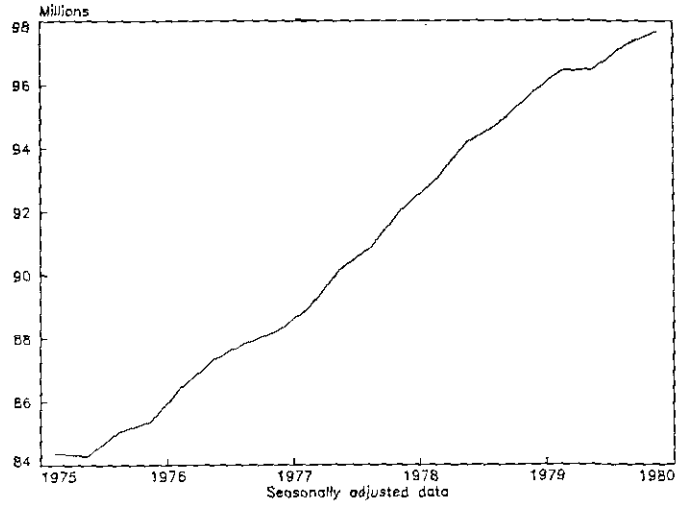
> ...the President has used the authority provided to him in the Humphrey-Hawkins Act to extend the timetable for achieving a 4 percent unemployment rate and 3 percent inflation. The target year for achieving 4 percent unemployment is now 1985, a 2-year deferment. The target year for achieving 3 percent inflation has been postponed until 3 years beyond that. Economic goals through 1985 consistent with this timetable are shown [in the table above].
>
> The short-term goals represent a forecast for 1980 and 1981. The medium-term goals for 1982 through 1985 are not forecasts but projections of the economic performance needed to achieve the unemployment rate and inflation goals within the Administration's timetable... (p. 94)

2/ Seasonally adjusted.

3/ Based on total real GNP per hour worked.

Source: U.S. Council of Economic Advisers. Economic Report of the President. Washington, U.S. Govt. Print. Off., 1980. p. 94.

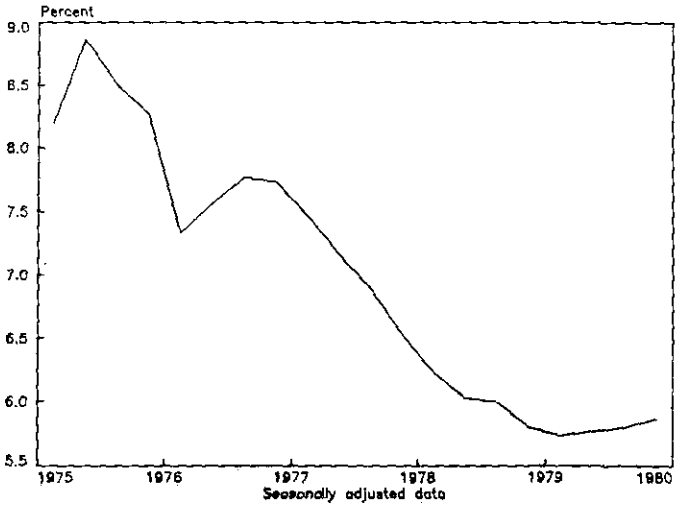
EMPLOYMENT
TOTAL CIVILIAN EMPLOYMENT



Seasonally adjusted data

Data source: Bureau of Labor Statistics, Department of Labor

UNEMPLOYMENT
PERCENT OF CIVILIAN LABOR FORCE

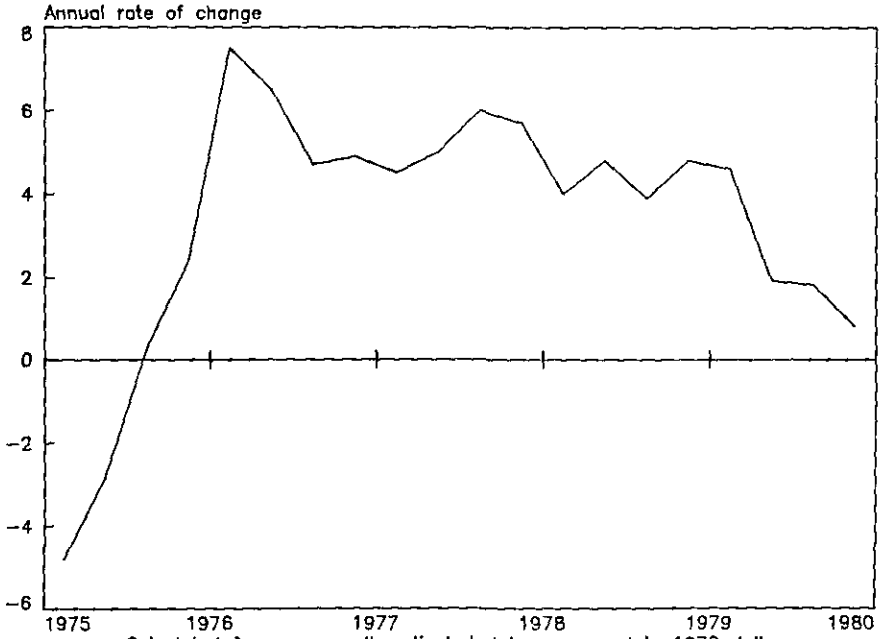


Seasonally adjusted data

Data source: Bureau of Labor Statistics, Department of Labor

PRODUCTION: REAL GNP

% CHANGE FROM SAME QUARTER, PREVIOUS YEAR

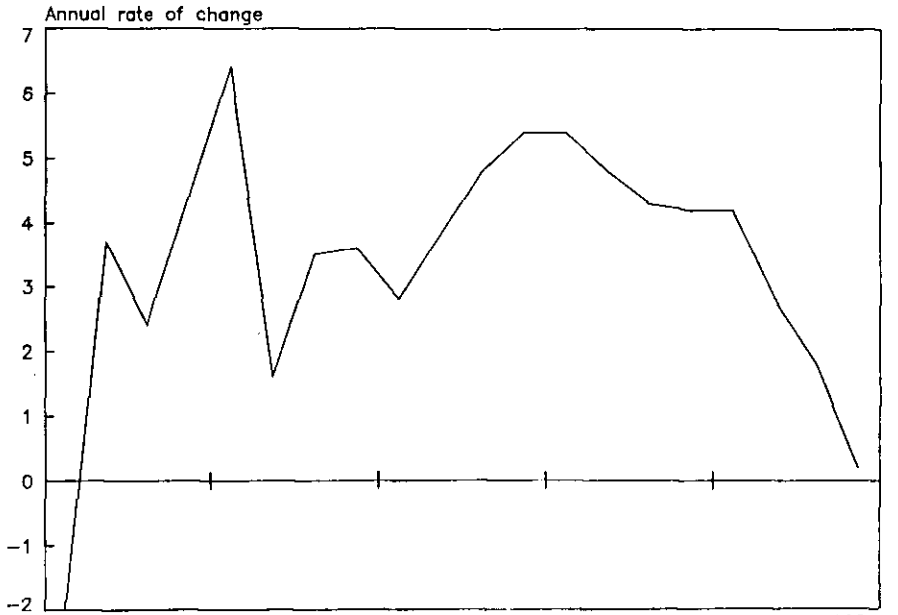


Calculated from seasonally adjusted data expressed in 1972 dollars

Data source: Bureau of Economic Analysis, Department of Commerce

REAL INCOME: DISPOSABLE PERSONAL INCOME

% CHANGE FROM SAME QUARTER, PREVIOUS YEAR

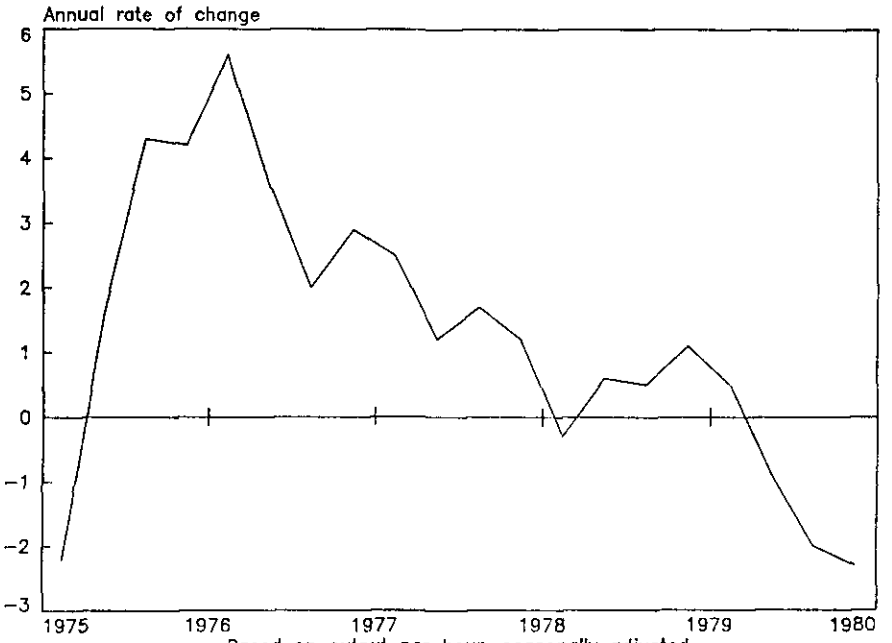


Calculated from seasonally adjusted data expressed in 1972 dollars

Data source: Bureau of Economic Analysis, Department of Commerce

PRODUCTIVITY: NONFARM BUSINESS SECTOR

% CHANGE FROM SAME QUARTER, PREVIOUS YEAR

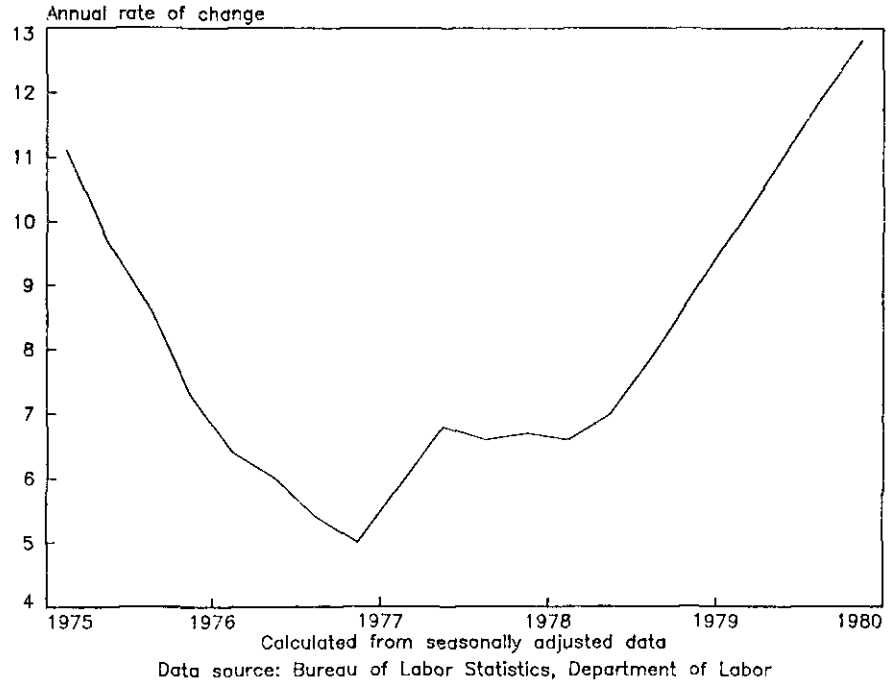


Based on output per hour, seasonally adjusted

Data source: Bureau of Labor Statistics, Department of Labor

PRICES: CONSUMER PRICE INDEX

% CHANGE FROM SAME QUARTER, PREVIOUS YEAR



Calculated from seasonally adjusted data

Data source: Bureau of Labor Statistics, Department of Labor

EXPORTS, IMPORTS, TRADE BALANCE 1/ AND TRADE-WEIGHTED EXCHANGE VALUE OF THE U.S. DOLLAR 2/

	1975	1976	1977	1978	1979 p	1979 I	1979 II	1979 III	1979 IV p
	(in billions of dollars; quarterly data seasonally adjusted)								
Exports	107.1	114.7	120.8	142.1	182.4	41.3	42.7	47.3	51.1
Imports	98.0	124.0	151.7	175.8	211.5	47.4	50.5	54.6	59.0
Trade balance	9.0	-9.4	-30.9	-33.7	-29.1	-6.1	-7.8	-7.3	-7.9
Memorandum item: Petroleum imports	27.0	34.6	45.0	42.3	60.0	11.6	12.9	16.6	18.9
Index of the weighted-average exchange value of the U.S. dollar	98.34	105.57	103.30	92.39	88.09	88.14	89.79	86.97	87.37

1/ Merchandise, excluding military, on balance of payments basis (adjusted from Census data for differences in timing and coverage).

2/ Index of weighted average exchange value of U.S. dollar against currencies of other G-10 countries (Germany, Japan, France, United Kingdom, Canada, Italy, Netherlands, Belgium, Sweden) and Switzerland. March 1973=100. Weights are 1972-1976 global trade of each of the 10 countries.

Sources: Exports, imports, and trade balance - Department of Commerce, Bureau of Economic Analysis. Trade-weighted exchange value of the U.S. Dollar - Board of Governors of the Federal Reserve System.

GROWTH RATES FOR SELECTED MONETARY, CREDIT AND RESERVE AGGREGATES
(Seasonally adjusted compound annual growth rates)

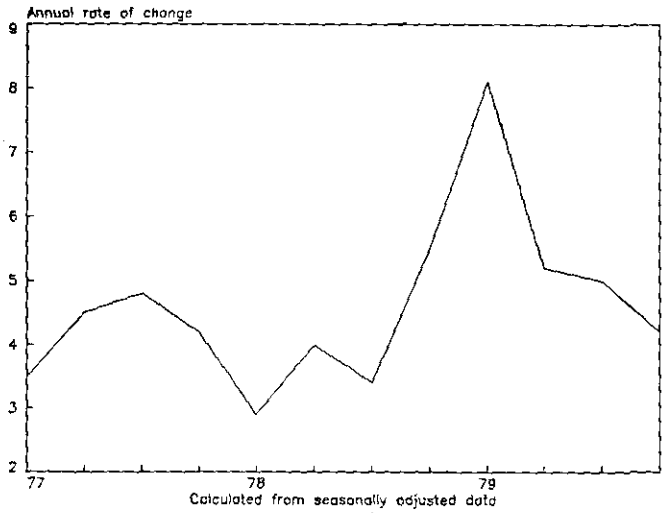
	1976 1/	1977 1/	1978 1/	1979 1/	1978 2/ II	1978 2/ III	1978 2/ IV	1979 2/ I	1979 2/ II	1979 2/ III	1979 2/ IV	Federal Reserve targets: 4th quarter 1979 to 4th quarter 1980
Monetary aggregates:												
M-1A	5.5	7.7	7.4	5.5	8.9	7.3	5.7	0.2	8.1	9.1	4.8	3.5 - 6.0
M-1B	6.0	8.1	8.2	7.9	9.4	7.5	7.7	4.9	11.1	10.6	5.4	4.0 - 6.5
M-2	13.7	11.5	8.4	8.8	7.7	8.5	9.8	6.4	10.6	10.8	7.4	6.0 - 9.0
M-3	11.4	12.6	11.3	9.5	11.5	10.8	12.0	8.1	9.1	10.7	10.1	6.5 - 9.5
Bank credit	7.5	11.1	13.5	12.3	13.5	13.5	14.6	14.6	11.8	14.1	8.7	6.0 - 9.0
Reserve aggregates: (adjusted)												
Total reserves	0.7	5.4	6.6	2.7	6.3	8.9	2.2	-3.1	-3.6	5.2	13.0	
Required reserves	0.7	5.5	6.7	2.4	6.9	8.9	2.0	-3.0	-3.4	4.9	12.1	
Nonborrowed reserves	0.9	3.1	6.7	0.6	0.7	6.8	4.5	-3.6	-7.2	7.2	6.9	
Monetary base	6.7	8.3	9.1	7.5	7.9	9.6	8.6	5.7	4.9	9.6	9.9	

1/ From fourth quarter of previous year to fourth quarter of year indicated.

2/ From previous quarter.

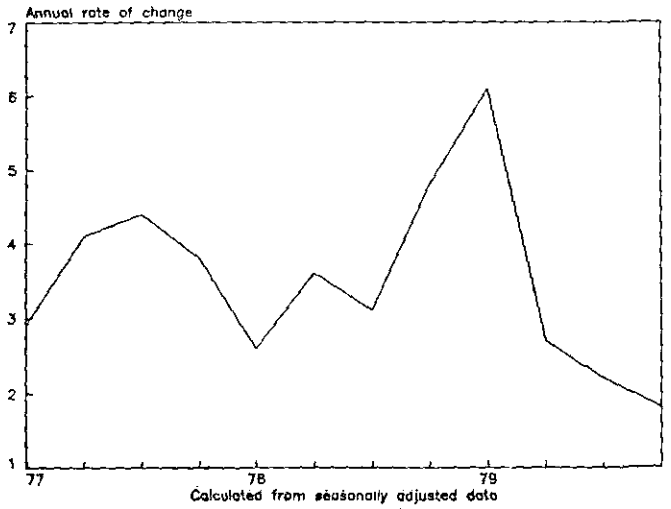
Sources: Calculated from data series of the Board of Governors of the Federal Reserve System, accessed from data files of Data Resources, Inc. At the time the reserve aggregate data were accessed, the Federal Reserve was in the process of making new seasonal adjustments for these series. Data accessed reflects changes which have been made as of February 14, 1980.

INCOME VELOCITY OF MONEY (M-1A)
% CHANGE FROM SAME QUARTER, PREVIOUS YEAR



Calculated from seasonally adjusted data
Data sources: Federal Reserve Board; Department of Commerce

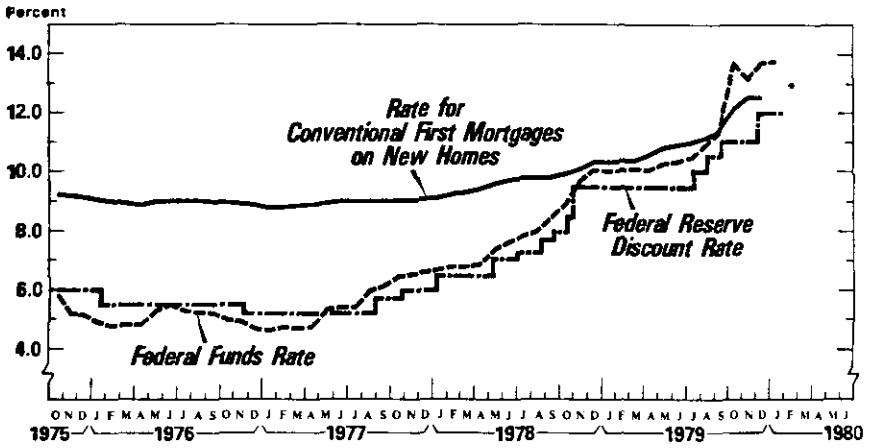
INCOME VELOCITY OF MONEY (M-1B)
% CHANGE FROM SAME QUARTER, PREVIOUS YEAR



Calculated from seasonally adjusted data
Data sources: Federal Reserve Board; Department of Commerce

SELECTED INTEREST RATES

October 1975 through January 1980



* On February 15, 1980 the Federal Reserve Discount Rate was raised to 13%.

Data Sources: Board of Governors of the Federal Reserve System and Federal Housing Administration, Department of Housing and Urban Development.

SELECTED INTEREST RATES, 1976-1980

	1976	1977	1978	1979	1979 Sept.	1979 Oct.	1979 Nov.	1979 Dec.	1980 Jan.
3-mo. Treasury bills (new issues)	4.99	5.26	7.22	10.04	10.18	11.47	11.87	12.07	12.04
10-yr. Treasury securities (constant maturity)	7.61	7.42	8.41	9.44	9.33	10.30	10.65	10.39	10.80
Corporate Aaa bonds (Moody's)	8.43	8.02	8.73	9.63	9.44	10.13	10.76	10.74	11.09
Prime commercial paper, 4-6 mos	5.35	5.60	7.99	10.91	11.60	13.23	13.26	12.80	NA
Prime rate charged by banks	6.84	6.82	9.06	12.67	12.90	14.39	15.55	15.30	15.25
New home mortgage yields, FHA/HUD series	9.00	9.00	9.70	10.90	11.35	12.15	12.50	12.50	NA
Federal Reserve discount rate	5.50	5.52	7.52	10.31	10.50-11.00	11.00-12.00	12.00	12.00	12.00 *
Federal funds rate	5.05	5.54	7.94	11.20	11.43	13.77	13.18	13.78	13.82

* On February 15, 1980, the Federal Reserve discount rate was raised to 13%.

Sources: Board of Governors of the Federal Reserve System, Department of Housing and Urban Development, and Moody's Investors Service.

FUNDS RAISED IN U.S. CREDIT MARKETS

[In billions of dollars; quarterly data are seasonally adjusted at annual rates]

	1975	1976	1977	1978	1978 (IV)	1979 (I)	1979 (II)	1979 (III)
Total funds raised, by instrument:	223.5	296.0	392.5	481.7	525.0	453.3	501.5	512.4
Investment company shares	-.1	-1.0	-.9	-1.0	-1.3	*	-.6	-1.6
Other corporate equities	10.8	12.9	4.9	4.7	8.6	5.6	5.0	7.3
Debt instruments:	212.8	284.1	388.5	478.0	517.7	447.6	497.1	506.7
U.S. Government securities	98.2	88.1	84.3	95.2	87.5	72.6	77.9	75.4
State and local obligations	16.1	15.7	23.7	28.3	24.4	22.3	12.7	23.5
Corporate and foreign bonds	36.4	37.2	36.1	31.6	31.7	35.8	38.7	29.1
Mortgages	57.2	87.1	134.0	149.0	158.7	157.4	168.9	157.6
Consumer credit	9.7	25.6	40.6	50.6	53.3	50.7	44.7	42.4
Bank loans, n.e.c.	-12.2	7.0	29.8	58.4	75.4	34.9	65.7	99.2
Open market paper	-1.2	8.1	15.0	26.4	40.6	37.7	44.9	55.4
Other loans	8.7	15.3	25.2	38.6	46.1	36.3	43.6	24.1

Source: Board of Governors of the Federal Reserve System. 1979(III) based on incomplete data.

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RESERVE AGGREGATES AND MONETARY CONTROL

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February 29, 1980

CONTENTS

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on Banking, Housing, and Urban Affairs
United States Senate

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LIST OF TABLES AND CHARTS

RESERVE AGGREGATES AND MONETARY CONTROL

INTRODUCTION

As part of its new anti-inflationary monetary policy program announced October 6, 1979, the Federal Reserve adopted a new operating procedure for implementing monetary policy. Under the new operating, procedure money stock control is implemented by following a day-to-day operating procedure in which bank reserves are monitored and controlled with the aim of keeping the growth of bank reserves consistent with desired money stock growth. Previously, the Federal Reserve's operating procedure consisted of keeping the Federal funds rate within a targeted range consistent with the desired rate of growth in the money stock.

This paper describes Federal Reserve operating procedures under the Federal funds approach and under the new reserve aggregates approach. The two techniques will be compared and the criticisms and problems associated with each one will be discussed. There are a number of aggregate measures of bank reserves available to the Federal Reserve for use as target variables. These alternative measures are defined and their roles in the monetary process are explained. Finally, some implications of the new policy and the recent experience with it will be discussed.

FEDERAL RESERVE OPERATING PROCEDURES BEFORE OCTOBER 6, 1979

Prior to the October 6, 1979 policy change, the Federal Reserve attempted to control the growth of the money stock by keeping the Federal funds rate within

a prescribed range. The Federal funds rate is the interest rate a member bank pays to borrow reserves from another member bank.

The Federal funds approach entailed, first, determining a desired rate of growth in the money stock, estimated to facilitate real growth in GNP, and reduce inflationary pressure. From a desired money growth rate, a range could be inferred for short term interest rates; given the relationship between the Federal funds rate and other short term interest rates, a range could then be defined for the Federal funds rate, estimated to be consistent with desired money growth.

The Federal Open Market Committee therefore in effect established two sets of targets, one for monetary aggregate growth and one for the Federal funds rate, that were estimated to be consistent with each other. Daily open market operations were then designed to keep the Federal funds rate within its targeted range, on the assumption that this goal, if met, would be conducive to desired noninflationary money growth. If actual money growth did not fall within the targeted range, one of the two sets of targets had to be adjusted; either the Federal funds rate target could be changed to achieve the money growth target or money growth could be allowed to proceed at whatever rate followed from adherence to the Federal funds target. Many observers agree that in this situation, the Federal Reserve frequently failed to adjust its Federal Funds rate target as far, or as quickly, as was needed to maintain close money stock control.

If the Federal funds rate rose above its target, because of the scarcity of bank reserves or other upward market pressures, the Federal Reserve could respond in one of two ways. It could make open market purchases of Government securities, increasing the reserves available to the banking system. This action would decrease the upward pressure on the Federal funds rate, allowing it to

return to its target range; by providing more bank liquidity, it would also facilitate an expansion of money and bank credit. Or, the Federal Reserve could decide to allow the funds rate to stay above the target range (in effect, raising the target range), instead of accommodating expansionary banking activity.

If plentiful bank reserves or other market forces lowered the Federal funds rate below its target, the Federal Reserve could sell or reduce purchases of government securities, reducing reserves in the banking system, and creating enough upward pressure on interest rates to return the Federal funds rate to its target range; this would also force banks to cut back on money and credit expansion. Or it could allow the funds rate to remain below the target, thereby encouraging banks to use their plentiful reserves to expand money and credit.

EVALUATION OF THE FEDERAL FUNDS RATE APPROACH

Many have criticized the Federal Reserve's emphasis on interest rate control, charging that it leads inevitably to erratic money growth. A large share of the criticism comes from monetarist economists who believe instead that open market operations should be aimed at more direct control of the money stock.

Criticism of the Federal funds target approach is based on a number of issues, but much of the criticism focuses on the stability of the relationship between the quantity of money and short term interest rates. As described in the preceding section, controlling the rate of money growth by hitting a Federal funds rate target assumes an ability to relate desired money growth to the level of short term interest rates. Many monetary economists believe that the relationship between money stock growth and short term interest rates is too loose to determine accurately the range of short term interest rates that is consistent with desired money growth. For example, suppose the Federal Reserve determines

that the rate of monetary growth should be slowed; using the Federal funds operating strategy, this determination must be translated into a prescribed change in the Federal funds rate. By how much should the Federal funds rate be allowed to rise, in order to achieve a specified decrease in monetary growth? Since there is no precise way to answer such a question, critics claim that errors are inevitable.

Keeping the Federal funds rate within its prescribed bounds may, under some economic circumstances, simultaneously allow desired money growth to be achieved, but under other economic circumstances, an entirely different rate of money stock growth may obtain. It is this uncertainty and variability in the monetary outcome of keeping the Federal funds rate at a specific level that, in the opinion of many monetary economists, renders the procedure unreliable.

There is reason to believe that in the current economic environment, the estimated relationship between money and interest rates may be increasingly imprecise. Statistical estimation of the correspondence between money growth and market interest rates must necessarily be based on historical economic experience and previous public behavior; currently, however, market interest rates are at higher levels than ever before. The relationship may therefore be different than our previous experience would indicate.

In addition, financial innovation such as money market mutual funds and repurchase agreements are providing the public with new money-forms in which to hold their assets. This too may be altering the money growth-interest rate relationship from what has been previously recorded. For these reasons many economists charge that the money growth-interest rate relationship is a poor one on which to base monetary control; under the most stable economic conditions,

inferences between money stock growth and market interest rates can produce large errors.

A closely related concern is the claim that targeting the Federal funds rate causes procyclical growth in the monetary aggregates. Suppose, for example, that the economy enters an expansionary phase and the demand for credit rises, putting upward pressure on market interest rates and straining bank reserves. If market forces threaten to push the Federal funds rate above its target range, the Federal Reserve will, under a Federal funds procedure, supply reserves to the banking system through open market purchases, until the Federal funds rate falls back within its target range. Some increase in bank reserves is of course appropriate in order to accommodate the business expansion. But if market pressures, such as a high demand for credit or inflation, continue to push market rates upward, the Federal Reserve must continue to add reserves in an attempt to keep the Federal funds rate down within its target. Continued increases in reserve availability in an expanding economy will lead to a rapid increase in money and credit growth. Critics claim such an expansion of money and credit does not simply accommodate the economic expansion, but exaggerates it, generating increased and continued inflationary pressure.

Following the same reasoning, the Federal Reserve may worsen a business contraction by causing a rapid reduction of money and credit growth. In general, many economists believe that as long as the Federal Reserve follows an interest rate target and supplies or withdraws reserves from the banking system accordingly, it is apt to cause a procyclical expansion of the money stock when the economy expands and a procyclical decline in monetary growth rates when the economy contracts. This procyclical behavior of the monetary aggregates will therefore

magnify the monetary impact of exogenous shocks to the economy and exaggerate the ups and downs in the economy into inflationary booms and recessions.

Critics contend that the procyclical movements of the money stock would be less likely to occur under a Federal funds target if the Federal Reserve allowed the Federal funds rate to deviate farther and more frequently outside its target range as economic conditions dictate, or if the Federal Reserve adjusted the target range more frequently and more quickly as market conditions change. However, they believe that adjustments in target ranges have been made only after considerable delay; changes in Federal funds ranges therefore would lag changing market conditions and may be inappropriate. Pursuance of inappropriate interest rate targets, given market conditions, then produce cumulative and reinforcing, procyclical expansions or contractions of money growth.

Critics also claim that basing monetary policy on interest rate targets directs too much attention toward interest rates as indicators of current and future monetary policy. The level of interest rates is affected by many forces besides monetary policy; it can therefore be misleading to link observed changes in interest rates with actual or expected changes in monetary policy. For example, if market interest rates are high, there is a tendency for the public to conclude that monetary policy has been tight and is therefore likely to become more expansionary. On the contrary, high market interest rates may be the result of over-expansionary monetary policy that has fostered a high rate of borrowing and spending and has generated inflationary pressure. In such a case, continued or increased monetary expansion, aimed at reducing high market interest rates, might succeed in doing so for a short period of time; ultimately, however, such a policy would only lead to more inflation and even higher interest rates.

For these reasons, opponents of the Federal funds rate approach believe that it results in imprecise money stock control, and, in their view, deliberate and precise money stock control is extremely important. Advocates of the Federal funds rate approach tend to attach less value to close money stock control and place more importance on the stabilization of market interest rates. They consider the interest-rate stability that is fostered by the Federal funds rate approach to be a major advantage of the procedure because it minimizes uncertainty and allows the financial markets to function smoothly. Proponents of the Federal funds approach also point to a number of operational difficulties that are associated with a reserve aggregate approach which reduces the precision of money control under a reserve target. These operational issues will be discussed in a subsequent section.

THE FEDERAL RESERVE'S NEW OPERATING PROCEDURE

Immediately prior to the Federal Reserve's policy announcement on October 6, 1979, there was growing evidence of increasing inflationary pressure in the economy; inflation and inflationary expectations were contributing to speculative behavior in commodity markets and a deterioration of the dollar in foreign exchange markets. In addition, the various measures of the money stock and bank credit were all expanding at rates in excess of Federal Reserve targets. In its new anti-inflationary program, the Federal Reserve announced renewed dedication to bringing down the rate of growth in the monetary aggregates, stating that reduced monetary growth is essential to combat inflation.

Part of its new program is a change in Federal Reserve operating procedure; the new policy shifts primary emphasis from control of the Federal funds rate to the control of bank reserves. This means that in daily open market operations,

Federal Reserve policy is based on various measures of bank reserves, rather than on the Federal funds rate. This does not mean that interest rates are ignored; Federal Reserve spokesmen have indicated that there is still a range prescribed for the Federal funds rate, but that that range is broader and is monitored primarily with respect to its relationship to reserve availability. Operating procedures were apparently changed because of increasing difficulty controlling the monetary aggregates under the Federal funds rate technique.

Since member banks are required to hold reserves against their deposits, there is a basic relationship between the amount of reserves that the Federal Reserve creates for the banking system and the amount of deposits and therefore the money stock. Through its open market operations, the Federal Reserve can strongly influence the level of bank reserves; this control over bank reserves gives the Federal Reserve an indirect, and to some extent imprecise, ability to control the money stock. It is this reserve-deposit or reserve-money stock relationship that underlies the new reserve aggregate approach to monetary policy.

Both the former Federal funds rate approach and the new reserve aggregate approach to monetary policy of course turn on the same basic Federal Reserve powers and market relations and reactions; the difference between the two is that different intermediate economic variables are emphasized in implementing and monitoring monetary policy.

For example, suppose that the Federal Reserve determines that the rate of money stock growth needs to be slowed. Under the previous approach, the desired slowdown in money growth would have been translated into a higher target range for the Federal funds rate. Federal Reserve open market sales (or a reduction in the rate of purchases) of Government securities would have reduced (or slowed

down the rate of increase in) the amount of reserves available to banks, causing the Federal funds rate to rise to within its new target range. This would put upward pressure on other market interest rates, and with a general scarcity of reserves, banks would be inclined to reduce money and credit expansion, bringing the desired slowdown in monetary growth. Open market operations, under this policy scheme, were designed to have a prescribed effect on the Federal funds rate; their effects were monitored and policy actions were then modified when necessary, relying primarily on the market information conveyed by changes in the Federal funds and other short term rates.

Under the new policy approach, the same desired slowdown in monetary growth is translated into the necessary reduction (or slowdown in the rate of growth) in bank reserves. This is achieved, as under the previous scheme, by Federal Reserve sales (or reduced purchases) of Government securities, which reduces the level of bank reserves, forcing banks to cut back on money and credit expansion. Open market operations, under the new policy scheme, however, are designed specifically to have a prescribed effect on bank reserves; measures of bank reserves, rather than interest rates, are monitored on a daily basis to assess the impact of Federal Reserve operations and to modify policy actions when needed.

The difference between the two approaches is therefore an operational one. Furthermore, since under the old policy procedure, reserve aggregates were not ignored, and under the new approach, interest rates will not be ignored, the procedural change is largely one of emphasis. Nevertheless, many analysts have labelled the policy change as a major, historical change in monetary policy procedures with potentially far-reaching implications and effects.

More specifically, under its new operating procedure the Federal Reserve first determines the rate of money stock growth that is desirable during the following three month period. 1/ To translate desired money growth rates into growth rates for the reserve aggregates, the Federal Reserve must project changes in other factors that effect bank reserves and each of the factors that may alter the reserve-money relationship. A more detailed discussion of these items and descriptions of the various reserve aggregates appear in the following section. Estimates of these factors are required in order to accurately forecast the reserve target that will be consistent with desired money stock growth.

This provides estimates for the desired level for total reserves and the monetary base. An assumption is then made about the level of member bank borrowing; from this and the estimate for total reserves, a desired path for nonborrowed reserves is calculated.

Total reserves, nonborrowed reserves and the monetary base are the three measures of reserves that the Federal Reserve has chosen to emphasize. Chairman Volcker has stated that total reserves is the Federal Reserve's primary reserve target, because it is more closely related to the money stock than nonborrowed reserves; nonborrowed reserves, however, is its primary operating variable because it has closest short-run control of nonborrowed reserves. The monetary base, according to Federal Reserve spokesmen, gets less attention in the control process because its highly-variable currency component can cause difficulties.

Given the reserve targets set at meetings of the Federal Open Market Committee, the System Account Manager aims at a nonborrowed reserve target each week

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1/ For a more detailed description of the new operating procedures see, Paul A. Volcker, The New Federal Reserve Technical Procedures for Controlling Money. Attachment to statement before the Committee on Banking, Housing and Urban Affairs. U.S. Senate. February 4, 1980.

during the period between Committee meetings. Between meetings, it is possible that total reserves or the monetary base will go outside of their targeted paths, even though the nonborrowed reserve target is achieved. If this situation persists, the nonborrowed reserve target would be altered to bring total reserves back within its target range. Inter-meeting adjustments of all three reserve measures may become necessary if there is an unforeseen movement in one of the factors that alters the reserve-money relationship; in that case, an offsetting adjustment in reserve targets would be needed. During the period since October 6, Chairman Volcker indicates that such adjustments have been made infrequently.

A DESCRIPTION OF RESERVE AGGREGATES

Several measures of bank reserves are available to the Federal Reserve as monetary control variables. Total reserves is the sum of member banks' deposits at the Federal Reserve plus vault cash. The higher the level of total reserves, or the faster total reserves grow, the greater the amount of reserves available to banks to facilitate deposit expansion; other things equal, greater reserve availability will mean a higher level of monetary growth or a greater potential for monetary growth.

Total reserves can be divided into required reserves and excess reserves. The Federal Reserve requires member banks to hold specified percentages of their deposits in required reserves; reserves may be held as either vault cash or deposits at the Federal Reserve. Excess reserves are those that member banks choose to hold above what is required of them; excess reserves therefore is defined as total reserves minus required reserves.

Total reserves can also be divided into borrowed reserves and nonborrowed reserves, where borrowed reserves equals member banks' borrowings from the

Federal Reserve and nonborrowed reserves is those supplied by the Federal Reserve through open market operations.

Free reserves is another measure of bank reserves that was used in the 1960's in relation to monetary control. Free reserves is defined to be excess reserves minus reserves borrowed from the Federal Reserve. If borrowed reserves exceeds excess reserves and free reserves is therefore negative, it is usually referred to as net borrowed reserves.

Free reserves can be considered a measure of the potential in the banking system for monetary expansion. If free reserves is high, meaning that in the aggregate excess reserves exceed borrowings from the Federal Reserve, there is potential for the banking system to expand loans and deposits. That is, the banking system could expand money and credit at its discretion, without any need for the Federal Reserve to supply additional reserves. On the other hand, if free reserves is low or negative many member banks are in a position of having had to borrow from the Federal Reserve to meet reserve requirements. In this situation the banking system possesses little or no capacity to expand money and credit without the Federal Reserve supplying additional reserves; banks in the aggregate are under pressure to reduce lending and deposit creation in order to repay borrowings from the Federal Reserve. That would of course reduce money growth.

The monetary base is defined as member bank reserves plus currency in circulation. The monetary base is therefore closely related to bank reserves and is also closely related to the money stock. For control purposes, it has the claimed advantage over bank reserve measures that, since it includes currency in circulation, it does not vary with changes in the public's demand for currency. For this reason, many believe that the base can be controlled by the Federal

Reserve with considerable precision. The relationship between the base and the money stock is however subject to several other sources of variation also found in the reserves-money relation; these items will be discussed in the following section.

Table 1 provides summary definitions of the various measures of bank reserves.

Table 1

Bank Reserve Measures
Summary of Definitions

Reserve Aggregate	Definition or Calculation
Total Reserves-	Total amount of reserves available to the banking system to back deposits. Member bank deposits in Federal Reserve Banks plus vault cash.
Required Reserves	The amount of reserves the Federal Reserve requires member bank to hold behind their deposits. Required reserves may be held on deposit at the Federal Reserve or as vault cash.
Excess Reserves	The amount of reserves that member banks hold in excess of required reserves. Total reserves minus required reserves.
Borrowed Reserves	Reserves that member banks have borrowed from the Federal Reserve.
Nonborrowed Reserves	Total reserves less member bank borrowing from the Federal Reserve.
Free Reserves	Excess reserves minus member bank borrowing. Referred to as net borrowed reserves if member bank borrowing exceeds excess reserves. A measure of the banking system's potential to expand money and credit.
Monetary Base	The combined net monetary liabilities of the Federal Reserve and the U.S. Treasury. Total reserves plus currency in circulation.

EVALUATION OF THE RESERVE AGGREGATES APPROACH

There are a number of reasons why the Federal Reserve may not be technically capable of closely controlling bank reserves in the first instance, and ultimately the money stock. First, there are a number of factors that influence the level of bank reserves besides Federal Reserve open market operations. These are commonly referred to as the technical factors and include things such as float, member bank borrowing at the Federal Reserve, U.S. Treasury deposits at the Federal Reserve and the public's desire to hold currency. For precise reserve control, the technical factors must be accurately predicted.

Consider first the public's desire to hold currency. Since vault cash constitutes a part of bank reserves, if the public withdraws currency from the banking system, the level of reserves available to support bank deposits declines. Therefore a given injection of reserves into the banking system will result in fewer reserves available for monetary expansion, if the public chooses to withdraw cash from banks. The Federal Reserve can anticipate many of the changes that occur in the public's demand for currency, and can design open market operations to offset cash withdrawals from or deposits into the banking syetem. But unpredicted changes in the public's demand for currency causes unpredicted variation in the monetary results of a given injection of bank reserves.

Close control of the amount of reserves in the banking system may also be jeopardized by member bank borrowing at the Federal Reserve discount window. Suppose, for example, that the Federal Reserve is attempting to reduce monetary expansion and is therefore limiting the growth of bank reserves. By borrowing reserves from the Federal Reserve, member banks can supplement reserves and thereby, to some extent, circumvent restrictive monetary policy. This leakage is potentially most troublesome when market interest rates rise above the

discount rate, the interest rate the Federal Reserve charges for member bank borrowings. Under these circumstances, member banks have a cost incentive to borrow from the Federal Reserve.

The Federal Reserve can of course discourage borrowing when market rates rise by raising the discount rate. But since changes in the discount rate typically lag behind market interest rates and the Federal funds rate is often above the discount rate, some economists are critical of the discount window mechanism. Under these circumstances, not only does the Federal Reserve subsidize member bank borrowing at a below-market rate, but it also provides an incentive for member banks to borrow and thereby reduce the precision of reserve control. Under the new reserve aggregate procedure, unforeseen member bank borrowing may make control of total reserves difficult, even if nonborrowed reserve targets are achieved.

Other economists and many Federal Reserve spokesmen diminish the importance of member bank borrowing as a leakage in the reserve control process. First, they point out that member bank borrowing is very small relative to the total amount of funds raised by the banking system and changes in borrowing tend to be predicted relatively well by the Federal Reserve.

In addition, the Federal Reserve has traditionally administered the discount window on the principle that borrowing is "a privilege, not a right," so that member banks that borrow from the Federal Reserve have encountered some degree of added supervision and surveillance. Cost of borrowing, it is claimed, is therefore only one consideration in a member bank's decision to borrow. Given this historical treatment of the borrowing privilege, it is unlikely that any member bank would seek to borrow a large enough amount of reserves for a long enough period of time to threaten monetary policy, regardless of the cost

incentive to do so. Furthermore, the Federal Reserve can always deny credit to a member bank.

Even if the Federal Reserve can control bank reserves precisely a second set of factors may interfere with monetary control. These are the factors that influence the correspondence between bank reserves and money. Because of these factors, the Federal Reserve does not know with certainty the impact on the monetary aggregates when it engineers a given change in bank reserves; or, if the Federal Reserve desires a given change in money growth, it is not possible to determine precisely how much bank reserves need to be altered. Conversely, a change in the rate of money growth may occur without any deliberate change in the level of reserves. The factors causing variation in the reserve-money relation include: deposits in nonmember banks, member bank excess reserves and a number of structural aspects of Federal Reserve reserve requirements. Each of these factors will be discussed below.

First, the deposit creation activities of nonmember banks can cause the reserve-money relationship to vary. Nonmember banks are not subject to the reserve requirements that the Federal Reserve imposes on member banks so its control of bank reserves has no direct impact on nonmember banks and their ability to expand loans and deposits. 1/ A given injection of reserves by the Federal Reserve may therefore correspond to different changes in money growth, depending on the share of deposit expansion that occurs in nonmember banks. Or, variation in the proportion of the nation's bank deposits that are in nonmember banks will cause variation in the reserve-money relationship.

1/ Nonmember banks are indirectly affected by Federal Reserve actions because the deposit expansion activities of nonmember and member banks are highly inter-related. This inter-relation stems primarily from correspondent banking, interbank deposits and the nationwide check clearing network.

Several institutional arrangements in the structure of Federal Reserve reserve requirements also cause variation in the reserve-money relationship. First, the Federal Reserve requires member banks to hold reserves against several kinds of deposits that are not included in official definitions of money. These include government deposits, interbank deposits, and several types of nondeposit liabilities. The Federal Reserve does not know with certainty what proportion of the reserves they supply to the banking system will be used to back these non-money deposits, so it cannot know what proportion of those reserves will be available to support money growth. For example, if the Federal Reserve increases the level of reserves available to banks at the same time that there is an unforeseen increase in government deposits, a larger proportion of bank reserves would have to be used to back government deposits, and the expansion of the money stock would be less than anticipated.

Second, the Federal Reserve places different reserve requirements on the different types of deposits that are included in the various definitions of money; various types of savings and time deposits and non-deposit liabilities are subject to different reserve requirements than demand deposits. In addition, requirements on certain types of deposits vary with the amount of such deposits held by a bank or with the maturity date of deposits. Currently, for example reserve requirements for demand deposits, which are higher than requirements on other types of deposits, increase with the amount of demand deposits held by a bank. Therefore the effects on the money stock of a given increase in reserves will depend on how these reserves are distributed among different-sized member banks and what proportion of reserves are used to support non-money deposits. The Federal Reserve does not know how reserves will be distributed among member banks or what proportion will be used to expand money, so it does not know precisely how money growth will react to a change in bank reserves.

In addition, member bank holdings of excess reserves can also cause variation in the total reserves-money relationship. An increase in reserves aimed at expanded money growth could have no effect if member banks increase their excess reserve holdings by the same amount. Variability in member banks' desires to hold excess reserves can offset or reinforce changes in reserves, causing variation in the reserve-money relationship. Furthermore, lagged reserve requirements 1/ cause variability in the relation between reserves and money on a week-to-week basis.

All of these economic and institutional factors introduce variability into the relation between reserves and money growth. This means that a specified change in reserves can theoretically cause a variety of rates of change in the monetary aggregates, if a shift in one of these factors occurs. Likewise, such a shift can cause a change in money growth that is not preceded by a change in reserves.

Opponents of the reserve aggregate approach to monetary policy claim that the range of responses, in terms of money growth, resulting from a change in reserves is wide and variable and therefore control of bank reserves does not necessarily mean that monetary growth can be controlled precisely. Advocates of reserve aggregate targeting, while recognizing that variability in the reserve-money relationship reduces the precision of monetary control, believe that controlling reserves is a more precise monetary control device than targeting interest rates. Reserves control, they believe, allows more stable, predictable monetary growth. Conversely, they believe that the interest rate control procedure resulted in unpredictable, unintentional, erratic periods of rapid monetary expansion and contraction.

1/ Under lagged reserve requirements, member banks hold required reserves based on deposit levels, two weeks earlier.

IMPLICATIONS OF THE NEW POLICY

It is generally accepted that it is not yet possible to judge whether the new policy approach will be successful and reserve control will prove to be a more precise monetary control device. There are several reasons why judgements at this time must be tenuous.

Any analysis of the effects to date of the new procedure must necessarily be based on monetary data over a relatively short period of time. Short-term data on the monetary aggregates are known to contain errors and temporary aberrations, and observers have frequently warned against judging monetary control on the behavior of the monetary aggregates over short periods of time.

In addition, the lags in the effects of monetary policy are long enough that the full impact of the new policy has not yet been felt. While estimates vary widely, it is generally believed that the lag is at least six months in length and may be as long as two years. While the effects of the new policy approach may already be reflected in the behavior of some variables such as bank reserves and interest rates, the impact on inflation cannot be expected to appear for many months. Furthermore, most experts warn that inflation and inflationary expectations may now be so deeply entrenched in our economy that inflationary pressure is not apt to dissipate quickly, regardless of how effectively the Federal Reserve can control money growth using its new procedure.

Given the lags in monetary policy, most analysts agree that the new technique must be followed for at least a year before its effectiveness can be assessed. If inflationary pressures persist, some advocates of reserve control are concerned that the procedure will be abandoned before its efficacy can be demonstrated. The Federal Reserve has adopted operating procedures before that

emphasized reserve targets, but only followed them for relatively short periods of time.

There are some monetary economists who believe that the Federal Reserve has not chosen to emphasize the best measure of bank reserves in its control process. However, there is no general agreement as to which reserve is the optimal policy guide. Most monetarists believe that monetary control would be best achieved by controlling the monetary base, rather than nonborrowed reserves or total reserves. This is based on the belief that, of the various reserve aggregates, the monetary base is most closely related to the money stock and that the Federal Reserve can also control it with considerable precision.

A possible implication of the new procedure which is potentially of great importance is the degree of variability in market interest rates that may accompany reserves control. Economists have generally believed for many years that if the Federal Reserve used a money or reserve aggregate to guide daily operations, there would be more and larger fluctuations in market interest rates. The Federal Reserve has never adhered to a reserve target long enough to determine the impact on interest rate variability. The Federal Reserve can, of course, still use its powers to ameliorate fluctuations in interest rates if they move too far out of a desired range. But if the Federal Reserve controls bank reserves on a day-to-day basis, some short-run fluctuations in interest rates that would have been smoothed out under previous policies, can be expected. The disorder that may result in the financial markets and the adjustment or accommodations that may have to be made there are largely unknown at this time.

On the one hand, many financial experts believe that there will be a significant increase in interest rate variability which will be disruptive in the

financial markets. They see investment dealers and brokers, commercial banks and other participants in the financial markets having to adjust to a financial environment of increased uncertainty. On the other hand, some economists discount the importance of increasing interest-rate variability. They believe that once an initial transition period has passed and financial market participants have adjusted to the Federal Reserve's new program and operating procedures, the actual increase in interest-rate variability will be small; or, that whatever increased variability does occur in the long run, can be accomodated without much cost to the financial markets.

THE RECENT EXPERIENCE

This section examines the issues of monetary control discussed above as they apply to recent experience. In the weeks following October 6, 1979, the rate of expansion of the money stock and bank credit has slowed appreciably. In the fourth quarter of 1979, M1A increased at an annual compound rate of 4.8 percent, following rates of increase exceeding 8 and 9 percent respectively in the preceding two quarters. Bank credit, increased at an annual compound rate of 8.7 percent in the fourth quarter of 1979, which is the smallest quarterly increase since 1976.

In the long run however, the true test of the usefulness of reserve targeting will be whether or not it allows the Federal Reserve to control money growth more precisely than under the old operating procedure. One of the factors that may interfere with that precision is the variability in the relationship between bank reserves and money. Table 2 gives quarter-to-quarter compound annual growth rates for M1A, total reserves, nonborrowed reserves, and the monetary base, 1968 to the present. These figures demonstrate the lack of correlation between growth

rates for reserves and money. Focusing on the year 1979 alone, it can be seen that, for any of the bank reserve measures, a wide range of rates of growth for reserves can correspond to a variety of money growth rates. In the fourth quarter of 1979, for example, total reserves grew much more rapidly than in the previous two quarters, while M1A growth slowed considerably. In this recent experience, this discrepancy can be traced largely to increases in the level of government deposits and certificates of deposit, both of which must be backed by bank reserves but are not included in M1A. In general such discrepancies are attributable to the various factors discussed above that affect the reserves-money relationship, such as nonmember banks or non-money deposits.

As table 2 also shows, the relationship between the growth rates of the various reserve measures also varies widely. This variability demonstrates the difficulty of controlling several reserve targets at once; since open market operations are aimed at controlling nonborrowed reserves in order to achieve a total reserves target, the Federal Reserve must be able to predict the forthcoming difference between nonborrowed and total reserves, which is member bank borrowing.

Chart 1 shows the historical pattern of nonborrowed reserves and total reserves; it shows that the gap between the two reserve measures has been relatively large since the middle of 1977. Chart 2 plots the Federal funds rate and the difference between the Federal funds rate and the Federal Reserve discount rate. When the Federal funds rate rises and the difference between it and the discount rate grows, member banks can be expected to increase their borrowing at the Federal Reserve. Comparing Charts 1 and 2, it can be seen that periods of time since 1968 when the gap between the two rates widens correspond closely to periods when the discrepancy between total and nonborrowed

Table 2

Money and Bank Reserves
Compound Annual Growth Rates
Quarterly, 1968-1979

	1969				1970				1971				1972				1973			
	ii	iii	iv	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	iv
M1A	1.4	-.6	4.3	4.1	4.6	4.6	6.1	7.7	9.9	6.2	3.0	8.8	7.3	8.2	9.8	8.5	5.1	4.4	4.8
Total Reserves					4.1	11.8	13.0	12.7	10.5	10.0		10.9	11.5	9.1	13.6	12.6		9.2	
Nonborrowed Reserves					5.8	11.7	23.4	14.0	10.6	3.9	9.8	14.8	10.7	5.2	8.7		6.0		
Monetary Base					6.4	8.2	8.0	9.9	8.5	9.2	4.5	8.6	8.2	7.8	11.3	10.2	9.3		

	1974				1975				1976				1977				1978				1979			
	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	iv	i	ii	iii	iv
M1A	7.0	3.6	3.1	5.8	2.8	6.0	7.2	3.0	5.6	5.9	5.3	7.2	9.2	6.9	6.1	8.6	7.8	8.9	7.3	5.7	0.2	8.1	9.1	4.8
Total Reserves	6.9	11.7	9.0			-13.0	9.6		-2.7		1.5	4.6	4.9	2.5	7.6	6.4	9.3	6.3	8.9	2.4	-2.9	-4.9	6.4	13.8
Nonborrowed Reserves	9.8	-3.4	-1.0	31.6	14.2	-2.0	-3.7			-.8	1.6	4.9	4.8	1.5	2.2	3.9	15.1		5.8	4.8	-3.4	-8.5	8.5	
Monetary Base			8.6											6.8	9.6	9.3	10.2	7.9	9.6	8.6		4.9	9.6	

Source: Board of Governors of the Federal Reserve System; data accessed from files of Data Resources, Inc.

Note: The Federal Reserve is in the process of revising all reserve aggregates for changes in seasonal factors, but the revised series were unavailable when this table was prepared.

reserves grows. Lags in adjusting the discount rate upward as market rates rise have therefore, by encouraging member bank borrowing, widened the difference between nonborrowed and total reserves. More important for monetary control purposes, anything that makes member bank borrowing more difficult to predict, loosens the correspondence between nonborrowed and total reserves.

Charts 3 and 4 provide information for the 18 weeks preceding and following the October 6 policy change. Chart 3 gives the Federal funds rate; Chart 4 gives total and nonborrowed reserves on the top panel and the difference between the Federal funds rate and the discount rate on the bottom panel. Using the Federal funds rate as an indicator of short-term interest rate behavior, it is clear that there has been increased variability in interest rates since October 6. However, since this observation is based on a relatively short period of time, many analysts would contribute much of the increased variability to two possible, short-term considerations. First, much of the variability can probably be attributed to the psychological effects of the Federal Reserve announcement of increased monetary restraint. Second, some part of the variability may be representative of a transition period when financial market participants are still adjusting to the Federal Reserve's new operating procedures. If these two factors prove to be important, the increase in interest rate variation may well prove to be a temporary phenomenon.

Weekly reserve figures, as shown in the top of Chart 4, also have varied more since October 6; whether or not this closer control of bank reserves is allowing more precise control of money growth cannot be determined yet. The gap between the Federal funds rate and the discount rate, while positive throughout the 36-week period plotted in Chart 4, has fluctuated widely since October 6.

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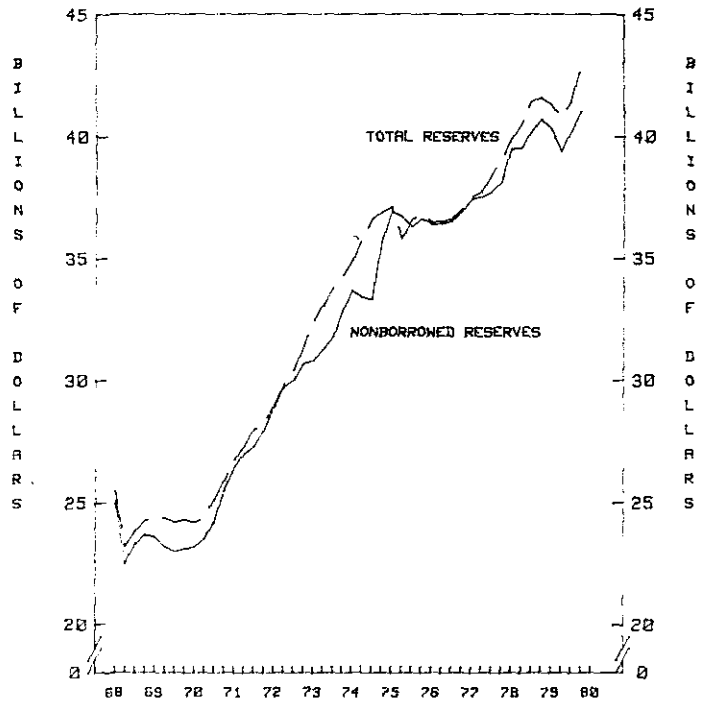
CHART I

TOTAL RESERVES AND NONBORROWED RESERVES
SEASONALLY ADJUSTED, AVERAGES OF DAILY FIGURES
QUARTERLY, 1968-1979
(ADJUSTED FOR CHANGES IN RESERVE REQUIREMENTS)



SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, ACCESSED FROM FILES OF DATA RESOURCES, INC.

NOTE: The Federal Reserve is in the process of revising all reserve aggregates for changes in seasonal factors, but the revised series were unavailable when this chart was prepared.

PREPARED BY THE CONGRESSIONAL RESEARCH SERVICE

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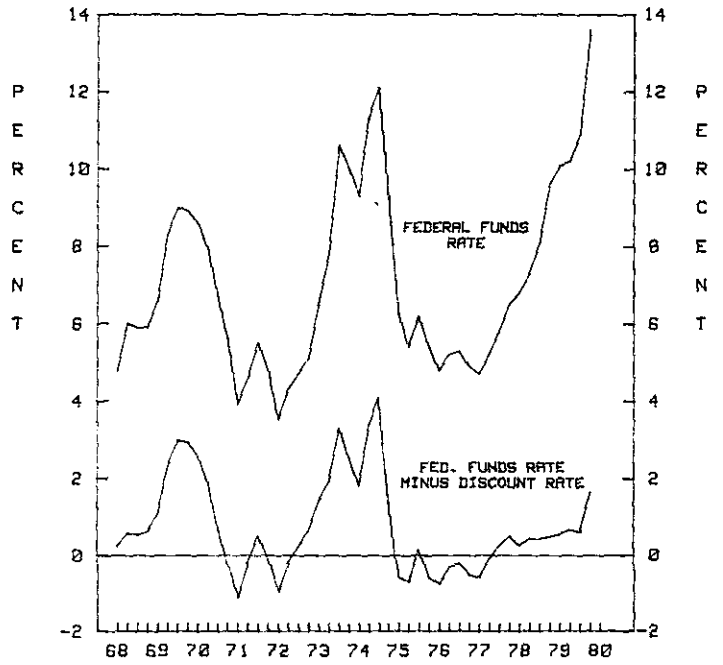
CHART 2

THE FEDERAL FUNDS RATE AND THE
FEDERAL FUNDS RATE - FEDERAL RESERVE DISCOUNT RATE
QUARTERLY AVERAGES OF DAILY FIGURES
1968-1979

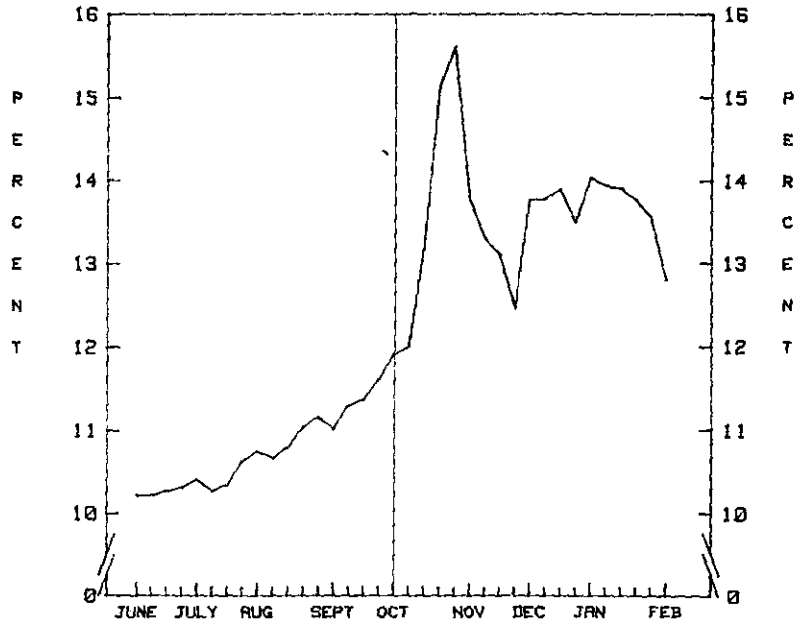


SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

PREPARED BY THE CONGRESSIONAL RESEARCH SERVICE

CHART 3

THE FEDERAL FUNDS RATE
18 WEEKS BEFORE AND AFTER OCTOBER 6, 1979
(JUNE 6, 1979 THROUGH FEBRUARY 6, 1980)



SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

PREPARED BY THE CONGRESSIONAL RESEARCH SERVICE

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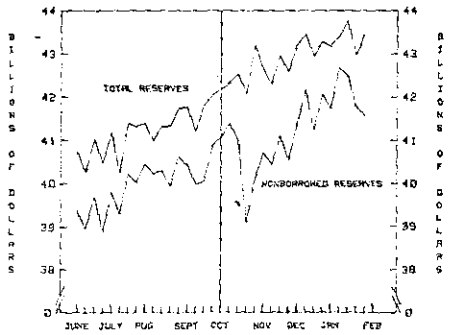
CHART 4

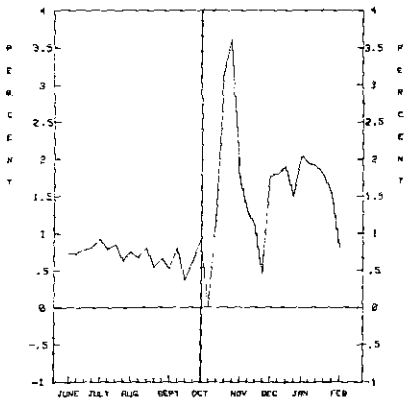
18 WEEKS BEFORE AND AFTER OCTOBER 6, 1979

(JUNE 6, 1979 THROUGH FEBRUARY 6, 1980)

TOTAL RESERVES AND NONBORROWED RESERVES
SEASONALLY ADJUSTED, AVERAGES OF DAILY FIGURES
(ADJUSTED FOR CHANGES IN RESERVE REQUIREMENTS)



THE FEDERAL FUNDS RATE MINUS
THE FEDERAL RESERVE DISCOUNT RATE



SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, ACCESSED FROM FILES OF DATA RESOURCES, INC.

NOTE: The Federal Reserve is in the process of revising all reserve aggregates for changes in seasonal factors, but the revised series were unavailable when this chart was prepared.

PREPARED BY THE CONGRESSIONAL RESEARCH SERVICE

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Allan H. Meltzer
Maurice Falk Professor of
Economics and Social Science

February 8, 1980

Senator William Proxmire
United States Senate
Senate Banking Committee
5341 Dirksen Building
Washington, D. C. 20510

Dear Senator Proxmire:

I am enclosing a copy of the recommendations adopted by the Shadow Open Market Committee at its semi-annual meeting on February 3, 1980. These recommendations are a program to prevent a very large increase in real tax burdens and to reduce inflation.

I hope you will bring our report to the attention of the members of the Senate Banking Committee.

Sincerely,

Allan H. Meltzer

AHM/jep

encl.

SHADOW OPEN MARKET COMMITTEE

The Committee met from 2:00 P.M. to 8:00 P.M. on Sunday, February 3, 1980.

Members:

Professor Karl Brunner, Director of the Center for Research in Government Policy and Business, Graduate School of Management, University of Rochester, Rochester, New York

Professor Allan H. Meltzer, Graduate School of Industrial Administration, Carnegie-Mellon University, Pittsburgh, Pennsylvania

Mr. H. Erich Heinemann, Vice President, Morgan Stanley & Company, Inc. New York, New York

Dr. Homer Jones, Retired Senior Vice President and Director of Research, Federal Reserve Bank of St. Louis, St. Louis, Missouri

Dr. Jerry Jordan, Senior Vice President and Chief Economist, Pittsburgh National Bank, Pittsburgh, Pennsylvania

Dr. Rudolph Penner, American Enterprise Institute, Washington, DC

Professor Robert Rasche, Department of Economics, Michigan State University, East Lansing, Michigan

Professor Wilson Schmidt, Department of Economics, Virginia Polytechnic Institute, Blacksburg, Virginia

Dr. Beryl Sprinkel, Executive Vice President and Economist, Harris Trust and Savings Bank, Chicago, Illinois

Dr. Anna Schwartz, National Bureau of Economic Research, New York, New York

In the fourth quarter of 1979, the Federal Reserve showed that it was capable of achieving its target rates of monetary growth. However, there is no evidence yet that the Federal Reserve can be relied on to reach announced targets consistently. Current procedures generate avoidable uncertainty and should be improved promptly.

A Program for 1980 and Beyond

1. The Federal Reserve should announce further details about its procedures to reduce the long-run trend of money growth and reestablish its credibility by actually achieving its announced targets. This would be the most effective way to eliminate the entrenched belief that the rate of inflation will continue to rise in the Eighties.

2. The SOMC favors an immediate return to the 6% growth rate for base money that was achieved in the first and second quarters of 1979. A 6% average rate of growth of the base in each quarter of 1980 will continue the policy we advocated at our September 1979 meeting. Base money by the end of the fourth quarter of 1980 will reach $162-billion if our recommendation is followed. The proposed policy is likely to be accompanied by a mild recession in 1980 and a slight reduction in the rate of inflation.

3. Large, permanent reductions in the rate of inflation can be achieved in 1981 and beyond only if there are further reductions in the growth rate of the base. We recommend reductions of one percentage point in 1981 and 1982, so that the level of the base will reach $170-billion at the end of 1981 and $177-billion at the end of 1982.

4. Under a monetary policy consistent with ending inflation, the Federal Reserve will provide smaller and smaller contributions to financing budget deficits. Congress should remove the inconsistency between budget projections and Federal Reserve policy. It should demand that the Administration provide budget projections that are compatible with the Government's commitment to an antiinflationary policy.

5. We propose that the ratio of government outlays to GNP be reduced steadily. By 1985 the ratio should not exceed 20%.

6. We repeat our recommendation for a tax reduction in 1980. Inflation has increased the real tax burden. We are poorer as a result of the oil price increases. Unless taxes and government spending are reduced, the entire burden of the oil price increase falls on private consumption and investment. We call on the Congress to enact a prompt reduction of $15- to $20-billion in government spending and taxes.

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

PAUL A. VOLCKER
CHAIRMAN

March 17, 1980

The Honorable William Proxmire
Chairman
Committee on Banking, Housing
and Urban Affairs
United States Senate
Washington, D. C. 20510

Dear Mr. Chairman:

Enclosed, as requested in your February 7 letter, are tables for recent quarters showing various measures of borrowing from the Federal Reserve System by member commercial banks in different size categories.

As one would expect, larger banks account for a bigger share of the overall dollar volume of borrowing from the Federal Reserve than smaller banks; however, smaller banks regularly borrow larger shares of their required reserves. Because borrowings by larger banks do respresent the lion's share of the total dollar volume of borrowing, any calculation of the value of obtaining credit at a discount rate below the federal funds rate also sums to a greater absolute dollar total for large banks than for small banks. However, the value of the rate spread to large banks is not very large when measured as a ratio to bank assets or bank capital.

Large money market banks are expected to borrow from the Federal Reserve only on a very temporary basis to assist in making orderly adjustments to unexpected deposit and credit flows. For this reason, money market banks are infrequent borrowers, and in the weeks they do borrow, their use is typically for only one day in the bank settlement period, either on the final day or just before the weekend. These borrowings are repaid the following business day.

When large banks do borrow, the dollar sums needed are often relatively large--as is suggested by some of the numbers in

The Honorable William Proxmire

the accompanying tables. However, the administrative rules for access to the discount window effectively limit this use to days when legitimate adjustment credit needs develop. Moreover, as you know the System has recently imposed a 3 percentage point surcharge above the basic discount rate on borrowings by large banks for ordinary adjustment credit when such borrowing occurs successively in two statement weeks or more, or when the borrowing occurs in more than four weeks in a calendar quarter.

I hope this information satisfies your needs.

Sincerely,

Table 1

Member Bank Borrowing in Relation to Required Reserves
By Bank Size

(Third Quarter, 1978)

Bank Size (Deposits in Million $)	Member Banks: Total Number	Member Banks: Number Borrowing	Col. 3 as % of Col. 2	Average Number of Borrowing Days 1/: July	Aug.	Sept.	Quarter	Reserves at Borrowing Banks: Required 2/	Borrowed 3/	Col. as % Col.
	389						29			25
										26
								258		
	1,305							440	93	
0 - 100	720	187					36	820	152	
50 - 100	561	169	4				27	1,777	274	5
,000	95	53	56				16	1,160	146	3
1,000 - 5,000	88	55	62					2,385	324	
5,000 and Over	16	13						1,460	104	
Total All Banks	5,616	1,109						8,343	1,168	

1/ Number of days on which borrowing occurred in period, divided by the number of banks that borrowed.
2/ Total amount of required reserves at borrowing banks (in millions of $), divided by the number of days in the quarter.
3/ Total amount of borrowings at borrowing banks (in millions of $), divided by the number of days in the quarter.

Table 1 (Cont.)

Member Bank Borrowing in Relation to Required Reserves
By Bank Size

(Fourth Quarter, 1978)

Bank Size (Deposits in Million $)	Member Banks: Total Number	Member Banks: Number Borrowing	Col. 3 as % of Col. 2	Average Number of Borrowing Days 1/: Oct.	Nov.	Dec.	Quarter	Reserves at Borrowing Banks: Required 2/	Reserves at Borrowing Banks: Borrowed 3/	Col. 10 as % of Col. 9
	361	26		14			29			29
	756	90					32			30
	1,764	279	.6				29	234	62	26
	1,915	254	21	4	14	1	31	469	93	20
50 - 100	725	192	26	14	14	14	29	674	122	18
100 - 500	564	182	32	3	10		24	1,538	237	15
500 - 1,000	94	48	51				13	818	98	12
1,000 - 5,000	90	56	62					2,016	244	12
5,000 and Over	16	12	76					1,112	86	
Total All Banks	5,586	1,139	20					6,904	955	

1/ Number of days on which borrowing occurred in period, divided by the number of banks that borrowed.
2/ Total amount of required reserves at borrowing banks (in millions of $), divided by the number of days in the quarter.
3/ Total amount of borrowings at borrowing banks (in millions of $), divided by the number of days in the quarter.

Table 1 (Cont.)

Member Bank Borrowing in Relation to Required Reserves
By Bank Size

(First Quarter, 1979)

Bank Size (Deposits in Million $)	Number Banks: Total Number	Number Banks: Number Borrowing	Col. 3 as % of Col. 2	Average Number of Borrowing Days 1/: Jan.	Feb.	Mar.	Quarter	Reserves at Borrowing Banks: Required 2/	Borrowed 3/	Col. 10 as % of Col. 9
							29			25
								249	66	
	1,305	255					20	453	103	23
20 - 100	697	183					32	741	145	20
100 - 500	555	185	3	12	1		23	1,631	244	15
500 - 1,000	93	53	57	10			15	1,094	136	13
1,000 - 5,000	88	56	64				7	1,831	206	1
5,000 and Over	16	15						1,054	78	
Total All Banks	5,539	1,149						7,090	989	

1/ Number of days on which borrowing occurred in period, divided by the number of banks that borrowed.
2/ Total amount of required reserves at borrowing banks (in millions of $), divided by the number of days in the quarter.
3/ Total amount of borrowings at borrowing banks (in millions of $), divided by the number of days in the quarter.

Table 1

Member Bank Borrowing in Relation to Required Reserves
By Bank Size

(Second Quarter, 1979)

Bank Size (Deposits in Million $)	Member Banks: Total Number	Member Banks: Number Borrowing	Col. 3 as % of Col. 2	Average Number of Borrowing Days 1/: Apr.	May	June	Quarter	Reserves at Borrowing Banks: Required 2/	Borrowed 3/	Col. 10 as % of Col. 9
	366	30		15	17	12	31			31
	734	99		13	16	16	32	44		35
	1,716	286	6	15	17	16	34	285	75	26
	1,215	247	20	15	17	15	34	499	108	22
50 - 100	693	188	27	12	17	15	30	725	132	18
100 - 500	553	200	36	1	13	13	24	1,868	300	16
500 - 1,000	97	56	58		9	8	17	1,375	187	14
1,000 - 5,000	86	61	71				14	3,249	397	12
5,000 and Over	16	14					4	1,707	145	
Total All Banks	5,526	1,181						9,757	1,361	

1/ Number of days on which borrowing occurred in period, divided by the number of banks that borrowed.
2/ Total amount of required reserves at borrowing banks (in millions of $), divided by the number of days in the quarter.
3/ Total amount of borrowings at borrowing banks (in millions of $), divided by the number of days in the quarter.

Table 1

Member Bank Borrowing in Relation to Required Reserves
By Bank Size

(Third Quarter, 1979)

Bank Size (Deposits in Million $)	Member Banks: Total Number	Member Banks: Number Borrowing	Col. 3 as % of Col. 2	Average Number of Borrowing Days 1/: July	Aug.	Sept.	Quarter	Reserves at Borrowing Banks: Required 2/	Borrowed 3/	Col. 11 as % of Col. 9
	268	37			16	14	27			35
	740				8		32			31
	1,772						32	46	55	26
	2,305	220			16	15	30	407	91	23
50 - 100	690	150		4	16	13	29	572	102	18
100 - 500	561	169	30	2	12	11	23	1,487	226	15
500 - 1,000	99	55	56			3	16	1,266	172	14
1,000 - 5,000	88	56	64				14	3,163	377	12
5,000 and Over	16	14	88					2,074	169	8
Total All Banks	5,541	1,041						9,265	1,218	

1/ Number of days on which borrowing occurred in period, divided by the number of banks that borrowed.
2/ Total amount of required reserves at borrowing banks (in millions of $), divided by the number of days in quarter.
3/ Total amount of borrowings at borrowing banks (in millions of $), divided by the number of days in the quarter.

Table 1

Member Bank Borrowing in Relation to Required Reserves
By Bank Size

(Fourth Quarter, 1979)

Bank Size (Deposits in Million $)	Member Banks: Total Number	Member Banks: Number Borrowing	Col. 3 as % of Col. 2	Average Number of Borrowing Days 1/: Oct.	Nov.	Dec.	Quarter	Reserves at Borrowing Banks: Required 2/	Borrowed 3/	Col. 10 as % of Col. 9
	374	27			14	14	26	5		32
	735	94			18	15	31	48		32
	1,748	247			16	14	34	259		24
25 -	1,185	231			14	12	30	430	95	22
50 - 100	675	143	21	2	13	13	29	557	107	19
100 - 500	551	195	35	11	12	10	23	1,877	311	17
500 - 1,000	94	71	75	3			21	2,093	304	15
1,000 - 5,000	89	62	70					4,497	669	15
5,000 and Over	16	15	95					1,498	206	
Total All Banks	5,467	1,085						11,264	1,771	

1/ Number of days on which borrowing occurred in period, divided by the number of banks that borrowed.
2/ Total amount of required reserves at borrowing banks (in millions of $), divided by the number of days in quarter.
3/ Total amount of borrowings at borrowing banks (in millions of $), divided by the number of days in the quarter.

Table 2 (Cont.)

Average Value to Borrowing Banks, By Size of the Favorable Spread of the Fed Funds Rate Over the Federal Reserve Discount Rate

(First Quarter - 1979)

Bank Size (Deposits in Million $)	Number of Banks Borrowing	Average Value of Spread Per Borrowing Bank 1/ (In Dollars) Jan.	Feb.	March	Quarter	Average Amount Borrowed 2/ (Million $)	Share of Total Spread Value 3/ (Percent)
Up to 5 Million	25		30	50	80		0.1
5 to 10 Million	90			110	160		1.0
10 to 25 Million	289			760	920	9	6.6
25 to 50 Million	253	240	280	320	580	37	10.4
50 to 100 Million	183	480	560	560	1,120	71	14.7
100 to 500 Million	185	820	980	1,160	1,870	119	24.7
500 to 1,000 Million	53	2,000	2,250	1,910	3,630	231	13.7
1,000 to 5,000 Million	56	2,610	3,490	2,520	5,180	331	20.7
5,000 and Over	15	5,040	2,500	3,580	7,400	468	7.9
All Classes	1,149	590	650	650	1,220		100

1/ The federal funds rate minus the System discount rate, divided by 365, times the total amount borrowed, divided by the number of banks that borrowed.
2/ Total amount borrowed, divided by the number of banks that borrowed.
3/ Figures for each size class in column 6, times the number of borrowing banks in that class (Col. 2), divided by the average figure for all size classes in column 6, times the total number of banks borrowing (Col. 2).

Table 2 (Cont.)

Average Value to Borrowing Banks, By Size of the Favorable Spread of the Fed Funds Rate Over the Federal Reserve Discount Rate

(Second Quarter - 1979)

Bank Size (Deposits in Million $)	Number of Banks Borrowing	Average Value of Spread Per Borrowing Bank 1/ (In Dollars) April	May	June	Quarter	Average Amount Borrowed 2/ (million $)	Share of Total Spread Value 3/ (Percent)
0 to 5 Million	30	40	70	50	110	6	0.1
5 to 10 Million	99	90	130	140	260	14	1.1
10 to 25 Million	286	160	250	240	450	24	3.3
25 to 50 Million	247	240	400	380	750	40	7.8
50 to 100 Million	188	350	730	700	1,230	64	9.6
100 to 500 Million	200	840	1,490	1,500	2,600	136	21.6
500 to 1,000 Million	56	1,310	3,600	2,840	5,980	303	13.9
1,000 to 5,000 Million	61	2,270	7,930	6,070	11,700	592	29.7
5,000 and Over	14	2,020	9,010	9,260	18,600	942	10.8
All Classes	1,181	520	1,210	1,070	2,040	105	100

1/ The federal funds rate minus the System discount rate, divided by 365, times the total amount borrowed, divided by the number of banks that borrowed.
2/ Total amount borrowed, divided by the number of banks that borrowed.
3/ Figures for each size class in column 6, times the number of borrowing banks in that class (Col. 2), divided by the average figure for all size classes in column 6, times the total number of banks borrowing (Col. 2).

Table 2 (Cont.)

Average Value to Borrowing Banks, By Size of the Favorable Spread of the Fed Funds Rate Over the Federal Reserve Discount Rate

(Third Quarter - 1979)

Bank Size (Deposits in Million $)	Number of Banks Borrowing	Average Value of Spread Per Borrowing Bank 1/ (In Dollars) July	Aug.	Sept.	Quarter	Average Amount Borrowed 2/ (million $)	Share of Total Spread Value 3/ (Percent)
0 to 5 Million	27	40	70	70	120	6	0.1
to 10 Million	93		170	330	280	14	1.1
to Million	257		220	240	460	23	5.3
25 to 50 Million	220	400	400	350	770	38	7.5
50 to 100 Million	150	580	660	620	1,260	62	8.4
100 to 500 Million	169	1,210	1,400	1,240	2,470	122	18.5
500 to 1,000 Million	55	2,960	2,510	2,990	5,800	285	14.2
1,000 to 5,000 Million	56	4,860	5,170	6,800	12,410	613	30.8
5,000 and Over	14	12,500	6,340	10,120	22,470	1,095	14.0
All Classes	1,041	1,020	970	1,100	2,160	107	100

1/ The federal funds rate minus the System discount rate, divided by 365, times the total amount borrowed, divided by the number of banks that borrowed.
2/ Total amount borrowed, divided by the number of banks that borrowed.
3/ Figures for each size class in column 6, times the number of borrowing banks in that class (Col. 2), divided by the average figure for all size classes in column 6, times the total number of banks borrowing (Col. 2).

Table 2 (Cont.)

Average Value to Borrowing Banks, By Size of the Favorable Spread of the Fed Funds Rate Over the Federal Reserve Discount Rate 1/

(Fourth Quarter - 1979)

Bank Size (Deposits in Million $)	Number of Banks Borrowing	Average Value of Spread Per Borrowing Bank 1/ (In Dollars) Oct.	Nov.	Dec.	Quarter	Average Amount Borrowed 2/ (million $)	Share of Total Spread Value 3/ (Percent)
0 to 5 Million	27	220	100	160	260	6	0.1
5 to 10 Million	94	370	280	320	670	15	0.9
10 to 25 Million	247	530	360	440	1,040	24	3.5
25 to 50 Million	231	950	620	750	1,680	38	5.3
50 to 100 Million	143	1,560	1,020	1,460	3,040	69	5.9
100 to 500 Million	195	3,470	2,590	3,110	6,400	147	16.9
500 to 1,000 Million	71	10,160	5,260	8,560	17,880	393	17.2
1,000 to 5,000 Million	62	25,610	10,910	18,470	46,040	992	38.7
5,000 and Over	15	40,210	26,080	19,340	56,740	1,262	11.5
All Classes	1,085	3,870	2,170	2,930	6,800	150	100

1/ The federal funds rate minus the System discount rate, divided by 365, times the total amount borrowed, divided by the number of banks that borrowed.

2/ Total amount borrowed, divided by the number of banks that borrowed.

3/ Figures for each size class in column 6, times the number of borrowing banks in that class (Col. 2), divided by the average figure for all size classes in column 6, times the total number of banks borrowing (Col. 2).

Table 3

Daily Average Interest Rates Paid by Borrowing Banks

		Federal Funds Rate	Federal Reserve Discount Rate	Spread (basis points)
1978:	July	7.81	7.23	58
	Aug.	8.04	7.43	61
	Sept.	8.45	7.83	62
	Oct.	8.95	8.26	69
	Nov.	9.75	9.50	25
	Dec.	10.03	9.50	53
1979:	Jan.	10.07	9.50	57
	Feb.	10.06	9.50	56
	Mar.	10.09	9.50	59
	Apr.	10.01	9.50	51
	May	10.24	9.50	74
	June	10.29	9.50	79
	July	10.47	9.69	78
	Aug.	10.94	10.24	69
	Sept.	11.43	10.70	73
	Oct.	13.77	11.77	200
	Nov.	13.18	12.00	118
	Dec.	13.78	12.00	178

FEDERAL RESERVE'S FIRST MONETARY POLICY REPORT FOR 1980

TUESDAY, FEBRUARY 26, 1980

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, D.C.

The committee met at 10 a.m., in room 5302, Dirksen Senate Office Building, Senator William Proxmire (chairman of the committee) presiding.

Present: Senators Proxmire and Stevenson.

STATEMENT OF CHAIRMAN PROXMIRE

The CHAIRMAN. The committee will come to order.

Today we are meeting to hear comments from non-Government monetary experts on the Federal Reserve's monetary policy plans and objectives for calendar year 1980. Yesterday we received testimony from Chairman Volcker, including the Federal Reserve's report to Congress as required by the Full Employment and Balanced Growth Act of 1978. In that report, the Federal Reserve indicated that its monetary targets for 1980 would be somewhat lower than the actual money growth rates for 1979, with the largest reduction indicated for the new money stock measure M-1B, which is currency, demand deposits, and NOW, ATS, and share draft accounts offered by all depository institutions, including thrift institutions.

We are fortunate to have with us today four economists with substantial experience in monetary and financial matters. Our witnesses are: Mr. William Griggs, senior vice president at J. Henry Schroder Bank & Trust Co., New York; Mr. Kevin Hurley, director of financial forecasting at Chase Econometrics; Mr. Jerry Jordan, senior vice president and chief economist at Pittsburgh National Bank; and Mr. John Paulus, senior financial economist at Goldman, Sachs, & Co., New York.

Gentlemen, this committee must, by law, make a report to the Senate indicating its view and recommendations with regard to the Federal Reserve's announced monetary policy plans and objectives for 1980. The reason why we have invited you here today is to get your views on monetary policy and our serious inflation problem so that we may send the Senate the best, most knowledgeable report of monetary policy that we can. Therefore, in addition to your prepared remarks, we will want to get your views on specific issues of concern to committee members.

So that you might think about some of these while you are listening to the statements of the other witnesses, let me briefly

mention some of the areas that I would like to hear your views on once we get into the question and answer portion of the hearings:

First, are the objectives for monetary policy set by the Fed consistent with the economic goals set by the administration and will they contribute importantly to a significant slowing of inflation if the Fed is successful in hitting those targets?

Second, does the monetary policy plan place enough emphasis on controlling the growth of credit, as opposed to money?

Third, does the set of monetary policy actions taken bythe Federal Reserve on October 6 and thereafter, and especially the new stress on controlling bank reserves, represent a significant improvement in procedures for implementing monetary policy, and how will the new thrust of monetary policy be affected if we fail to deal with the Fed's membership problem in this session of Congress?

Fourth, would monetary policy be significantly improved if the procedures now being used by the Fed to administer the discount window were dropped, and the discount rate were pegged at a penalty rate above market rates?

Fifth, would monetary policy be significantly improved if the Federal Reserve took a longer run view, and established multiyear targets for growth in the monetary and credit aggregates with narrower ranges than is now the case?

Sixth, since monetary policy cannot be expected to stop inflation without the help of fiscal policy, how important is it to have a balanced budget or to reduce the share of GNP accounted for by Federal outlays?

Seventh, should the Congress set an overall limit on Federal credit activities, as it does on Federal spending, and would this help to reduce inflation in the long run?

Finally, since this Committee will begin hearings next week on anti-inflation policies in general, I'd like to have your views on wage and price controls, credit controls, regulatory reform, a tax on gasoline to encourage conservation, and productivity growth.

Our first witness this morning will be Mr. William Griggs, senior vice president, J. Henry Schroder Bank & Trust Co., New York

STATEMENT OF WILLIAM GRIGGS, SENIOR VICE PRESIDENT, J. HENRY SCHRODER BANK & TRUST CO., NEW YORK

I. ECONOMIC OUTLOOK

Mr. GRIGGS. Most observers of the U.S. economic scene spent much of 1979 trying without success to predict when the latest recession would begin. For the most part, they failed in this because they expected that the downturn would be of a significantly different character or magnitude than the substantial slowdown in economic activity which was already occurring. Real growth in 1979 at 2.3 percent was about 2 percent less than in 1978. Many of these same observers now find themselves equally baffled about 1980. While 1980 does look harder to predict, I would be of the opinion that the behavior of the economy this year will be much like that of last year. That is, another 2 percent decline in real growth. This would mean real growth in 1980 near zero minus 1 percent to plus 1 percent.

The factors that prevented a sharp downturn last year will do the same for 1980. Plant and equipment spending will hold up well, single-family housing activity will continue to slacken but not collapse and multifamily, commercial, and industrial construction will do well. Inventories will continue to be kept under good control, employment and personal income will hold up well, and the consumer, struggling to maintain a standard of living that has been devastated by inflation, will reduce his savings rate further. The Federal Government will continue to stimulate the economy through substantial budget deficits and the easing of credit demands, associated with slowdown in economic activity, will mean that credit will be readily available.

In this environment there is little reason to expect prices to decline substantially. Consider if you will what, at its most basic, we are up against on the price side. First we have unit labor costs rising at an annual rate of 9 percent with no productivity gains to offset this rise. Energy costs will continue to move substantially higher—probably adding at least 3 percent to consumer prices—even if OPEC oil price increases are well under the 1979 pace. This is the case because domestic energy prices will be moving significantly higher. Thus, even if food prices behave relatively well, as seems possible, it is difficult to believe that the Consumer Price Index will rise less than 10 percent in 1980—the third year in a row of double-digit inflation. I would like to note that while rising energy costs are a short-term problem, they are absolutely necessary if we are to achieve energy independence in the long run. This is the case because over time these price rises make the development of alternative energy sources feasible on a cost/return basis.

II. ECONOMIC POLICY

Fiscal policy has been an important stimulative factor for the economy in this cycle and it will continue to be so. We are looking for deficits of $41 billion and $44 billion in fiscal 1980 and fiscal 1981, respectively. However helpful this kind of fiscal policy might be in adding to employment, it has almost certainly done nothing to alleviate our inflation problems. If we are ever to have a chance to reduce inflation, it is essential that such deficits be eliminated by spending restraint.

The Fed has adopted a singular strategy in its attempt to deal with inflation. The essence of that strategy has been to produce a moderate slowdown in economic activity, risking a mild recession, but not a substantial one. The rationale for such a strategy runs something like this:

One. The history of the country clearly indicates that as a Nation we have not been willing to tolerate a serious recession for any length of time. That is, if a recession threatened, we typically shifted to a very stimulative posture laying the groundwork for a renewed inflationary buildup a few years later. Thus, a big recession would provide only a temporary solution to our inflation problems.

Two. Much of the upward pressure on prices comes from the rising costs of food and fuel, pressure that would not ease in

response to a recession unless it were so severe in terms of output and employment as to be unacceptable.

Three. Consumption and housing, which have provided the drive to this expansion, should slacken steadily in response to the steady erosion of real income, associated with an inflation rate which is running well ahead of income growth, and the financial squeeze associated with heavy reliance on credit to finance purchases.

Four. The impediments to monetary policy in this cycle are such that the Fed's ability to control inflation is limited. These impediments include: A Federal budget that is persistently in heavy deficit; a compensation per man-hour that grows at 9 percent and productivity that does not grow at all; an inflation rate that has led the consumer to the conclusion that if inflation is not going to be controlled and savings are going to be penalized by taxation, one should spend and borrow as much as possible and save as little as possible; the absence of any effective control over energy prices; a dollar that is no longer mighty and thus a constant concern in shaping Fed policy; the ubiquitous threat that actions to tighten credit could cause still other banks to leave the Federal Reserve System in research of more tender treatment elsewhere; the fact that various sectors of the economy have been insulated from the effects of tight money.

The adoption of this strategy seems sensible to me, all things considered. However, in the short run at least, this strategy has meant a higher rate of inflation.

Finding a solution to our budget, energy, and productivity problems is critical to the long-run control of inflation. We have refused to deal with these issues over the years and we are now paying a high price for that neglect. Moreover, even if we begin today, it will take years to deal with each of these problems. In the interim, we can expect slow economic growth, unbalanced—but hopefully reduced—Federal budgets, high inflation, high interest rates, and more modest gains in standards of living than we have enjoyed in the past. Sensible and timely action by the Congress, the administration, and the Fed can speed the adjustment process but there is no avoiding the problems.

One final comment. I see nothing in the recent actions of the Fed or in the testimony of Chairman Volcker before the Senate or House Banking Committees to suggest that the long-run Fed strategy outlined above will change in 1980. On the contrary the Fed apparently intends to stay with this strategy well beyond 1980.

III. FED POLICY SINCE OCTOBER 6

The decision by the Fed to shift the main focus of attention in implementing policy from the Fed funds rate to bank reserves, bank credit and money was widely hailed as a long overdue change. This warm reception was based on the belief that the Fed had spent 1978 and 1979 pushing rates higher without reducing credit availability adequately. The market's reaction to the announcement of this change in procedures was sharp. Rates rose substantially and banks began revising their lending procedures to take account of what they thought would be a substantial reduction in reserve availability. Unfortunately, this fear of a severe

squeeze lasted only a few weeks. It disappeared as the Fed permitted bank reserves to grow rapidly and banks once again became aggressive lenders. As a result, bank lending, which had leveled off in October and November, picked up substantially thereafter. Moreover, the slowdown in bank lending in October and November was more a rate phenomenon—that is, commercial paper was more attractive than bank borrowing—than a reflection of a reduction in overall demand for credit.

The Fed rationalized such a policy on the basis that bank credit and the money supply were both growing at about 3 percent in the fourth quarter and the Fed apparently expected the economy to be considerably weaker than in fact it was. Thus, even though bank reserves grew too rapidly—about 13 percent for both total and nonborrowed reserves—in the fourth quarter, and even though it was obvious that credit was readily available to all but the least credit-worthy borrowers, the Fed, taking its cue from bank credit and money supply, did nothing.

The response of the debt markets to the Fed's inaction in the latter part of 1979 and early this year is interesting for what it says about market perceptions. The short-term markets showed little or no change for 2 months or longer—prior to the discount rate change of February 15—while the long-term markets backed up dramatically. The message in this is that the short markets benefited from this liquidity, while the long markets saw this liquidity a harbinger of more inflation and/or a tighter monetary policy.

The decision to raise the discount rate from 12 percent to 13 percent on February 15 was an interesting move because it seemed to be an isolated event. After all, this action could have been justified at any time in the last few months based on the disparity between market rates and the discount rate. It is easy to understand, therefore, why analysts and the debt markets expected the Fed to do something more and why they were disappointed when no other overt tightening actions were immediately forthcoming.

IV. THE NEW MONETARY AGGREGATES

The redefinition of the monetary aggregates brought these various statistical series into better line with reality and was therefore a welcome and constructive development. It does not assure that a better monetary policy will now be forthcoming but it will help. As for the appropriate growth targets, I find myself of two minds. On the one hand, the target ranges set by the Fed for 1980 seem appropriate in some cases but too expansive in others. On the other hand, in my judgment strict attention to targets is probably inappropriate in any case.

The target rates of monetary growth set by the Fed for 1980 and the actual growth in 1979 are as follows:

[In percent]

	1980	1979
M-1A	3.5 to 6.0	5.5
M-1B	4.0 to 6.5	8.0
M-2	6.0 to 9.0	8.8
M-3	6.5 to 9.5	9.5

If one uses the midpoint of the Fed's target ranges for 1980 and compares it with 1979, it suggests a significant tightening of monetary growth in 1980. If however, one compares the upper end of the ranges for 1980 with actual growth in 1979, only the M-1B target looks tight. The reason this upper end of the range worries me is that I am not sure that the Fed would try to slow the growth if it were near the high end of the range. If it did not, the growth for all the monetary aggregates except M-1B would clearly be too high. More generally, I am so concerned about inflation that given the still respectable performance of the economy, the still precarious position of the dollar, the existence of considerable liquidity in the banking system, the possibility that the seasonal adjustment factors applied to the monetary aggregates understate their growth and the need to demonstrate to labor that firm action is being taken to control inflation. I would have preferred that the Fed clearly err on the side of firmness in setting their targets.

The reason I wonder whether we should be worrying about this whole matter at all is that targets imply too mechanical an approach to policymaking. In the fourth quarter of last year, for example, regardless of the fact that money supply was growing at a rate well within the target range, the realities of the marketplace were such that the Fed was losing its grip on the banking system and policy was simply too easy. I would have preferred to see the Fed respond to such a situation by slowing the rapid growth of bank reserves even at the risk of producing slower growth in the monetary aggregates. In short, I would prefer to see more judgment and less reflex in policymaking.

It is extremely important to understand that the failure of the Fed to control inflation does not result from the fact that the Fed does not know what to do. The Fed knows how to withdraw reserves from the banking system and in so doing, it can reduce inflation to more reasonable levels. The problem is that we want more than that from the Fed. We want the Fed to control inflation without producing sharp increases in unemployment and to do it in a way that keeps the dollar strong. Moreover, the Fed is supposed to accomplish this feat in a very difficult environment. The budget deficit situation, the energy situation, the productivity situation, the Fed membership situation are all givens for the Fed. Can anyone really wonder that the Fed cannot achieve all that is being asked of it? And should anyone be surprised that the debt market, having lost all confidence in the ability or willingness of Washington to deal effectively with these problems, is in disarray?

V. SUMMARY

The U.S. economy has been in the process of slowing down gradually throughout 1979 and that process will continue in 1980. Whether this slowdown will qualify as a recession remains to be seen but the economy will show little if any real growth. This kind of steady slackening in the pace of economic activity is not an accident. Rather, it is the result of a conscious policy on the part of the Federal Reserve to produce a substantial slowdown over a considerable period rather than the usual sharp recession. This long-run strategy to deal with inflation makes sense given the impediments to Fed policy—budget deficits, no productivity, unresponsive energy prices, and banks leaving the Federal Reserve System, to name a few—but in the short run it has meant living with more inflation. In the long run, the health of the economy can only be insured by appropriate action to reduce Federal budget deficits, to enhance productivity, and to expand domestic sources of energy.

The Fed's decision to adopt an aggregate approach—announced October 6—was welcome because the old techniques had succeeded in raising interest rates but not in controlling credit growth. Unfortunately, the Fed permitted bank reserves to grow too rapidly following the change in technique so that while money supply and bank credit behaved well statistically, credit availability was excessive. Nevertheless, the Fed has stayed with this policy to the present and shows no inclination to change anything in the next year or two. Thus, credit will be readily available to all but the least credit-worthy borrowers through 1980.

The redefinition of the monetary aggregates will be helpful to the Fed since the new definitions are more realistic. However, I am not entirely comfortable with the growth rates established for this year. While it is extremely difficult to know what growth rates are appropriate, the ones chosen seem to me to risk too expansive a policy. Indeed, it is this difficulty of knowing the appropriate growth that makes me uncomfortable relying on such targets. They imply more precision in the whole matter than I think is justified. Finally, the Fed does not need any additional tools to control inflation. What it does need though is the political support to do it. It will not be easy even then because of the many impediments to success that have been erected over the years; nor will it be done quickly. The sad part of it is we could have avoided our current impasse by making the tough decisions that needed to be made along the way. We failed to do so, however, with the result that price stability as we knew it only a few years ago will be a long time returning.

The CHAIRMAN. Thank you very much, Mr. Griggs. I thank you with a mixed reaction. That's certainly a gloomy analysis, but I thank you.

Mr. Hurley.

STATEMENT OF KEVIN HURLEY, DIRECTOR OF FINANCIAL FORECASTING, CHASE ECONOMETRICS, NEW YORK

Mr. HURLEY. Mr. Chairman, I am honored to have the opportunity to present my views on the outlook for the economy, the role of monetary policy, and related matters to this committee.

OUTLOOK FOR THE ECONOMY

Chase Econometrics' forecast for the economy in 1980 is in basic agreement with that of both the administration and the Federal Reserve. We believe that an accumulation of underlying forces in the economy is pulling us into a mild recession. High inflation has eroded consumer purchasing power substantially and is continuing to do so. In recent years, substantial increases in employment offset the reduction in each worker's real income. Furthermore, rising home prices gave households the intangible impression of growing wealth and, in many cases, actual funds to continue spending despite lower incomes. Now, employment growth has slowed, and home prices are no longer rising. Hence, growth in consumption expenditures can no longer carry the economy forward.

As in most downturns, the recession is being led by declining residential construction. Both home prices and financing costs have moved well beyond the reach of many potential home buyers. Indeed, a weak year for housing is virtually certain, as evidenced by low current levels for mortgage commitments, building permits, and deposit inflows at thrift institutions.

Finally, fiscal policy is becoming less stimulative. Although the budget will in fact remain in the red, the deficit is narrowing while the economy is moving into recession. Typically, a weakening economy implies a widening deficit. The administration notes that in a hypothetical full-employment economy, the budget would have a $12 billion deficit in 1979, a $4 billion surplus in 1980, and a $5 billion surplus in 1981. This shift from a full-employment deficit to surplus evidences fiscal restraint.

Although the administration's budget proposal may well be modified, we do not believe the differences will be significant enough to change this characterization of fiscal policy. In particular, increased funding for defense does not alter the outlook appreciably, because of the lags inherent in new spending projects and because of the small share of GNP accounted for by defense spending.

Our outlook for inflation is not very optimistic. We do not anticipate another round of sharp bursts in the prices of energy and food as occurred last year. But, recent oil price increases, coupled with decontrol of domestic crude, will boost energy costs significantly this year. And, nonagricultural factors, such as fuel and labor costs, will push up the price of food at retail. Finally, and most disturbingly, the underlying rate of inflation, based on accelerating wage rates and declining productivity, is rising.

A comparison of our forecast for 1980 with those of the administration and the Federal Reserve is presented in table 1. Specifically, we expect real economic activity to decline by 1.3 percent from the fourth quarter of 1979 to the fourth quarter of 1980. The consumer price index is projected to rise 11.1 percent. And the unemployment rate is seen to rise to 7.6 percent in the fourth

quarter. Looking ahead to 1981, our forecast agrees with the administration's in anticipating a relatively slow recovery. Real GNP is expected to increase only 3.9 percent, leaving unemployment up at 7.3 percent of the work force in the fourth quarter of 1981. Inflation will remain on a high plateau, with the consumer price index increasing 9.6 percent.

CONSISTENCY OF MONETARY POLICY WITH THE OUTLOOK

Analyzing the consistency of the Federal Reserve's target ranges for money and credit with the economic outlook is not an easy matter. Institutional changes in the nature of money balances have hampered this analysis in the past. And now, the new set of money definitions established by the Fed confuses the matter further.

One means of addressing this issue is to compare our forecasts for the monetary aggregates, as previously defined, to ranges set for them. Table 2 presents two sets of target ranges for the old aggregates. The first set was established last July. The second set is estimated by the Federal Reserve to be consistent with its ranges for the new aggregates.

When we use our economic forecast—which agrees with the administration's and the Federal Reserve's—to project growth rates for the monetary aggregates under the old definitions, the predicted growth rates fall within the ranges prescribed for them. These forecasts are also shown in the table. Hence, we believe the Federal Reserve's objectives are consistent with the economic results anticipated by the administration.

A POTENTIAL PITFALL FOR MONETARY POLICY

Given the primary objective of slowing the inflation rate, monetary policy must walk a very thin line during 1980. We agree that the rate of price increases clearly calls for monetary restraint. But, with the same goal in mind, we are also concerned that an overly restrictive policy will be counterproductive.

Looking back over previous cycles, monetary policy is seen to have a tendency toward overkill. Given downward rigidities in our price structure, extreme monetary restraint primarily affects real economic activity rather than inflation. This occurs most noticeably when an external force, such as an OPEC price increase, accelerates inflation. Tight monetary policy is then aimed at forcing other prices to decline at an offset to rising energy costs. But since other prices will not decline, the toll is taken on physical output of goods and services.

Driving the economy into recession by tight monetary policy may result in some shortrun improvement in inflation as producers cut prices on manufactured goods to lower inventories. This policy is actually counterproductive, however, to containment of longer term inflationary forces.

Our concern here is based on our view of the inflation process. Apart from the externally imposed increase in oil prices, we believe current inflation stems from an environment of disincentives sapping investment, research, and development. In part, this is fostered by inflation itself when combined with the corporate tax structure. The regulatory maze is another source. The accumula-

tion of disincentives has slowed the economy's investment and technological development, fostered the substitution of labor for capital, and in the process lowered productivity and intensified inflation.

Over the long haul, inflation can be slowed only by increased investment, which increases the capital stock, raises productivity, and lowers unit labor costs. Sharp slowing of the economy, however, slows investment for four reasons: (1) A low rate of capacity utilization makes expansion unnecessary; (2) a low rate of business activity reduces internally generated funds; (3) reduced production rates slow the physical deterioration of the capital stock, lessening replacement; (4) slower replacement schedules retard the introduction of technological advances embodied in new capital goods.

To be sure, a weakened economy may lower the interest cost of borrowed funds. But, in our view, a reasonably healthy rate of economic activity is a more important incentive to investment. Hence, an effective anti-inflationary policy must damp the economy without fostering a tailspin which seriously deters investment.

A PROBLEM OF IMPLEMENTATION

If monetary policy is to go wrong in the fight against inflation, it will not be through lack of good intentions. Rather, the error will come from incorrect implementation. In this regard, the single-minded focus on money in the procedures adopted last October 6 give us reason for concern.

Although described as a policy directed toward attaining goals of "money and credit," current procedures are more appropriately described as aiming for "money not credit." Most cyclical swings in bank credit, and business loans in particular, are financed by banks through managed liabilities. These are certificates of deposit, Eurodollar borrowing, security repurchase agreements, and similar transactions. Since most of these are reservable, their changes directly affect required reserves to control these items, and ultimately bank credit, the Fed's operating policy must resist deviations in the growth of reserves associated with these items. Current Fed policy does exactly the opposite. It concerns itself with only that portion of reserves related to the monetary aggregates and accommodates changes in reserves related to bank credit.

Current operating procedures are the reason why the Fed's commitment to slowing inflation has been questioned recently. Many supporters of the Fed's October 6 changes believed that for the first time in this cycle the availability of credit would be in doubt. With the Fed's announced intention of restraining the provision of reserves, there could be no assurance that funds would be available when needed. This was expected to slow demand by forcing borrowers to rethink their investment decisions. But, by supplying the reserves associated with bank credit, the Fed has signaled the banking system that sources of loanable funds can be readily tapped. This has disappointed those hoping for a tight rein on credit availability.

The Federal Reserve chairman has stated that we must keep an eye on money to assess Fed policy, although M-1 fell within its range last year, the economic results were highly inflationary.

Bank credit, on the other hand, was well above its range last year. Indeed, bank credit has been above its range for the past 3 years in succession. This leads one to believe that bank credit is telling us something M–1 is not. Hence, we feel strongly that open market operations should be directed toward the control of credit availability rather than the money stock.

COORDINATION OF TAX POLICY WITH MONETARY POLICY

In addition to the general posture of fiscal restraint, another connection between fiscal and monetary policy lies in the area of tax initiatives to counter inflation. In our economy, pollution, health, safety, and a multitude of other regulations drastically erode the return on capital spending projects. At the same time recent institutional changes have greatly facilitated the access of individuals to the capital markets. Through mortgages and credit purchases of autos and other durables, households now compete with corporations for funds much more effectively than in the past. In an environment of rising prices, the return on investment is higher on household items than on capital spending projects. Hence, it is no wonder that a rising share of credit is going to households and away from business investment.

To redirect financing toward increasing productive capacity, the rate of return on capital spending must be improved. A clear means of accomplishing this is to provide more generous depreciation allowances on capital equipment. Financial regulatory bodies can also help redirect the flow of funds by shortening the repayment period on household credit, thereby reducing its attractiveness.

At the same time, we must be careful in assessing proposals to cut payroll taxes as an anti-inflationary device. Some reduction may be desirable. But too much can encourage the substitution of employees for capital goods, lower productivity, and retard growth in the real income of workers.

SUMMARY

We are in complete agreement with the general goal of monetary policy to work toward a stable, noninflationary economy. We must remain dubious, however, about prospects for success as long as policy implementation is directed singlemindedly toward money stock targets.

In this respect, we are grateful for the opportunity to suggest alternatives which we consider of great importance. Through discussions such as this one, we are confident that the effective Government policy we all seek can be attained.

TABLE 1.—COMPARISON OF FORECASTS FOR 1980

[In percent]

	Administration	Federal Reserve	Chase econometrics
Real GNP	−1.0	−2.5 to 0.5	−1.3
CPI	10.4	8.75 to 12.0	11.1
Unemployment rate	7.5	6.75 to 8.0	7.6

TABLE 2.—COMPARISON OF TARGETS AND PROJECTIONS

[In percent]

	Targets for 1980		Chase econometrics projections
	July 1979	February 1980	
M—1	3.0 to 6.0	3.5 to 6.0	5.7
M—2	5.0 to 8.0	5.0 to 8.0	7.2
M—3	6.0 to 9.0	5.0 to 8.0	7.3
Bank credit	7.5 to 10.5	6.0 to 9.0	6.4

The CHAIRMAN. Thank you very much, Mr. Hurley.
Mr. Jordan.

STATEMENT OF JERRY L. JORDAN, SENIOR VICE PRESIDENT AND CHIEF ECONOMIST, PITTSBURGH NATIONAL BANK

Mr. JORDAN. Mr. Chairman and members of the committee, I am pleased to have this opportunity to present my views on the economic outlook and monetary policy. The policy actions of the Federal Reserve since last fall have been appropriate for the circumstances and provide some basis for optimism that the long upward spiral of inflation finally may be broken. But our Nation's central bank's reputation as an effective inflation fighting institution has been so severely damaged by events of the past decade that I now believe strong congressional support is essential for the Federal Reserve to succeed with the announced policies. The fiscal stimulus associated with the recently released 5-year budget projections is not consistent with an anti-inflationary monetary policy, and financial market analysts generally have concluded that the expansionary thrust of fiscal policies ultimately will dominate.

These hearings, pursuant to the Full Employment and Balanced Growth Act of 1978, provide a useful forum for debating, and hopefully reconciling, the longer-run impact of monetary and fiscal policies on inflation, employment, and real growth. Clearly stated and consistent objectives for the price level, capital formation, productivity improvement, and real tax burdens would be a major contribution to the functioning of the Nation's financial markets and to the performance of the dollar in foreign exchange markets.

A LEGACY OF INAPPROPRIATE ECONOMIC POLICIES

There has been ample opportunity to learn a few lessons about the formulation of stabilization policies in the past several years. It is important to demonstrate that these lessons have been learned and will serve to guide our policymakers in the future. Much of the analysis of the effects of the first oil shock in 1974 was wrong and the policies to deal with it were inappropriate. Yet, by the begin-

ning of 1979 we found ourselves vulnerable to another major oil shock.

A substantial real wealth loss was imposed on the oil consuming countries by OPEC. It was futile to think we could avoid this loss by tax rebates to stimulate consumption and by easy money and credit policies. The failure to correctly analyze and respond to the oil shocks resulted in the major burden of the loss being borne by private sector investment—which means that future consumption and future standards of living were sacrificed in favor of short-run considerations. In relative as well as absolute terms, the real Government sector has increased and real tax burdens have risen because the private investment sector has been so adversely affected by the oil shocks. Testimony by Prof. Allan Meltzer of Carnegie Mellon University before this committee last July clearly and carefully analyzed the effects and the appropriate policies to deal with such external developments.

The emphasis on the GNP gap after the first oil shock was not correct, and efforts to spend our way back to prosperity have backfired. The locomotive or convoy theories behind recommendations for more stimulus in this and other leading industrial countries were ill-founded. The pressure on the Federal Reserve to resist rising market interest rates in 1977 and 1978 by rapid injections of money and credit were based on fallacious conceptions of the monetary policy process. Finally, the benign neglect of the rapid depreciation of the value of the dollar on foreign exchange markets before November 1, 1978 was based on incorrect analyses of the causes of the dollar's weakness and a misunderstanding of forces affecting a dominant international reserve currency in a regime of floating exchange rates.

These experiences of the 1970's no doubt have some educational value, but it has been, and continues to be, a very costly education. Mistakes were made in the formulation and the implementation of monetary policy in the past decade—but not all the mistakes involved monetary policy. Energy policies have been slowly evolving into more sensible sets of incentives and disincentives, but our major long-run energy problems will be overcome only if stabilization policies are different than they have been. Fiscal and budgetary policies also have been major problems, and monetary policies cannot be expected to overcome the adverse effects of actions in the fiscal arena any more than monetary policy can offset the shocks in the area of energy. It would be naive to become highly optimistic about the benefits of a given set of monetary policies until there are definite signs that our national energy and fiscal policies are moving in the same direction.

MONETARY POLICY ACTIONS IN 1980

Monetary growth in 1979 was expansionary on balance, although somewhat less so than in 1977 and 1978. In the year ended in the fourth quarter of 1979, the monetary base rose 8.2 percent and the Federal Reserve's new money measure called M-1B rose 8 percent. In the same period, nominal GNP rose 10 percent, real output rose 1 percent, and the general price index rose 9 percent.

For the current year, Chairman Volcker has announced that the Federal Open Market Committee has established a target growth range for M–1B of 4 to 6.5 percent. At its semiannual meeting on February 3, 1980, the Shadow Open Market Committee recommended a target growth rate of the monetary base of 6 percent for 1980, which would be consistent with a growth rate of M–1B of about 5 to 6 percent this year.

The data released thus far by the Federal Reserve suggest that the income-velocity, or rate of turnover, of M–1B has risen at about a 3 to 3.5 percent rate on average in recent years. The average growth of the velocity of the monetary base has been between 1.5 and 2.5 for long periods of time. This past experience suggests that growth of the monetary base of 6 percent and M–1B of about 5 to 6 percent in 1980 would be accompanied by a growth of total spending (nominal GNP) of about 8 percent. Given that the lagged effects of strong monetary and fiscal stimulus in 1977 to 1979 will produce an increase of the general price level of about 9 percent again this year, these projections are roughly consistent with the administration's projection of a 1-percent decline in real output in 1980.

The strongly expansionary monetary and fiscal policies in 1977 and 1978 produced a temporarily rapid growth of real output of over 5 percent on average for those 2 years, and total employment rose by 7.3 million, or 8.3 percent, during those 2 years. Unfortunately, the expansionary policies that produced strong gains in output and employment in 1977 and 1978 contributed to the substantial inflationary pressures in 1979 and 1980. Any recession that does occur this year should be chalked up as part of the price that must now be paid for the impatience that influenced policy actions 2 and 3 years ago. The new president of the Deutsche Bundesbank characterized the problem quite well recently when he remarked that, "inflation is like toothpaste. Once it's out, you can hardly get it back in again. So the best thing is not to squeeze too hard on the tube."

If a decline of output and a rise of unemployment does occur this year as is generally expected, participants in domestic and international financial markets will be watching closely for signs that the anti-inflationary monetary polices are being abandoned in favor of antirecessionary polices. Such a shift of emphasis in U.S economic policies would be a serious mistake and would have grave implications for the dollar in foreign exchange markets. It might be possible to further delay the onset of recession by a shift to quick-fix stimulus, but such actions would only increase the probability of a deep and long recession at some point. Nobel Prize-winning economist Fredrich A. von Hayek long ago put forth the view that, "the only way to fight recession is during the prior expansion." Once the economy has been overstimulated, it eventually must be allowed to cool off. Consequently, any recession that does occur this year should not be blamed on monetary policy actions taken by the Federal Reserve this year.

CREDIBILITY AND PERSERVERANCE ARE NECESSARY

An understanding of the rather long lags of policy actions and the role of expectations about the future is necessary to interpret

economic developments this year as well as the likely effects of policy actions this year. It would be wrong to say that the Federal Reserve policies this year must cause a recession in order to effectively reduce inflation. Whether or not a recession occurs, and the depth and duration of any recession that does occur, will be a function of the credibility of the Government's commitment to substantially reduce inflation during the next few years.

As we enter a new decade, the central issue concerning stabilization policies is not the role of the money supply versus interest rates, and it is not the relative importance of monetary versus fiscal policies, as was the case in the past decade. Now, the critical issue is credibility. Declarations of a renewed commitment to combat inflation were made with such increasing frequency during the past 15 years, only to be abandoned before lasting progress was made, that the Federal Reserve is no longer viewed as a solid bastion against inflationary forces. The importance of restoring our central bank's reputation and credibility as an inflation fighting institution cannot be overemphasized. The ultimate total cost to our economy in terms of lost output and reduced employment will be greatly affected by the credibility of the Federal Reserve's announced policy actions.

If it were universally believed that the Federal Reserve would have the total support of the legislative and the executive branches of Government for as long as necessary to achieve price stability, then the cost of a successful policy to eliminate inflation would be minimal. However, if individuals in their roles as consumers, workers, labor leaders, business leaders, and Government officials do not believe that we have the national will to persevere until inflation is eliminated, and if they base their economic decisions on the assumption that inflation in the early 1980's will be at least as high as in the late 1970's, then the real economic costs and the dislocations associated with strongly anti-inflationary policies could be considerable.

Restoring credibility of the commitment to persevere against inflation will not be easy. Participants in financial markets suffered large losses in recent years when they prematurely anticipated a downturn of inflation and interest rates. Consumers and homebuyers have been conditioned to believe that there is no benefit to delaying purchases based on the expectation of relative price stability. The psychology of buy now before prices rise further is deeply entrenched. Workers have watched average consumer goods prices rise more rapidly than wages on average in recent years and will not be easily convinced that their compensation for accepting smaller wage increases now will come in the form of smaller price increases in the future. Major corporations have been willing to borrow long-term even at the highest interest rates in history in the belief that high inflation will continue and they will repay their debts with greatly depreciated dollars. If a policy of permanently reducing inflation is going to be successful, all those attitudes must be changed. The more rapidly people become convinced that this time the anti-inflation program will not be abandoned prematurely, the sooner the economy will return to full employment, improved productivity, lower interest rates, and high capacity utilization.

As a creature of Congress, it is natural that the Federal Reserve should look to the legislative branch of Government for support of its most recently announced commitment to pursue an anti-inflation policy. The congressional concurrent resolution of 1975 had the potential of strengthening the central bank's reputation as an inflation fighter, but the experience has not been satisfactory thus far. The targets for monetary growth announced at successive hearings since 1975 were so widely and frequently exceeded that they became irrelevant to outsiders trying to analyze Federal Reserve policy actions. Now, after having frequently espoused laudable intentions to reduced monetary growth to undermine inflationary forces, but failing to achieve their own targets, the Federal Reserve is confronted with widely held skepticism, if not cynicism, about their monetary growth targets. This is not a healthy environment in which to implement a successful anti-inflation monetary policy. The target growth rates for the various monetary aggregates in 1980 seem appropriate for the present circumstances. But the announced target growth rates for each of the past 4 years also seemed appropriate. They simply were not achieved.

Now there is a new chairman at the Federal Reserve and new operating procedures have been adopted, so I believe the chances are greatly improved that the Federal Reserve will actually achieve its targets. But I feel very lonely in that belief. Most other observers view the announced target ranges as nothing more than a wish list. I am afraid that it may take considerable time for the Federal Reserve to demonstrate that the announced policy objectives, and ultimate benefits in terms of reduced inflation, lower interest rates, and sustainable growth are anything more than a wish list.

I also have a wish list. The first item on my list is, of course, that the Federal Reserve actually achieve the announced objectives of reducing the growth rates of the monetary aggregates in 1980 and during several more years in the future. To minimize economic dislocations that might accompany a sustained anti-inflationary monetary policy, I wish that something could be done to make people believe, and make economic decisions based on the belief, that inflation and interest rates will decline substantially during the next few years. Consequently, my wish list includes a declaration by all Presidential candidates that they will support the central bank's anti-inflation stance until price stability is restored, and I wish for a joint resolution by Congress mandating that the Federal Reserve persevere for as long as necessary.

The skeptics argue that monetary policies will become highly stimulative once again as soon as real output declines and the unemployment rate begins to rise rapidly. These pessimists about U.S. inflation must finally be proven wrong, or our standards of living will continue to stagnate indefinitely. I will not repeat all of the arguments as to why reduction of the trend rate of inflation is essential. However, I am convinced it is necessary before we can: restore the soundness of the financial system; achieve once again higher rates of saving, investment and productivity; stabilize our currency in foreign exchange markets; and create an environment where high rates of employment can be sustained.

There should be no controversy over whether reducing inflation is worth the cost. The notion of a stable inflation rate is an illusion. Either monetary and fiscal policies are geared toward reducing the long-run trend rate of inflation, or the average rate of inflation can be expected to continue ratcheting upwards. I don't see how there can be any question about the harmful effects of the secular rise of inflation since the early sixties, and I don't see how there can be any doubt about the benefits that would come from eliminating inflation in the eighties.

FISCAL DEVELOPMENTS ARE A PROBLEM

The Federal budgetary program recently announced by the administration for the period 1980 to 1985 is a major obstacle to the restoration of price stability. The economic assumptions underlying the budget projections are very pessimistic—an average annual rate of inflation of 7.7 percent and inflation still over 6 percent in 1985. Since private forecasters are accustomed to viewing the Government's forecasts of inflation as being on the optimistic side, the reaction has been that if the Government admits that inflation will average almost 8 percent for the next 5 years, then that means it will be at least 9 or 10 percent. Furthermore, the budget also assumes a highly optimistic real output growth of 3.5 percent on average for the 5-year period. These inflation and real growth assumptions are simply inconsistent. Either inflation must be brought down sharply in order to help stimulate the more rapid rate of capital formation and productivity growth necessary to achieve a high rate of real output growth, or continued high inflation will further undermine the economic base of our country and make high growth impossible.

The pursuit of a restrictive anti-inflationary monetary policy as outlined by Chairman Volcker, in the face of the fiscal program implied by the administration's budget projections, would mean that private sector saving and investment would be severely squeezed for an extended period of time. When fiscal policies are expansionary, the impact of restrictive monetary policies falls on saving and investment. However, the mood of Congress seems to be, and private analysts agree it should be, one of concern over the deterioration of our capital stock, our productivity, and our industrial competitiveness. I believe, and I think it is generally believed, that Congress will take actions to stimulate savings and investment and to enhance the prospects for improved productivity. But if the Government's share of national income is rising, efforts to change the mix of the private sector's shrinking share from consumption to investment cannot be successful while the Nation's central bank bears the sole burden of combating inflation.

I believe it was a mistake for the administration to extend the timetable for reducing inflation to 3 percent to 1988. The monetary growth targets announced by Chairman Volcker for 1980, together with the promise of further reductions in monetary growth for the next several years, would achieve a 3-percent inflation, or less, well before 1988. The actual timetable and the associated growth of output and employment depends on whether or not the vast majority of the people believes it actually is going to happen. It is

counterproductive to extend the timetable and show a lack of determination.

It is my conclusion that if the fiscal program does not also become strongly anti-inflationary, restrictive monetary policies will not be sustained sufficiently long to be successful. It the Government's command over the Nation's real resources actually grows at the rates projected in the administration's 5-year budget, there is no reason to expect the performance of our economy to be any better in the next 5 years than the dismal record of the past 5 years. Alternatively, a goal of limiting Government spending as a percent of GNP to 20 percent by 1985 would reinforce the Federal Reserve's actions which would finance less than 3 percent inflation by 1985. I believe it can and should be done, and it will be an enourmously positive outcome of these hearings if Congress shows strong support for our central bank's policies.

The CHAIRMAN. Thank you, Mr. Jordan.

Mr. Paulus.

STATEMENT OF JOHN PAULUS, SENIOR FINANCIAL ECONOMIST, GOLDMAN SACHS, NEW YORK

Mr. PAULUS. Thank you, Mr. Chairman.

Under normal circumstances the targets announced by the Fed last week, if achieved, would I think contribute to an easing of inflationary pressure in the United States. But these are not normal times. Interest rates are at record levels and they provide some rather extraordinary incentives for cash managers to alter their cash management practices and to move funds out of banks and into close substitutes—higher yielding close substitutes which in turn can artificially slow the growth of the monetary aggregates.

The experience in 1974 through 1976 provides some guidance on the possible reaction of cash managers to these record high interest rates. From the middle of 1974 to the end of 1976 we saw a rather significant slowdown in the rate of growth of money which in retrospect was, I think, an artificial slowing. This was in reaction to record high interest rates in 1974.

Federal Reserve staff studies indicate that if you had measured money properly, if you had accounted for the leakage of funds out of banks, money growth in the period from the middle of 1974 through end of 1976 would have averaged perhaps 8.5 percent instead of the actual recorded 4.5 percent.

I am concerned that with interest rates today at record levels we face another breakdown in the money demand relationship; that we could see a year of very slow money growth but that that slowdown may not be indicative of a relatively tight monetary policy. So I am concerned that monetary aggregates in 1980 will not provide a good indicator of the impact of monetary policy on the economy.

There is no really good indicator, or no totally reliable indicator, of monetary policy that I'm aware of. If there was, I suppose we would all use the same thing. But one indicator that I find very appealing is the rate of growth of private borrowing. That would be borrowing by State and local governments, by nonfinancial businesses, and by consumers. When the Fed hikes interest rates, you observe a couple things happening. First, if rates get above the

statutory and regulatory ceilings, credit availability problems can be created and, second, higher rates, all things being equal, restrain the demand for credit. This slows the growth in credit which slows the growth in aggregate demand which eventually contributes to the cooling of the economy.

Now empirically there's been a lag of 1 to 1½ years between the time monetary policy is tightened according to this measurement of policy—that is a slowdown in private borrowing—and the time the economy cools off and inflation begins to ease up. I think the record of the Fed through the third quarter of last year is pretty miserable. Private borrowing proceeded at a very rapid pace through the third quarter of 1979, despite the fact that we were experiencing accelerating inflation. In retrospect, there was no effort made by the Fed to really tighten up credit market conditions to make monetary policy an effective tool against inflation.

HOPEFUL SIGNS

But since the October 6 program we have seen some hopeful signs that policy is beginning to bite. In the fourth quarter, for example, we saw a decline in private sector borrowing to $295 billion, down from $360 billion in the previous quarter. That's a rather extraordinary reduction in the rate of borrowing in a single quarter, one of the largest that I can remember seeing.

In the first quarter there's some concern that commercial paper outstanding and large bank loans to businesses have picked up and that perhaps the Fed is caving in again. I think those developments reflect to some extent bridge financing being done by business firms that have pulled out of the collapsing bond market and will be reversed should the bond market stabilize.

When I add all this up—and I would add I think that growth of mortgage credit will slow considerably in 1980—when I add all these things up, I would say the Fed policy is beginning to work. I would judge Fed policy as being moderately restrictive at this time. I don't, however, think we are going to see any miracles on the inflation front for the next several months because of the fairly long lag between the time Fed policy turns the corner and the time you get the positive effects on the economy. And through the third quarter I think we had a pretty stimulative monetary policy in this country.

BREAKDOWN IN FISCAL POLICY

I'd like to make a final comment. I think the problem with financial markets today and the deterioration in the inflation outlook are related more to a breakdown in fiscal policy than in monetary policy. In 1978 and 1979 the full employment budget, which is probably the best single measure of the impact of fiscal policy on the economy, moved pretty steadily toward surplus, or toward restraint. In 1980 the full employment budget balance will basically be neutral. We have Federal Government expenditures growing by 14 percent in fiscal 1980. So-called other income maintenance programs are up at a 26-percent annual rate. They include food stamps, housing assistance, low income energy assistance, unemployment compensation and so on. And I would add, with the saber rattling that we have heard coming out of the White House,

there's some real concern that the increase in defense spending in the fiscal 1980 and 1981 budgets will turn out to be inadequate.

So to quickly summarize, I think the Fed has turned the corner here but I wouldn't expect to see any major improvement in inflation for the next several months. I think the first half of 1980 will be pretty miserable in terms of the inflation performance. Thank you, Mr. Chairman.

[Complete statement follows:]

Statement by
John D. Paulus

Senior Financial Economist
Goldman, Sachs & Co.

I am pleased to have the opportunity to present my views to this Committee on the outlook for the economy in 1980 and the effect of monetary policy on that outlook.

Continued double-digit inflation, surging commodities prices, the surprising strength of the equities market, and the collapse of the bond market since the beginning of the year have all aroused concerns that a generalized flight from currency is underway. In part this concern is based upon a feeling that credit market conditions are not tight enough -- that the Federal Reserve has not done its job properly. In particular, critics point to the absence of severe credit availability problems as evidence of the laxity of the Fed in the conduct of monetary policy. Rapid bank reserve growth since last fall is also cited by financial market participants as a key indicator of what they view as a swing toward stimulus in monetary policy.

Such criticisms seem unjustified. The absence of credit crunch conditions is a direct consequence of changes in regulatory and statutory interest rate ceilings implemented over the last few years, not necessarily of an overly accommodative monetary policy. Under the current system of interest rate ceilings it is unclear whether the Fed could create a meaningful credit crunch without adopting a truly Draconian interest rate policy. Moreover, the usefulness of reserve growth as an indicator of the impact of monetary policy on the economy is limited over periods as short as a few months when simple changes in the composition of bank liabilities can produce large fluctuations in the growth of reserves.

To be effective an indicator of Federal Reserve policy should bear a close relationship to changes in aggregate demand initiated by changes in monetary policy. One measure that conveniently captures the impact of policy changes on the credit markets and, thereby, on aggregate demand is the rate of growth of private borrowing in the U.S. Since October, when the Fed hiked short-term interest rates appreciably, private borrowing in U.S. credit markets has slowed significantly. On this basis it might be inferred that the Fed has finally turned the corner, that monetary policy is beginning to work to restrain aggregate demand and eventually to contain inflation.

But, although Fed policy may now be on the right track, it will take several months before this policy will begin to meaningfully retard growth in the demand for goods and services and in the price level. In the meantime inflation will continue to rage and the Fed will be subjected to frequent criticism, sometimes intense, that monetary policy is too easy. These circumstances will test the Fed's resolve in avoiding overly restrictive policies that could wreak havoc on U.S. financial markets.

Monetary Policy and the Economy

The problem of using bank reserve growth as an indicator of the impact of monetary policy on the economy can be easily illustrated by examining changes in required reserves last fall arising from fluctuations in specific bank liabilities. During the fourth quarter of 1979 total Federal Reserve member bank reserves expanded by $1.4 billion, or at a 14% annual rate. But of this increase, $280 million was attributable to a substantial rise in interbank demand deposits. Such deposits, though reservable, are thought to have essentially no impact on the aggregate demand for goods and services. Another $470 million increase in required reserves resulted from a sizable

increase in outstanding bank CD's. This increase in CD's merely offset a reduction of several billion dollars in borrowings in the Eurodollar market. Thus, of the $1.4 billion increase in total reserves, more than half can be accounted for by increases in particular bank liabilities that were either not related to overall economic activity or, in the case of the growth in CD's, that resulted from a substitution of one type of bank liability for another with the former having a higher reserve requirement. Another $200 million in total reserve growth in the fourth quarter was due to a rise in excess reserves.

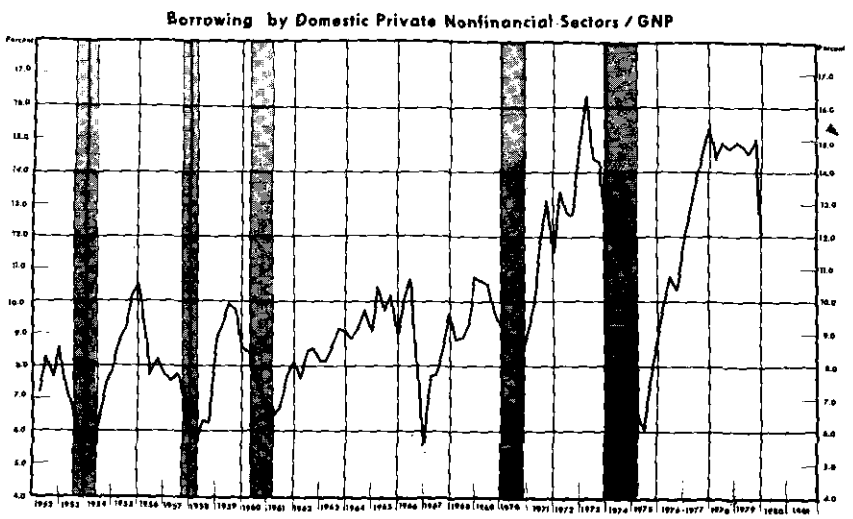
The basic thrust of monetary policy can be better gauged by an assessment of the impact of changes in interest rates on the supply and demand for credit. By raising market interest rates above statutory and regulatory ceilings on certain financial instruments, such as mortgages and bank deposits, monetary policy can restrain the supply of credit to various sectors of the economy by making it unprofitable to "lend" to those sectors. Moreover, high interest rates, all things equal, restrain the demand for credit in the sectors where credit availability is not shut down. By slowing the growth of credit, either by restricting credit availability or by choking off the demand for credit, or both, monetary policy can lower the aggregate demand for goods and services.

One concrete measure of credit growth that has proved to be an excellent leading indicator of economic activity and, I would argue, of the degree of restraint in monetary policy, is total borrowing by domestic private nonfinancial sectors. Domestic private nonfinancial sector borrowing ("private borrowing" for short) is just the sum of

borrowings by households, state and local governments, and nonfinancial businesses in the mortgage and consumer credit markets, the bond and equity markets, and the money market. Put another way, it is equal to total borrowing in the U.S. credit markets excluding borrowings by the Federal Government, financial companies, and foreigners.

In the past the ratio of private borrowing to GNP has declined sharply in advance of each of the last five recessions (see Chart 1). For example, after peaking at a little over 16% in early 1973, more than half a year before the onset of the 1973-1975 recession, the ratio declined steadily to 6% by the spring of 1975. In late 1968, about a

Chart 1



year before the 1969-1970 recession began, it peaked at just under 11% before falling, again steadily to 8 1/2% by the summer of 1970. This pattern has been maintained without exception for the last quarter of a century.

The sharp declines in the ratio of private borrowing to GNP reflected the restraining effects of higher interest rates on both credit availability and the demand for credit. This restraint in financial markets was, in turn, transmitted ultimately to the economy through a reduction in the demand for goods and services, particularly durable goods.

The Current Conduct of Monetary Policy

Between early 1978 and the third quarter of 1979 the ratio of private borrowing to GNP had fluctuated narrowly around 15%. Or, what is the same thing, growth in private indebtedness had kept pace with growth in nominal GNP. The stability of this key ratio at an historically high level appears to imply that despite the sharp rise in nominal interest rates in 1978 and the first three quarters of 1979, Fed policy can probably be characterized as "mildly stimulative" over that period.

This assessment seems broadly consistent with the overall performance of the economy and with its stubborn resistance to recession in 1979. In retrospect, the interest rate hikes of 1978 and the first three quarters of 1979 were inadequate to create credit availability problems. Moreover, the sharp rise in inflation and inflationary expectations outstripped increases in nominal interest rates so that real borrowing costs remained low. As a consequence, strong credit demands continued unabated.

Since October, when the Federal Reserve permitted short-term interest rates to rise some 150 basis points, private borrowing has slowed appreciably. After advancing by $361 billion in the third quarter, private borrowing grew by only $295 billion in the fourth quarter according to preliminary Federal Reserve flow-of-funds data. This decline chiefly reflects a significant slowing in growth of consumer credit, bank loans, and open market paper (see Table 1).

Since the first of the year new issues of corporate bonds have remained light, largely in reflection of the volatile conditions in the bond market. A part of the deferred bond market financing was no doubt shifted to the commercial paper market, where outstanding paper issued by nonfinancial concerns rose by over $4 billion during the first six weeks of 1980. Likewise, a part of the sharp increase in lending by large commercial banks in early 1980 probably served to fulfill temporary financing needs by business firms which had temporarily withdrawn from the bond market. But while business loans made by large banks have increased sharply, it should be noted that such loans made by all banks during January actually declined by almost $2 billion.

Table 1

Borrowing by Domestic Nonfinancial Private Sectors
($ Billions)

Sector	1979 I	II	III	IV
State and Local Obligations	22.3	12.5	25.2	25.1
Corporate Bonds	21.1	25.4	18.5	21.8
Corporate Equities	2.9	2.8	2.9	4.4
Mortgages	159.2	164.7	159.6	159.5
Consumer Credit	51.1	45.3	43.0	30.0
Bank Loans	41.4	52.4	65.7	28.6
Open Market Paper	12.7	8.8	23.0	-1.1
Other	29.6	28.3	23.1	27.0
Total	340.2	340.1	361.1	295.3
Memo: Ratio to GNP	14.8	14.6	15.1	12.0

As shown in the Table, borrowing in the mortgage market, by far the largest single sector of the U.S. debt market, was about unchanged in the fourth quarter from the third. The level of borrowing in this market was buoyed by takedowns of commitments made before mortgage rates began to rise in October. The lending pattern of savings and loan associations, which typically supply about one-half of all the funds to the $100 billion home mortgage market, might provide a better indicator of mortgage borrowing in the next several months. These institutions, which had been acquiring about $4 billion in mortgages per month, slowed their acquisition rate to just under $3 billion in November and to $1.3 billion in December (seasonally adjusted). At the same time, commitments at S&L's for new mortgages declined in December to $28 billion from $33 billion.

There is, in fact, good reason to believe that the demand for mortgage credit will weaken appreciably in 1980. Prior to the upsurge in mortgage rates in October, the potential home buyer made the following calculation: after-tax financing costs of an 11% mortgage are, say, 8%; but home prices are expected to rise at a 12% to 15% rate. Under these circumstances, it made sense to enter the housing market as soon as possible to beat future price hikes. In effect, the real after-tax cost of financing a home purchase was negative.

The Fed's October 6 program has changed both elements in the home-buyer's calculation. First, mortgage rates are now higher. The average rate on new commitments for conventional mortgages at S&L's during the week of January 11 was 12.90%. For a consumer in a 30% tax bracket, this

would amount to 9% after taxes. Second, and more important, home price appreciation has slowed considerably. In part due to an initial reluctance by consumers to borrow at the record high rates established last fall, the demand for mortgages and for housing declined. Home prices fell as a result (see Table 2). If potential homeowners project home price appreciation on the basis of past price changes, it seems clear from recent experience that expected appreciation over the next 6 to 12 months has certainly declined, perhaps substantially.

Table 2

Percentage Change in Home Prices
(Annual Rate, Not Seasonally Adjusted)

	Federal Home Loan Bank Board		Commerce, HUD	Association of Realtors	
	(1) New	(2) Existing	(3) New	(4) Existing	Average of (1), (2), (3), (4)
78 H1	17.0	18.2	17.4	19.0	17.9
78 H2	17.6	28.2	13.3	10.3	17.4
79 H1	16.4	1.3	20.5	23.2	15.4
79 H2	10.3	9.0	2.2	-1.1	2.9
Memo: Change since Sept.*					
	6.4	-18.6	-8.9	-5.6	-6.7

* Through January for FHLBB new and existing series; through December for others.

These twin developments have removed the urgency from the home-buying decision. With after-tax financing costs running 9% and with expected appreciation over the next several months having dropped significantly, it no longer makes sense to buy now simply to beat future price increases. In effect, because of the Fed's October 6 program, real interest rates in the mortgage market over the next year or so

have soared as nominal interest rates have risen and expectations of home price appreciation, once thought surer than death and taxes, have collapsed.

There is, in addition to the direct effect on financial markets, a possible immediate side effect on consumption of the Fed's October 6 policy. The decline in the rate of appreciation of home values, due in part to the weakened demand for mortgages, could induce consumers to step up their rate of acquisition of financial assets. The large increase in equity in homes has helped to push the real net worth of consumers to successively higher levels despite the fact that the so-called "savings rate" has plummetted since 1976. While homeowner equity had represented about 25% of total consumer net worth in 1976, increases in home equity have accounted for between 36% and 52% of the growth in nominal net worth in 1977-1979 (see column 4 of Table 3). For example, net worth in 1-4 family residences has advanced by about $130 billion in 1977, $165 billion in 1978, and, through the first three quarters of 1979, by $215 billion at an annual rate. Because the bulk of this rise in real net worth is related to home price appreciation, a slowdown in home

Table 3

Change in Consumers' Net Worth
($ Billions)

	(1) Increase in Financial Net Worth*	(2) Increase in Home Equity	(3) Increase in Net Worth	(4) (2) ÷ (3)
1977	121	133	254	.52
1978	236	167	404	.41
1979**	385	217	603	.36

* Excludes mortgages.
** First three quarters, annual rate.

price increases will significantly retard growth in homeowners' equity and will begin to depress real consumer net worth. Should consumers react to this decline by increasing their demand for financial assets, the savings rate will begin to rise. Such an increase would, of course, lower consumer spending and contribute to a cooling in the economy.

The Outlook for 1980

Many factors influence the basic course of economic activity. But surely the two most important over a period as long as a year are fiscal and monetary policy. Between the end of 1977 and mid-1979 fiscal policy, as measured by the full employment budget balance, had moved steadily toward restraint. Over this period, the full employment budget moved from a deficit of a little over 2% of GNP into basic balance. But with the sizable upward revision in federal government expenditures for fiscal 1980 the full employment budget, instead of moving well into surplus as the President's 1979 budget message would have dictated, will remain near balance over 1980 if current projections are borne out. Fiscal policy will thus maintain a neutral effect on the economy in 1980, neither significantly stimulating nor restraining economic activity.

Monetary policy as now conducted might be judged as moderately restrictive. The rate of growth in private sector borrowing has fallen substantially since the Fed hiked interest rates last fall and the weakening in home prices, associated with the falloff in mortgage demand, has probably begun to lower consumer net worth. But although Federal Reserve policy has assumed a restrictive stance, this move toward restraint beginning last fall is not likely to reduce economic activity substantially in 1980. If history is a guide, it usually takes about a year after monetary

policy has been tightened before a significant slowing begins in real economic activity. In effect the profligacy of the Federal Reserve prior to October 6 will help to sustain the economy during much of 1980.

Barring unforeseen major external shocks to the economy, economic activity will likely remain flat for the year, much like in 1979. A major recession is unlikely, but so too is a significant upsurge in economic activity. On balance, it now seems appropriate to characterize 1980, like 1979, as a year of stagflation rather than recession.

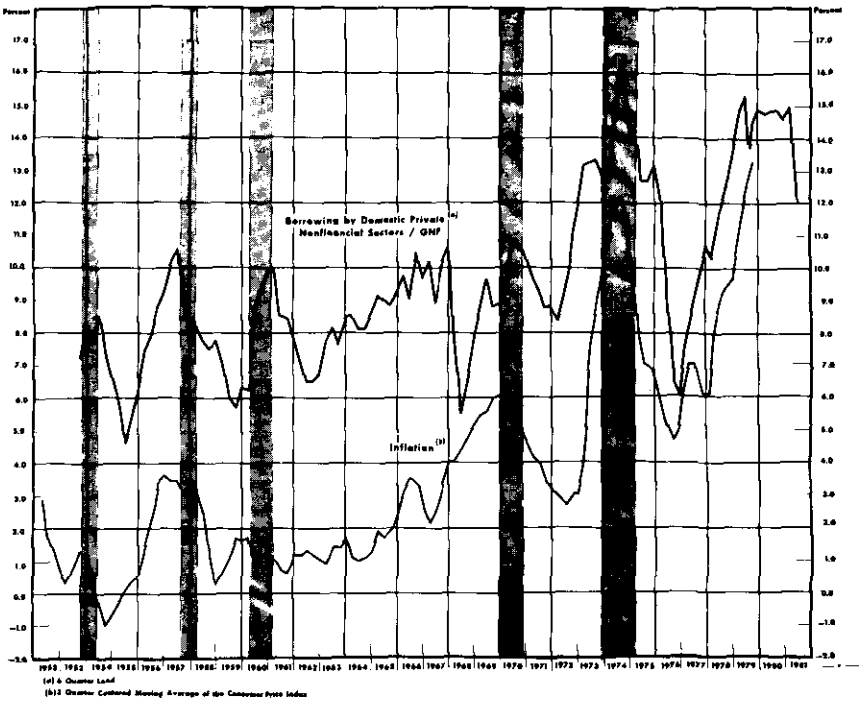
Although the movement toward restraint in monetary policy will eventually lead to an abatement in inflationary pressures, high inflation will continue to disrupt financial markets, producing record high interest rates, and to expose the dollar to further downward pressure on foreign exchange markets through most of 1980. Changes in monetary policy generally affect inflation with a lag. Though an unanticipated movement toward restraint would ordinarily begin immediately to lower inflation and cut profit margins, the major impact on inflation will come only after the reduction in profit margins causes widespread worker layoffs and a downward revision in inflationary expectations.

In fact, it generally has taken about a year and a half after monetary policy has assumed a restrictive stance before inflation has peaked. (See Chart 2, noting that private borrowing is plotted six quarters into the future). The inflationary problems facing the economy in 1980 can thus be attributed largely to the reluctance of the Federal Reserve to introduce meaningful restraint on the economy in 1978 and during the first three

quarters of 1979, despite the fact that inflation accelerated quite steadily over this period.

Chart 2

Borrowing by Domestic Private Nonfinancial Sectors / GNP and Inflation



The principal danger facing the economy in 1980 and beyond is that the Federal Reserve will have to bear a disproportionate share of the burden of containing inflation. This problem will be magnified if poli-

tical instability intensifies in the Middle East and, possibly, Southeast Asia heightening the need to substantially increase defense spending. In that case, if social programs are maintained near current levels, as seems likely in an election year, soaring interest rates could reduce private sector investment spending and further retard U.S. productivity growth. Resort to wage and price controls ultimately would have equally pernicious effects on the viability of the U.S. economy.

The CHAIRMAN. Thank you, Mr. Paulus.

Mr. Hurley, in listening to your remarks I just wondered how the Fed can win. You say if they restrain monetary policy too much—and they are in danger of doing that you think—they tend to prevent investment; they slow down productivity. It can have a perverse, serious effect on the economy.

On the other hand, Mr. Jordan says that the issue really is credibility. He argues that it's not a matter of monetary and fiscal policy any more. It's just a matter of convincing the American people that the Fed means business; they are really going to fight inflation.

I don't know how they can show they mean business and follow a policy of restraint and continue it and stick with it without being in very serious danger of doing what you say would be serious damage to the economy.

What's your response to that?

BANK CREDIT ABOVE ITS TARGET

Mr. HURLEY. I guess one way in which the Fed could show it means business is by meeting the targets that it announces, and I would point out in that respect that last year the Fed's policies were a success regarding meeting its target for M-1 with a 5.5-percent rate of growth in M-1. It came in within its target. Last year bank credit was well above its target and in fact bank credit has been above its target for the past 3 years in a row. I think we all know 1979 was not a success and yet if we look at only M-1 it should have been a success. So I think we might get better credibility by meeting our bank credit targets than by simply meeting our money targets.

The CHAIRMAN. Well, except I just wonder how many people in the financial community, let alone the public as a whole, really follow the targets. What they really follow is the consequences. What happens to the price level; what happens to the availability of capital; what happens to interest rates.

Mr. HURLEY. That's why I think following the bank credit target is even more important, because people understand bank credit. How many people have you ever heard say, "Well, I'm going to spend more or less because M-1 went up or down." They don't say that. They do say, "Well, the bank is going to give me a mortgage

and therefore I'm going to buy a house," or "I couldn't get a loan for a car and therefore I can't get a new car." Those are credit items which I think ought to be paid attention to because they have a specific meaning to the man on the street. They also have a specific meaning to the businessman who's wondering whether to increase his inventories or increase his plant and equipment spending.

The CHAIRMAN. I think you and I are arguing on exactly the same side, but we're coming out in a different way somehow. My position—and I take it your position too—is that if the Fed restrains effectively and vigorously, it restrains people from borrowing money to buy a house, small business or a business of any kind from borrowing for expansion and so forth, farmers from borrowing, and that gives them some credibility. People feel the Fed is fighting it.

You say the effect of that can be perverse economically because it can prevent business from getting the funds they need to improve their efficiency and productivity and getting costs down in the long run.

Mr. HURLEY. Let's look at the two ways in which the Fed's bank credit goals for the year could be missed. They could be missed on the high side by the economy being much stronger and business loans and other consumer type borrowing being much stronger pulling bank credit above its range. By the Fed maintaining its range, that would provide a restraint, allow interest rates to rise to discourage that type of borrowing, and keep the economy in a less expansive state.

We could also err on the side of having too weak an economy. When that happens businesses sell off their inventories, reduce the business loans they are using to support them, and bank credit goes below this range. This would allow the Fed to encourage an increase of bank credit while allowing interest rates to fall and encourage renewed borrowing.

So I'm saying that in order to stay within the narrow lines that I say the Federal Reserve must walk, I believe it must pay very close attention to the rates of increase in credit expansion this year so that it keeps excessive credit expansion down, if that's how the economy goes. We are all pretty uncertain how the economy is going to go this year. It keeps rates of credit expansion down within the range if the economy is strong, and it builds credit expansion up if credit is going to go below its range if the economy is weak this year.

The CHAIRMAN. I have a lot of trouble with that because it seems to me you're looking for a kind of fine-tuning situation at a time when we have overwhelming, appalling inflation. It's just getting beyond anything that we had expected and it's becoming very, very frightening. Inflation, both producer price and consumer price reports most recently are at a very high level and there's every indication that something like that is going to continue for the next year or so.

Under those circumstances, it seems to me that we are going to have to pay a price for the weaker economy. We are going to have to pay a price with higher unemployment. We are going to have to pay a price with less investment, unfortunately, because the impor-

tant thing now is to convince the American people, convince business, that we are going to turn the corner on inflation and pay the price that's necessary to do it, and that price is going to be painful, tough, difficult, but it's a price we are willing to pay. What's wrong with that?

Mr. HURLEY. Well, my intention here is to show that while there may be some short-run benefit in fighting inflation by clamping down on the economy, by not fine-tuning let's say, by going all out in terms of monetary restraints, this is actually counterproductive in the long run. I think we have emerged from the 1974-75 period in worse shape than we started because we had a far deeper recession than we probably needed and we discouraged the development of capital equipment and so forth during that period so we had lower capabilities of production relative to the amount of labor force and so forth coming out of 1974-75 than we did going into it. And what I'm concerned about is the long-run implications for inflation, not simply the inflation rates this year.

The CHAIRMAN. Well, the problem now is whether or not we are going to turn inflation around at all. I think that's the big question mark in the mind of many people. The feeling is that inflation is inevitable, go ahead and buy regardless of the kind of price you've got to pay for the money, in order to get the money so you can buy real estate or whatever.

MONETARY TARGETS

Mr. Griggs, let me start with you and then I'm going to go across the panel on the monetary targets. The growth rate ranges for monetary aggregates are quite broad. As I indicated in my opening statement, the upper limits of the ranges represent somewhat lower growth than actually occurred in 1979 except for M-1B which is quite a bit lower, 6.5 versus 8 percent, than the actual growth in 1979.

Now I have a couple questions about these target ranges I'd like each of you to answer. We'll go across the panel on each of these, first Mr. Griggs. Are the upper limits of the ranges too high to represent a meaningful reduction in money growth?

Mr. GRIGGS. I think they are. I think they are too high with the exception of M-1B. The problem is that it is not clear with a 3- to 6-percent range that the Fed would respond if money growth came in consistently at 6. What's very important here is visibility. Because we are following a much different monetary policy than we have in the past. We have never seen this kind of thing before—that is, where we are deliberately not willing to produce a recession. Before we had always seen monetary policy move in, to control inflation. By producing a recession. Therefore, the market must be convinced that things are going to happen, and the Fed fails in this by using targets that seem to be too expansive.

The CHAIRMAN. Did you say in the past we have taken the posture if a recession follows, so be it; the important element is to restrain inflation, but this time we are not saying that; we are saying in the event a recession comes along we are going to give——

Mr. GRIGGS. I think the policy this time is deliberately taking the view that it's going to try to deal with inflation over a long period of time and not produce the recession which has been the typical way of stopping the inflation—but only the moment. The things we have done between recessions have not been correct, and so we have not permanently stopped the inflation. But this time around we are taking a much different tack and that's hard for the markets to understand. It's new to them and they don't know how it will work.

The CHAIRMAN. All right. Mr. Hurley.

Mr. HURLEY. I believe that the upper end of those ranges is about correct. I think, if anything, we will err probably on the high side. So they are, in fact, restrictive. In other words, I'm saying the aggregates, if anything, would come in above those ranges rather than below them. I point out that if we are talking about lowering them, since monetary policy does not have much effect on inflation relative to GNP, if we talk about lowering the range, we are talking about lowering real GNP; we're not talking about lowering inflation. The range is not going to slow inflation.

The CHAIRMAN. Mr. Jordan.

Mr. JORDAN. The range of M-1B, the upper limit of it, is somewhat higher than I would like to see. I think the midpoint that was emphasized as being 5¼ of that range would be about appropriate for this year. I think in 1980 it's not so much the problem of consistency in the ranges and what can happen to the economy and inflation, but the problem is especially in 1981. The kind of nominal income growth projections that are built into the administration's budget projections for 1981, as well as the total spending projections in the analysis of the Congressional Budget Office for 1981, suggest they are assuming a lot more rapid growth in total spending than the Fed's announced monetary growth would support. This major inconsistency over the next 2 years is the problem.

I would like to see them stick with the announced range. I would be happy to see it come in at the low end of the range, but only if such a policy didn't result in an automatic reaction in the other direction later on. Consistency is important here.

The CHAIRMAN. Mr. Paulus.

Mr. PAULUS. Well, I think it's important we not be too ambitious on these targets. In the past I don't think we have been ambitious enough, but I would agree with Jerry Jordan's opening statement about the importance of credibility with the Federal Reserve. If they were to lower their ranges significantly, say lower the top of the range for M-1A to let's say 3 percent instead of 6, they would run a serious risk that it would be almost impossible for them to restrain money growth to that lower range. Money over periods as short as a quarter, maybe even two quarters, in effect has a life of its own. The Fed really can't control it over short periods of time.

I think we have a very serious credibility problem in this country which could intensify if we were to lower the ranges too much. I will qualify that, though, by saying as I said in my opening statement that I think there's very good chance that money will grow very sluggishly this year, but in an artificial sense; that we will experience another major downward shift in the demand for money and, in that case, the ranges won't make much difference. Unfortu-

nately, it's very difficult to predict when a shift is beginning and to predict the extent of it.

The CHAIRMAN. All right. Mr. Griggs, second, should the Fed aim at the midpoint of the range as the maximum amount of money growth which should be permitted in 1980?

SET MONETARY TARGETS LOWER

Mr. GRIGGS. Well, I think the midpoint would be better than the high end. I would have set all the targets lower than they were set. That is, the range I would try for would have been considerably lower. I think I should say that I'm not really enamored with the targets at all as meaning something that is going to be terribly important. A number of people have already mentioned a good deal of growth in bank credit and associated spending is going to be produced out of things that don't show up in M-1A or M-1B. The growth of bank credit is going to be accentuated if the capital markets stay in the state they're in. Because corporations are going to the banks in large numbers.

So I think if it were me, I would have set the targets lower simply because I think it would make clear the Fed's intentions to really deal with inflation, no matter what targets are set, however, I would hope to see the Fed use its head in this matter, and if it sees that bank credit is expanding rapidly but that is not affecting the money supply, it would say, well, even though our money supply is growing just right, our policy is too easy.

I think the targets in some ways have been a disservice because everybody looks at the target and sees whether they're hitting them and decides whether or not policy is going to be effective, and I think that's unfortunate.

The CHAIRMAN. Mr. Hurley, should the Fed aim at the midpoint of the range as the maximum amount of money growth which should be permitted in 1980?

Mr. HURLEY. The reason why we set ranges in the first place is that there's enough random effects on money growth that it's very difficult to set any one particular number or one particular growth path. So we have to have the ranges because of the random influences. If we believe the random influences are distributed normally or in a general fashion, then it only makes sense that we should have a midpoint. I would think one would not argue as to whether one should hit above the midpoint or below the midpoint, but one should ask should the mid-point itself be lower?

The CHAIRMAN. That was pretty much what I asked. Should the Fed aim at the midpoint of the range as the maximum amount of money growth that should be permitted in 1980? The way I asked that question, in fairness to Mr. Griggs who answered it this way, and this is the way I intended it, is: are the ranges too high and should they be lowered with the midpoint being the maximum?

Mr. HURLEY. No. I guess the ranges are appropriate at this level and if we hit the midpoints we probably ought to be happy.

The CHAIRMAN. Mr. Jordan.

Mr. JORDAN. I would like to see them aim at the midpoint. I would like to see them always announce their targets to you with the understanding that it might be a half percent higher or lower.

The CHAIRMAN. Bless your heart. I have been trying to get the Fed to do this for a long time. In this case, the ranges have been ridiculous, not like they have been in the past. Sometimes they are absurd. The top is excessive and the bottom is unrealistic.

Mr. JORDAN. In 1975, at the time they were originally setting up the first targets announced to you, I was attending the Open Market Committee meetings and the Committee decided that the target should be 6¼ percent with a range around it; but they felt it was awkward to say 6¼ percent plus or minus 1¼ percent, so they said, we'll just call it 5 to 7½. But, internally the emphasis was on the center point. I think if they could get back to emphasizing the center point with the understanding that it's one-half more or less it would be desirable.

The Germans and the Swiss and other central banks that do targeting look upon their target growth range as an announcement of information to the markets, to business firms in their pricing policies, to labor negotiations, to all kinds of inflation considerations as to what the government is willing to do. So far, the targeting procedure in this country has not had that information communicating aspect. I think it works very well in some other countries, and I think making the targets less ambiguous would help in this country too.

The CHAIRMAN. I'm very glad to get that. We'll use that and press them for that. Mr. Paulus.

Mr. PAULUS. I think if we're going to have targets it's very important to hit them. The reason we don't convey information to the markets with the Fed's targets in this country is because we have not had any success in hitting them in the past. I would aim for the midpoint of the respective ranges but I would pay very careful attention to the rate of growth of the private sector borrowing because I think the monetary aggregates are a little too narrow an indicator of the impact of Fed policy in the economy. I would repeat that I fear we face a real danger of an artificial slowing of money growth which will not really be reflective of a tightening of Fed policy.

The CHAIRMAN. Mr. Hurley.

Mr. HURLEY. I'd like to speak a second on the question about hitting the targets or narrowing the ranges. I notice, for example, in the summary of the hearings last July, the same issue came up—can we get the ranges narrower and can we be more capable of hitting them? I would like to suggest that we can get very narrow ranges. We can even get a growth path if we try to target something that the Fed in fact can legally control, something, for example, on its own balance sheet.

What we have done by setting up monetary aggregates is ask the Fed to target something which it has no specific control over. It has to manipulate its actual instruments in order to hope to hit some intermediate target that it has set a range for. Since there's far more randomness in the intermediate target, they have to set a range for it. I don't think we can ask them to set a specific number for it. We could ask them to set a specific number for nonborrowed reserves or total reserves or some other measure that is much closer to the Fed's legal capabilities of dealing with. In fact, I would think there would be nothing wrong with setting a specific

target for reserves for the year as a whole. We all know and people that have been in this business know the Fed can easily hit that path. When we start asking them to hit something farther out, you've got to have ranges.

I noticed another question is should we try to ask them to do longer term things. Certainly they can have a narrower range over a longer period. I don't think that answers the question. You want to have a more specific control over what the Fed is doing let's say on a monthly, quarterly and annual basis. The way to do that is to set the ranges on things they can more specifically control.

DANGER OF IGNORING OTHER VARIABLES

The CHAIRMAN. Mr. Griggs, given the new definition of these aggregates, isn't M-1B the basic money supply variable for money supply purposes and isn't there any danger in ignoring the other variables?

Mr. GRIGGS. I think M-1B is the more important of the monetary targets, no doubt about it. I think there is a danger in ignoring the others, though, and particularly in the sense that I think a lot of credit is going to be financed through CD's and other instruments that do not show up in M-1B. So I think it would not be sensible to ignore the other monetary aggregates or bank credit, but I think of the monetary targets that we're talking about, M-1B is the most important.

The CHAIRMAN. Mr. Hurley.

Mr. HURLEY. Certainly M-1B is the most important. As a simple example of that, they do not announce the data for the higher aggregates, M-2 and M-3 and so forth, so they are using M-1B as their specific week-to-week policy variable. Also, I believe I agree with Mr. Griggs that we are missing a lot by not paying attention to some of the other factors.

The CHAIRMAN. Mr. Jordan.

Mr. JORDAN. I think M-1B is the aggregate that should be emphasized. There is a danger as has been demonstrated in the past, of having too many targets so that if one of a long list of targets comes within the range there's some degree of comfort. If you narrow the focus and hit the target on any one of them, it would be an improvement, but M-1B is certainly my choice.

The CHAIRMAN. Thank you. Mr. Paulus.

Mr. PAULUS. M-1B is my choice too. I don't think the old higher aggregates were very useful and I don't believe the Fed paid a whole lot of attention to them. They have some high-powered research that indicates that there's a much closer connection between unanticipated changes in M-1 and unanticipated changes in the economic activity than there is between changes in economic activity and other monetary aggregates. I think there is a feeling there that a narrow definition of money makes sense, and I would agree with that.

The CHAIRMAN. Mr. Griggs, let me ask you about Mr. Jordan's testimony in putting a good deal of stress on the Fed's credibility problem. Given its record of hitting its targets over the past 4 years, there's little doubt that this concern about credibility is real, especially in an election year.

Would this credibility problem be helped and the policy improved substantially if the Federal Reserve were required to set multiyear growth rate targets for monetary and credit aggregates as was suggested by Senator Garn during yesterday's hearings?

Mr. GRIGGS. I don't think it would be any help at all. I think that the problem would be that the market would be saying, "They're having enough trouble hitting the short-run targets. There's no way to believe that they are going to hit the longer one."

I think what would really be more helpful would be if the Fed would simply say they are definitely committed to controlling inflation. I mean, that's the thing that people want to hear, not whether they set longer-run growth targets. I don't think that would help.

The CHAIRMAN. Any difference of opinion on that?

Mr. JORDAN. I strongly believe it would be helpful. I think if you can do 5-year budgeting, you must do 5-year monetary projections and you must resolve the inconsistencies. Chairman Volcker has implicitly announced the long-run money target by emphasizing repeatedly in recent months that not only is he lowering the target in 1980, but he's going to lower it in subsequent years, and that's consistent with what's built into the budget—either projected by the Office of Management and Budget or the Congressional Budget Office. So 5-year projections of monetary growth would put us on the track of reconciling the problems between fiscal and monetary policies.

The CHAIRMAN. Any other opinions on that?

Mr. HURLEY. The attempt of these hearings and what the law is based on is to coordinate the monetary growth ranges with the economic reports on the economic outlook. Therefore, there is a long term of 5 years on the economic outlook in the report.

LONG-TERM TARGETS

I would have to say, though, that the meaningfulness of long-term monetary targets can only be related to the meaningfulness of those long-term economic targets and, in fact, there is some uncertainty in those long-term economic projections as to whether they are goals, whether they are things that are expected to happen, or whether they are just numbers. As a result, I don't think that long-term monetary aggregates would have any greater credibility than economic forecasts themselves.

Mr. GRIGGS. If I understand it right, the economic forecast probably coming from the Council would require faster growth in the money supply next year.

The CHAIRMAN. Would require what?

Mr. GRIGGS. Would actually require a faster growth in the money supply next year. They are projecting a stronger situation shaping up for 1981, so I assume it would be just the opposite from what Chairman Volcker has suggested.

Mr. JORDAN. That's correct. The administration's forecast would suggest that M–1B would have to go to 8 percent or more in 1981. That's the inconsistency that I have been emphasizing. The Congressional Budget Office numbers suggest that M–1B may grow as fast as 10 or 11 percent in 1981 to be consistent with the long-term income projections.

The CHAIRMAN. If they had long-term targets, how would that affect that kind of variability?

Mr. JORDAN. It would bring attention at least to the inconsistency between monetary and fiscal policy. Everybody in the financial markets understands this. They look at two sets of the projections, what the Federal Reserve Chairman says he's going to do and what the budget projections suggest, and they know that this has to be reconciled and they are accustomed to seeing the monetary authorities accommodate themselves to the fiscal rather than the other way around.

The CHAIRMAN. Why wouldn't this be a good idea?

Mr. GRIGGS. I don't think that's what the markets do. They look at these two projections and say, "Which one is right," and they say, "The economic outlook is too optimistic next year, so therefore Volcker's is about right."

The CHAIRMAN. Well, they have a basis for evaluating it. They know what they're trying to do. It would be a basis for debate and discussion and correction.

Mr. GRIGGS. I can see if what you wanted to do is to highlight the inconsistencies in forecasting it would help you in that regard, but I don't know how you would reconcile it. When you're sitting here and arguing and the CEA comes in and says that's their forecast and the Federal Reserve comes in and says that's their forecast, then what do we do at the end?

The CHAIRMAN. The fundamental problem is you want a long-term policy in fighting inflation. I recognize this isn't something you can do in a year or two. It's something we have to continue for many years in the future. Therefore, we obviously can't bind future Federal Reserve Boards, or future Congresses for that matter. Nevertheless, we can perhaps have some disciplining effect on them by indicating our direction and requiring them therefore to justify departure from what seems to be a disciplined course in the direction of restraining inflation.

Mr. GRIGGS. I can see that, but the problem I can see is if you both come in and you both have had your hearings and you argued your two sides and then you both part and you have exactly the same forecast, what are the financial markets to conclude. That you have agreed that there's no way we can have a consistent monetary and fiscal policy.

Mr. HURLEY. I think another problem is as soon as you get into long run, if we continue to have some financial innovations, any targets we set for this year aren't going to mean anything for next year. It certainly hasn't for the past 3 or 4 years. I'm not sure they could be that meaningful. We can always change the targets because we redefine the aggregates.

The CHAIRMAN. It may be the technology is going to change every 6 months the way it has but I hope it doesn't. I hope we can get some greater degree of stability in the future. Maybe not.

Mr. Paulus, the Fed's new policy strategy stresses bank reserves rather than short-term interest rate control. Opinion is almost uniformly in favor of that change. Will this new stress in bank reserves permit the Fed to achieve better control of the monetary aggregates than in the past?

Mr. PAULUS. Not in the short term, but over a longer period of time, 6 months to 1 year, if they hit their reserve targets, they will achieve better control over the monetary aggregates. But over periods as short as a month or quarter or perhaps even two quarters, you won't see a material improvement in the control of monetary aggregates.

The CHAIRMAN. Mr. Hurley.

Mr. HURLEY. I believe that the move toward reserve targeting is one which will help the Federal Reserve meet its targets. The problem I have is that, as I mentioned in my discussion of implementation, at the present time it's only the reserve aggregates that relate to the money stock measurements that the Federal Reserve is trying to hit. Therefore, I think it may do OK in hitting the money stock targets. Since it's not paying attention to reserves related to credit aggregates I don't think we can very well say it's going to improve its ability to hit the credit aggregates.

MEMBERSHIP ATTRITION

The CHAIRMAN. Let me ask Mr. Paulus again. Membership attrition and a decline in the reserve basis the Fed has to work with—they are down to 70 percent as you know now. Could this undermine Federal Reserve monetary policy to a greater degree now than it did before? Do you agree with that assessment and, in your opinion, how important is it that the reserves question be solved during this session of Congress?

Mr. PAULUS. I worked for the Fed when we were worrying about membership in 1977 and I remember the arguments about the safety and soundness of the banking system and the discount window umbrella and monetary aggregates targeting. At that time there really wasn't a strong need to have a lot of members because we were targeting on Federal funds rate. I think you could now build a stronger case for the need for Fed members, given that the Federal Reserve is now targeting on the monetary aggregates through the reserve aggregates. I don't think that the reduction in the percent of deposits in the system, down to something like 70 percent of all deposits—I don't believe it's proceeding at such a rapid pace that it's essential that the membership problem be solved in this session of Congress. I would like to see it solved, but I don't think it's a critical problem.

The CHAIRMAN. Mr. Jordan?

Mr. JORDAN. I think it's extremely important. I think it should not be posed as a question of membership, because I think there are some virtues of a dual banking system as far as chartering, but it's a question of reserve requirements. I do believe that universal and essentially uniform reserve requirements would greatly improve monetary control.

I think that something like S. 85 would be a very positive step to helping in monetary control, implementation of monetary policy, as well as removing some of the enormous competitive inequities. I think that if it is not solved in this Congress, then the problems that the Fed alludes to as a membership problem are going to escalate very, very rapidly.

I don't think that a delay on this issue would be a healthy thing at all.

CHANGES IN DISCOUNT RATE

The CHAIRMAN. Mr. Jordan, the Federal Reserve has used changes in the discount rate to announce its intent to tighten policy or defend the value of the dollar three or four times during the past year or so.

At the same time, the discount rate has lagged behind changes in market rates. I'd like to get your views as to whether the Fed's discount rate policy aids or hurts its overall monetary policy objectives, and also your comment on the proposition that the discount rate be set at a slight penalty rate relative to market rates, and that it fluctuate from week to week with market rates, instead of being used occasionally.

Mr. JORDAN. Most people, I think, view the discount rate and changes in it as mainly having an announcement effect. Often it can be a perverse announcement effect by the failure to change the discount rate, when it is out of line with market rates; that tells the market something that they think they know or understand about the Fed's intentions, or the strength of the resolve on the Federal Reserve Board to deal with inflation.

So removing this effect, allowing the discount rate to move automatically, maybe with a 3-week lag behind the Federal funds rate or the bill rate—and my preference would be at somewhat of a penalty—I think would be healthy.

I don't think it would impair at all the Fed's ability to formulate and implement their monetary policy, and it would remove some perverse effects it is now having.

The CHAIRMAN. Mr. Griggs?

Mr. GRIGGS. I would like to see a penalty rate. I would not like to see it fluctuate. I would still like to retain it as something the Fed could use when it wanted to indicate to the market that it had a change in policy in mind.

My own preference would be to see it have a tiered rate, one in which the kind of seasonal borrowings, kind of a regular access to the window could be had at one rate, but anything over that would have to come at a penalty rate that would be adjusted as an indication of credit conditions.

The CHAIRMAN. Mr. Griggs, the burden of fighting inflation has largely been delegated to the Federal Reserve because of the failure of fiscal policy, large increases in Federal spending for fiscal year 1980, the failure to balance the budget for 1981. Many people look at fiscal policy as contributing to inflation rather than acting to restrain it.

Would the Fed's job reducing money and credit growth in reducing inflation be significantly helped by balancing the budget in fiscal 1981 and by a binding commitment by Congress to reduce the shares of the Nation's gross national product accounted for by Federal outlays?

Mr. GRIGGS. I think there is no doubt about it, that it would do a lot. I think myself, the balancing the budget in fiscal 1981 is going to be very, very difficult to do, but I think what we really need is a commitment that says the Congress and the administration have agreed to move toward a balance.

The CHAIRMAN. The administration thinks they have done that with what they call a $16 billion deficit. It may be much bigger than that, but that's less than the deficits they have had in the past, and it is close enough so that it would seem to me the next step that would have any support in the credibility would be an announcement by the President that he is going to come in with a revision in this 1981 budget, and a cut by $16 billion or more, $20 billion, $25, whatever it takes, to have a balanced budget in 1981.

Mr. GRIGGS. Well, my problem with that would be simply that I don't think the $16 billion is realistic.

The CHAIRMAN. I agree with that.

Mr. GRIGGS. And that then it would be another problem of credibility.

The CHAIRMAN. They'd have to come in with more than $16 billion. They'd have to come in with a surplus.

Mr. GRIGGS. I think that would be spectacular, great, if he can do it. I'd love to see it happen. I think it would do wonders for monetary policy.

The CHAIRMAN. Mr. Hurley?

Mr. HURLEY. Well, I'd like to separate the symbolic and the real effects of that. I think it would be very good from a symbolic point of view. I think it should also be something that we would seek overall as a long-term policy to stay much closer to——

The CHAIRMAN. Let's stay with symbolic just for a minute, because we say symbolic, and people think, well, it's a symbol that we'd like to look at in the paper for a day or two and forget. But symbolic has a lot more significance than that in this case, does it not?

Wouldn't the symbolic effect of a balanced budget in 1981, a determination by the President coming in with a very sharp reduction in spending, mean decisions, perhaps, on the part of business and on the part of labor and the part of others that would be more likely to restrain inflation than simply symbolic in the notion and the sense that it's nice to have the President do this?

Mr. HURLEY. Well, I guess that is really what we mean by that. It is almost sort of an announcement effect where the willingness to pull in our horns in fiscal policy would encourage the private sector to do the same, and I believe that those implications would be there for that.

I agree with Bill Griggs, though, that no one believes the $16 billion deficit, so we'd better move from a deficit people believe (we are using $40 billion) and start subtracting from there as opposed to subtracting from $16 billion.

The CHAIRMAN. I missed the last part of your remark.

Mr. HURLEY. I'm sorry. In order to have this as an effective, credible policy, we should probably use a more credible number for the current budget deficit estimate. We don't believe the $16 billion deficit. We are using approximately a $40 billion deficit estimate for the 1981 fiscal year. So we should probably be talking about a $40 billion cut.

The CHAIRMAN. Well, that's a fascinating figure. How do you get $40 billion? I've heard $40 billion is the estimate for 1980. But for 1981 you estimate a $40 billion deficit? If you assume a substantial recession, obviously it's——

Mr. HURLEY. We have a recession——

The CHAIRMAN. God knows how deep the deficit will be. But on the assumption that you have a moderate recession, if that.

Mr. HURLEY. OK, combined with that assumption of a moderate recession is an assumption of a tax cut, which is not in the Federal budget.

The CHAIRMAN. How big a tax cut?

Mr. HURLEY. About 25.

The CHAIRMAN. $25 billion?

Mr. HURLEY. Yes.

The CHAIRMAN. Oh, well, there it is right here.

Mr. HURLEY. Yes. But that's related to the—the specifics of it are the depreciation thing that I mentioned earlier, and a rollback of the rate increase on the social security tax that starts in January. And these things become effective in October.

BALANCING THE BUDGET

The CHAIRMAN. Let me ask the other gentlemen here. How important is it to have an action by the President, by the Congress, in making a commitment that one way or another we are going to balance the budget in 1981?

Mr. JORDAN. I don't think that there is anything that could possibly be more significant—have a more positive effect on inflation psychology and people's expectations about future inflation—than showing some discipline over the budgetary process.

My own way of looking at it is Government spending as a percent of national income. It may be that the idea of balancing the budget or creating a surplus communicates the determination better than spending limitations, but the budget as projected shows that tax revenue as a percent of national income in calendar 1981, would be the highest level in any year in our history, except 1944, and there were better reasons for it in 1944.

The CHAIRMAN. How high do you expect that to be?

Mr. JORDAN. Well, that depends on differences of projections on nominal income. I don't think nominal income is going to grow as much as the budget projects. I certainly hope not. I hope inflation is not as much as what the administration projects. They still project 8.6 percent for the deflator in 1981.

The CHAIRMAN. What's the percentage of the gross national product that Federal spending would achieve?

Mr. JORDAN. They have in there 22.3. With my projections of nominal income growth and less inflation, if they spend as much as they project, the percentage would be even higher than that, and I would like——

The CHAIRMAN. Would that be the highest it's been in any year except 1944?

Mr. JORDAN. I believe except——

The CHAIRMAN. As a percentage of the gross national product, Federal spending as a percentage of GNP?

Mr. JORDAN. Yes, except for 1944.

The CHAIRMAN. Astonishing. In a year of austerity and fighting the worst inflation we've had in our history.

Mr. JORDAN. I would suggest a number of about 20 percent should be set and firmly held to. I'm not in favor of sticking it in the Constitution or anything like that, but I think a strong resolve, a determination to limit there, would be a big help on improving inflation psychology in this country.

The projections of the budget have spending growing to $902 billion in 1985. The amount that they project to spend in 1984, in this year's budget, is $165 billion more than what they projected a year ago. And to change one year's numbers by $165 billion in a year's time is just an astounding result, and it's because of——

The CHAIRMAN. Give me those figures. How do you get to $165 billion?

Mr. JORDAN. The number that they projected to spend in 1984 a year ago, when they did their 5-year projection, and the number that is in this year's budget projections for 1984, this year is $165 billion more than a year ago.

The CHAIRMAN. How much of that is military spending?

Mr. JORDAN. Not a lot. These numbers were put together before the Russians rolled into Afghanistan, before the recent shift in emphasis toward more defense.

The CHAIRMAN. What's the principal reason?

Mr. JORDAN. Nondefense expenditures as a percent of a national income rise almost category for category.

The CHAIRMAN. Well, is it because of a different estimate of inflation?

Mr. JORDAN. In large part. Also a higher real growth assumption, and I don't believe the inflation and the real growth assumptions are consistent. They are assuming that nominal income growth over the next 5-year period is going to average about 11 percent. It's an assumption that inflation is simply going to stay high through the next 4 years or so, and that beginning maybe in 1985, and beyond, real progress will be made. In the period 1985 to 1988 is where they are projecting that inflation will come down, which to me is saying it's somebody else's problem.

The CHAIRMAN. You can say that again.

So the assumption is that we will have raging inflation through 1984?

Mr. JORDAN. Their projections through 1985 are 7.7 percent annual rate on the deflator basis, and the deflator is running 9 percent now. That's an extremely high figure.

The CHAIRMAN. Any reason in your mind as to why it would take 4 or 5 years to turn inflation down?

Mr. JORDAN. No; in fact, I think inflation would come down much more rapidly and without severe loss of output and high unemployment if people believed it was going to be done.

There have been developments in other countries when it has. The recession of 1974–1975 was severe; more severe than it really had to be, I think. But inflation came down from 12 percent in 1974 to 4.7 percent in 1976.

I think that now, though, the inflationary psychology is so deeply entrenched that if there are not actions that change people's perceptions about inflation and the Government's determination, then that kind of fiscal and monetary restraint would again cause a severe recession.

I don't think that we have to have a very deep, sharp recession, and very high unemployment to bring inflation down rapidly, if people believe that it is really going to be done.

The CHAIRMAN. Mr. Paulus?

Mr. PAULUS. I would second that. I think it's very important that the Government demonstrate a firm resolve in dealing with inflation. I think the credibility record of the Federal Reserve and the fiscal policy is pretty low, and that's why, I think, it will take quite a long time to wring inflation out of this economy.

Decisionmakers are expecting a continuation of past policies. Wage decisions are being based on an expectation that inflation will continue quite high, and if you take policy actions to remove inflation rather quickly from the economy, you will only create a very deep recession.

As a consequence, I believe we need to pursue a policy which is targeted on bringing inflation down over the next 3 to 5 years, let's say. I don't really have any specific time period in mind. But I think we have to achieve some degree of credibility in policy before we can make real progress against inflation.

And to that point, balancing the budget in fiscal 1981, I think that would have a favorable effect on financial markets, on expectations of inflation, but I would point out that in fiscal 1980, Federal Government expenditures will grow by $70 billion. Currently, in the fiscal 1981 budget, we are assuming an increase of $50 billion. I think it's unlikely that we are going to see a $20 billion reduction in the rate of growth of Federal spending in fiscal 1981.

So I think we have the problem that Kevin Hurley pointed to, that we have a pretty unrealistic target for fiscal 1981 on the deficit. We have to, I think, take that into account, if we are thinking about making an attempt to balance the budget, a meaningful attempt to balance it in fiscal 1981.

Let me say also, that limiting Federal Government expenditures to 20 percent would have a tremendously positive effect on inflation, on inflation psychology, and eventually on business investment and productivity over a longer period of time.

DEMAND FOR FEDERAL CREDIT PROGRAMS

The CHAIRMAN. Mr. Paulus, while I have you, on the credit markets again, given the high interest rates and the tight credit situation arising from recent monetary policy measures, and a growing concern about Federal spending, there is likely to be greater demand in the next several years for Federal credit programs.

We have already had pressure in this committee, the Export-Import Bank, the Brooke-Cranston housing proposals, and others. And, of course, we had the Chrysler matter, and we are likely to have other problems like that come before the committee, too.

So there is pressure for more direct loans and loan guarantees than in normal times. According to the President's fiscal 1981 budget, Federal credit programs are projected to expand substantially in the current fiscal year 1980, and again in fiscal year 1981.

For example, loan guarantees are projected to increase 28 percent in fiscal year 1980; $26.1 billion to $33.4 billion. And then to grow by another 24 percent in 1981, up to more than $41 billion.

Federal credit programs make up about 20 percent of the total funds advanced by U.S. credit markets in 1979, and they are going to be a higher proportion in 1981 and subsequently, the way we are going.

Is this likely to make the conduct of monetary policy more difficult, and should there be a cutback in Federal credit programs in 1980 and 1981, to be consistent with monetary policy measures?

Mr. PAULUS. It makes everything more difficult. I think it is critically important that we get a handle on Federal credit programs. We have seen, as you noted, rapid growth in those programs, and it goes back a long time. In the past 3 or 4 years, we have seen the rate of capital formation in the United States decline, at least from its trend level or trend growth achieved in the 1960's and the early 1970's. The Government is squeezing out private sector borrowing with loan guarantees, and with other Federal credit programs. I think it is of great importance over the longer term to bring these programs somehow into the budgeting process, and to get a handle on them.

The CHAIRMAN. Mr. Griggs?

Mr. GRIGGS. I agree with that. We seem to take the view they don't cost us anything, but they often do, and I think it is appropriate for us to bring them under the scrutiny of a budget, and to consider them that way, and I think it would be very helpful to the financial markets to do so.

The CHAIRMAN. Now I'd like to end up with the—what do you call it, $64,000 question, or the Armageddon, or the end of the world—but I'd like to end up with a question on desirability of mandatory controls, both wage and price controls and credit controls, and I'd like to hear any specific recommendations you have on policies to reduce inflation and the role of the Council on Wage and Price Stability.

We'll start off with Mr. Griggs.

DESIRABILITY OF MANDATORY CONTROL

Mr. GRIGGS. Well, on the credit controls, they make——

The CHAIRMAN. They're on the books now, of course.

Mr. GRIGGS. Yes, they can do it. Right. I would object to consumer credit controls or real estate credit controls.

Aside from a philosophical objection to them, I think that this is entirely the wrong time for them. In 1978, they might have made some sense, but I think in 1980, they don't, and particularly because it is very difficult to be sure of their impact

I mean if we were dealing with an economy that was roaring we would not be so concerned about the risk of producing a sharp cut back in spending. But we are not dealing with that kind of economy. We are dealing with an economy that is poised on the edge of a big recession, and I think that is not the time to start doing something that you really can't control, and that would be devastating to the economy. Furthermore, unless you exempted autos,

and housing, it would almost certainly be devastating to those areas since they are already weak.

The idea of thorough-going wage and price controls, I find even more objectionable. They have demonstrated over and over in the past that they do not work and, they distort decisionmaking to the longrun detriment of the economy.

If some move toward controls is inevitable, however, the idea of some sort of a wage freeze makes more sense to me. It might give monetary policy a chance to work, more slowly than in the past.

The CHAIRMAN. A wage freeze only?

Mr. GRIGGS. Well, wage and price. Just a freeze on everything for the moment.

The CHAIRMAN. How long?

Mr. GRIGGS. I don't know how long; 6 months, something like that. But I say I'm not really an advocate of it. I'm just saying that if we are going to get into this area, this would be the only approach that would have any interest for me, because it would give monetary policy an opportunity to work and would permit the Federal Goverment to come up with some programs, perhaps, for reducing spending further, and that would demonstrate to the populace in general that things are going to be done on energy and productivity, and provide some reason to believe that inflation will be reduced.

As I say, I wouldn't advocate it, but I think if you are going to get into controls, that's the only thing I would be willing to do.

The CHAIRMAN. You freeze all wages and prices, energy prices? Including the price of imports and so forth?

Mr. GRIGGS. Well, obviously, there are some things you can't control.

The CHAIRMAN. We wouldn't let people buy them, I suppose, if the price was higher.

Mr. GRIGGS. Well, that's right, but you'd probably have to have some flexibility. It just seems to me it would not involve the kind of apparatus and bureaucracy that a real wage and price control mechanism would, and I would see that as a modest plus.

The CHAIRMAN. Well, you have to have a bureaucracy of some kind to enforce it.

Mr. GRIGGS. You would.

The CHAIRMAN. It wouldn't be voluntary. In wage-price freeze, you are going to have to have several thousand people to crack down and make sure it's being followed.

Mr. GRIGGS. There's no way you can get around some bureaucracy. I'm just saying it would be of quite a different magnitude than a more permanent control program.

The CHAIRMAN. Have we done anything of the kind that you contemplate before? Would this be like any other experience?

Mr. GRIGGS. Well, we did freeze things initially some years ago, and then followed them up with wage and price controls.

The CHAIRMAN. That was 1971.

Mr. GRIGGS. That proved equally ineffective, the whole program did. I'm not saying that we go from that to controls. I'm suggesting a freeze only. You might give yourself a chance to do the things that need to be done.

The CHAIRMAN. You have a difficulty in getting into that, don't you?

Mr. GRIGGS. I do.

The CHAIRMAN. I mean mechanically you have difficulty getting into it, because it has to be debated in this committee, the corresponding committee in the House, we have to bring it to the floor, it has to be debated on the floor, it has to go to conference, and it must be signed by the President.

Meanwhile, people are just letting their prices and wages go up in anticipation of the freeze. If it's a 6-month freeze or 1 year's freeze, it would be doubtful if you'd really inhibit inflation that way for very long. When you take it off, there it goes.

Mr. GRIGGS. I don't think it in any sense represents a solution. I am not suggesting that. I am suggesting all it gets you is a little bit of time to break the psychology, if you can, by then doing the right things in the interim.

The CHAIRMAN. Why don't you break the psychology by doing these other things?

Mr. GRIGGS. I think that's a much better idea.

The CHAIRMAN. Break the psychology by a tough fiscal and monetary policy.

Mr. GRIGGS. Absolutely. I agree. That's the thing to do. I'm saying you go to controls only out of desperation. Only because you can't do the thing the other way. And that's the only thing that takes you there.

We wouldn't be talking about controls if we were doing these other things.

The CHAIRMAN. Would you object to a policy that did everything else, but not the controls part of it? In other words, that emphasized the monetary fiscal policy and not the controls?

Mr. GRIGGS. I would much prefer that policy, one that addresses the budget deficit issue, the energy issue, the productivity issue. That's the way we should be going.

The CHAIRMAN. All right. Mr. Hurley?

Mr. HURLEY. I think this whole issue of controls now has come up because the country is asking Washington to do something.

The CHAIRMAN. Rather popular, unfortunately. I'm against them, but my polls indicate in my State that they are about 2 to 1. People are in favor of it.

Mr. HURLEY. Well, what we might do is instead put up an alternative, which would be TIP, some sort of tax incentive program. It is no more thoroughly discredited than controls. Controls are the pits. TIPS may be above that somewhere. But given that we expect revenues are rising relative to nominal GNP, that we can expect that some time between now and a year or two from now, that we are going to have some sort of tax cut, why not make that sort of a tax cut from a——

The CHAIRMAN. They just pointed out to me that you have achieved a new kind of acronym in reverse, that TIPS are the pits backward. [Laughter.]

So it's something we'll keep in mind.

Mr. HURLEY. Yes, see if we can get that quoted around.

The CHAIRMAN. Next time we run into Henry Wallach.

Mr. HURLEY. Anyway, the problem, of course, now is wages are picking up and we have been fortunate, I would say, to not have the increases in petroleum and food get into the underlying inflation rate, but we expect with a number of labor contracts coming up midyear, and some time after midyear, that a major problem in inflation this year would be acceleration of wages, especially given that productivity has been stagnant.

WAGE-RELATED TAX REDUCTION

Thus, it again presents a time or it further presents a good time to try some sort of wage-related tax reduction that would be an alternative to wage-price controls, attacking the same problem.

The CHAIRMAN. Well, do I understand, or do I not understand, Mr. Hurley, that you are against wage-price controls?

Mr. HURLEY. Yes. I guess I would say I definitely find them abhorrent, and also ineffective.

The CHAIRMAN. How about credit controls?

Mr. HURLEY. Well, there's a little more believability in credit controls that they might work when applied to the household sector. I don't believe they work very well applied to the business sector, because the business sector is far too innovative.

The CHAIRMAN. What's left in the household sector?

Mr. HURLEY. Autos and houses.

The CHAIRMAN. Automobiles are obviously not very good candidates right now.

Mr. HURLEY. Right. Both of them are on the decline, so that pushing them further down is the only alternative when you use credit controls. It's very difficult to get controls on business borrowing. There are too many open market alternatives. So I don't think a whole lot of credit controls, either.

The CHAIRMAN. Any other anti-inflation actions that you would like to bring up.

Mr. HURLEY. I would reemphasize now is the time to try TIP.

The CHAIRMAN. Now is the time what?

Mr. HURLEY. Now is the time to try TIP.

The CHAIRMAN. TIP. OK.

Mr. Jordan?

Mr. JORDAN. I think that even the discussion of controls—wage, price or credit controls—is counterproductive to doing something about inflation psychology.

I think it demonstrates a lack of confidence, of belief or resolve that monetary and fiscal will do the job to the public. You don't expect the public at large to really understand how monetary and fiscal are supposed to work, and how long the lags are.

I think the polls indicate their frustration and their desire to see something happening, and so they will go for a magic wand approach when responding to a poll. But to the business community, the discussions of controls says that the Government in total is not going to impose the kind of monetary and fiscal discipline on themselves to deal with the fundamental problem of inflation.

In 1972 in this country, the fact is that the existence of controls meant that there was less monetary and fiscal discipline than there otherwise would have been, and the experience in many other countries that have tried controls is that you don't get mone-

tary and fiscal discipline because you have incomes policy or controls dealing with inflation, and so you use these other policies to lubricate the skids, to promote expansion of output and employment, and the markets understand that.

I think that it would do a lot of damage to people's belief that the fundamental things are really going to be done. And, in fact, I believe that the fundamental things would not be done if we have controls, whether it's a TIP type or any other kind of type.

The CHAIRMAN. So you are against wage-price controls, credit controls, or any other incomes policy that would try to achieve this?

Mr. JORDAN. The whole thing, because I don't believe you would get the monetary and fiscal discipline, if you have them. And if you don't get the monetary and fiscal discipline, the controls aren't going to work.

The CHAIRMAN. OK. Mr. Paulus?

Mr. PAULUS. I think both credit and wage and price controls would be a very serious mistake. On credit controls, I don't know who you would impose them on. I hear talk of the consumer, but he's already reduced his borrowing in the last several months. As it was pointed out earlier, the housing marking and auto demand have both slackened off in recent months.

On wage and price controls, I have at least three reasons for very strongly opposing them.

One is the point that Jerry Jordan made on the lack of follow-through in policy. The experience around the world, and certainly in the United States, in 1971 through 1974, suggests that there is a certain feeling of euphoria that controls brings to policy makers. We have swept the problem under the rug, so to speak, now let's get with the business of getting the economy going.

M–1 grew at a record rate in 1972. It's never been passed since then. There was a very large Federal budget deficit in 1972; not as large as we have seen in the last few years, but nevertheless, both parts of macropolicy were moved toward stimulus under the last controls program, and I don't know of any reason why things are any different today.

The second point is with a price controls program, you basically lock relative prices into a fairly rigid alinement with one another. You run the risk of creating some pretty serious bottlenecks and shortages, as we saw in the summer and fall of 1973, when we had certain aluminum products, and may steel products in very short supply. We also observed chemicals and fertilizer being shipped overseas, where prices were higher.

Without some flexibility in prices we will observe shortages eventually develop, and the economy will be hamstrung by these shortages.

The final point is that the unintended consequence of a wage and price controls program can sometimes be the most damaging.

I would point to our current energy problem, which I think had its origin in the 1971 through 1974 controls program, when we first imposed controls on energy prices. We had control on natural gas before 1971, but we put comprehensive controls on all energy prices during that program, and we never removed them. And as a conse-

quence, we have a serious energy problem in the United States today.

The CHAIRMAN. Gentlemen, I want to thank you very, very much for excellent testimony. It's been one of the best panels we've had in a long time, and I think you have made some very sound and helpful, if painful, recommendations to us, and we are in your debt. You made a fine record. Thank you very much.

[Whereupon, at 11:50 a.m., the hearing was adjourned.]

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