RECENT MONETARY DEVELOPMENTS AND FUTURE ECONOMIC PERFORMANCE

HEARING

BEFORE THE

SUBCOMMITTEE ON DOMESTIC MONETARY POLICY

OF THE

COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS HOUSE OF REPRESENTATIVES

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TUESDAY, SEPTEMBER 27, 1977

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY OF THE
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 8:37 a.m. in room 2220, Rayburn House Office Building, Hon. Parren J. Mitchell (chairman of the subcommittee), presiding.

Present: Representatives Mitchell, Barnard, Watkins, Derrick, Hannaford, Hansen, and Caputo.

Chairman MITCHELL. The hearing will come to order.

Today's hearings have been called to discuss recent monetary developments. Since early spring, short-term interest rates have increased 100 to 150 basis points, and the conventionally defined money supply, M_1, has grown at an annual rate of 9.1 percent, which is 40 percent above the Federal Reserve's current target range of 4 to 6½ percent annual M_1 growth.

Many economists stress interest rates in their analysis of the impact of monetary policy on the economy. Others stress money supply. Recent developments are disquieting to both camps.

Those who stress interest rates warn that the goals of the Carter administration for 1980—full employment and a balanced budget—cannot be achieved if interest rates are allowed to rise. The Joint Economic Committee, in its "1977 Midyear Review of the Economy" cites a study by Prof. Ray C. Fair of Yale University who told the committee that:

"If the Fed behaves by keeping the bill rate unchanged, full employment and a balanced budget are reached by 1980."

But, Professor Fair argues, if the bill rate is allowed to rise, the expansion is aborted and the goals are not met. The Joint Economic Committee states that "Professor Fair's results imply that the maintenance of a constant bill rate will require M_1 to grow at a rate between 10 and 11 percent in 1978 and 1979." Under this view of the economy then, 9 percent annual money growth is not enough.

However, economists who stress money supply in their analyses point out that M_1 growth in the 9-percent range, if long sustained, will trigger another calamity boom. This would delay recession for a time, perhaps even until 1980, although quarter to quarter changes are likely to be bumpy. But in their views, money growth as high as 9 percent per year will cause accelerating inflation, beginning as early as mid-1978.

In turn, the added inflation will lay the foundation for a deep recession later on; and the longer it is delayed by accelerating money growth, the worse it will be.

As I understand it, monetarists are not sanguine about the future even if M_1 growth is now squeezed back to the 4 to 6½ percent track. They point out that if money growth is not quickly decelerated to bring it within the Federal Reserve's 4 to 6½ percent target range for 1977 as a whole, the recovery is almost certain to be set back later this year. On the other hand, the longer the delay in moderating the money growth, the greater the risk of triggering another calamity boom.

Thus, the speedup in money growth during the past 6 months may have created a dilemma, neither horn of which is pleasant to grab; a choice between slowing, even aborting the recovery now, or accelerating inflation and courting a deeper recession later on.

I have called these hearings to find out what is happening in monetary policy, what it means, and what remedial steps are necessary, if any. Specifically, we need answers to the following questions:

One, why are short-term interest rates rising at the same time that money growth is accelerating?

Two, would still faster money growth contain upward pressures on interest rates?

Three, what are the risks of 9 percent or even faster money growth, for example 10 or 11 percent per year?

Four, would the recovery abort if M_1 growth was squeezed so as to be under 6½ percent for 1977 as a whole?

Five, might not the best solution now be to start anew; to design a money growth track from this day forward, consistent with achieving full employment, stable prices and moderate interest rates?

Six, what track would you design?

Our first witness will be Gov. J. Charles Partee, member of the Federal Reserve Board—I am delighted to see you again, sir. After he has testified and the members have had a chance to question him, we will have a panel of three eminent economists: William G. Dewald, professor of economics, Ohio State University, and editor of the "Journal of Money, Credit and Banking"; Dr. William Gibson, vice president and manager of the fixed income research department of Smith, Barney, Harris, Upham & Co., Inc.; and Prof. David Laidler, a renowned English monetary expert now with the University of Western Ontario, London, Ontario, Canada.

Before proceeding, I want to state that Chairman Arthur F. Burns of the Federal Reserve Board has expressed reservations about "Board testimony on the conduct of our Nation's monetary policy" being presented at other than the quarterly hearings, which are held alternately before the House and Senate Banking Committees pursuant to House Concurrent Resolution 133.

His position was set forth in a letter which he sent to me dated September 22 and received last Friday, September 23. Subcommittee members have been provided copies of the letter.

In his letter, Chairman Burns asked that the subcommittee consider his position and deal with the question of policy that he raises. Essentially, the question is whether it is constructive for this subcommittee, the Subcommittee on Domestic Monetary Policy, to inquire

into monetary developments in public session with officials of the Government agency responsible for monetary policy.

I think it is a fair question that has been raised. I would ask the subcommittee members to study Dr. Burns' correspondence.

[The letter received from Chairman Arthur F. Burns follows:]

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

September 22, 1977

The Honorable Parren J. Mitchell
Chairman
Subcommittee on Domestic Monetary Policy
Committee on Banking, Finance and
Urban Affairs
House of Representatives
Washington, D. C.

Dear Mr. Chairman:

Thank you for your letter of September 14 asking the Board to testify on "Recent Monetary Developments and Future Economic Performance" on September 27.

As you know, pursuant to H. Con. Res. 133, the Chairman appears before the Banking Committees of the Congress four times a year to testify on monetary policy developments. I so testified before the Senate Banking Committee on May 3 of this year and before the House Banking Committee on February 3 and July 29. I am scheduled to testify before the Senate Banking Committee in early November. I welcome these appearances before the Congress and have publicly indicated on various occasions that they have served our nation well.

However, I doubt that a constructive purpose would be served by Board testimony on the conduct of our nation's monetary policy at more frequent intervals. Given the customary pace of change in economic and financial conditions, more frequent hearings are likely to be repetitive or to place undue stress on transitory developments. Not only that, but the significance that now attaches to the statutory quarterly hearings would be diluted.

The Honorable Parren J. Mitchell - Page 2.

I welcomed the initiative you took earlier this year to arrange an informal meeting with the members of your Subcommittee. As I indicated to you last Friday, I would be happy to meet informally with you and members of your Committee at any time and I thought that you were agreeable to this suggestion.

I think it would be desirable for your Subcommittee to consider my position, and I trust you will deal with the question of policy that I raise. I realize that you may be unable to do this immediately, and I therefore want to assure you that a member of the Board will appear before your Committee on September 27, as you originally suggested.

With kind regards,

Sincerely yours,

Arthur F. Burns

Chairman MITCHELL. I will probably have a brief meeting with you to get your reactions to this problem area, but certainly, we will not do that this morning.

Our immediate concern is to hear from Governor Partee, what he has to say about recent monetary developments and then what the other witnesses have to say. Governor Partee, I am delighted that you are here. The public needs to know what is going on. We are looking forward to receiving your testimony and to questioning you about recent monetary developments and their bearing on our future economic performance.

Before asking you to testify, I will turn to our ranking minority member to see whether he has an opening statement.

Mr. CAPUTO. I have not.

Chairman MITCHELL. Mr. Hannaford has a statement he would like to make, as of this time.

Mr. HANNAFORD. Thank you, Mr. Chairman. I would like to commend you for calling these hearings although Chairman Burns appears to take issue with the subcommittee's desire to discuss recent monetary policy developments.

The purpose of the hearing is to raise particular questions regarding the recent growth of the money supply. High growth rate of M_1 outside of the Fed's established target range is a matter which deserves the full attention of this subcommittee.

We all know the Fed's conduct in monetary policy affects the lives of everyone in this country, fundamentally.

We, in the Congress, are working hard to combat inflation, and unemployment, and we need to work with the Fed and not against it. I am confident that there is no desire to politicize the central bank.

What I am stressing is that the Federal Reserve, as an agency of the Government, must realize that Congress and its oversight committees are interested in its operations and that we share the responsibility for increasing public awareness of the institution's functions and the role it plays in our economic affairs.

To this end, a few weeks ago H.R. 8094, the Federal Reserve Reform Act, was passed by the House. The bill attempts to increase the accountability of the Federal Reserve System to the public and to the Congress.

That bill is, indeed, a modest one. As my colleagues are aware, I am interested in having the Federal Open Market Committee reinstate detailed minutes of its meetings.

This practice was discontinued in May 1976. As this provision is not included in H.R. 8094, Mr. Chairman, it is my intention to introduce a bill to that effect.

I would like to call this to the attention of my colleagues on the subcommittee and invite their cosponsorship of that legislation, as I introduce it.

Thank you.

Chairman MITCHELL. The Chair would like to ask a question. When do you anticipate introducing your bill?

Mr. HANNAFORD. I have a copy of the legislation prepared.

I would anticipate putting it in today, unless you would like to see it, Mr. Chairman.

Chairman MITCHELL. No. I just was trying to calculate whether or not we would have time before the recess to hold hearings in this subcommittee on that bill. I see no reason why we should not.

Mr. HANNAFORD. I will put it in today.

Mr. MITCHELL. Thank you very much.

Governor, again welcome. We are anxious to hear your testimony.

STATEMENT OF HON. J. CHARLES PARTEE, MEMBER, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Governor PARTEE. Thank you, Mr. Chairman.

I have a short statement after which I will be glad to try to answer the subcommittee's questions.

I am pleased to appear before this committee today to present the views of the Federal Reserve Board with respect to recent monetary developments. As I understand it, the purpose of this hearing is to provide an updating of the recent monetary oversight hearings of your parent committee, at which Chairman Burns appeared. My remarks therefore will supplement his, and I think it would be appropriate to include a copy of the Chairman's testimony on that occasion as an attachment to my much briefer statement.

As Chairman Burns indicated at the July 29 hearings, the FOMC at its July meeting adopted new longer-run growth ranges for the monetary aggregates that it expected to be appropriate to the needs of the economy over the coming year. These growth rate ranges were 4 to 6½ percent for M_1—defined to include currency and demand deposits at banks—7 to 9½ percent for M_2—which is M_1 plus savings and time deposits—except for large negotiable CD's—at the banks—

and 8½ to 11 percent for M_3—which is M_2 plus deposits at the thrift institutions. The Chairman also noted that implicit in these projections for monetary growth was the expectation that the velocity of M_1 would continue to increase at a faster rate than it had during comparable periods of previous business cycle expansions, and that, because of heightened uncertainty as to the relationship between rates of monetary expansion and the performance of the economy, the Federal Reserve would continue to maintain a posture of vigilance and flexibility in the period ahead.

The fact is that the pace of monetary expansion now appears to have been unusually rapid during recent months. This is especially true of the narrowly defined money supply, where the increase over the past 6 months—from February to August—is indicated to have been at an annual rate of 9.1 percent. This rate of expansion, of course, is well above the FOMC's stated longer-run range of projections. Broader measures of the money supply, on the other hand, have grown at rates only a little above the upper end of the committee's projected ranges. During the past 6 months, M_2 and M_3 have increased at annual rates of 9.9 percent and 11.3 percent, respectively. I might note that over longer time periods—the past year, for example—growth in M_1 has been more moderate while the increases in M_2 and M_3 have been somewhat higher than those I have just cited. And over all of the period of economic recovery, dating from the first quarter of 1975, the expansion in the narrow money supply has averaged just over 6 percent per annum.

As the recent expansion in the monetary aggregates tended to run above the FOMC's expectations, System operations have been directed toward holding down on the provision of bank reserves needed to support the larger monetary totals. Just as in any other market, the more limited availability of reserve supplies relative to demands has meant that prices—in this case, interest rates—have gone up on day-to-day bank borrowings—Federal funds—and other very short-term sources of financing. The rate paid on Federal funds, for example, is up about 1½ percentage points from the lows prevailing early this year, with almost all of the rise taking place during and after the April and July runups in the narrow money supply. Other short-term market interest rates also have been affected, but longer-term interest rates, which are of much greater significance to the economy, have not increased on balance despite the firming since April in short-term market conditions.

Some would argue that the Federal Reserve should have responded more forcefully to the April and July bulges in the money supply. Indeed, a few would say that the reserves necessary to support the deposit expansion simply should not have been provided, letting financial markets and the economy suffer whatever consequences might result. But the FOMC continues to believe that the wiser course is to limit the speed with which money market conditions are adjusted to changing monetary growth rates. We believe this partly because the monetary aggregates—particularly M_1—have proved to be inherently unstable in the short run. Bulges of a month or two in duration are often reversed subsequently, as was the case in the spring and summer of 1975 and again in 1976. Prudence in our actions is dictated also by

the fact that the relationship between the various measures of monetary growth and the performance of the economy is loose and unreliable, since it is subject to rather abrupt shifts as the result of changing financial practices and economic conditions.

In the current situation, for example, there are a number of ambiguities for which we do not yet have the answers. Until there is more information, it seems to me that one should be very cautious about prescribing a policy of stern monetary restraint.

First, the excessive growth in the narrow money supply this year has been concentrated in just two 1-month periods—April and July. We do not have a good explanation for these bulges. It may be that they reflect in part a shift in the seasonal pattern of money demand. If so, it is entirely possible that a period of adjustment in money growth could lie ahead, just as it has in the latter part of other recent years.

Second, the abnormal expansion that has occurred over the past 6 months has been concentrated in the narrow money supply, while the growth in broader monetary measures—though substantial—has been much closer to our expectations. One reason for this development may be that the accelerated pace at which other forms of deposit and liquid asset instruments were being substituted for bank checking account balances has now slowed, at least temporarily. That would modify the meaning of the changed relative growth rates of the various monetary aggregates, in terms of probable impact on future economic performance, since it would simply reflect a shift in holder preference from one form of deposit to another.

Third, the behavior of the economy this spring and summer, though generally satisfactory, does not suggest that a major new boom is in process of developing. Indeed, both the growth in real activity and the pace of inflation have slowed somewhat in recent months, following acceleration earlier in the year. This has been true also abroad, where most developed countries to date have shown only rather sluggish recoveries. Nor has there been a rush of business borrowing at the banks, though credit demands in general have been well sustained. Thus the current economic data do not suggest that businesses and households are building up cash balances with a view to increasing abruptly their rate of expenditure. Since sizable unused resources still exist in this and other economies, moreover, there is no immediate need to restrain excessive expansion, and there should be time to check any speculative surge in spending and investment that might develop.

I can assure you that the Federal Reserve has been concerned about the recently accelerated growth in the narrow money supply, and that we are monitoring this development closely. And I want to emphasize that we have by no means given up on our views as to the ranges of growth for the family of monetary aggregates that are appropriate in the longer run to the needs of the economy. The recent tendency toward excess has proceeded in fits and starts, however, and we cannot yet be sure how durable—or meaningful—these increases are likely to be. Our efforts to restrain the monetary expansion must therefore be judicious. With the unemployment rate nationally still hovering around 7 percent, we would not want to contribute to conditions in

credit markets that might imperil the prospects for sustained economic recovery.

Thank you, Mr. Chairman.

[The statement of Chairman Arthur F. Burns before the House Committee on Banking, Finance and Urban Affairs on July 29, 1977, referred to by Governor Partee in his opening remarks, follows:]

Statement by

Arthur F. Burns

Chairman, Board of Governors of the Federal Reserve System

before the

Committee on Banking, Finance, and Urban Affairs

House of Representatives

I am pleased to appear before this Committee once again to present the report of the Federal Reserve Board on the condition of the national economy and the course of monetary policy.

Since the closing months of 1976, our Nation has experienced a vigorous and broadly based economic expansion. The gains in the industrial sector have been especially impressive; during the past 8 months, the combined output of factories, mines, and power plants has risen at an annual rate of 9-1/2 per cent. Activity in other sectors of the economy also has increased briskly. As a result, total employment in June was almost 3 million higher than last October -- an unprecedented gain in so short a period. The unemployment rate remains high; but it has declined in recent months by nearly a full percentage point, despite rapid growth of the labor force. The rate of utilization of our industrial plant capacity also has risen significantly, and now exceeds 83 per cent in manufacturing.

Demand for consumer goods has continued to propel the expansion. With confidence buoyed by improving economic conditions, consumers have been spending freely from current income besides adding significantly to their personal indebtedness.

The strong buying mood of consumers is reflected in the personal saving rate, which in the first half of this year averaged less than at any time since the early 1960's.

Retail sales climbed steeply during the fall and winter months and remained at a high level this spring. Over the past three quarters, retail sales, after adjustment for price increases, have risen at an annual rate of about 6 per cent. Auto sales contributed greatly to the advance, averaging -- on a seasonally adjusted basis -- almost one million cars per month since March.

The rise of consumer spending played a major role in prompting a resurgence of inventory investment early this year. A moderate inventory correction in the latter part of 1976 had reduced the ratio of stocks to sales to exceptionally low levels in many lines of trade and manufacturing. Once sales again accelerated, businessmen had to rebuild their inventories in order to meet customer demands. The annual rate of additions to business inventories reached $14 billion in the first quarter of this year, and perhaps $20 billion in the quarter just ended.

In the past two months or so, it appears that stocks in certain categories of nondurable goods reached somewhat higher levels than businessmen desired. The latest data on employment and production in manufacturing suggest that business firms have again moved promptly to reverse the build-up. With inventory positions generally still lean and sales prospects favorable, inventory investment is likely to contribute to economic expansion later in the year and on into 1978.

The upward trend of sales and of capacity utilization has encouraged businessmen to enlarge their outlays for plant and equipment. There are some signs that business capital spending may finally be gaining significant upward momentum. Order backlogs of capital goods manufacturers have been climbing. Business equipment posted the largest advance of any major category of industrial production during the first half. New contracts and orders for plant and equipment most recently have been running more than 20 per cent above year-earlier levels. To date, business capital expenditures have been concentrated largely on vehicles and other light equipment, but there is some tentative evidence that large

construction projects and heavy machinery are beginning to make a contribution to the capital-goods recovery. All told, the evidence at hand points to moderate strength in spending on plant and equipment in the months ahead.

Residential construction meanwhile has remained a major area of strength in the economy. Home sales have been brisk, and the average level of single-family housing starts in the second quarter was the highest in more than two decades. The multi-family sector has continued to recover slowly, but the low vacancy rates in many localities are likely to stimulate additional construction. In certain parts of the country, especially in California, speculative activity in the single-family sector has recently emerged and this development bears watching. In general, however, the expansion of homebuilding seems to be realistically attuned to the Nation's mobile population. In the Board's judgment, residential construction will post further gains in coming quarters.

Governmental spending has picked up recently, most markedly in the State and local sector. The budgetary position of many State and local governments has improved considerably,

being bolstered by Federal grants, by higher tax rates, and by the effects of economic expansion on tax revenues. State and local units have been able to expand employment more rapidly of late, although growth has not been as strong as in the 1960's and early 1970's. Their construction programs, delayed in many cases as governmental units concentrated on rebuilding their financial position, are moving ahead again and should provide significant impetus to economic activity in coming quarters.

The only major weak spot in the economy has been the foreign trade sector. Exports have been sluggish this year, being limited by the relatively slow economic expansion in other industrial nations. Most of these countries have experienced indecisive rebounds in business investment, and this has restricted the demand for American machinery -- an important part of our sales abroad.

Cyclical developments have also played a large role on the import side of the trade ledger. In general, the demand for imported industrial materials has increased in step with the recent rapid growth of production in this country. Imports of cyclically-sensitive durable goods -- such as machinery, autos, and other consumer items -- are also reflecting recent economic

trends. And needless to say, oil imports have risen enormously this year, swelled first by cold weather and then by inventory building in anticipation of OPEC price increases.

Continuing advances in investment income and other nontrade items have partly offset the deficit in our foreign trade; even so, the current-account deficit has reached record size. Oil imports should experience some decline later this year, aided by the availability of Alaskan oil. But prevailing trends in economic activity here and abroad suggest little likelihood of significant near-term reduction in our foreign trade or current-account deficits.

In general, financial developments have favored economic expansion in our country, and they are continuing to do so. However, some familiar cyclical patterns have begun to emerge since the turn of the year.

Borrowing by households has been growing very rapidly. Instalment credit has expanded at a 16 per cent annual rate thus far this year. Measured relative to disposable personal income, growth of instalment credit has reached a pace comparable to past peak rates.

Mortgage credit flows have been of record magnitude. Mortgage credit has in fact grown much faster than could be expected on the basis of past relationships between borrowing and residential construction, thus suggesting that households have been putting mortgage funds to a broad variety of uses.

Despite the rapid growth of consumer and mortgage credit, measures of household debt burden generally remain within the range of historical experience. Moreover, delinquency and bankruptcy rates have declined significantly from their recession highs. At this juncture, debt burdens do not appear to constitute a serious impediment to further gains in household expenditures; but we must not overlook the possibility of excesses in this area.

Business firms also have placed heavy demands on credit markets this year. Their over-all need for external financing has grown because capital outlays have risen much faster than profits. The net funds raised by nonfinancial corporations increased by about 30 per cent between the second half of 1976 and the first half of this year.

The character of business borrowing has also shifted considerably. Until the latter part of 1976, business firms concentrated on repayment of short-term debt with the proceeds

of long-term borrowing. Since last fall, long-term indebtedness has continued to grow, but not nearly so rapidly as short- and intermediate-term borrowing. Bank loans to businesses have increased at an annual rate of 11 per cent since last September, and commercial paper and finance company loans have increased even faster. These developments have caused liquidity ratios of corporate balance sheets to decline somewhat -- a normal cyclical development, although delayed in this case. Still, the state of corporate liquidity remains relatively comfortable because of the extensive improvement achieved during the preceding two years.

Credit demands by State and local governmental units have been very large this year. About a fifth of the record bond offerings has been devoted to advance refunding of debt issues that were sold in earlier years when interest rates were appreciably higher. The remainder has included substantial amounts to finance construction of public power plants, hospitals, and water and sewer facilities.

Federal Government borrowing, in contrast, has declined from last year -- a development which, among other things, reflects the recovery of Treasury revenues and an

expenditure pattern still characterized by shortfalls. However, both the Administration's projection and the First Concurrent Resolution indicate that the deficit for fiscal year 1978 will substantially exceed that in the current year. If actually realized, this would be an unusual development. Normally, of course, Federal borrowing diminishes in the course of an economic expansion. In view of the probable need to finance an increasing volume of private capital formation, the prospect of greater demands for funds by the Federal Government in the next fiscal year has been a cause of some disquietude in financial circles.

The strong demands for money and credit that have accompanied our economic expansion have been reflected in a rise of short-term interest rates since the turn of the year. The Federal Reserve might have accommodated credit demands by providing bank reserves more liberally. However, such a course would only have postponed briefly the rise in interest rates because the resulting build-up of liquidity would have intensified inflationary expectations. By responding promptly to the enormous expansion of the monetary aggregates in April, the Federal Reserve gave clear notice that it was alert to the

danger of a new wave of inflation. This reassurance to the business and financial community that the Federal Reserve would not permit the money supply to run riot was well received by credit markets. Long-term interest rates, of course, are of much larger significance to the economy than short-term rates; but the long-term rates are also especially sensitive to inflationary expectations. It is well, therefore, to take note of the fact that interest rates on corporate and municipal bonds, instead of following the recent rise in short-term rates, remained fairly stable and are actually a little lower now than they were in April.

These developments in credit markets are, I believe, attributable in significant part to public confidence in the Federal Reserve's monetary policy. It is noteworthy that, in general, interest rates still remain below levels prevailing at the beginning of the economic recovery.

During the past half year, the Federal Reserve has managed to keep the growth of the major monetary aggregates on a moderate path. M_1 -- which consists of currency and checking accounts at commercial banks -- increased at an

annual rate of 6.4 per cent. This is a faster rate of growth than occurred last year, and it reflects the very intense demand for transactions balances in recent months. Growth of the broader aggregates, on the other hand, has been slower than last year -- a deceleration due partly to the low personal saving rate that has evolved and partly to some modest redirection of savings flows away from deposit accounts to market securities as short-term interest rates have risen. Despite the moderate slowing of the broader monetary aggregates, financial institutions -- both commercial banks and the thrift institutions -- remain relatively liquid and in a good position to continue supporting economic expansion.

During the next few quarters, it is improbable that over-all economic growth will proceed as rapidly as it did during the past six months. Typically, bursts of consumer spending of the kind witnessed this year are followed by phases of moderation. Such moderation, indeed, seems to be signaled by recent data on retail sales. Nor, of course, is it to be expected that inventory investment will be adding as much to economic expansion as it did in preceding quarters. And in

view of the high rate of single-family housing starts already attained, it is likely that housing will contribute less to growth.

These probable developments, however, do not portend an end to general economic expansion. We at the Board anticipate continuing growth -- albeit at less rapid rates -- in consumption, inventory investment, and homebuilding. We think, moreover, that investment activity by business firms will maintain a good growth pace and perhaps accelerate as businessmen are confronted, as they may well be, by reduced capacity margins next year. Meanwhile, as I noted earlier, there is reason to expect that the pace of State and local government spending will continue to quicken. What these various trends suggest is a change in the character of the expansion -- with the over-all growth rate slowing but still high enough to produce some further reductions in unemployment.

The fact that the Nation's unemployment rate remains high by historical standards is a source of continuing concern. If we as a people are to address this problem effectively, our first task is to understand the special factors that make it so difficult now to achieve rapid reductions in joblessness.

The stickiness of the unemployment rate, it needs to be appreciated, does not reflect unusual slowness in the opening up of new job opportunities during the current expansion. On the contrary, the growth of jobs since the recession trough in March 1975 -- some 6-1/2 million -- has been more rapid than during the comparable phase of any cyclical recovery since World War II. It happens, however, that the rate of increase in the labor force also has been unprecedentedly rapid in the course of this expansion -- amounting to more than 5-1/2 million persons. Consequently, despite the huge rise that has occurred in employment, the reduction in over-all unemployment has been modest.

The single most important reason for the fast pace of labor force growth has been a veritable rush of adult women into the job market. Indeed, of the increase of 5.6 million that has occurred in the labor force since the recession trough, 2.4 million -- or more than 40 per cent -- is accounted for by women of age 25 or over. Strikingly, if the percentage of this adult female population in the labor force had been the same in June 1977 as it was in March 1975, when economic recovery started, the adult female labor force would have been lower by 1-1/2 million this June. What we are witnessing, literally, is a

revolution in the role of women in our society, and we need to focus on the economic implications of this phenomenon more carefully than we have.

Obviously, the fact that the labor market has had to absorb the "extra" influx of female job seekers is a major reason why the Nation's over-all unemployment rate has not moved downward more decisively. The rapid influx of women into the labor force takes on particular significance because it happens to reinforce another demographic factor that also is taxing the absorptive capabilities of the labor market. I refer to the continuing large additions of young people to the labor force -- a reflection of the high birth rates of the 1950's.

Both adult women and young people tend to experience unemployment rates above average. Many have never held a regular job before. Others left the work force years earlier on account of marriage or the arrival of children. Whatever the state of the labor market, a decision to enter or reenter the labor force often involves a fairly extended period of job hunting -- frequently prolonged by lack of knowledge about available job opportunities. For married women -- especially

those with young children -- the desired job is often part-time and close to home, so that finding the right position may take quite a lot of time. For young people, early work experience frequently involves various job shifts -- and sometimes several periods of unemployment -- until a job considered appropriate is found.

Because of the decline in birth rates which started in the early 1960's, growth in the younger-age component of the labor force can be expected to taper off in the next few years. But no sign of tapering is as yet visible in the labor-force participation by adult women. A decided slowing of the inflation rate -- if that were to occur -- might check the rise in female labor-force participation, since some women clearly have taken jobs in order to offset the effects of inflation on household budgets. However, social trends seem to be of greater significance in conditioning the movement of women into the labor force. Attitudes toward child-bearing and child-rearing and toward educational and career aspirations of women have been undergoing dramatic changes in our society, and it cannot be foretold when this process will wane.

Thus rapid labor force growth may persist, thereby continuing to make it difficult to reduce the over-all unemployment rate to levels that were once considered reasonably consistent with the goal of full employment. Indeed, the changed age-sex composition of the labor force -- now weighted more than formerly toward groups that tend to have higher than average unemployment rates -- probably has imparted an upward tilt to over-all unemployment of about one percentage point compared with 20 years ago.

In time, of course, as women gain experience in the labor market and as businesses adapt their operations so as to employ women more effectively, the upward bias should lessen. One of our prime policy objectives certainly should be to facilitate the assimilation of adult women and young people into the active work force. That is not likely to be accomplished by actions that rely simply on boosting aggregate monetary demand. Such actions would tend to accentuate inflationary pressures in the economy without doing a great deal to facilitate the desired assimilation. In fact, the need to protect family incomes against the ravages of inflation may cause even more women and young people to enter the labor force. We therefore

need to recognize very clearly that accommodation of significant changes in the labor market requires policies that are specifically tailored to the elimination of structural hindrances to full employment.

Even before the sharp acceleration of growth in the entry of women into the labor force, there was reason to be concerned that reasonably full use of our commercial and industrial capacity might be reached before we began approaching full employment of our labor force. That concern, arising from the laggard behavior of capital formation, is now greater because of the unexpected rapidity with which the labor force is expanding. The inference seems inescapable that we need governmental policies that offer decisive encouragement to capital formation. Unless recognition of that need conditions the evolution of policies in such major areas as energy, taxes, social security, welfare, and governmental regulation, there will be small hope of maximizing job opportunities in the next several years.

We need an environment that is decidedly more conducive to business risk-taking than that which has prevailed in recent years. In my judgment, we are very much in danger of forgetting that ours is basically an enterprise economy whose vitality depends

on whether business firms are able to earn an adequate rate of return on invested capital. Despite the increasing role of government in economic activities, profits are still the essential driving force of our economic system. Economic discussions nowadays deal extensively with the effects of monetary and fiscal policies on economic activity; but they do not focus frequently enough on the even more important matter of whether private businesses -- which dominate job creation in our system -- have adequate incentive to expand their operations or to undertake new ventures. Our citizenry may pay dearly if this myopia persists.

It also is important to rethink some of our national policies with respect to the market for jobs. One of the most critical needs is to avoid governmental actions which compound the problems that newcomers to the job market already have. New entrants -- whether young people or adult women -- often cannot be highly productive in the initial phase of their employment. Minimum-wage legislation is blind to that fact, and thus limits employment opportunities for job seekers with little or no recent work experience. With young people and other newcomers to the labor force now accounting for a disproportionate

share of the unemployed, this is hardly an opportune time for Congress to contemplate a boost in the minimum wage that goes well beyond the President's original recommendation.

Statutory changes in minimum wages affect not only the lower end of the wage spectrum. In practice, they tend to have a leveraging effect on the general wage structure as various tiers of workers seek to maintain the differential between their wage and that of lower paid workers. Such a development would reinforce the upward pressure on wages that already derives from the continuing advance of consumer prices, from tight labor markets here and there, and from large and well-publicized collective bargaining settlements in some industries.

Labor costs per unit of output in the private business sector rose by 5.4 per cent in the year ending in March. This increase reflects the difference between an average increase in labor compensation per hour of about 8 per cent and an average increase of 2-1/2 per cent in output per manhour. Since we are now in a phase of the business cycle when productivity gains are more likely to slow than to accelerate, the upward pressures on wages may lead to still stronger pressures

on unit labor costs. Many businesses -- not always justifiably -- already feel a need to recoup labor-cost increases or to increase profit margins. To the extent that they succeed in raising their selling prices, the inflation rate will tend to worsen and so too will inflationary expectations. To the extent they fail, profits margins may narrow -- a development that would diminish the likelihood of sustained expansion of capital investment.

The need to concern ourselves with impending cost distortions and inflationary trends is evident from the price record of the first half of this year. That record, to be sure, was influenced by some transitory forces, and there has been some diminution in the rate of inflation lately. Even so, the rate of inflation this year is running higher than it did last year. This is a disturbing development for international as well as for domestic reasons.

In recent weeks, the dollar -- which had maintained remarkable stability against the average of foreign currencies since early last year -- has experienced limited but conspicuous depreciation. This is a matter that no one in our government can or does take lightly: first, because any material depreciation of the dollar against foreign currencies would have some adverse effect on our domestic price level; second, because the dollar

is a store of value for much of the rest of the world. The fact that the dollar has weakened even in relation to the currencies of countries experiencing much greater inflation than the United States is a reminder that market psychology has a way of magnifying or distorting for a time underlying trends. A sound dollar is essential to our economic future and everyone with major financial responsibility in our government is keenly aware of that.

We at the Federal Reserve have persistently sought to protect the integrity of the dollar and at the same time foster further economic expansion. The members of the Federal Open Market Committee, when they met earlier this month to discuss the longer-run growth of the monetary aggregates, carefully considered international as well as domestic developments. The Committee decided to leave unchanged for the year ending in the second quarter of 1978 the previously projected growth ranges of the broader monetary aggregates. M_2 thus is projected to grow within a range from 7 to 9-1/2 per cent during the next year, and M_3 within a range from 8-1/2 to 11 per cent. An adjustment, however, was made in the growth range for M_1; the lower boundary of this range was dropped by one-half of a percentage point, so that this aggregate is projected to increase within a range from 4 to 6-1/2 per cent in the year ahead.

The adjustment in the projected growth range for M_1, while small, represents another step toward bringing the long-run growth of the monetary aggregates down to rates compatible with general price stability. Sustained progress in this direction is essential if the Administration's publicly announced goal of reducing the pace of inflation by about two percentage points by the end of 1979 is to be achieved.

The trend of growth in monetary aggregates, I regret to say, is still too rapid. Even though the Federal Reserve has steadily sought during the past two years to achieve lower ranges for monetary expansion, the evolution of its projections has been extremely gradual; indeed, at the pace we have been moving it would require perhaps a decade to reach rates of growth consistent with price stability. I must report, moreover, that despite the gradual reduction of projected growth ranges for the aggregates during the past two years, no meaningful reduction has as yet occurred in actual growth rates. That unintended consequence is partly the result of data deficiencies that complicate the already formidable task of adjusting or approximating monetary growth objectives. Some of the data deficiencies we have experienced are being

overcome. Even so, monetary measurement will continue to lack the precision of a science. So too will the Federal Reserve's actions aiming to influence developments in financial markets.

Implicit in our projections for monetary growth is the expectation that the velocity -- or turnover -- of M_1 will increase at a faster rate than it has on average during comparable periods of previous business-cycle expansions. That does not seem an unreasonable expectation, inasmuch as the velocity of M_1 has in fact been increasing more rapidly during the current recovery than the historical record would have suggested -- a development that reflects the increasing importance of a wide range of substitutes for traditional checking deposits. The Federal Reserve Board's staff estimates that the growing use of such substitutes -- for example, NOW accounts, credit union share drafts, drafts on money-market mutual funds, passbook savings accounts for business firms and State and local governments, and telephonic transfers from savings to checking accounts -- depressed the rate of growth of M_1 by about 1-1/2 percentage points in 1976. This year the impact may be smaller but nonetheless will remain significant.

The relationship between monthly or even yearly rates of monetary expansion and the performance of the economy is subject to considerable uncertainty under the best of circumstances. In the current environment of rapid change in methods of carrying on financial transactions that uncertainty is heightened. Consequently, the Federal Reserve will continue to maintain a posture of vigilance and flexibility in the period ahead. Current monetary policy represents our best judgment as to what is appropriate in the light of evolving economic and financial developments. We will not be slow in modifying that policy if actual conditions deviate materially from our expectations.

In concluding this report, I think it appropriate to emphasize the great complexity of the economic problems currently confronting our Nation. There are no instant, easy solutions that will deliver us from our difficulties. For our part, we at the Federal Reserve know that inflation ultimately cannot proceed without monetary nourishment. But we also live with a realization of our limited capacity to move dramatically or quickly in making means of financing less readily available.

The shock of abrupt adjustment after so many years of drug-like abuse of our economic system would be excessively risky. To the maximum extent feasible, however, we are determined to move toward reestablishing conditions of financial order in our society. That is not because financial order is itself an end with which we are preoccupied, but because our Nation cannot realize its potential for sustained prosperity and well-being until existing apprehensions about inflation are subdued.

We at the Board have no illusions about what the Federal Reserve alone can accomplish. Sound monetary policy is a prerequisite to the achievement of the employment and price goals set forth by the Administration. But other elements are no less critical. The President's timetable for eliminating the deficit in the Federal budget deserves the earnest support of the Congress. Structural rigidities that are weakening our economy also require serious attention. It is fortunate that members of the Congress increasingly perceive that persistent budget deficits and ever faster increases of the money supply, whatever their usefulness in the past, are no longer capable of solving our economic problems.

Chairman MITCHELL. Thank you very much, Governor.

I have three quick questions. Referring to page 3, you indicate that money growth bulges of a month or two are often reversed subsequently. Why does this happen? How does the reversal take place? Does it happen by itself or does the Federal Reserve do anything to make it happen?

Governor PARTEE. My reference there is to the possibility that it would happen by itself. Remember, that what we are talking about are rates of increase in the stock of money. If you get a rapid increase for a bit, there's a good chance of a level off; that is, that there will be a bulge when the increase occurs, and then the stock will remain at the higher level.

There is always the possibility that there will be a month or two of 10 or 12 percent increases, and then a month or two with very little increase. Therefore, the possibility of this uneven pattern in the developing trend of money growth is one that would lead, I think, to prudence in taking monetary action.

If, however, monetary action is taken—that is, if we hold back on the reserves and short-term interest rates are driven up—the effect of this, according to our studies, will be to distribute the impact over 5 or 6 months after the change in short-term market conditions has occurred. In that case, a bulge would be gradually taken out of the money growth number over the next 5 or 6 months as a result of tighter market conditions. Thus, I am making the distinction between just the normal unevenness in the number and the characteristics, which are somewhat similar, of the effect that we would expect from explicit monetary action.

Chairman MITCHELL. Let me pursue that a little further. Again referring to page 3, the FOMC rejected a policy recommended by some not to provide the reserves necessary to support deposit expansion bulges.

Governor PARTEE. Yes.

Chairman MITCHELL. It seems to me as a consequence this 6-month bulge in the money growth has resulted. What happens is that consequences result if you provide reserves and they also result if you do not.

More specifically, my question is: What are the consequences or the costs of providing reserves, or of not doing so, when deposits expand unexpectedly?

Governor PARTEE. The cost of providing the reserves, Mr. Chairman, is that if this is the beginning of a real expansive move rather than one of the aberrations I spoke of, you have lost progress in resisting it. You permitted the increases to occur and it becomes harder to take them out, if, in fact, it is a basic move toward speculative excessive expansion in the monetary aggregates.

The cost of not providing the reserves is that it will cause a scrambling in the markets as the banks, after the fact, try to adjust their positions. After all, they must obtain the reserves. Without the provision of more reserves banks then must rearrange their assets in order to come up with the requisite reserves. So they scramble by selling Government securities and calling loans, and the result is a disturbance in the markets and higher interest rates. If it has been a temporary or an

unimportant expansion that has occurred in the money supply, those disturbances in the market—those tighter conditions and those higher interest rates—are not conducive to good economic progress. It is, as you said in your opening statement, the horns of a dilemma, since no one can never know.

You see, after the fact you can look back and look at the series and say: "Aha! there is where the basic shift occurred toward very much more rapid expansion." But that's after the fact. When you are living through the event, one has no way of distinguishing really between aberrations and more fundamental movements.

Chairman MITCHELL. Thank you very much.

Congressman Derrick?

Mr. DERRICK. Thank you, Mr. Chairman.

Governor, do you believe in the basis of 30-, 40-, 50-year economic cycles?

Governor PARTEE. Well, I believe there is some basis for such long cycles.

Mr. DERRICK. What's the name of the economist who developed that? What I am getting around to is that I have seen some projections here just recently that indicate we are probably going to be stuck in this country, at least Japan and the United States, with about 4 percent real growth over the next 10 or 15 years.

Governor PARTEE. Four percent, did you say?

Mr. DERRICK. About a 4-percent real growth. This would be tops. Some of the other developing nations probably substantially less than that. I noticed that President Carter, before the World Bank and the Monetary Fund yesterday suggested that we were going to have a 6-percent real growth in the next fiscal year.

I was wondering if you might comment on this. There are quite a few, of course, who believe we are going to be saddled with this 4-percent or less real growth and the corresponding unemployment, about what we have or maybe a little worse over the next number of years, certainly on through the 1980's.

Governor PARTEE. Mr. Congressman, I really think that my answer should be divided into two parts.

Mr. DERRICK. Probably my question should be as well.

Governor PARTEE. No. 1, I believe the President was talking about a period in which he expected to have more rapid than normal economic growth in order to utilize the resources—unused plant and equipment as well as unused labor—that exist in the economy. It is quite possible to have for relatively brief periods of a year, 2, or 3, faster rates of growth as the economy absorbs these idle resources; as the unemployment rate is reduced, if you will.

Mr. DERRICK. That same theory, as you know, suggests that we overbuilt during the 1950's and 1960's and this is where our problem is.

Governor PARTEE. I understand. The second point I would make is that in the long run the prospects are that our economy doesn't have a growth potential much above 4 percent. The growth rate of the labor force is on the order of 1½ percent per year or a little more perhaps 1¾ percent over the long run. The growth in productivity or output per employee in the economy is on the order of 2¼ to 2½ percent per year. And since real output can only grow as fast as the labor force

and productivity grow, the total comes around to about 4 percent per year in the long run.

Now, as far as long range cycles are concerned, there are tendencies in the short run, the intermediate run—which is called the kitchen cycle, I think—and the long run toward repetition. The long run tends to be characterized by periods of invention and innovation that wear themselves out, and a building cycle which tends to be quite long run in character.

I don't believe in the inevitability of cycles. I think that that suggests that man can't deal with sources of instability through thinking and reasoning. I have never felt that there was anything inevitable about cycles, even though one can see periodic episodes in history. I don't think that means we have to have them in the future.

Mr. DERRICK. Assuming that you feel that the 4-percent real growth is realistic, how does that—give us an unemployment figure in there somewhere.

Governor PARTEE. At a 4-percent real growth rate, the unemployment rate should remain about unchanged. That was the basis of my comment; that is, for a while there can be a faster rate of growth as idle labor is utilized, and the unemployment rate would be dropping. After a point, there would be a more stable growth rate of around 4 percent and the unemployment rate would change very little.

Mr. DERRICK. Do you think we are probably going to have to learn to live with an unemployment rate of about what we have on the average during the eighties?

Governor PARTEE. I don't think we should.

Mr. DERRICK. I don't think we should either. What I want to know is do you think we may be faced with that—that there is a strong likelihood?

Governor PARTEE. My own view is that the economy is not working now at anything like its optional level, that there's considerable progress that can be made in getting higher output given the capacity and the capital and the labor that we have, and that such progress would bring the unemployment rate down some.

I think also there is a very real need for structural programs to reduce unemployment in those areas where it is so persistent.

Mr. DERRICK. Such as?

Governor PARTEE. Massive training programs for people who don't have the skills that would make them employable, and other programs that would make them better workers.

Chairman Burns has often mentioned job banks; and I think that has got something. There is a need to match up the unemployed with the jobs that are available. I think we could do more with that. There could also be more regional movement of people from one place to another in order to fill vacancies that develop. There are a great many things that could be done in that area, sir.

Mr. DERRICK. One more question, What jobs are going to be available for these structured programs? That seems to me to get back to the whole crux of the thing unless we have some sort of public work jobs, or make-work jobs.

Governor PARTEE. I am talking about making people more employable at various levels of skills, starting at very low levels. If you look

at the record of the recovery period, you will find employment has increased very sharply across the board, more sharply than it has on average in postwar recoveries. We have generated a great many jobs. We can generate a great many more. But I would, myself, much prefer that they be jobs that people can take as a result of retraining rather than, as you say, public service jobs that are probably deadends and won't really prepare people for other kinds of productive work.

Mr. DERRICK. Thank you.

The Chairman has kicked me three times under the table. I guess that means my time is up.

Chairman MITCHELL. I am not even capable of doing that.

Mr. Caputo?

Mr. CAPUTO. I got the impression that it was your view that the expansion in the monetary aggregates was at best acquiesced to by the Fed; they didn't initiate it, and it may be transient. The larger aggregates may not have gone up beyond recent growth rates at all. The adjusted Federal Reserve credit numbers, which are largely reflections of voluntary, discretionary action by the Fed in that you can choose to buy securities and choose to let the float expand seem to have accelerated in the last 12 months also.

Governor PARTEE. Yes.

Mr. CAPUTO. Which would be a monetary decision.

Governor PARTEE. I don't think it is, Mr. Caputo. I don't think it is voluntary because, as I said before, if the way that holders' demands and preferences are worked out results in an increase in currency and demand deposits, then the choice that the Federal Reserve has is either one, to provide the Federal Reserve credit, because the Federal Reserve credit makes available the reserves that are required to support either the currency or the bank deposits, or two, not to provide it and to force those currency or deposit totals back down again. So it is not voluntary in the sense that we just decide in the abstract that, yes, let's provide some more Federal Reserve credit. It falls out of what's happening in the private sector in terms of demands for various kinds of money and deposits.

Of course, we certainly could have done it. We could have failed to provide the credit and we could have forced a downward adjustment in the amounts the private sector desired to hold.

Mr. CAPUTO. I just wanted to be sure you had control over that.

Governor PARTEE. If we wanted to.

Mr. CAPUTO. Let me ask also: I share your concern for your problem of trying to identify how interest rates affect economic statistics at any point in time, especially the short run, where you are called upon to make that relationship. It seems to me that interest costs have at present marginal impact on the decision to invest in job-creating business activity. Uncertainty about energy policy, tax policy overwhelm one-half percent differences in the interest rates. Is that your view? That small changes in the interest rate are not likely to change in one way or the other job-producing business investments at this time?

Governor PARTEE. Business investment—that is spending on plant and equipment—is probably not as responsive to interest rate changes as are other sectors of the economy. As you indicated there are so many other considerations in the investment decision. Also, interest

is a before-tax expense and, therefore, there is a tax benefit—in effect, the Federal Government pays half of the cost of the interest, assuming it is a successful business.

I have always held that most businesses do consider a range of possible investment expenditures that will yield different calculated rates of return, and that if we move interest rates up significantly—and half of one percent may not be significant—that will cut off some of the lower yielding planned expenditures. If you reduce rates significantly, it will make possible some of the lower yielding expenditures. But changes in interest rate have other effects on the economy.

There seems to be a fairly definite relationship between interest rates and the performance of the stock market, for example, because the alternative to investing in stocks is to buy bonds. If bonds yield more, they are more attractive. If they yield less, they are less attractive. Changes in interest rates tend to direct money between those two markets and thus affect the performance of the stock market.

Mr. CAPUTO. Why should we be worried about that?

Governor PARTEE. Because our econometric studies have suggested, and I think it is probably true, that the way consumers perceive their real wealth—that is what they feel their total financial wealth to be—affects the way they spend.

Mr. CAPUTO. Why does the mix between debt and equity affect their real wealth?

Governor PARTEE. The stock market represents a substantial store of value at market prices to consumers. Therefore, if the market goes down, consumers will feel less inclined to spend, particularly on durable goods. If it goes up, they will feel more inclined to spend.

I think also that interest rates have a considerable effect on inventory policy. For there, too, interest is a calculated cost of carrying inventory as against the calculated rate of return resulting from expected inflation and avoidance of bottlenecks and that kind of thing that the businessman has to consider in deciding inventory policy.

Finally, I think there is no question that interest rates considerably affect the demand for housing, and, therefore, substantially higher interest rates will tend to choke off housing starts while lower interest rates will tend to encourage them.

There is a whole range of effects on the economy that can work through interest rate changes.

Mr. CAPUTO. So, for purposes of unemployment, we should be concerned about small changes in even short-run interest rates?

Governor PARTEE. Now, you changed the terms on me in two ways. You say small changes rather than substantial. Second, you say even short-term rates. I think short-term rates are of much less concern than long-term rates in terms of their effects on the economy.

I don't think the 150 basis point increase in the funds rate that we have had so far had any significant choking effect on demand in the economy. But I wouldn't say to you that 250, 300, or 400 basis points would have no effect, partly because as those short rates rise, the direction of savings flows will change away from the thrifts and banks into the market, and thus would reduce the quantity of mortgage credit. Also, if those short rates rise substantially further, there is

going to be an effect on long-term interest rates. So far, long-term interest rates have not increased. On balance, really, they have gone down a little although short rates have risen some since March. But sooner or later, if short rates rise substantially, our experience would suggest that the long-term rates would increase.

Mr. CAPUTO. My time has elapsed. I want to make a concluding statement for myself. Unfortunately, you don't have time to answer it.

The kinds of ranges, the kinds of interest rate changes that we have observed are unlikely to have had an adverse effect on economic activity.

Instead, there are problems with energy and uncertainty about taxes and balance-of-payments problems.

Governor PARTEE. I agree.

Chairman MITCHELL. Mr. Hannaford?

Mr. HANNAFORD. Thank you, Mr. Chairman.

Governor, it is unusual for short-term rates to be rising when business activity and inflation are slowing. How do you account for this happening at the present time?

Governor PARTEE. Well, Mr. Hannaford, the slowing of the inflation and the growth in the economy is a pretty recent development. One of the principal things that happened this year was that in the first half, there was an acceleration in the economy's growth and there was an acceleration in the rate of inflation. The more rapid inflation was due to food and energy prices going up, with an underlying inflation rate that seemed to continue along about the 6-percent level. It may well be that what we have seen through the spring and the summer has been a reaction of short-term rates to the credit demands associated with that strengthening in nominal GNP that occurred in the first half of the year.

It is really only the third quarter, maybe even only August and September or perhaps October, where we are talking about a slowing. It is so recent that I don't think it can have communicated itself. Now, if that slowing should continue for an appreciable period, or extend itself into even more slowing than we have seen so far, I think it would have its effect on rates.

One reason, I think, that long-term rates haven't increased over this period is that the market is anticipating that there won't be excessive expansion in the economy in the period immediately to come.

Mr. HANNAFORD. Thank you.

If I could turn to Congressman Derrick's question about long-term cycles, and as described long-term cycles to external forces, such as waste of activity and invention.

Governor PARTEE. The long cycles are generally thought to be those.

Mr. HANNAFORD. Would it not be true that the long-term lag that he suggested is due to the continuing increasing costs of energy to a large extent?

Governor PARTEE. I think the change in the price of energy has been a major development for the world economies. But I don't know whether we can say that there has been an important lag introduced by that. Energy is a factor of production, and that means that one of the costs of the factors of production has gone up substantially. There could be adjustments by shifts away from energy use to other factors, without much of a lag.

Mr. HANNAFORD. A very simple example, an increase of imported energy——

Governor PARTEE. Yes.

Mr. HANNAFORD. Particularly, perhaps domestic to some extent, would have the effect of a surtax in that amount, just sucking it out of the flow of the economy.

Governor PARTEE. That is true.

Mr. HANNAFORD. This is something we really haven't experienced before, I don't believe. We dealt with it in our history. What policy should we pursue to recompense that?

Should it be an effect in monetary policy or an effect in fiscal policy, or should we just throw our arms up over our heads and survive it?

Governor PARTEE. That's a very important and deep question you have asked.

My answer is that if we have had a shift in the direction of funds that results from much higher energy prices—both shifting income away from consumers and in the direction of business, and shifting them away from domestic business to foreigners, which was your important point—that has to be compensated for principally through a changed fiscal policy.

Let me make one more point. This is such an important question.

To the extent that higher foreign oil prices have resulted in a higher general level of prices from that exogenous force, then we can't easily take care of this with domestic monetary adjustments. You would have to have a somewhat higher monetary base for the economy than you would have had in the absence of the oil price hikes. Otherwise what one is saying is that we are going to force reductions in prices on other sectors of the economy by holding down the monetary base, in order to compensate for the increase in price that has occurred in oil and gas and that kind of thing.

It seems to me that that is pretty stiff medicine for the economy to take. So far as economic activity is concerned, it seems to me that a fiscal policy response is what is called for.

Mr. HANNAFORD. I am sorry for straying somewhat from the immediate question at hand, but that is the question we are going to be dealing with for the rest of this century, I think. Relationship is important.

Thank you. I yield back my time.

Chairman MITCHELL. Thank you.

Mr. Barnard?

Mr. BARNARD. Governor Partee, in previous hearings this year, the Fed has been somewhat criticized for keeping a restrictive monetary policy during 1976. Does this criticism have any effect on the attitude of the Fed this year?

Governor PARTEE. Mr. Congressman, we always listen to all of our critics. I might say that, generally speaking, our critics have not been on just one side of the issue. We almost always have some critics who say we are too expansive and other critics who say we are too restrictive at any single point in time.

Right now, the criticisms seem to be particularly marked. Comparing the recent publication of the so-called Shadow Open Market Committee, a group of academic and business economists, with the

report of the JEC that was issued over the weekend, one is really pulled very strongly in two directions.

At the Fed we like to think that we are trying to do what is best for the economy at the particular point of time in which we find ourselves.

Now, I would say that the arguments that monetary policy was restrictive last year were very much overdone. I don't think it was nearly as restrictive as many said, and I base that conclusion on the performance of the broader aggregates which were growing strongly throughout 1976, the flows of funds in the economy which were rising relative to the GNP, and the performance of interest rates which declined throughout most of the year.

So I think it is only in terms of narrow M_1 that someone might have concluded that there was restrictive policy last year. By the same token, I don't think we have such an expansive policy this year. Again it is a question of what you look at; if you look at the broader aggregates, as I said in my statement, you find the growth rates aren't going up. In fact, the rate of growth of the broader aggregates is lower this year than it was last year. If you look at interest rates, you see they are rising—not falling—at least in short-term markets. If you look at the flow of funds, which is the total flow of credit in the economy, you find it has not risen significantly further relative to the GNP this year, after having risen last year.

Your conclusion about what kind of monetary policy we've had depends on how broadly you cast your net.

Mr. BARNARD. Do you think we are overreacting from the standpoint of the increase in interest rates?

Governor PARTEE. I don't believe so, Mr. Barnard. I think it's been indicative that the long-term market rates have not risen significantly. It seems to me that if market participants were anticipating a repetition of the sharply rising trend of rates of 1972–74, they would be avoiding those long-term securities and the interest rates on those long-term securities would be going up sharply. I believe that the market is taking what has happened so far with considerable ease. Perhaps aplomb would be the best word.

The short-term rate increase is significant; that is, the 150 basis points in the very short-term markets. That's about true of the very short-term Treasury bills also. But the increase is not strikingly large; and, of course, it would have had to have been considerably larger had we kept the money growth rate down over this particular span of time to the ranges that have been specified by the committee.

Mr. BARNARD. Governor, are you familiar with the minority report from the Joint Economic Committee?

Governor PARTEE. Yes. I only got it yesterday afternoon. I have leafed through it. I haven't read it carefully, sir.

Mr. BARNARD. I was interested in Senator Javits' recommendation that over a long period of time we ought to have a significant decrease in monetary rates in order to offset inflation. Do you feel that is the track we ought to take?

Governor PARTEE. I believe that approach is necessary to significantly reduce the rate of inflation. But it takes a long period of time, because we have so many structural obstacles that have been built into the economy which raise costs that result in the higher rates of infla-

tion. Over a long period, I think both the expansion of our money supply—broadly defined as being the kinds of assets that people have that they can spend—and the expansion of the costs in the economy have to be brought down together. I do believe that that is a proper policy. It is a question of degree and speed, and whether you do it unrelentingly from quarter to quarter or whether you move back and forth with the vicissitudes of economic developments.

Chairman MITCHELL. Would the gentleman yield?

Mr. BARNARD. Yes, Mr. Chairman.

Chairman MITCHELL. In your last answer you referred to a long period of time. How long a time span are you talking about?

Also, I assume you would attempt to reduce these incrementally, say quarterly, over that long period of time? I am not clear where you are going with this. What are we talking about when we talk about "a long period of time"?

Governor PARTEE. I can't be very specific, Mr. Chairman, because I think what it takes is a change in attitude on the part of the economy that will lead to an acceptance of much lower rates of gain in money incomes, because lower money income gains go along with lower money growth.

What I mean is that length of time it will take before workers agree to wage increases that are no higher than the productivity gains, about 2½ percent. How long will it take until we introduce into business operations the constraints that limit expected price increases in response to cost increases that go on every day?

How long will it take before we get rid of the inflationary bias that exists in hundreds of government programs? All that, I think, causes from the cost side upward pressures on the price structure; and all that has to be brought down as we bring down the rate of growth in the money supply.

How long? It is a very difficult question.

Chairman MITCHELL. I thank you for yielding to me.

The answer makes it very clear to me that we cannot in the near future, even if we introduce all of those variables, plot a time span when this reduction would take place.

Governor PARTEE. I do think, Mr. Chairman, that we need a major program to deal with the structural problems that lead to upward cost pressures in the economy, as one of the major things to go along with a gradual program of reduced monetary expansion.

Mr. BARNARD. Would taxes play a part in it?

Governor PARTEE. Yes; I think so.

Mr. BARNARD. Today, we have been discussing increasing productivity, reducing unemployment, reducing and maintaining a lower rate of inflation; but I think that one of the most important questions we are going to be facing in the very near future is a significant personal and corporate tax reduction program to stimulate the economy. It seems to me that what is presently being done is having only a slight effect: The consumer has little confidence; the business community has little confidence. These are the hard problems we must face. What we all want is a better economic recovery.

I have no further questions.

Chairman MITCHELL. Mr. Watkins?

Mr. WATKINS. I have been sitting here giving it a little thought from the standpoint of being a former home builder. I realize that the money supply is increasing, but yet we are defeating the purpose on the other hand when we see our interest rates increasing.

What do you predict the economy will do with the money supply increasing and interest rates increasing as Mr. Barnard stated? I know home building very well from a firsthand experience and I use the money supply as a gauge lots of times as a forecaster to the economy so I know whether to move forward or hold back.

Governor PARTEE. Up to this point, Mr. Watkins, I don't believe that the increase in interest rates has been significant enough to have any material impact on the economy generally, or on home building. If we look at the recent figures, we see still quite a good rate of inflow to the mortgage lending institutions, including the commercial banks. We see commitments rising for home mortgages by all lenders, and we see the rate of starts at very high levels. At this point there hasn't been any undesirable impact, from your point of view, on home building demand.

However, if the economy continues to move ahead, and if the monetary aggregates continue to expand and therefore interest rates begin to move up, we will begin to see limited prospects for further advances in such fields as homebuilding. That has happened before, and I would expect it would happen again.

I myself, looking at the statistics, don't see that we have that rapid an expansion in the economy in prospect. I am hopeful that the behavior of the monetary aggregates which we were discussing earlier today is in the nature of an aberration and perhaps a shift in holder preference from one form of deposit to another, and not the beginning of a major expansion in money.

I have to say to you that if in fact there's going to be a major accelerating expansion in money, defined in any of a variety of ways, the Federal Reserve will have to move against it because it will be in the long run inflationary for the economy. It will be in the long run destabilizing for the economy.

But I don't yet find myself in the position of saying to you that that is highly likely.

Mr. WATKINS. But have you run any studies on which ones are more inflationary, in say, allowing interest rates to drop so business-industry can go about expanding and building jobs in the private sector versus the Government plowing billions of dollars into public work jobs?

Governor PARTEE. Well, I don't know of a study that has been done that could specifically address itself to that question, because there are cyclical movements in Government expenditures and private demand. In the abstract, I would say that if one shifts resources to the point where a much larger proportion of resources is going to the Government for nonproductive purposes, the chances are that will in the end be more inflationary, because it will collapse the availability of resources to build productive plant or basic additions to the economy in the private sector.

We haven't seen anything of that kind, of that size. I had felt that perhaps they would reach that stage in Britain, where the public sec-

tor takes a very large proportion of the GNP of the country and a very large proportion of all credit flows. So in the abstract, I think if one identifies public spending as involving expenditures which don't add to productive capacity, and private investment as adding capacity to produce in our economy, then I would have to say that the public spending in the long run will be more inflationary than the private investment.

Mr. WATKINS. *I a*gree with you. We are all delving for the same pot of money, whether it's for the Government spending programs or whether it's for the business industries to expand.

Then we have a second factor oriented to production. We have got a tremendous deficit of trade that's going to have to be offset some way. Agriculture can do a large portion of it, but somewhere along the line we are going to have to allow production in our private sector to export more to offset this balance of trade.

How significant do you think that deficit will be?

Governor PARTEE. The deficit has two effects on the U.S. economy. First, the larger the trade deficit—that is, the more imports relative to exports—the more you hold back the recovery of the domestic economy in the abstract. Therefore, the rapid expansion in the deficit over the past year has in my view reduced the rate at which the domestic economy has been able to expand.

The second effect, I think, is the financial effect. Although we finance the deficit easily—that is to say, the dollar hasn't dropped significantly relative to the average of foreign currencies—it does establish a whole stock of short-term credits that foreigners have advanced to the United States. It seems that will not be sustained. It will stop, be reversed. It does produce, in my view, over the long run another potential source of financial instability.

That is the way I would answer your question.

Mr. WATKINS. Mr. Chairman, it has been brought to my attention, that an article by Mr. Lindley H. Clark, Jr., in today's Wall Street Journal is relevant to these hearings. I would like to insert that in the record.

Chairman MITCHELL. It will be inserted.

[The article referred to follows:]

[From the Wall Street Journal, Sept. 27, 1977]

THE MONEY MESS

(By Lindley H. Clark, Jr.)

Today the House Domestic Monetary Policy subcommittee will open hearings on the new money mess. Federal Reserve Chairman Arthur Burns keeps saying that the Fed has to slow the growth of the money supply if we're ever going to overcome inflation, but the Fed keeps pouring out money faster.

Mr. Burns set the maximum growth rate for M1—currency plus bank checking accounts—at 6½ percent. For the past six months, however, M1 has been expanding at an annual rate of more than 9 percent.

"We want to know whether recent monetary developments mark a change in Federal Reserve policy and, if so, what the change is and what it is intended to achieve," said Parren J. Mitchell, the Maryland Democrat who heads the subcommittee. "If recent money growth and interest rate developments were unplanned, we need to know what caused them and why the Federal Reserve has been unsuccessful in correcting for them."

Chairman Burns has been invited to testify or send a representative.

In a letter to Mr. Burns early this month, Henry Reuss, chairman of the full House Banking Committee, charged flatly that the Fed has "lost control of the money supply." The Wisconsin Democrat foresees dangers of accelerating inflation in 1978 and a deeper stock market slump as investors fear desperate Fed moves to get the money supply under control.

* * * * * * *

Last week the Shadow Open Market Committee, a group of private monetary economists, was pondering the money mess. The group is composed of monetarists, economists who stress the importance of money-supply growth to short-term economic trends. It meets twice a year to assess the Fed and its works.

At times over the past two years the group's verdict has been largely favorable. After all, the Fed has been setting targets for monetary expansion rates and even showing some determination to stick to them.

Now, however, the Federal Reserve has painted itself into a corner. There is simply no easy way out.

The shadow group, headed by Karl Brunner of the University of Rochester and Allan Meltzer of Carnegie-Mellon University, said the Fed has three alternatives:

It can continue on the path of rapid money growth that has prevailed in 1977. This option, the group said, "minimizes the risk of recession in 1978 but would result in increased inflation. By maintaining the recent high rate of money growth, real growth might temporarily be higher than otherwise, but at the cost of higher inflation later."

As inflation increased, demands would grow to do something about it. There are no miracle cures for accelerating inflation. As Chairman Burns has often pointed out, wage-price controls at best are no more than a temporary palliative. Sooner or later the Fed feels compelled to slam on the monetary brakes and we skid into another recession.

The second option is only slightly more appealing. We could in effect accept this summer's errors and tell the Fed to go and sin no more. Starting with the money supply at current levels we could slow future growth to an acceptable rate within the Fed's own target range.

Such a rate, of course, would be well below recent levels. What it would achieve, in all probability, would be a recession—accompanied by the inflation already purchased with recent excessive monetary growth. Eventually, though, the economy would get back on track.

The third option is more complicated but probably more useful. The Fed could, in a short period of time, merely lop off the summer bulge by reducing the money supply by $4 billion. It should, at all time, announce what it's doing and why.

If this were done, the shadow committee is convinced that the effect on economic growth would not be severe. The economy so far has not had time to adjust to the higher money-supply levels that now prevail.

After the once-for-all adjustment in the money stock, the shadow group says the Fed should resume the expansion of M1 at a constant 4½ percent annual rate. For my part, I wouldn't quibble too much if the Fed kept the growth rate within its own target range.

* * * * * * *

Option three is not one that is likely to appeal to the Federal Reserve. In fact, if the Fed clings to its current operating methods, the once-for-all adjustment would be difficult to achieve.

At present the Federal Reserve plays a little guessing game involving interest rates. One interest rate that the Fed can control effectively for short periods of time is the rate for Federal funds—the reserves that banks lend one another for brief intervals.

If the system wants to cut the Fed funds rate it simply creates more reserves—for example, by purchasing Treasury securities. A larger supply tends to depress the rate. Conversely, the Fed tends to push the fed funds rate up by reducing the supply of reserves—by selling Treasury securities, for instance.

The Fed funds rate is always known. So the Federal Reserve asks an econometric model what funds rate is consistent with the monetary-growth rate it seeks. The trouble is that the model keeps coming up with the wrong answers; that's one reason why the Fed, lately, has been pumping too much money into the economy.

Federal Reserve technicians in time could adjust to the wrong answers. This year, however, they apparently have been reluctant to do so, since the adjustments have meant that they have had to accept somewhat higher Federal funds rates. Faced with the choice the Fed has elected to let the money supply get out of control.

In the current uncertain economy the Fed's performance has been irresponsible. Now it's time for an explanation.

Chairman MITCHELL. Bear with me for just a moment. Mr. Hansen has some questions. We have other witnesses. There is one question I want to put to you after Mr. Hansen's time. You might be thinking about it.

In the Wall Street Journal article being inserted in the record, Chairman Reuss says, very flatly, that the Federal Reserve has lost control of money flow. Without speaking directly to his accusation, I would like to know, after Mr. Hansen's questions are raised, what specifically does the Federal Reserve plan to do to get the money supply back into the targets that were clearly established at the beginning of the year, targets suggested by the Federal Reserve and agreed to by the Congress?

I am a funny kind of guy. I have to know in specifics what you intend to do, how you intend to initiate some sort of serious efforts to get back to the targets that the Federal Reserve established as its own targets for this year.

Mr. Hansen?

Mr. HANSEN. Thank you, Mr. Chairman.

When you have a bubble or balloon created advertently or inadvertently with regard to money supply, what's the lag time of effect as far as what it does to the economy and what's the lag time of effect as far as corrective measures that are taken to offset it by organizations such as yours?

Governor PARTEE. Well, Congressman, first of all, it may be that the bubble results from just a technical shift in the function, in which case it has no effect on the economy and doesn't really need to be taken care of.

If, however, it is not a technical change in relationships that has occurred, there is a distributed lag effect on the economy—both on the real economy and on the rate of increase in costs and prices. We have generally felt the effect on the real economy occurs in the earlier part of the lag. The effect on prices and costs occurs later on, say, after 1 years or so, if when this bubble occurs we are not operating at capacity in the economy, which we haven't been.

Our own lag structure of reaction is made up of two parts as we see it. First, it's a question of the length of time it takes us to change market conditions to a point at which they will successfully resist the increase in the average level of the money stock, or whatever monetary aggregate you are talking about. And, second, there is the lag that occurs with regard to the public's and the banks' adjustments that take place in response to those different market conditions.

I would say that the first lag is relatively brief, certainly counted in terms of weeks or 1 month or 2. The second lag, as I stated earlier, we believe to extend over 5 or 6 months. Thus, if you do get a real shock to the money supply, and you might well characterize the April and July bulges put together as a real shock, the chances are it would

take 6 or 9 months to wash it out subsequently, without doing great damage to the economy. That is, it would take 6 or 9 months to wash it out as one looks over the aggregates.

Mr. HANSEN. So what we are saying, then, regarding some adjustment to the economy, at least through the supply of money, is that you can have some effect within weeks or at least a few months through this type of adjustment as opposed to trying to influence the economy with tax credits and various other things which can be something that sometimes takes years?

Governor PARTEE. I think the lag time is longer on most fiscal policy actions; yes.

Mr. HANSEN. When you talk about stimulating the economy from our vantage point, can the Fed give enough adjustment? Can you give enough adjustment in tax credits or various other governmental actions really to offset an economy that may be so laden with regulations and requirements on business that you are almost taking the resiliency out of it? In other words, can you give the businessman enough incentive by minor adjustments or even some major adjustments to offset the fact that he's doggoned near out of business with the overhead and the regulatory requirements he has to live with in order to be in business?

Governor PARTEE. Well, it is difficult, Mr. Congressman. At times I think the economy is more receptive to getting the kinds of medicine that will increase the rate of expansion. At other times it is less receptive. Certainly the receptivity of the economy to Government action is affected by redtape, pollution controls, environmental controls, work requirements and all of the kinds of regulations you are talking about.

There might be social benefits involved, but just looking at the economic side of it, one would have to conclude that that system of controls and regulations, as it becomes more extensive, does tend to reduce the receptivity of the economy to expansion.

Mr. HANSEN. Well, I was thinking—and I don't mean to make an unfair analysis of this, Mr. Chairman. I sometimes liken the Fed to the tail on the dog, the Government dog, so to speak. I think too often you are expected by one group of people to be able to make adjustments that would change things markedly and greatly as far as the economy and management of the money supply and interest rates are concerned. You are even expected to make adjustments which really are not in your realm and which perhaps are more in the realm of the Congress.

On the other hand, some people who don't like adjustments by the Fed blame you for things that really the Congress is responsible for. I think too often the heat is on you to do things that really are more in our realm to do or undo in the sense of making a better business climate—a better climate for employment and so forth.

A lot of times we hear, Mr. Chairman, about increases in wages and so forth being inflationary. Perhaps they are to a degree. However, the most inflationary thing we have, the problem that is conducive to keeping business sluggish and slowed down, and keeping us from having jobs and prosperity, is too darned much government; too many regulations. We find ourselves heaping this massive burden on business

and then trying to undo it by a tax credit, an interest adjustment, more money supply, or something else.

I believe we have to address ourselves, if we are out to help the workingman, to establishing a business climate in this country where a businessman can function without being so much under the gun that when you give him an adjustment, it isn't enough of a gasp of air or oxygen that he can respond significantly to it.

I think maybe, just maybe, the administration said it all recently regarding OSHA being the best example of massive overregulation and still not accomplishing what was desired in the field of health and safety.

I am wondering if we don't need to really take a good look, although it is not our capacity in this committee or subcommittee, but a good look at what we are doing to the business climate and the agricultural climate in this country in terms of regulations, demands on business, and so forth.

I am not saying we don't need to regulate to a point of keeping people safe and keeping circumstances adjusted properly, but I believe we need to take a good look at what we have done. I can tell you, Mr. Chairman, for instance, on safety—and that is probably somebody's sacred cow—but we have workmen's compensation, liability insurance, State and local health inspectors, fire inspectors—every kind of inspector. Now we have the Federal Government in on it, and it is heaped on and heaped on, patchwork after patchwork.

Then we go to the businessman and say, here you are, Mr. Businessman, we have some paper here—paper to shuffle. He then puts on three secretaries to take care of something when one secretary ought to be able to do what it takes to run a business. And again we come along and say we will give you a tax credit of so much, and he is supposed to respond to this. Can he?

Chairman MITCHELL. The gentleman's time has expired.

Mr. HANSEN. I understand that.

I would like to ask you, Governor, in your experience, do you find you are sometimes fighting a wall when you are trying to make adjustments? Do you think you are being expected to do something impossible because of the structure of things?

Governor PARTEE. Yes, Mr. Hansen. Your comments have really gone well beyond my field of expertise. I certainly agree with one——

Mr. HANSEN. Gone beyond the purview of this subcommittee, too. [Laughter.]

Governor PARTEE. I would like to say one thing. I think people often put too much emphasis on monetry policy as the principal factor that can change all of the economic prospects we have and all of the economic arrangements we have. I do believe, as I said earlier, that we need to make progress with our structural problems—of which you certainly mentioned a number of important ones—that would go along with a proper monetary policy to reduce and eliminate the inflation in the economy. Otherwise we are fighting a war of inexorable cost increases which mean, I think, that moving to a noninflationary rate of monetary growth would do great harm to the real economy, because of those structural effects that raise costs and keep costs rising more rapidly than productivity in the economy.

Mr. HANSEN. Mr. Chairman, I put the gentleman on the spot a little bit, but it concerns me about hearings that sometimes we get looking only at one line of attack on the adjustments we need. I appreciate your indulgence and hope we can keep this, the whole problem, in perspective. It's futile to try to solve the whole problem having only a handle on one little corner of things. Thank you.

Chairman MITCHELL. Fine. I am glad that you spoke as you did. It points up the criticalness of the question that I have raised. What we have done in this Congress in an effort to get a handle on Government spending is to establish a Committee on the Budget which works in concert with Ways and Means, Appropriations, and all the other major committees. Key to that working relationship is the understanding of monetary policy established early in the year.

Now, without in any way attempting to place an undue burden on Governor Partee or the Federal Reserve, my earlier question goes to the issue that if there is a commonly agreed on monetary growth policy at the beginning of the year, then all of us—banking, budget, all of Congress—operate roughly within those guidelines established by you and accepted by the Congress. To the extent and degree that you move away from those guidelines, you throw this whole delicate balance out of whack. That is why I posed that question to you.

You are out beyond the guidelines that you established. What do you intend to do to get back within them? How and when? By what methods?

Governor PARTEE. Mr. Chairman, you put me in a very difficult position because you are asking me to speculate about the future. I can't do that. That is, you are asking me what future actions the FOMC will take with regard to money markets and open market operations in order to achieve some particular range of growth in the aggregates.

I would also point out that we have never referred to the long-term growth rates for the monetary aggregates as targets. We have always referred to the ranges of growth of the aggregates as those that we thought at that point in time seemed appropriate to the needs of the economy. The reason that we come up quarterly to testify at the oversight hearings is to hold open the option to change our views, because of what's happened in the economy, as to what the aggregate performance ought to be. So you see, not only can I not answer your question, because the FOMC has not had the meetings at which it will make those determinations, but you are asking a question that is associated with the quarterly oversight hearings.

Chairman MITCHELL. Then, Governor, are you saying—and I don't want to misinterpret you—in effect, that the money growth targets, particularly, M_1, M_2, mutually agreed upon by the Federal Reserve and the Congress, are really meaningless? Is that right?

Governor PARTEE. No, I don't think they are. I think they indicate the drift of current thinking. And I think that there has to be significant reason and significant understanding in changing them, but I just can't say that they won't be changed, because that might occur.

I would say one thing to you, Mr. Chairman. I remember I said that our conception was that there is a lag structure of adjustment to the kinds of short-term money market conditions that we establish. We are talking about a system in which in a matter of a relatively few months,

5 months or a little less, the funds rate has gone up by 150 basis points or so. That lag structure has not yet fully worked. I would take the position that we have already done quite a bit to reduce the future rates of growth in the aggregates by our actions over the spring and summer.

Whether it is enough or not, I can't say, because I just don't know how the economy will perform and I don't know, as I said in my statement, whether there are some technical aspects to the movement of these aggregates that will be reversed in the period to come. I just don't know whether we've done enough or not. Whether or not the longer-term ranges that the committee is seeking will be changed, I also don't know.

As I stated before, M_1, which has been the point of emphasis in all of this discussion, is the aggregate that is moving substantially beyond the projected range. The other aggregates are only modestly over. We use them because we feel that there needs to be a family of them so you don't over rely on only one where there may be technical factors affecting its performance.

They could very well drop back down within the ranges that we have posted over the remaining 6 or 8 months that we have to run in the year's period. I don't think that the evidence is clear that we are going to substantially exceed the growth ranges for the family of aggregates that were stated by the Chairman in the July meeting.

Chairman MITCHELL. I won't raise any more questions. However, my hunch is that at the end of the next 6 months, we are going to find that we have consistently exceeded the target you set. That is, indeed, in my opinion, disruptive to the fiscal policy planning process, and to business and consumer planning as well.

Governor PARTEE. Yes, sir.

Chairman MITCHELL. Mr. Watkins?

Mr. WATKINS. Mr. Chairman, if you will yield, I would like to pose the question a little differently and get back to your original question.

Governor Partee, in your thinking, what caused us to have this bulge and to get out of the limits that you actually set for yourself?

Governor PARTEE. If I might amplify my point on substitution which is in the testimony , there had been a great movement by holders away from cash balances—that is, currency and demand deposits—in the direction of substitutes over the period 1975, 1976, and perhaps early 1977. These substitutes included such things as the growth in savings deposits of business firms, which had not been permitted until the end of 1975. We think that those savings deposits of business firms came in part from what otherwise would have been in demand deposits.

The regulatory authorities allowed State and local governments to have savings deposits, beginning in the late part of 1974. These also moved up from zero—because they had been prohibited earlier—to several billion dollars in the course of a short period of time; and we think they probably substituted in some measure for demand deposits.

We had the development of NOW accounts in New England which are not counted in the narrow money supply. We had the development of things like automatic or telephonic transfer of balances—Perpetual Savings & Loan advertises on the television that they do this. That is not included in the narrow money supply. We also had a very sub-

stantial growth on the part of banks in financing through RP's and financial funds obtained from nonbanks in 1975 and 1976.

But now we think that it may be that what you are seeing in these changed growth rates of M_1 versus M_2 and M_3 is a slowing or a halting for the time being of that tendency to shift away from demand deposits, that structural shift that was taking place over the past few years. That may be a major reason for the increase that has occurred.

Chairman MITCHELL. May I interrupt for a moment again?

We planned our next set of witnesses to begin at 10 o'clock. I would like Mr. Watkins to conclude his other questions, if they can be answered succinctly.

Further, I would like to indicate that all of us have additional questions that we would like to have answered, and, obviously, we would like to submit them to you for reply in writing.

Governor PARTEE. I will be glad to try to answer them.

Chairman MITCHELL. Proceed, Mr. Watkins.

Mr. WATKINS. Would you define what the causes are, which I guess is past history?

Also what are the alternatives in getting it back within the guidelines?

That doesn't put you "on the spot;" does it?

Governor PARTEE. Mr. Watkins, the answer to that, as I said before, is that we have tried to hold back on the provision of reserves. In the course of that, the Federal fund's rate has gone up 150 basis points. We feel that will have some effect—not only has had some effect in the last relatively few weeks or month or two, but will continue to have an effect for some months to come.

If, in fact, that does not do the job, then the Committee—not me, the Committee—the FOMC will have to decide what further action, if any, it wishes to take.

Mr. WATKINS. Not all of it is bad. Don't get me wrong. I see business and industry needing the inventory to work with.

Chairman MITCHELL. Governor, thank you very much. You have been very informative. We appreciate your taking the time to be with us this morning.

I will ask the next three witnesses to come up so they can be seated together.

Gentlemen, thank you so very much for taking time out of your crowded schedules to be with us. I think you can see from the questions posed by the members of the subcommittee that there are serious concerns about the rate of monetary growth and its impact on the economy. This is a democratically run subcommittee. We welcome you. Any order in which you wish to speak, is fine with us.

Gentlemen? Dr. Gibson?

STATEMENT OF DR. WILLIAM GIBSON, VICE PRESIDENT, AND MANAGER, FIXED INCOME RESEARCH DEPARTMENT, SMITH, BARNEY, HARRIS, UPHAM & CO., INC.

Dr. GIBSON. Well, thank you, Mr. Chairman. It is a pleasure to be here. It was a pleasure to hear Governor Partee. He announced that the Federal Reserve listens to its critics. I gather he figures I am not going to be critical since the Federal Reserve contingent has left.

The monetary sector is having a distorting influence on the economy. The money supply is rapidly rising and short-term interest rates are steadily climbing. We are accustomed to fearing one or the other of these situations.

Now, we have both. I think it is a situation that we should not let go on much longer.

The money supply is increasing faster than the economy can stand and faster than the Federal Reserve has said is appropriate.

It is $3 billion above the upper end of its announced target range.

Likewise, short-term interest rates are jumping very rapidly. In fact, events have kind of overtaken all our prepared statements. Yesterday they had risen 175 basis points or a shade higher, rather than the 150 we had more or less gotten used to. They keep going up. All this is not supposed to happen.

In consultation with you the Congress, the Federal Reserve has pledged to keep the money supply at a lower and more stable growth pattern than this. As all parties agree, the Fed and the Congress alike, sustained monetary growth at high levels is detrimental to inflation in the course of the economy and its stability. In its original resolution on the subject in March 1975, the Congress said that greater stability in monetary policy would lead to greater stability in interest rates. I think that this congressional position is correct.

What has happened then?

In the first quarter of this year the money supply was weak. It was actually lower in the last week of the quarter than in the first. The Federal Reserve took no actions to increase it during the quarter—it left the Federal funds rate at 4⅝ percent, the rate at which it began the quarter. Then in April money started growing rapidly, and in May the Federal Reserve began trying to counter this. It has raised interest rates more or less steadily since then. But still money supply is growing too fast.

The Federal Reserve has not announced that it has let the money grow faster than target because the economy needed faster money growth. It has said to the Congress that 4 to 6½ percent growth was what the economy needed. The economy may need more, but this has not been a motivation for policy. It was hinted at this morning but only hinted.

Further, I do not believe that what has happened in the monetary sector is what the Federal Reserve wanted. Rather, I think it crept up unexpectedly. It is not, however, something which was unavoidable.

We got to the present situation as a result of two factors. First, the behavior of the money stock in the first quarter was strange. Second, the Federal Reserve was reluctant to raise interest rates rapidly enough. Money's flatness with flat interest rates was more like a symptom of a weak or declining economy rather than one expanding at twice the average rate of real growth. Money was flat when overall short-term credit to business expanded at a 5-percent annual rate. In part, I think that this resulted from poor seasonal adjustment of the data.

I urged this subcommittee in another session to take a much closer look at the way in which these data are adjusted. While very technical, these procedures have a real-world impact on the execution and impact of monetary policy.

The other fact was the Federal Reserve's reluctance to control the increases in money once they began for fear of pushing interest rates up too fast. In the end, the Federal Reserve probably had to see rates rise more than they would have, had action to control the money stock been taken earlier. Central banks around the world have traditionally been hesitant to raise or lower—but especially raise—interest rates quickly for fear of upsetting financial markets and disrupting business activity. The Federal Reserve is not immune to such concerns, and from time to time this caution has been encouraged by some voices in Congress as well. When the Federal Reserve has delayed controlling money at such times lest interest rates rise too much, they have commonly risen more than they otherwise would have, as inflationary expectations flared up in the interim.

I would like to comment on this reluctance to see interest rates move from the standpoint of financial markets. These markets are becoming more knowledgeable about monetary matters.

The past 3 months has been a very interesting period. Markets are becoming more knowledgeable about monetary matters. They are looking beyond the perspective of the next 2 months. Financial markets generally prefer stable short-term interest rates. But at times they do not. The main of these times is when the money supply is rapidly growing. Markets now recognize that if the price for stable short rates is accelerating money growth, the comfort for the market is a fleeting one. There is a growing recognition that rapid money growth leads to rapid inflation eventually, and this is definitely not a comfort for markets. Indeed, many investors viewed the monetary situation in July as threatening enough to plan to sell long-term securities if short rates did not begin to rise soon to control the monetary expansion. They were concerned with the longer-range implications of an accelerating supply of money.

The fact that this market concern was not just imaginary was shown in August, when short-term interest rates did begin rising as part of the Federal Reserve's efforts to control money. Accepted wisdom from earlier years would have predicted harmful effects on bond markets from the August move in the Federal funds rate from 5⅜ to 6 percent. Virtually no one would have ever predicted that such a move would be good for long markets.

But that is exactly what happened. Market conditions were never really unsettled, and at the end of the month, long-term interest rates were somewhat lower than at the beginning. Markets are ready for faster and more decisive moves from monetary policy. Indeed, they are beginning to demand them, even when they mean rising interest rates. By avoiding the excesses which follow from rapid money growth or inordinately weak money growth, such a policy would eventually reduce the general level of interest rates, and markets are beginning to recognize this.

It is interesting to note that although the money stock has moved all over the waterfront since the targets were announced, the Federal Reserve has generally reached its announced four-quarter goals since they began being announced. Between the second quarter of 1975 and the second quarter of this year, the four-quarter rates of M_1 growth have ranged between 4.6 percent and 6 percent. We estimate that the growth for the four quarters ending this quarter will be 7.4 percent.

We only have 2 weeks of data to go, so I am reasonably comfortable with that number.

This will be the first time that the money stock has deviated substantially from the targets over a four-quarter period. It moved around in between but the Fed has always reached that four-quarter target.

This present deviation is troublesome. It is, however, the first time that the Congress has had any grounds for complaint under the procedures set forth by the Federal Reserve and implicitly agreed to by the Congress. If the Congress feels that what happens to the money stock within a four-quarter span has some near-term relevance to the economy, it might wish to encourage the Federal Reserve to set more specific targets for the short term publicly.

Longer term, one of the goals of monetary policy is to steadily reduce the rate of inflation and long-term interest rates. Unlike the quarterly targets and the congressional monetary policy review process, the primary impetus for this initiative has come from the Federal Reserve itself rather than the Congress.

I urge the Congress to support it as well, as it is the only way to return stability to financial markets, lower interest rate levels and break the upward tilt to the inflation rate. Since the targets were first announced on May 1, 1975, they have ranged from 5 to 7½ percent for M_1 then down to 4 to 6½ percent now. This net 1 percentage point adjustment was the net result of 10 different settings of this target. From the second quarter of 1975 to the latest statistical quarter, M_1 has grown at a 6.2 percent annual rate. Over the past 52 weeks, its average level has grown by 7.5 percent. We need to make better progress than this. We need to pull down the monetary growth rate more when the economy is expanding. There will always be pressure to accelerate money growth when the economy is doing less well.

I think we are dangerously close to building a high rate of inflation into our thinking and into our economy. Numerous Federal officials have said that a 6- to 7-percent rate of inflation may be an irreducible minimum for the economy. I do not agree with this assessment, but it indicates the length to which inflationary mentality has pervaded this country.

With recent rapid growth in velocity likely to continue, 7½ percent money growth no longer is as modest or tame as it might have appeared a few years ago. We are seeing 4 to 6 percent velocity growth as a matter of course now. If velocity continues growing in the 4- to 6-percent range, which it can quite plausibly do, and we get the 5 percent real growth optimistically forecast by the administration, 7½ percent money growth if sustained would lead to 6 to 8 percent inflation. If real growth falls short of 5 percent, the inflation consequences would be worse.

These are crude numbers but I think they give you the flavor that if we keep on the path we are in now, we will be accelerating inflation, rather than pushing it down to the 5 to 5½ percent range which, I think, is quite attainable in the near term.

To give up this deceleration and instead accelerate inflation would do no one any good. It will not show up in generally greater real growth. Even the hopeful administration forecast does not foresee

this. Maintaining money growth at the 11 percent rate of the last quarter or the 7½ rate of the last year would be a serious step backward in our efforts to squeeze the inflation pressure and mentality out of our economy. We have made progress and will make more if monetary conditions are kept under control. Now is the time to begin reining in money growth.

As recent monetary growth does not seem to have been completely desired by the Federal Reserve, it is worthwhile considering how this might be avoided in the future.

I think Governor Partee very eloquently in his own way explained how monetary growth sort of slipped upward this year. One reason is that the increases took place in the form of numerous specific bulges traceable supposedly to specific nonrecurring events.

You heard about the April bulge, the July bulge. Every bulge in money has had a story, so it seemed.

We used to have stories about stocks. Now we have stories about M_1. There are several bulges due to a change in the mailing schedule for social security checks, one due to the New York City blackout, one supposedly to be due to variations in the Saudi Arabian fund transfer schedule. All of these plausibly seemed at the time like transitory shocks which would soon be reversed. But they were not reversed.

As I think Governor Partee said, some of these will be unwound on their own record. They have not all been reversed by any means, however. They have proved to be part of a new surge in the money stock.

I think the Federal Reserve should try to get a better handle on these underlying trends and not accept these stories about these specific increases. I think the Fed could have had a better chance to see there was an underlying surge in the money supply if it had paid more attention to the monetary base. This aggregate—currency plus bank reserves supports—the monetary aggregates. In July and August it was providing fuel for the monetary expansion which took place and which continues.

Accordingly, with this and the other recent difficulties of policy in mind, I offer the following recommendations for improving the execution of monetary policy.

One: More attention should be paid to the monetary base as a precursor of trends in the other monetary aggregates. The base seems to be ignored in policymaking now. This should be changed to help separate unusual blips in monetary data from developing underlying trends.

Two: Season adjustment procedures for the money stock need to be improved. When changes in seasonal factors appear and are known, such as varied timing in the mailing of $7 billion of social security checks, some method should be available to adjust the data. Seasonal adjustment techniques also need to account for patterns from policy changes differently from variations due to purely seasonal influences.

Three: The changes in short-term interest rates required to control the monetary aggregates are not as detrimental to markets as you might think. Markets now understand that the money supply cannot balloon indefinitely without showing up in higher inflation and higher interest rates later. Sometimes markets become more upset by stable rates than rising short rates.

Give markets a chance. While some real-world discretion and caution always have a place in conducting monetary policy, it should not be hamstrung by fears of excessive impacts on markets. Indeed, the effects of delayed policy moves are generally worse than those of prompt moves.

Thank you Mr. Chairman.

Chairman MITCHELL. Thank you for a provocative statement.

Let me make an apology for the subcommittee members. We all serve on 33 different subcommittees. Many of the members said they would be back. I hope you understand that we begin at 10 with the regular committee hearings. That accounts for the absences.

Professor Dewald?

STATEMENT OF WILLIAM G. DEWALD, PROFESSOR OF ECONOMICS, OHIO STATE UNIVERSITY, AND EDITOR, OF "JOURNAL OF MONEY, CREDIT AND BANKING"

Professor DEWALD. I don't have a prepared statement. But I have an article on economic forecasts for 1978 that is available for distribution to members of the subcommittee.

[The article referred to follows.]

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BULLETIN OF
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The Trend of Business

Inflation and Unemployment—A Prognostic Model for Fiscal Year 1978

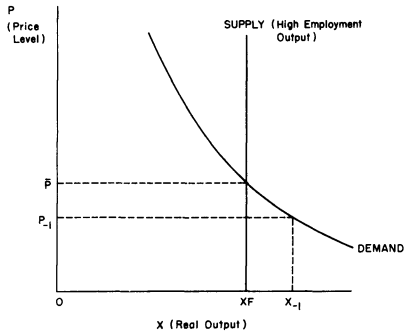
Appraising the stance of economic policy and the outlook for the economy can be organized in basically different ways.

The first and most commonly employed method builds a forecast from the bottom up, appraising performance in detailed subsectors of the economy and linking them into an aggregate. This is the method of the large model builders such as those who created the Wharton, Chase Econometric, or Federal Reserve-MIT models; and variants of this method are used by many professional business economists. Often such models are thought of as Keynesian because of their emphasis on the structure of the economy, particularly with respect to spending components.

The second method uses a so-called "reduced form" model which essentially builds a forecast from the top down, focusing on the major determinants of total spending and not much on its components. So long as the underlying structure of the economy does not change, this method can be employed very successfully and usually at far less cost than the alternative. Such reduced form models are often considered as monetarist models because of their emphasis on money as a major factor influencing total spending rather than any particular component of it. The model of this article represents an attempt to use a variant of the "St. Louis" monetarist model of the U.S. economy.[1] Interestingly our reduced form model yields several results that are broadly Keynesian, not narrowly monetarist—most particularly that prices are very slow to adjust to major economic shocks, that not only money but also government spending significantly affect total spending, and further that changes in spending in the short run are mainly reflected in output and not in prices.

[1] Leonall C. Andersen and Keith M. Carlson, "A Monetarist Model for Economic Stabilization," *Review*, Federal Reserve Bank of St. Louis, April 1970, pp. 7-25. The key spending equation in the model is based on Leonall C. Andersen and Jerry L. Jordon, "Monetary and Fiscal Actions: A Test of Their Relative Importance in Economic Stabilization," *Review*, Federal Reserve Bank of St. Louis, November 1968, pp. 11-24. A reestimation of the model appeared in Leonall C. Andersen and Keith M. Carlson, "St. Louis Model Revisited," *International Economic Review*, Vol. 15, No. 2, June 1974, pp. 305-27.

FIGURE 1
PRICE AND OUTPUT DETERMINATION



The article proceeds to lay out a brief methodological outline of the key variables and assumptions on which the model is based. Then it looks at the evidence of current and recent values of these variables and presents a forecast of what the analysis suggests is ahead in the near term future.

The Model

The key variable is demand pressure—the gap between total demand and supply in the economy. Supply is measured by "potential" or "high employment" output as calculated by the President's Council of Economic Advisers and used by the Federal Reserve Bank of St. Louis. High employment output grows as a result of improved production techniques or increased numbers of productive agents. Historically it has grown on the average by about 3 to 4 percent a year.

The demand for output can be above or below high employment output. But there is a *tendency* for demand to be equated with supply by adjustment in prices. This is demonstrated in stylized way in Figure 1 which shows aggregate supply (high employment output) and aggregate demand as related to the price level. If the economy were operating at price level P_{-1} and real output level X_{-1} with aggregate demand in excess of aggregate supply, the price level would tend to rise to $\bar{P}$ at which point excess demand would be eliminated and supply and demand would be the same. That is an ancient doctrine of economic theory.

It is interesting to look at the historical record of demand pressure[2] and the inflation rate for the U.S. economy as shown in Figure 2. The fact that calculated demand pres-

[2] Demand pressure is defined operationally as the quarterly change in total spending (ΔY) less the real output gap [high employment real output (XF) less actual real output last quarter (X_{-1})]. Rearranging this statement from $\Delta Y - (XF - X_{-1})$ to $(\Delta Y + X_{-1}) - XF$, $\Delta Y + X_{-1}$ can be interpreted as the level of demand for real output at the preceding quarter's price level; XF is the level of supply. Thus, demand ($\Delta Y + X_{-1}$) less supply (XF) is excess demand or demand pressure. The inflation rate is the quarterly change in the GNP deflator at an annual rate.

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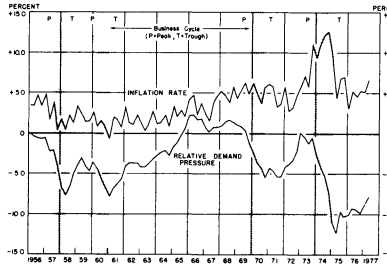
The Trend of Business *(Continued from page S-1)*

FIGURE 2
INFLATION RATE AND DEMAND PRESSURE, UNITED STATES, QUARTERLY, 1956 I — 1977 II



sure has been negative on the average over these years presumably reflects a bias in the measure since if demand pressure had in fact been negative we would have had deflation, not the inflation that was actually observed. One may infer that the true *level* of high employment output grew less than the CEA estimates. If in fact high employment real output grew less than has been assumed since 1970, then demand pressure would have been uniformly higher, bending the demand pressure curve upward after 1970. But even without such an adjustment, the statistical relationship is apparent in Figure 2. Demand pressure as measured was persistently increasing from 1961 through 1965 and remained high through 1968. This was reflected in accelerating inflation. Demand pressure turned down in 1969 through 1971. This was reflected in subsequently decelerating inflation until mid-1972. Except for 1973 I, demand pressure as measured was negative throughout the 1970s. It increased

(Continued on page S-3)

Business Conditions in Ohio and the United States

ITEM	Unit or Index Base Period	OHIO June 1977 (p)	OHIO May 1977 (r)	OHIO Change From Last Month: June 1977 from May 1977	OHIO Change From Last Year: June 1977 from June 1976	OHIO Change From Last Year: 6 months 1977 from 1976	UNITED STATES Unit or Index Base Period	UNITED STATES June 1977 (p)	UNITED STATES May 1977 (r)	UNITED STATES Change From Last Month: June 1977 from May 1977	UNITED STATES Change From Last Year: June 1977 from June 1976	UNITED STATES Change From Last Year: 6 months 1977 from 1976
GENERAL BUSINESS				%	%	%				%	%	%
• Bank Debits[6, 13]	*1967*	379	374	+ 1	+ 25	+ 20	*Bil. $ Ex. NY[6, h]*	n.a.	16,284	n.a.	n.a.	n.a.
Commercial Failures—Number[12]	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.	*Number*	n.a.	n.a.	n.a.	n.a.	n.a.
Commercial Failures—Liabilities[12]	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.	*Thous. Dol.*	n.a.	n.a.	n.a.	n.a.	n.a.
Life Insurance Sales[6]	*1967*	243	242	+ x	+ 12	+ 8	*1967*	266	255	+ 5	+ 14	+ 12
INCOME												
• Total Personal Income[1, 13]	*Mil. Dol.[6, h]*	76,181	75,650	+ 1	+ 12	+ 10	*Bil. Dol.[6, h]*	1,530	1,520	+ 1	+ 11	+ 11
Salaries & Wages Income[7, 13]	*Mil. Dol.[6, h]*	c	c	+ 1	+ 16	+ 10	*Bil. Dol.[6, h]*	987	982	+ x	+ 11	+ 11
Nonagricultural Income[13]		b	b	b	b	b	*Bil. Dol.[6, h]*	1,495	1,484	+ 1	+ 12	+ 11
Employee Earn.—Gross Wkly.: Mfgr.[14, 16]	*Dollars*	286.52	281.05	+ 2	+ 13	+ 12	*Dollars*	227.51	224.07	+ 2	+ 9	+ 9
" " Constr.[14, 15]	*Dollars*	377.75	379.71	— 1	+ 4	+ 5	*Dollars*	295.37	296.25	— x	+ 3	+ 4
Agr. Income (Cash Mktgs.)[10, 17]	*1957–59*	n.a.	n.a.	n.a.	n.a.	n.a.	*1967*	n.a.	182	n.a.	n.a.	n.a.
EMPLOYMENT & UNEMPLOYMENT												
Civilian Labor Force[14, 15]	*Thousands*	4,855.8	4,796.1	+ 1	+ 1	+ x	*Thousands*	99,135	96,193	+ 3	+ 3	+ 3
Civilian Employment[14, 15]	*Thousands*	4,551.7	4,512.5	+ 1	+ 2	+ 2	*Thousands*	91,682	90,042	+ 2	+ 4	+ 3
Nonagricultural Employment[14, 15]	*Thousands*	4,265.1	4,226.7	+ 1	+ 3	+ 2	*Thousands*	87,862	86,564	+ 1	+ 4	+ 3
Mfg. Prod. Employment[7, 15]	*1967*	83	81	+ 2	+ 5	+ 2	*1967*	n.a.	98	n.a.	n.a.	n.a.
• Mfg. Prod. Payrolls[7, 15]	*1967*	165	160	+ 3	+ 17	+ 13	*1967*	n.a.	191	n.a.	n.a.	n.a.
Average Weekly Hours—Mfg. Prod.[7, 15]	*Number*	42.7	42.2	+ 1	+ 2	+ 1	*Number*	40.7	40.3	+ 1	+ 1	+ x
Unemployment, Total—No.[14, 15]	*Thousands*	304.1	284.5	+ 7	— 20	— 17	*Thousands*	7,463	6,151	+ 21	— 3	— 2
Unemployment, Total—Rate[14, 15]	*Percent*	6.3	5.9				*Percent*	7.5	6.4			
Unemployment, Insured[14, 15]	*Thousands*	77.3	85.3	— 9	— 19	— 3	*Thousands*	2,938	3,105	— 5	— 15	— 10
Registered for Work, O.B.E.S.[14]	*Thousands*	399.5	395.5	+ 1	+ 5	+ 12		b	b	b	b	b
Unemployment Compensation Fund[14]	*Mil. Dol.*	199	219	— 9	— 14	— 37		b	b	b	b	b
PRODUCTION												
Gross National Product (Quarterly)[13]		b	b	b	b	b	*Bil. Dol.[6, h]*	1,869	n.a.	n.a.	+ 10	+ 10
Industrial Production[7, 11]	*1967*	c	c	+ 2	+ 6	+ 3	*1967[4]*	139	138	+ 1	+ 7	+ 6
• Steel Production[18, 19]	*Thous. Tons*	1,956	2,081	— 6	— 5	— 8	*Thous. Tons*	11,384	12,201	— 7	— 2	— 4
Electric Power Production[8]	*1967[f]*	n.a.	n.a.	n.a.	n.a.	n.a.	*Mil. KWH*	n.a.	n.a.	n.a.	n.a.	n.a.
Bituminous Coal Production[20]	*Thous. Tons*	4,645	4,635	+ x	+ 10	+ 2	*Thous. Tons*	63,180	61,560	+ 3	+ 8	+ 2
Pig Iron Production[18]	*Thous. Tons*	1,365	1,434	— 5	— 9	— 10	*Thous. Tons*	7,530	7,962	— 5	— 4	— 6
Machine Tools—Shipments[21]		b	b	b	b	b	*Mil. Dol.*	220.25	185.70	+ 19	+ 21	+ 3
Machine Tools—New Orders[21]		b	b	b	b	b	*Mil. Dol.*	252.40	265.95	— 5	+ 47	+ 58
Durable Goods—New Orders[13]		b	b	b	b	b	*Mil. Dol.[4]*	58,522	59,176	— 1	+ 14	+ 16
CONSTRUCTION (Value of Contracts)												
• Total (Seas. Adj.)[6, 22]	*1967[4]*	206	874	— 76	+ 37	+131	*1967[4]*	284	317	— 10	+ 45	+ 26
Total[2, 22]	*1967[f]*	239	1,042	— 77	+ 37	+152	*Mil. Dol.*	15,417	15,932	— 3	+ 41	+ 27
Residential Building[2, 22]	*1967[f]*	299	267	+ 12	+ 39	+ 35	*Mil. Dol.*	5,945	5,660	+ 5	+ 42	+ 40
Nonresidential Building[2, 22]	*1967[f]*	179	172	+ 4	+ 63	+ 39	*Mil. Dol.*	3,063	3,047	+ 1	+ 11	+ 8
Utilities and Non-Building Const.[2, 22]	*1967[f]*	253	5,166	— 95	+ 2	+648	*Mil. Dol.*	6,409	7,225	— 11	+ 62	+ 29
DISTRIBUTION												
Total Retail Sales[2, 13]	*1957–59[4]*	260	262	— 1	+ 10	+ 9	*Mil. Dol.[4]*	59,233	59,247	— x	+ 10	+ 11
Department Store Sales[2, 13]	*1957–59[4]*	227	227	— x	+ 2	+ 1	*Mil. Dol.[4]*	6,061	6,112	— 1	+ 9	+ 12
New Passenger Cars Registered[3, 25]	*1967*	170	157	+ 8	+ 18	+ 15	*No.–47 sts.*	1,041,606	1,007,306	+ 3	+ 11	+ 9
New Trucks Registered[3, 25]	*No.–33 cos.*	6,952	6,875	+ 1	+ 25	+ 23	*No.–47 sts.*	317,959	305,392	+ 4	+ 13	+ 14
Used Cars Registered[3]	*No.–27 cos.*	40,384	42,299	— 5	+ 7	+ 1		b	b	b	b	b
PRICES												
• Cost of Living[15]		b	b	b	b	b	*1967*	182	181	+ 1	+ 7	+ 6
• Wholesale Commodity Prices[18]		b	b	b	b	b	*1967*	194	195	— x	+ 6	+ 6
Sensitive Indus. Commodities[18]		b	b	b	b	b	*1967*	206	218	5	+ 1	+ 11
BANKING AND FINANCE												
• Bank Loans, Large Banks—Total[11]	*Mil. Dol.*	19,413	18,831	+ 3	+ 5	+ 5	*Mil. Dol.*	311,188	307,026	+ 1	+ 8	+ 5
" " Bus. & Agric.[11]	*Mil. Dol.*	7,087	7,041	+ 1	+ 8	+ 3	*Mil. Dol.*	124,998	124,042	+ 1	+ 6	+ 2
Stock Price Index—400 Indust.[24]		b	b	b	b	b	*1941–43 = 10*	109.9	110.7	— 1	— 4	— 1
" " " 40 Utils.[24]		b	b	b	b	b	*1941–43 = 10*	55.2	54.3	+ 2	+ 21	+ 16
" " " 20 Trans.[24]		b	b	b	b	b	*1970 = 10*	14.9	15.5	— 4	n.a.	n.a.
Yield, Corp. AAA Bonds[26]		b	b	b	b	b	*Percent*	8.00	8.17	— 2	— 6	— 4

• Indicates series charted (page S-1). For sources and footnotes, see page S-6.

The Trend of Business

(Continued from page S-2)

substantially in 1972 and 1973, boosted a lot by import price inflation. This was followed by accelerating inflation. Demand pressure as measured decreased substantially in 1974 and 1975; and this was followed by decelerating inflation to about the 5 to 6 percent rate that exists today. Through 1977 II demand pressure in the current recovery has remained very weak *absolutely*. It increased in 1975 and 1976, though at a slower pace than in earlier recoveries in 1958, 1961, or 1971-72.

An inadequacy of this simple supply and demand framework of Figure 1 is that it fails to incorporate inflationary expectations. One would be nonplused to explain the persistence of continuing price increases in years like 1975 and 1976, even if at a slowed rate from earlier, when demand pressure was in fact substantially negative. So

(Continued on page S-4)

Business Conditions in the 8 Largest OHIO CITIES

ITEM	Unit or Index Base Period	June 1977 (p)	May 1977 (r)	Change From Last Year: June 1977 from June 1976	Change From Last Year: 6 months 1977 from 6 months 1976
AKRON				%	%
Number Employed[2]:					
Total[w]	*1967*	91	89	+ 25	+ 6
Manufacturing	"	73	72	+ 57	+ 12
Trade, Serv., & Utils	"	116	114	+ 9	+ 1
Construction	"	60	47	+ 5	+ 5
Payrolls[3]:					
Total[w]	"	159	156	+ 46	+ 16
•Manufacturing	"	130	129	+ 75	+ 21
Trade, Serv., & Utils.	"	219	217	+ 26	+ 12
Construction	"	123	86	+ 16	— x
Emp. Earn.—Gross Wkly.[7]:					
All Industries[w]	$	265.17	263.48	+ 21	+ 15
Manufacturing	"	306.38	303.98	+ 22	+ 17
Trade, Serv., & Utils.	"	201.42	204.36	+ 20	+ 13
Construction	"	410.39	364.79	+ 13	+ 6
Retail Sales[3]	%	c	c	+ 9	+ 4
Auto Titles[3]:					
New Cars	*No.*	n.a.	n.a.	n.a.	n.a.
New Trucks	"	n.a.	n.a.	n.a.	n.a.
Retail Food Prices[15]	*1967*	b	b	b	b
•Bank Debits[3]	*1967*	393	372	+ 35	+ 31
Commercial Failures[12]:					
Failures	*No.*	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967*	167	171	+ 14	+ 4
Value of Bldg. Const.[9]:					
Total	"	320	183	+178	+119
Residential	"	296	201	+134	+114
Nonresidential	"	344	164	+232	+126
Steel Production[10]	*1967*	b	b	b	b
Labor Force Estimates[14]:					
Civilian Labor Force	*Thous.*	240.9	238.7	— x	— x
Civilian Employment	"	226.9	225.1	+ 2	+ 2
Unemployment, Total—No.	"	14.1	13.6	— 28	— 23
Unemployment, Total—Rate	%	5.8	5.7		
CANTON				%	%
Number Employed[2]:					
Total[w]	*1967*	94	93	+ 10	+ x
Manufacturing	"	87	86	+ 1	— 1
Trade, Serv., & Utils	"	109	108	+ 27	— 4
Construction	"	70	70	— 15	— 28
Payrolls[3]:					
Total[w]	"	192	187	+ 24	+ 8
•Manufacturing	"	177	169	+ 16	+ 8
Trade, Serv., & Utils.	"	239	241	+ 49	+ 13
Construction	"	128	129	— 13	— 25
Emp. Earn.—Gross Wkly.[7]:					
All Industries[w]	$	262.88	263.69	+ 15	+ 9
Manufacturing	"	290.16	291.64	+ 15	+ 10
Trade, Serv., & Utils.	"	206.72	205.97	+ 19	+ 9
Construction	"	366.72	371.43	+ 2	+ 4
Retail Sales[3]	%	c	c	+ 7	+ 3
Auto Titles[3]:					
New Cars	*No.*	n.a.	n.a.	n.a.	n.a.
New Trucks	"	n.a.	n.a.	n.a.	n.a.
Retail Food Prices[15]	*1967*	b	b	b	b
•Bank Debits[3]	*1967*	356	349	+ 6	+ 6
Commercial Failures[12]:					
Failures	*No.*	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967*	b	b	b	b
Value of Bldg. Const.[9]:					
Total	"	215	138	+ 31	+ 21
Residential	"	284	242	+ 22	+ 14
Nonresidential	"	131	12	+ 61	+ 38
Steel Production[10]	*1967*	b	b	b	b
Labor Force Estimates[14]:					
Civilian Labor Force	*Thous.*	169.4	168.2	+ 1	+ 1
Civilian Employment	"	158.4	156.6	+ 4	+ 3
Unemployment, Total—No.	"	11.0	11.6	— 26	— 17
Unemployment, Total—Rate	%	6.5	6.9		
CINCINNATI				%	%
Number Employed[2]:					
Total[w]	*1967*	100	94	+ 8	+ 5
Manufacturing	"	77	76	— 1	+ 1
Trade, Serv., & Utils	"	126	114	+ 15	+ 8
Construction	"	71	72	+ 1	— 5
Payrolls[3]:					
Total[w]	"	212	192	+ 19	+ 15
•Manufacturing	"	172	165	+ 11	+ 12
Trade, Serv., & Utils.	"	275	232	+ 27	+ 18
Construction	"	151	157	+ 13	+ 1
Emp. Earn.—Gross Wkly.[7]:					
All Industries[w]	$	241.85	234.76	+ 11	+ 10
Manufacturing	"	304.03	288.84	+ 15	+ 11
Trade, Serv., & Utils.	"	164.44	165.27	+ 4	+ 7
Construction	"	393.68	386.86	+ 16	+ 8
Retail Sales[3]	%	c	c	+ 4	— 1
Auto Titles[3]:					
New Cars	*No.*	6,632	6,501	+ 16	+ 14
New Trucks	"	1,005	1,054	+ 13	+ 25
Retail Food Prices[15]	*1967*	198	198	+ 8	+ 7
•Bank Debits[3]	*1967*	396	445	+ 43	+ 39
Commercial Failures[12]:					
Failures	*No.*	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967*	b	b	b	b
Value of Bldg. Const.[9]:					
Total	"	102	133	— 30	— 1
Residential	"	137	156	+ 47	+ 20
Nonresidential	"	71	112	— 63	— 16
Steel Production[10]	*1967*	99	112	— 3	— 6
Labor Force Estimates[14]:					
Civilian Labor Force	*Thous.*	405.3	401.6	+ 1	+ x
Civilian Employment	"	374.7	373.7	+ 2	+ 1
Unemployment, Total—No.	"	30.6	27.8	— 14	— 11
Unemployment, Total—Rate	%	7.6	6.9		
CLEVELAND				%	%
Number Employed[2]:					
Total[w]	*1967*	92	92	+ 12	+ 2
Manufacturing	"	76	76	+ 1	+ 3
Trade, Serv., & Utils	"	110	110	+ 21	+ 1
Construction	"	63	64	+ 5	— 5
Payrolls[3]:					
Total[w]	"	180	179	+ 25	+ 12
•Manufacturing	"	154	148	+ 16	+ 16
Trade, Serv., & Utils.	"	223	225	+ 38	+ 9
Construction	"	133	146	+ 3	— x
Emp. Earn.—Gross Wkly.[7]:					
All Industries[w]	$	307.03	297.05	+ 18	+ 13
Manufacturing	"	345.42	325.53	+ 20	+ 15
Trade, Serv., & Utils.	"	259.73	255.61	+ 21	+ 11
Construction	"	391.38	421.73	— 2	+ 5
Retail Sales[3]	%	c	c	+ 5	+ 7
Auto Titles[3]:					
New Cars	*No.*	12,428	11,233	+ 14	+ 12
New Trucks	"	1,076	1,103	+ 13	+ 21
Retail Food Prices[15]	*1967*	200	200	+ 7	+ 7
•Bank Debits[3]	*1967*	378	331	+ 27	+ 17
Commercial Failures[12]:					
Failures	*No.*	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967*	b	b	b	b
Value of Bldg. Const.[9]:					
Total	"	104	125	+ 91	+ 30
Residential	"	134	96	+ 58	+ 34
Nonresidential	"	77	151	+186	+ 27
Steel Production[10]	*1967*	140	141	+ 3	— 7
Labor Force Estimates[14]:					
Civilian Labor Force	*Thous.*	752.6	743.4	— x	— x
Civilian Employment	"	707.7	701.8	+ 1	+ 1
Unemployment, Total—No.	"	44.9	41.6	— 17	— 17
Unemployment, Total—Rate	%	6.0	5.6		
COLUMBUS				%	%
Number Employed[2]:					
Total[w]	*1967*	103	104	+ 4	+ 1
Manufacturing	"	80	81	+ 6	+ 8
Trade, Serv., & Utils.	"	122	123	+ 3	— 1
Construction	"	66	56	+ 20	— 6
Payrolls[3]:					
Total[w]	"	203	200	+ 18	+ 11
•Manufacturing	"	155	155	+ 16	+ 18
Trade, Serv., & Utils.	"	257	254	+ 19	+ 8
Construction	"	123	106	+ 27	— 2
Emp. Earn.—Gross Wkly.[7]:					
All Industries[w]	$	231.21	228.94	+ 14	+ 11
Manufacturing	"	286.02	278.39	+ 14	+ 14
Trade, Serv., & Utils.	"	186.84	187.16	+ 16	+ 9
Construction	"	317.76	321.45	+ 7	+ 4
Retail Sales[3]	%	c	c	+ 11	+ 8
Auto Titles[3]:					
New Cars	*No.*	6,384	6,025	+ 19	+ 17
New Trucks	"	1,206	1,264	+ 55	+ 31
Retail Food Prices[15]	*1967*	b	b	b	b
•Bank Debits[3]	*1967*	488	534	+ 21	+ 16
Commercial Failures[12]:					
Failures	*No.*	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967*	b	b	b	b
Value of Bldg. Const.[9]:					
Total	"	186	179	— 29	+ 23
Residential	"	185	211	— 11	+ 34
Nonresidential	"	186	148	— 40	+ 15
Steel Production[10]	*1967*	b	b	b	b
Labor Force Estimates[14]:					
Civilian Labor Force	*Thous.*	432.6	426.0	+ 2	+ 1
Civilian Employment	"	407.7	404.5	+ 3	+ 3
Unemployment, Total—No.	"	24.9	21.5	— 16	— 15
Unemployment, Total—Rate	%	5.8	5.0		
DAYTON				%	%
Number Employed[2]:					
Total[w]	*1967*	102	101	+ 25	+ 8
Manufacturing	"	73	73	+ 4	+ 5
Trade, Serv., & Utils	"	148	146	+ 47	+ 11
Construction	"	77	74	+ 18	+ 9
Payrolls[3]:					
Total[w]	"	181	177	+ 32	+ 11
•Manufacturing	"	146	141	+ 20	+ 16
Trade, Serv., & Utils.	"	262	259	+ 52	+ 3
Construction	"	166	162	+ 28	+ 19
Emp. Earn.—Gross Wkly.[7]:					
All Industries[w]	$	314.71	302.89	+ 18	+ 8
Manufacturing	"	362.22	344.22	+ 19	+ 12
Trade, Serv., & Utils.	"	237.71	232.76	+ 17	— x
Construction	"	386.28	390.78	+ 7	+ 8
Retail Sales[3]	%	c	c	+ 8	+ 4
Auto Titles[3]:					
New Cars	*No.*	3,931	3,728	+ 15	+ 20
New Trucks	"	643	673	+ 6	+ 19
Retail Food Prices[15]	*1967*	b	b	b	b
•Bank Debits[3]	*1967*	296	284	+ 15	+ 17
Commercial Failures[12]:					
Failures	*No.*	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967*	b	b	b	b
Value of Bldg. Const.[9]:					
Total	"	277	314	+ 37	+ 69
Residential	"	354	249	+216	+174
Nonresidential	"	181	396	— 43	+ 1
Steel Production[10]	*1967*	b	b	b	b
Labor Force Estimates[14]:					
Civilian Labor Force	*Thous.*	270.3	266.3	+ 1	+ 1
Civilian Employment	"	255.3	252.6	+ 3	+ 3
Unemployment, Total—No.	"	15.0	13.7	— 21	— 19
Unemployment, Total—Rate	%	5.6	5.1		
TOLEDO				%	%
Number Employed[2]:					
Total[w]	*1967*	103	103	+ 9	+ 1
Manufacturing	"	91	90	+ 1	— 1
Trade, Serv., & Utils	"	114	115	+ 17	+ 4
Construction	"	100	104	— 6	— 9
Payrolls[3]:					
Total[w]	"	215	210	+ 21	+ 10
•Manufacturing	"	177	172	+ 14	+ 7
Trade, Serv., & Utils.	"	261	258	+ 36	+ 15
Construction	"	237	225	— 4	— 4
Emp. Earn.—Gross Wkly.[7]:					
All Industries[w]	$	283.50	272.35	+ 15	+ 9
Manufacturing	"	317.61	309.69	+ 14	+ 9
Trade, Serv., & Utils.	"	232.30	221.14	+ 18	+ 9
Construction	"	449.95	413.22	+ 4	+ 9
Retail Sales[3]	%	c	c	+ 4	+ 5
Auto Titles[3]:					
New Cars	*No.*	n.a.	n.a.	n.a.	n.a.
New Trucks	"	n.a.	n.a.	n.a.	n.a.
Retail Food Prices[15]	*1967*	b	b	b	b
•Bank Debits[3]	*1967*	265	273	+ 4	+ 12
Commercial Failures[12]:					
Failures	*No.*	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967*	157	159	— 2	+ 5
Value of Bldg. Const.[9]:					
Total	"	131	288	+ 2	+ 40
Residential	"	279	228	+ 39	+ 34
Nonresidential	"	53	319	— 42	+ 47
Steel Production[10]	*1967*	b	b	b	b
Labor Force Estimates[14]:					
Civilian Labor Force	*Thous.*	236.1	233.6	+ 2	+ 2
Civilian Employment	"	220.0	218.4	+ 4	+ 4
Unemployment, Total—No.	"	16.1	15.2	— 14	— 12
Unemployment, Total—Rate	%	6.8	6.5		
YOUNGSTOWN				%	%
Number Employed[2]:					
Total[w]	*1967*	97	97	+ 10	+ 1
Manufacturing	"	79	79	+ 5	+ 3
Trade, Serv., & Utils.	"	123	123	+ 16	— 1
Construction	"	63	70	— 7	+ 18
Payrolls[3]:					
Total[w]	"	191	191	+ 24	+ 11
•Manufacturing	"	170	169	+ 15	+ 10
Trade, Serv., & Utils.	"	245	239	+ 44	+ 10
Construction	"	130	158	— 7	+ 29
Emp. Earn.—Gross Wkly.[7]:					
All Industries[w]	$	267.43	264.16	+ 20	+ 13
Manufacturing	"	311.61	307.36	+ 20	+ 15
Trade, Serv., & Utils.	"	197.39	191.89	+ 26	+ 11
Construction	"	393.60	414.41	+ 4	+ 10
Retail Sales[3]	%	c	c	+ 6	+ 8
Auto Titles[3]:					
New Cars	*No.*	2,163	2,262	+ 17	+ 14
New Trucks	"	n.a.	282	n.a.	n.a.
Retail Food Prices[15]	*1967*	b	b	b	b
•Bank Debits[3]	*1967*	250	241	+ 6	+ 6
Commercial Failures[12]:					
Failures	*No.*	n.a.	n.a.	n.a.	n.a.
Liabilities	*Thous. $*	n.a.	n.a.	n.a.	n.a.
Indus. Power Consump.[4]	*1967*	119	128	+ 7	+ 5
Value of Bldg. Const.[9]:					
Total	"	334	279	+ 92	+ 93
Residential	"	407	437	+ 55	+ 97
Nonresidential	"	247	93	+257	+ 82
Steel Production[10]	*1967*	99	99	— 5	— 8
Labor Force Estimates[14]:					
Civilian Labor Force	*Thous.*	132.4	130.1	— 1	— 2
Civilian Employment	"	122.4	121.1	+ 2	+ 1
Unemployment, Total—No.	"	10.0	8.9	— 28	— 24
Unemployment, Total—Rate	%	7.5	6.9		

NOTE: All data are for county areas except bank debits and commercial failures, which are for areas within city limits. The indexes of number employed and payrolls and the employee weekly earnings are based on data for production workers in manufacturing, construction workers in contract construction, and nonsupervisory employees in other categories which exclude agriculture, government, education, and public institutions.

• Indicates series charted (page S-3). For sources and footnotes, see page S-6.

S-4

The Trend of Business

(Continued from page S-3)

Figure 1 needs to be interpreted not only in a dynamic way to reflect real growth in high employment output, but also in an expectational way to reflect that prices can continue to rise or fall on the basis of inflationary expectations. Accordingly, a point such as the intersection of supply and demand in Figure 1 where the price level is $\bar{P}$ and output XF must be interpreted as one where demand is increasing at the rate of growth of high employment output *and* actual and expected inflation are equal. Changes in demand pressure are considered to affect inflation rates only marginally beyond the built-in expected inflation rate. Thus the inflation rate in the short run is not solely a function of demand pressure.

One aggregate supply factor that merits special mention is import prices. Just as a reduction in the labor force or the supply of any productive agent would reduce potential output and increase the price level, so would an increase in the cost of imports used in the productive process. It seems clear that the oil import price boost in 1973-74 was precisely of this kind, simultaneously jacking up prices and reducing the supply of real output in the aggregate.

Spending

The next step is to discuss the factors that critically affect aggregate demand over time. Three are enumerated:

ΔM —Changes in the quantity of money (currency and demand deposits held by the public).

ΔEF—Changes in high employment federal government spending on goods and services.

ΔEX—Changes in exports.

Each has been found to be an important determinate of changes in total spending (ΔY) not only for the United States[3] but other countries too.[4] The first two are measures of monetary and fiscal policy to which the economy would be expected to react. The third, exports, is also such a factor but is determined by foreign demands for U.S. goods and services which would reflect comparative prices inclusive of shipping costs, tariffs, and exchange rates. In each case the lags in the estimated effects of these variables on total spending are quite short, about a year to a year and a half for money and government spending but only 6 months for exports. Indeed exports are estimated to have only a transitory effect on U.S. spending. The estimated spending changes captured the actual speed-up in spending in 1972-73, the collapse in 1974-75, and recovery in 1975-76. Accelerating and decelerating monetary growth was the principal explanatory factor; but government spending was also a significant factor.

What the future holds for the effect of these variables is discussed in the concluding section of this article. But with high and perhaps accelerating growth in money and government spending, the prognosis in a nutshell is expansionary for the near term future but not quite enough to keep pace with growth in potential output.

[3] Multiple regression equation, third degree polynomials for ΔM and ΔEF, first degree polynominal for ΔEX:

$$\Delta Y_t = \underset{(-0.02)}{-0.03} + \sum_{j=0}^{4} \alpha_j \Delta M_{t-j} + \sum_{j=0}^{5} \beta_j \Delta EF_{t-j} + \sum_{j=0}^{1} \gamma_j \Delta EX_{t-j}$$

α_0	= 2.75 (3.37)	β_0	= 0.25 (1.03)	γ_0	= 0.87 (2.69)
α_1	= 0.57 (0.80)	β_1	= 0.37 (1.95)	γ_1	= -0.64 (-2.00)
α_2	= 0.93 (1.99)	β_2	= 0.45 (2.58)	$\Sigma\gamma_j$	= 0.23 (-0.58)
α_3	= 1.32 (1.95)	β_3	= 0.42 (2.33)		
α_4	= -0.77 (-0.90)	β_4	= 0.25 (1.27)		
$\Sigma\alpha_j$	= 4.81 (4.76)	β_5	= -0.10 (-0.41)		
		$\Sigma\beta_j$	= 1.63 (4.03)		

Sample period: 1956 I – 1977 II
Test statistics:
Coefficient of determination (R^2) = 0.72
Standard error of estimate (SE) = 8.20
Durbin-Watson statistic (DW) = 1.80
T-values are recorded in parentheses beside estimated regression coefficients.

[4] As reported in the authors' "International Prices and Exports in 'St. Louis' Models of Canada, France, Germany, Italy, the United Kingdom, and the United States," presented at the Konstanzer Seminar on Monetary Theory and Policy, June 1977.

Inflation

The next step is to discuss the basic factors that affect inflation. The statistical relationship suggested from the discussion of Figure 1 is that inflation is a function of demand pressure which would increase the actual relative to the anticipated inflation rate. Also a factor would be the import inflation rate which in itself would contribute to inflation unless offset by domestic price deflation. Thus, the factors that critically affect the inflation rate are the following:

D—demand pressure defined as $\Delta Y - (XF - X_{-1})$.

$\dot{p}$ —observed domestic inflation rates.

$\dot{w}$—observed import inflation rates.

These variables are used to calculate an anticipated inflation rate by taking current and past values of the variables available in some particular quarter, say 1977 II, and using estimated weights to calculate the expected effects of the explanatory variables on inflation.[5] The weights were estimated by relating actual inflation rates to *past* values of demand pressure, import inflation, and domestic inflation

[5] Multiple regression equation, third degree polynominals:

$$\dot{p}_t = \underset{(5.56)}{0.00575} + \sum_{j=0}^{3} \alpha_j (D/XF)_{t-j-1} + \sum_{j=0}^{16} \pi_j \dot{p}_{t-j-1} + \sum_{j=0}^{6} \omega_j \dot{w}_{t-j-1}$$

α_0	= 0.068 (1.54)	π_0	= -0.129 (-1.16)	ω_0	= 0.048 (3.74)
α_1	= -0.052 (-0.80)	π_1	= -0.050 (-0.73)	ω_1	= 0.018 (2.23)
α_2	= 0.123 (1.99)	π_2	= 0.011 (0.28)	ω_2	= 0.012 (1.54)
α_3	= -0.002 (-0.04)	π_3	= 0.055 (2.07)	ω_3	= 0.020 (3.43)
$\Sigma\alpha_j$	= 0.138 (5.73)	π_4	= 0.085 (3.22)	ω_4	= 0.031 (4.10)
		π_5	= 0.103 (3.50)	ω_5	= 0.034 (4.41)
		π_6	= 0.110 (3.60)	ω_6	= 0.021 (1.29)
		π_7	= 0.110 (3.64)	$\Sigma\omega_j$	= 0.184 (4.37)
		π_8	= 0.104 (3.54)		
		π_9	= 0.094 (3.23)		
		π_{10}	= 0.083 (2.78)		
		π_{11}	= 0.072 (2.36)		
		π_{12}	= 0.064 (2.12)		
		π_{13}	= 0.061 (2.14)		
		π_{14}	= 0.066 (2.23)		
		π_{15}	= 0.079 (1.97)		
		π_{16}	= 0.104 (1.59)		
		$\Sigma\pi_j$	= 1.022 (7.73)		

Sample Period: 1956 I - 1977 II
Test statistics:
Coefficient of determination (R^2) = 0.91
Standard error of estimate (SE) = 0.0031
Durbin-Watson statistic (DW) = 1.98
T-values are recorded in parentheses beside estimated regression coefficents.

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rates. The idea is that inflationary expectations if derived rationally would use available and relevant information efficiently in projecting the future course of prices. The results indicated that demand pressure had a cyclical effect on measured anticipated prices and also that import prices importantly contributed to inflation not only after the burst of inflation in the 1970s, but before. And most importantly, there was a finding of an extremely long lag in the adjustment of the inflation rate to shocks from whatever source.

Output

It is important to note that this model of the U.S. economy is "recursive" which means that changes in spending affect inflation but inflation does not affect total spending. An interesting implication of this is that increases in the inflation rate, say as the result of an increase in import prices, will, in the short run, have the effect of *reducing* real output, at least until other prices adjust relatively. Indeed it is precisely this characteristic of the model that made it superior to its large structural model counterparts in estimating the effect of oil import prices on U.S. real output in 1974 and 1975. In other words, the model is structured so that short run increases in the inflation rate are reflected in declines in real output given the level of spending. Essentially the model specifies the dollar value of spending as insensitive to prices, being determined solely by exports and the stance of monetary and fiscal policy. Since policy is assumed to be relatively autonomous, the economy through price adjustment must react to policy rather than the other way around. Because the model makes prices the chief adjusting variable and, as it turns out, price adjustments appear to evolve so slowly, one gets the result that *autonomous* changes in spending or in prices from whatever source will in the short run mainly be reflected in output and only in the long run in prices.

FIGURE 3
CHANGES IN ACTUAL AND ESTIMATED REAL OUTPUT UNITED STATES, QUARTERLY, 1956 I — 1977 II, (1972 Base)

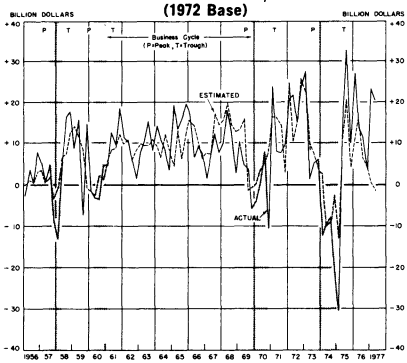
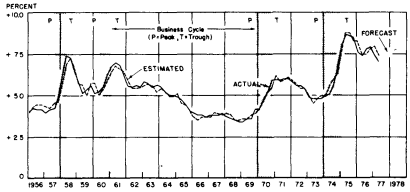


FIGURE 4
ACTUAL AND ESTIMATED UNEMPLOYMENT RATE, UNITED STATES, QUARTERLY, 1956 I — 1977 II AND FORECAST 1977 III — 1978 II



Output estimates are made by the following procedure. Anticipated inflation and its components are translated into dollar terms by multiplying by lagged real output. Then the output estimate is derived from a definition. By definition the dollar amount of change in spending ($\triangle Y$) consists of a part due to real output change ($\triangle X$) and a part due to inflation ($\triangle P$). Thus,

$$\triangle Y = \triangle X + \triangle P \quad or \quad \triangle X = \triangle Y - \triangle P .$$

This identity permits one to estimate real output changes indirectly from the estimates of spending change and the GNP change due to inflation. Unlike the large structural models that directly estimate real output, this model estimates spending and inflation directly and real output only indirectly. Figure 3 shows actual and estimated changes in real output. All told about half of the quarterly *changes* in real output were explained by the model which translates into an error of well under 1 percent of the level of real output. Though the estimates tracked actual output quite well over ordinary expansion or contraction quarters, they were uniformly too high at cyclical troughs in 1958, 1960, 1970, and especially in 1975.

Figure 4 shows the actual and estimated unemployment rate. It is estimated on the basis of a so-called "Okun's Law" relationship named after Brookings Institution economist, Arthur Okun, the Chairman of the Council of Economic Advisers under President Johnson, who publicized it. The unemployment rate (U) is related to the estimated percentage real output gap ($\widehat{G}$) and past values of the gap. $\widehat{G}$ is equal to the difference between the high employment real output (XF) and estimated real output ($\widehat{X}$) divided by XF.[6] The relationship fits the U.S. data very well even though there is reason to suspect that such factors as the altered structure of the U.S. labor force and unemployment

[6] Multiple regression equation, adjusted for serial correlation:

$$U_t = \underset{(29.05)}{3.93} + \underset{(1.63)}{0.089}\,\widehat{G}_t + \underset{(2.51)}{0.168}\,G_{t-1} + \underset{(2.60)}{0.086}\,G_{t-2}$$

($\widehat{G}$ is the estimated value of G.)

Sample Period: 1956 I - 1977 II
Test statistics:
Coefficient of determination $(R^2) = 0.96$
Standard error of estimate $(SE) = 0.27$
Durbin-Watson statistic $(DW) = 1.62$
First order serial correlation coefficient $(\rho) = 0.689$
T-values are recorded in parentheses below regression coefficients.

(Continued on page 5-6)

The Trend of Business *(Continued from page S-5)*

compensation have substantially increased the expected average rate of unemployment in the U.S. economy in the last decade. The unemployment relation shows that unemployment in the U.S. economy is very sensitive over the business cycle with each 1 percent decline in the real output gap being reflected in a 0.34 percent decline in the unemployment percentage.

Forecasts

The model discussed to this point was estimated for data through 1977 II. Forecasts are the most tenuous but perhaps the most important part of the analysis. Most economists are savvy enough to make forecasts only in the privacy of their own clients' offices, but not all, as we are about to demonstrate.

The assumptions on which the forecasts are based are the following:

- The structure of the economy remains the same as for the sample period 1956 I-1977 II.
- Import prices increase at about 4 percent and exports increase about 10 percent by mid-year 1978, an assumption based on expected declining softness in foreign economies.
- High employment output expands at about 3.6 percent.
- High employment federal government spending expands at 13 percent in fiscal year 1978, about what the administration has budgeted.
- Money expands at 6½ percent—the upper bound of the growth announced by Chairman Arthur Burns to the House Banking Committee at the end of July.

Table 1 records our forecasts based on these assumptions as quantified in Table 2. The forecasts are definitely less optimistic than many others that have been made public. The inflation rate is forecast to remain at about the current level, rising in the fourth quarter but then declining gradually in the remainder of the fiscal year. The model calculates about a 7 percent inflation rate for fiscal 1978.

GNP growth is forecast at a nearly 10 percent annual rate with some slackening in increases in the last half of 1977, but then a speed-up again in the first half of 1978, as more expansionary policies, particularly fiscal policy works through the economy. Forecast slackening in the last half of 1977 is the result of a comparatively nonexpansionary stance of monetary and fiscal policy in most of fiscal year 1977, as recorded in Table 2, which according to the model affects spending with a lag. Also an important explanatory factor is the comparatively high rate of import price inflation recorded in 1976 III and 1977 I which also affects the economy with a lag. Finally the very weak export showing during the winter of 1976/77 did not help the situation any. Thus, though the stance of both monetary and fiscal policy is projected as being expansionary for the long run, the economy of our model is largely bound by past events with only limited opportunity for current policy to influence current economic performance. As a corollary there is a risk that attempts to improve current performance in a hurry would only worsen the future situation.

TABLE 1
QUARTERLY GNP FORECASTS BASED ON 6½ PERCENT MONEY GROWTH AND 13 PERCENT HIGH EMPLOYMENT GOVERNMENT SPENDING GROWTH, 1977 III — 1978 II

	Actual	Forecast			
	1977	1977		1978	
Indicator	II	III	IV	I	II
	Billions of Current Dollars				
GNP Change, Total	58.2	43	42	50	49
Due to Past and Projected Changes in:					
Money		25	24	28	24
High Employment Government Spending		17	17	21	23
Exports and Other Factors		1	1	1	2
	Billions of Constant (1972) Dollars				
Real GNP Change	20.6	5	5	11	10
GNP Change Due to Inflation, Total	37.6	37	37	39	38
Due to:					
Built-in Inflation		38	38	39	39
Import Prices		16	15	14	14
Demand Pressure		— 17	— 16	— 14	— 15
	Percent				
GNP Deflator Annual Rate of Change (1972 Base)	6.62	5.1	7.5	7.1	6.7
Real Output Gap	10.02	10.5	10.9	10.9	11.0
Unemployment Rate	7.0	7.5	7.5	7.6	7.7

The most disheartening part of the forecast involves real output and the unemployment rate. Since real output potential is assumed to grow at a 3.6 percent annual rate, unless demand grows as fast there would be an associated increase in excess capacity and unemployment. That is what the model predicts: a gradual build-up in the real output gap from 10 percent in 1977 II to 11 percent in 1978 II, and correspondingly an increase in the unemployment rate from 7.0 percent in 1977 II to 7.7 percent in 1978 II. The model does not forecast a recession technically because real output growth is not predicted to decline, but it does forecast a marked pause in the expansion.

TABLE 2
QUARTERLY CHANGES IN EXPLANATORY VARIABLES, ACTUAL, FISCAL YEAR 1977, AND PROJECTED, FISCAL YEAR 1978

	Actual Change FY 1977				Projected Change FY 1978			
	1976		1977		1977		1978	
Variable	III	IV	I	II	III	IV	I	II
	Billions of Current Dollars							
ΔM (Change in Money)	3.1	5.0	3.3	6.7	5.1	5.2	5.2	5.4
ΔEF (Change in High Employment Government Spending)	12.3	9.7	4.0	10.7	16.2	14.9	14.6	9.1
ΔEX (Change in Exports	6.0	0.1	1.9	4.9	4.3	4.5	4.5	4.7
	Billions of Constant (1972) Dollars							
ΔXF (Change in High Employment Real Output)	13.1	12.7	12.8	12.9	13.0	13.1	13.3	13.4
	Percent							
ẇ (Change in Import Deflator)	17.2	1.7	15.9	8.5	3.7	4.2	3.9	3.8

Conclusions

What is such a forecast worth? Probably what you've paid for it in reading through the article. Making a forecast is a very chancy business. A lot could go wrong.

First, reduced form models such as employed in making the forecast have been criticized by exponents of structural models as being very apt to yield biased estimates. Not everyone agrees; but the critics may well be right.

Second, the specification assumes that variables such as money, government spending, exports, import prices, and potential output are autonomous, i.e., not influenced in the short run by the pace of economic activity. This could also bias the results.

Third, we've taken monetary and fiscal policy makers more or less at their word in terms of the stance of policy in the current fiscal year. If money growth and government spending growth turn out to be much different than we have assumed the results could be very different. For example, if the monetary growth rate is set at the 4 percent minimum of the Federal Reserve 4-6½ percent targeted range, the model forecasts virtually no real growth compared with 2½ percent real growth if monetary growth is 6½ percent.

Fourth, in addition to monetary and fiscal policy assumptions, we've had to make assumptions about exports and import prices. If other economies speed up their expansions, export growth could have at least a temporary expansionary influence on the U.S. economy. Similarly if by some good fortune import price inflation were eliminated, real output would get a substantial boost.

Fifth, and perhaps most unnerving to the reader, we are very suspicious about a key coefficient of the model. It is the estimated extremely small and slow effect of demand pressure on prices. It is our belief—but this requires further testing—that the CEA potential output series is overstated, particularly for the 1970s. One implication is that demand pressure has in fact not been so negative but perhaps even positive in the current expansion. Another implication is that demand pressure appropriately measured would have a stronger effect on price level adjustments than indicated by our estimates. A third implication is that slow real economic growth in the current expansion is not so much a reflection of built-in inflation and inadequate aggregate demand but rather is a reflection of supply factors: higher costs of key raw materials, slowed productivity growth, a higher natural rate of unemployment because of demographic factors as well as higher minimum wage and government transfer payment disincentives to work and so on.

Let the buyer beware! But for what it is worth, our model yields a very pessimistic forecast of the course of the economy over the current fiscal year.

To conclude, the analysis suggests that in the remainder of the calendar year 1977 little if any real growth is expected but that real growth will pick up in the first half of 1978, the same pattern as was observed in fiscal year 1977.

The model and forecasts based on it offer no ready suggestions for alternative policies to those that appear to be in the works. Speeding monetary growth or government spending could likely increase real output and cut the unemployment rate in the short run but only at the cost of a higher inflation rate later. The interpretation that we put on the situation is that the economy is still paying for mismanagement and bad luck in 1972 and 1973 which set the stage for a long lasting inflation from which it apparently takes a very long time to be extricated.

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Ohio Retail Sales Trends

June Sales of Ohio Retailers did not move upward from the previous month, but were 1 percent lower than sales in May, both before and after seasonal adjustment. Sales were 10 percent ahead of June last year.

In the First Half of 1977, Ohio retail sales averaged 9 percent above first-half 1976 levels.

By Kind of Business, first-half sales were ahead of last year in most of the retail lines covered by the OSU Indexes. Those retailers with the largest increases included drug stores (+20 percent), lumber-building materials dealers (+17 percent), motor vehicle dealers (+16 percent), and heating-plumbing and electrical supply stores (+13 percent). First-half declines, experienced by 7 kinds of business, were less than 10 percent. *—Linda L. Morris*

INDEXES OF OHIO RETAIL SALES

KIND OF BUSINESS	INDEX (1967–59=100) Unadjusted June 1977 (p)	Unadjusted May 1977 (r)	Seas. Adj. June 1977 (p)	CHANGE June 1977 from May 1977[a]	June 1977 from June 1976	6 months 1977 from 1976
				%	%	%
Total Retail Stores[2, b]	**266**	**270**	**260**	**— 1**	**+10**	**+ 9**
Grocery Stores	272	259	269	+ 4	+13	+ 6
Other Food Stores	303	297	299	+ 4	+10	+11
General Stores (With Food)	153	150	143	— 2	— 8	— 7
Department Stores	201	211	227	+ x	+ 2	+ 1
Other General Merchandise	201	210	206	— 3	+ 2	+ 8
Men's Clothing–Furns. Stores	127	109	130	+ 7	— 3	+ 1
Family Clothing Stores	109	140	124	—18	— 6	— 1
Women's Ready-to-Wear Stores	128	140	154	+ 2	+ 1	— x
Shoe Stores	113	112	109	+ 1	— 6	— 3
Furniture Stores	189	171	182	+15	+ 9	+ 2
Household Appl.-TV-Rdio Strs.	159	127	162	+16	—20	— 9
Home Furnishings Stores	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Motor Vehicle Dealers	452	439	395	+ 2	+22	+16
Other Automotive	168	163	147	+ x	+16	+ 8
Filling Stations	300	343	292	—13	+23	+12
Lumber–Bldg. Matls. Dealers	322	272	267	+ 9	+36	+17
Paint, Glass & Wallpaper Strs.	194	170	138	— 1	+11	+ 7
Heat.–Plumb. & Elec. Sup. Strs.	197	177	196	— 4	+15	+13
Hardware Stores	246	240	217	+ 4	+12	+10
Farm Equipment Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Eating and Drinking Places	171	167	170	+ 5	+ 1	— 2
Drug Stores	189	228	195	—15	+ 3	+20
Jewelry Stores	164	150	171	+ 3	+11	+ 3
Florists	117	180	108	— 5	— 2	+ 3
Fuel Dealers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hay–Feed, Farm & Grdn. Strs.	291	400	317	—10	—15	+ 8
State Liquor Stores	142	139	153	+ x	+ 3	— 1

For source and footnotes, see page S-6.

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Number Employed, Payrolls, and Man-Hours in Ohio Industry

INDUSTRIAL GROUP	NUMBER EMPLOYED[7]					PAYROLLS[7]					MAN-HOURS[7]				
	INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE			INDEX (1967 = 100)		CHANGE		
	June 1977 (p)	May 1977 (r)	June 1977 from May 1977	June 1977 from June 1976	6 months 1977 from 1976	June 1977 (p)	May 1977 (r)	June 1977 from May 1977	June 1977 from June 1976	6 months 1977 from 1976	June 1977 (p)	May 1977 (r)	June 1977 from May 1977	June 1977 from June 1976	6 months 1977 from 1976
			%	%	%			%	%	%			%	%	%
Total[w] (2,052)[a]	**91**	**90**	+ 1	+ 5	+ 2	175	171	+ 3	+ 16	+ 10	**90**	**87**	+ 3	+ 7	+ 2
All Manufacturing[w] (1,080)	**83**	**81**	+ 2	+ 5	+ 2	165	160	+ 3	+ 17	+ 13	**80**	**78**	+ 2	+ 6	+ 3
Chemicals (55)	98	97	+ 1	+ 6	+ 1	183	179	+ 2	+ 15	+ 7	95	93	+ 2	+ 9	+ 1
Food Products (83)	84	82	+ 2	+ 1	+ 3	167	164	+ 2	+ 6	+ 10	76	74	+ 2	+ 1	+ 4
Bakery	79	78	+ 1	— 2	— 2	145	143	+ 1	+ 4	+ 5	76	75	+ 1	— 3	— 3
Miscellaneous	84	82	+ 2	+ 1	+ 4	170	166	+ 2	+ 7	+ 11	76	74	+ 3	+ 2	+ 5
Lumber Products (37)	102	91	+ 12	+ 10	+ 6	172	149	+ 15	+ 23	+ 21	94	83	+ 13	+ 11	+ 9
Furniture	113	97	+ 16	+ 16	+ 7	189	158	+ 20	+ 30	+ 24	109	93	+ 17	+ 17	+ 11
Miscellaneous	83	83	+ x	— 3	+ 4	143	140	+ 3	+ 5	+ 16	73	71	+ 3	— 3	+ 6
Machinery (254)	76	75	+ 1	+ 2	+ 1	136	135	+ 1	+ 11	+ 10	73	72	+ 1	+ 2	+ 1
Elec. Mach., Apparatus and Supplies	85	85	+ 1	+ 4	+ 4	164	160	+ 2	+ 16	+ 15	83	81	+ 2	+ 4	+ 3
Machine Tools	60	60	— x	— 3	— 4	109	108	+ 1	+ 7	+ 7	61	61	— x	— 2	— 1
Agricultural Equipment	47	47	+ 1	— 6	— 12	89	89	— x	+ 6	— 4	54	54	— x	— 1	— 11
Special Machinery and Appliances	71	71	+ 1	+ 1	+ x	118	118	— x	+ 6	+ 6	67	66	+ x	+ x	— 1
Metal Products (276)	91	90	+ 1	+ 3	+ 3	185	179	+ 3	+ 14	+ 13	87	85	+ 2	+ 4	+ 3
Foundry Products and Drop Forgings	106	103	+ 3	+ 8	+ 4	232	216	+ 7	+ 16	+ 17	93	88	+ 6	+ 8	+ 6
Pipes, Valves, and Plumbers' Supplies	67	65	+ 4	+ 1	— 3	142	138	+ 4	+ 6	— 5	77	75	+ 3	— 2	— 13
Screw Machine Products and Hdwe.	86	87	— 1	+ 4	+ 6	163	164	— 1	+ 10	+ 15	92	92	— 1	+ 6	+ 9
Sheet Metal Work	99	98	+ x	+ 8	+ 10	218	205	+ 6	+ 23	+ 21	95	92	+ 4	+ 10	+ 10
Steel Works and Rolling Mills	85	84	+ 1	— 1	+ 1	165	163	+ 1	+ 10	+ 8	82	81	+ 1	— 1	— 1
Stoves and Furnaces	119	117	+ 2	+ 21	+ 16	201	187	+ 7	+ 30	+ 17	130	121	+ 7	+ 21	+ 10
Miscellaneous	86	86	+ x	+ 1	+ 2	165	160	+ 3	+ 12	+ 12	76	75	+ 1	+ 4	+ 3
Paper and Printing (124)	69	68	+ 2	— 2	— 3	149	142	+ 5	+ 9	+ 6	68	66	+ 3	+ x	— 1
Paper and Pulp	50	49	+ 1	— 9	— 10	137	131	+ 4	+ 4	+ 1	45	45	+ 2	— 6	— 7
Printing and Publishing	86	85	+ 1	— 4	— 5	164	161	+ 2	— x	+ 1	78	78	— x	— 7	— 6
Miscellaneous	69	68	+ 2	+ 2	+ 1	143	134	+ 7	+ 15	+ 10	73	70	+ 4	+ 6	+ 3
Rubber Products (49)	81	80	+ 1	+ 47	+ 16	168	163	+ 4	+ 71	+ 30	77	75	+ 2	+ 49	+ 16
Tires and Tubes	67	67	+ x	+185	+ 26	119	118	+ 1	+243	+ 42	50	50	+ 1	+182	+ 25
Miscellaneous	88	86	+ 2	+ 16	+ 9	207	196	+ 6	+ 31	+ 22	99	96	+ 3	+ 18	+ 10
Stone, Clay, and Glass Products (77)	81	80	+ 1	+ 2	— 2	167	161	+ 3	+ 11	+ 9	89	88	+ 2	+ 3	— 1
Brick and Tile	61	59	+ 3	+ 19	+ 6	103	99	+ 5	+ 35	+ 15	61	60	+ 1	+ 25	+ 6
Glass	93	93	— 1	— 4	— 4	175	174	+ x	+ 2	+ 6	94	94	— x	— 4	— 3
Vitreous & Semi-vit. China & Pottery	59	56	+ 5	+ x	— 5	141	135	+ 4	+ 10	+ 5	93	90	+ 3	— x	— 6
Miscellaneous	84	82	+ 3	+ 10	+ 4	187	172	+ 9	+ 27	+ 18	91	86	+ 6	+ 14	+ 6
Textiles (28)	76	75	+ 1	— 6	— 5	95	94	+ 2	— 8	— 9	72	72	— x	— 14	+ 14
Men's Clothing	88	86	+ 1	— x	— 2	91	89	+ 2	— 17	— 21	69	71	— 2	— 19	— 21
Miscellaneous	70	69	+ 1	— 10	— 7	103	101	+ 1	+ x	+ x	74	74	+ 1	— 11	— 10
Vehicles (48)	86	83	+ 4	+ 6	+ 3	201	190	+ 6	+ 26	+ 21	87	83	+ 5	+ 12	+ 8
Autos and Parts	99	97	+ 2	+ 5	+ 4	240	228	+ 5	+ 26	+ 22	101	96	+ 4	+ 12	+ 9
Cars, Electric and Steam Railway	82	82	+ x	+ 19	+ 11	153	153	+ x	+ 36	+ 21	76	76	+ x	+ 28	+ 14
Miscellaneous	56	45	+ 26	+ 10	— 3	100	84	+ 20	+ 21	+ 11	54	45	+ 21	+ 10	+ 1
Miscellaneous Manufacturing (49)	71	70	+ 1	+ 1	— 3	126	125	+ 1	+ 13	+ 8	66	65	+ 1	+ 2	— 4
Total Trade, Service, and Utilities[w] (622)	**104**	**103**	+ 1	+ 5	+ 1	197	194	+ 1	+ 15	+ 8	**107**	**103**	+ 4	+ 7	+ 1
Service (173)	120	117	+ 2	+ 2	+ x	210	205	+ 3	+ 8	+ 5	134	124	+ 8	+ 6	+ 3
Trade, Retail and Wholesale (345)	94	94	— x	+ x	+ x	177	176	+ 1	+ 7	+ 7	94	92	+ 1	+ 1	— x
Transportation & Public Utilities (104)	107	107	+ x	+ 35	+ 5	232	231	+ x	+ 53	+ 13	104	103	+ x	+ 40	+ 3
Construction (320)	**69**	**68**	+ 2	+ 7	— x	148	147	+ 1	+ 11	+ 5	**61**	**61**	— x	+ 7	+ x
Mines and Quarries (30)	**131**	**127**	+ 3	+ 2	+ 4	209	162	+ 29	+ 27	+ 14	**74**	**59**	+ 26	+ 17	+ 4

Indexes of number employed and of payrolls are based on the employment of 490,001 persons (production workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in other categories) in 2,052 firms; indexes of man-hours, on the employment of 480,098 production workers and nonsupervisory employees in 1,990 firms. Figures in parentheses show number of firms reporting employment and payrolls. In some cases fewer firms report man-hours. Data do not include agriculture, government, education, or public institutions. For sources and footnotes, see below.

FOOTNOTES FOR BULLETIN TABLES AND CHARTS

[1]Change in number of failures: [a]Figures in parentheses show number of firms reporting this month; [n.a.]Current data not available; [b]Comparable data not available; [c]Only percentage of change available: [d]Adjusted for seasonal change; [f]Adjusted for number of working days; [4]Four weeks average; [h]Annual rate; [p]Preliminary; [r]Revised; [s]Series revised; [w]Weighted: [x]Less than 0.5 percent; [y]More than 1,000 percent increase.

Primary Sources:

Computed from: [1]Center for Business and Economic Research multiple regression model.

Computed from original data collected by the Center for Business and Economic Research from: [2]Ohio retailers; [3]County Clerks of Courts: [4]Local Power and Light Companies.

Computed by the Center for Business and Economic Research from data supplied by: [5]Board of Governors of the Federal Reserve System: [6]Life Insurance Agency Management Association; [7]Division of Research and Statistics of the Ohio Bureau of Employment Services, collected in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor; [8]Federal Power Commission; [9]F. W. Dodge Company; [10]Dun & Bradstreet, Inc.

Other data sources: [11]Federal Reserve Board; [12]Dun & Bradstreet, Inc.; [13]U.S. Department of Commerce; [14]Division of Research and Statistics of the Ohio Bureau of Employment Services; [15]*U.S. Department of Labor;* [16]Department of Agricultural Economics, O.S.U.; [17]U.S. Department of Agriculture: [18]*Industry Week;* [19]American Iron and Steel Institute; [20]U.S. Department of Interior; [21]National Machine Tool Builders' Association; [22]F. W. Dodge Company; [23]R. L. Polk & Co.; [24]Standard & Poor's Corporation.

Note: In the Ohio-U.S. table, page S-2, dual source notes on a single line of the table stub refer first to Ohio data, second to U.S. data.

Professor DEWALD. I would have more confidence in these forecasts if I were Governor Partee and could do something about one of the key elements on which the forecasts depend; namely, the rate of monetary growth.

I must admit to this group that I am somewhat of an eclectic. I believe that fiscal policy as well as monetary policy are important in affecting spending, prices, output, and unemployment. I think Congressmen have to be eclectic, too.

In my view, the key economic problem that we face is the result of bad economic policy a long time ago. In a sense we have got an awful lot of built-in inflation in the economy and it's very difficult and costly for us to be extricated from it. In a word, the kind of economic policies, painful as they may be, to solve this problem involve a slowdown in the rate of growth of Government spending, a reduction in taxes, tariff cuts, and a reduction in the rate of monetary growth. That's the elixir. It may be a painful medicine.

Over the course of the business cycle, this last business cycle that we are living through, we had high hopes with congressional intervention through House Congressional Resolution 133 and its aftermath that the procyclical variation in money growth that had been observed in every other business cycle in recorded history, that that pattern might not be observed this time. In 1974, in 1975—particularly after the resolution—we hope that the rate of monetary growth would be higher during the depths of the recession and the early stages of the recovery than afterward.

Yet the fact is, the rate of monetary growth was lower in 1974–75 than it has been recently. In the last 1½ years, the rate of monetary growth was higher, for example, than it was in the preceding 1½ years. So even though the Federal Reserve is to be commended for what it aims at, there is some criticism on the basis of its failure to hit targets or guides, or whatever it is one calls what the Federal Reserve is aiming at in terms of monetary growth.

A word about the model that I referred to. It's a forecasting model based on a version of the Federal Reserve of St. Louis monetarist model of the U.S. economy. However, it is not 100-percent monetarist because it finds a significant effect of Government spending and exports on total spending in the economy. It also finds a significant effect of import prices on the level of prices. It is a monetarist model, however, in the sense that it finds that changes in money have the most important effects on total spending and prices in the long run. A dollar increase in money is estimated to cause a $4 or $5 increase in the total amount of GNP over the long pull. The long run indeed comes farily quickly on the basis of these estimates—in the period of about 1½ years.

That model is a bit of an embarrassment to me now, since the Federal Reserve has behaved in the period since the end of June in a way that surely was not expected on the basis of its announced target monetary growth rates.

Nevertheless, the model does suggest on the basis of the forces that were at work in the economy through midyear—and these forces have lagged effects on spending and prices—that there would be a marked slowdown in the rate of economic growth. That is accountable to the

fact that the rate of monetary growth this past year has been highly variable. It was relatively slow particularly in the last quarter of 1976 and the first quarter of 1977.

Those changes in money have a lagged effect on the economy. Also Government spending, inexplicably to some of us has increased moderately during the course of the last year. And exports have slowed, as was reported in yesterday's newspaper. Furthermore, in the last fiscal year we experienced several quarters of very high increases in import prices.

In any case, the main characteristic of the economy that is causing the present difficulty and the main characteristic of the model on which this forecast depends is its very slow reaction in terms of price adjustments. Prices adjust very slowly in the U.S. economy. And there is presently a lot of built-in inflation in the economy. It is fouling up the tax system and wage system, and profits and interest rates. In other words, the whole economy.

Unhappily instead of Government policy pursuing an even course, it has really been on a roller coaster, which has added additional uncertainties to the economic situation. Given that we had a recession in 1974–75, there was a good opportunity for economic policy to be put on a steady course. Surely the congressional budgetary and monetary oversight responsibilities established then can be interpreted to have aimed at this; but instead, monetary growth has been up and down on a short-term basis, and indeed a long-term basis too. It's been well off target, as Dr. Gibson explained, for protracted periods of time.

Fiscal policy has been restrained to date at least on the spending side and considerable fiscal drag has been introduced as a consequence of inflation and increases in income. This has also been a factor that may have damped the current expansion.

We can't entirely fault policymakers in 1977. They inherited an incredible problem. What we need in this situation, I believe, is a realistic approach that doesn't promise or expect instant results. Policy should be set on a steadier noninflationary course. And the economy should be restructured to permit individuals and business to serve themselves and their country more efficiently. I think that means tax cuts and tariff cuts which are both long overdue.

In any case, we have had policies in the past that seem likely to have set the stage for a recession in the next year or two. As far as monetary policy is concerned, with the rates of monetary growth well above targets, if the Federal Reserve brings these rates back to target the last 6 months this deceleration in the rate of monetary growth will be associated with a subsequent recession if it follows patterns that have been observed earlier in history.

Thus there is a dilemma that is faced because of bad policies in the past. Any efforts that are taken now to avoid the oncoming recession may well accelerate the already high rate of inflation and make the next recession all the worse and make it all the more difficult for us to extricate ourselves from an even higher rate of inflation.

There may be a lesson for us from the Swiss, who, according to yesterday's Wall Street Journal, in 1974 and 1975 fought inflation with such fervor that they created a recession, even worse than experienced in other countries. But they got the inflation rate down to under 2 per-

cent a year, and now they have the basis for sustaining growth. I think that kind of policy is what we have to aim at in the long run.

Thank you.

Chairman MITCHELL. Thank you very much.

Professor Laidler.

STATEMENT OF PROF. DAVID LAIDLER, DEPARTMENT OF ECONOMICS, THE UNIVERSITY OF WESTERN ONTARIO, LONDON, CANADA

Professor LAIDLER. Mr. Chairman, I am even less prepared with a formal statement than my two colleagues, but I think you will be relieved to know that I am not going to disagree with them at all, despite the fact that we haven't colluded in advance.

I thought that my most useful contribution as an opening statement might be to go down the questions which are listed on pages 3 and 4 of your own opening statement and comment on them one at a time.

The first question is: Why are short-term interest rates rising at the same time that money growth is accelerating?

It seems to me that there is an interaction of at least three factors here. The first is that the real economy is expanding; and at this stage of an expansion, you would expect that real expansion to be pulling interest rates up with it.

Second, I see no reason to disagree with Governor Partee's argument that a contributing factor here has been the fact that the Fed, somewhat belatedly, has tried to get hold of the monetary growth rate again.

Finally, I would like to echo what Dr. Gibson has said about the role of inflation expectations here. It does seem to me that, when the money supply has been growing above track for 6 months, you would expect participants in markets to notice this, and to build it into their expectations. In these circumstances it does indeed take a greater rise in interest rates to bring the money supply back on track than otherwise would have been necessary had action been taken earlier.

I would submit one bit of extra evidence here that hasn't been brought out yet, but which I think is consistent with the view that rising inflation expectations have something to do with the recent behavior of interest rates. That is the performance of the U.S. dollar in foreign exchange markets recently; I think that its weakness reflects growing worries about the future course of U.S. inflation; and I would be surprised if this was not related, to some extent at least, to the recent behavior of the money supply.

Now the second question is: Would still faster money growth contain upward pressure on interest rates?

I think implicit in that question is a dangerous fallacy which has a long history in economies, that we don't have to go into here. The fallacy is that if monetary policy is easy, interest rates are going to fall and if monetary policy is tight, interest rates are going to rise. The difficulty is that, built into interest rates, as we have already said, are expectations about inflation, and the above-mentioned fallacious view about the effect of monetary policy on interest rates ignores this.

The brief answer to your question is that still faster money growth might contain upward pressure on interest rates for a matter of months, but that ultimately it would contribute not to downward pressure but to upward pressure on interest rates.

In this context, I might just refer to the quotation in your opening statement taken from the evidence of Professor Fair to the Joint Economic Committee. I am not familiar with the details of the model upon which he based his predictions. However I find it surprising that he could apparently talk about a stable bill rate, which is a nominal interest rate, contributing to the achievement of full employment by a target date like 1980, without any reference to the effect of maintaining that bill rate on the rate of inflation and without any reference to the implications of inflation for the feasibility of maintainng the bill rate stable.

If it is the case that the monetary growth rate that goes along with the kind of policy that Dr. Fair has been recommending is 10 or 11 percent, then I would—simply on the basis of the past behavior of the U.S. economy—be arguing that an inflation rate of 9 or 10 percent, and an accelerating inflation rate of 9 or 10 percent at that—would accompany the full employment and balanced budget of 1980. I do not see how a bill rate of 4 percent or so would be compatible with such an inflation rate. Hence I find Professor Fair's views, as reported, both difficult to accept, and very worrying as a basis for policy.

The third question is: What are the risks of 9 percent or even faster money growth, for example 10 to 11 percent per annum?

I am concerned that those risks are real indeed. The reason for my concern is that, if I understand Governor Partee's evidence correctly, it indicates that the Fed is still trying to kill two birds with one stone with its monetary policy. It's trying to control monetary aggregates, but at the same time it appears to be taking a view as to what are appropriate levels for interest rates. And I think it's clear that you can go for one variable or the other, but you cannot go for both variables with your monetary policy. If you do, you inevitably fall between two stools.

My interpretation of the last 6 months is that the Fed has indeed fallen between those two stools and hence has achieved neither of its incompatible targets. If the Fed continues to try to maintain a chosen level of interest rates, there is a grave risk that monetary growth will accelerate faster.

Perhaps I should just say a word as to why I would rather look at a monetary aggregate than look at interest rates as a proper target for monetary policy. In the best of all possible worlds, if economists understood everything, it wouldn't really matter which we looked at. We could announce a time path for the money supply and tell you what that implied for interest rates. We could announce a time path for interest rates and tell you what that implied for the money supply. However we are just not that wise.

As I read it, the work that has been done over the last 20 years on the U.S. economy has told us a lot more about the nature of the relationship between the behavior of the money supply and that of prices and output than it has about the link between interest rates and those same variables. I don't think we know how to interpret the behavior

of interest rates. And precisely because we don't know how to interpret the behavior of interest rates, they are a very bad variable to be looking at in designing short-term monetary policy.

I don't think I am saying anything here that is inconsistent with Governor Partee's evidence. He said that he thought the recent behavior of the money supply was a short-term bubble, and that the behavior of interest rates was associated with this short-term bubble. But he wasn't really sure, and seemed to agree that if it wasn't a short-term bubble, action would have to be taken. It's precisely because you can't be sure what is going on when you are looking at interest rates that I would prefer monetary policy to be geared much more explicitly to achieving targets for the monetary aggregates than it currently is. One could then let the market sort out an appropriate time path for interest rates given all the factors other than the behavior of the money supply that impinge upon their determination.

Question 4 is: Would the recovery abort if M_1 growth was squeezed so as to be under 6½ percent for 1977 as a whole?

My arithmetic suggests that this would mean that, for the balance of the year, the monetary growth rate would have to go to somewhere between 3 and 4 percent, having been up to 9 percent. That is an enormous turnaround. Though I don't think that any of us can be definite in answering a question like this one, I would say that the risks of aborting the recovery would be substantial if such a turnaround in monetary policy was set in motion now.

That then brings me to question 5, which asks, might not the best solution now be to start anew?

I think that implicit in my answer to question 4 is the conclusion that it would be a good idea to start anew. But I give that answer with considerable trepidation because one of the great advantages in setting explicit targets when making economic policy is gained only when targets are followed through on. The public gets confidence in the stability of monetary policy if targets are set and are then seen to be adhered to. I don't think it's a light matter to be recommending abandoning a target which has been publicly set. It is very much a second best solution in a bad situation.

Finally, what track would I design? I suppose I would be arguing that since we are now starting from a 9-, 9½-percent rate of expansion of the money supply, a target over the next 12 months of, shall we say, 6 to 7½ percent might be an appropriate one.

I would hope that when this new track was adopted, there would be a public announcement that interest rates were no longer going to be a secondary target of policy. It would then be clear to the public that along with the revised targets there was a revised policy regime. That might give the public a little more confidence that future targets would be adhered to and wouldn't go the way of previous targets.

That's all I have to say by way of general introduction, Mr. Chairman.

Chairman MITCHELL. Thank you very much.

Professor Laidler, you indicated that there should be some kind of announcement made that interest rates would no longer be a secondary target. I assume that that just makes good sense. For the consumer, one thing that is most visible, has a large impact, and is meaningful,

happens to be the interest rate. I just don't see how we shift away from interest rates as the secondary target with that sort of attitude existing in the business world and among the general consuming public. How do you do that?

Professor LAIDLER. I think that it's really up to academic economists to make it plainer to the public than we have in the past that the choice really is not between stable interest rates and monetary fluctuations on the one hand and stable money and fluctuations in interest rates on the other. Stability in interest rates over the next few months will be bought at the price of much more instability in the future, because the monetary fluctuations that you are going to have to put up with now to stabilize interest rates are eventually going to come through and cause instability in interest rates. It is the old, old problem of persuading the public that they can buy long-term stability in interest rates only at the cost of some short-term instability. If we were starting off from a stable monetary situation, this problem wouldn't arise, but we are starting from a position that is way out of equilibrium, and it cannot be avoided.

Chairman MITCHELL. I think what I at least inferred from Governor Partee's testimony is: While it is good and desirable to establish targets, given the operation of the real economic world, they cannot be adhered to. I believe that is essentially what I heard him state. Is that your opinion?

Professor LAIDLER. I think the difference here perhaps is one of emphasis. I would not want to come down and say let the money supply grow in nominal terms at an annual rate of 5 percent per annum, month by month, week by week. day by day no matter what happened. I can conceive of situations in which some real exogenous shock to the economy might make it desirable to rethink a monetary target and perhaps give it up in the short term. I would cite as an example of this the OPEC oil price increase. The OPEC oil price increase represented a substantial real shock to the economy, and one could argue that rigid adherence to a monetary rule while that was going on was not the best short-term option, though I think that that was nevertheless a viable policy option.

Even so, I can well understand arguments that some of the impact of that kind of shock should be absorbed by relaxing the monetary expansion rate in an upward direction for maybe 12 months, taking a little more inflation and a little less unemployment as a consequence of the shock. However, my own reading of the evidence is that that kind of shock is really rather a rare event. I wouldn't advocate announcing monetary targets year by year while simultaneously assuming that every 6 months the world is going to change so that as a matter of course the announced target is going to be given up. I would urge that in every instance the onus of proof must be put upon those who want to give up a preannounced monetary target rather than being upon those who want to adhere to it.

Chairman MITCHELL. This then goes back to Dr. Gibson's emphasis on the monetary base and our paying more attention to it. Dr. Gibson?

Dr. GIBSON. I just wanted to comment on Governor Partee's statement. It is my interpretation of what he said, and my interpretation of what the Fed has done, their position is not that the monetary

targets once set should not be adhered to. Rather, I think their position is the monetary targets once set should not be carved in granite, but they should be free to revise them and then change them over time. In fact, they haven't done very much of this.

Chairman MITCHELL. You see, that is what we did. We established a great deal of flexibility in the range, acting upon their request. Still, they have not adhered to them.

Dr. GIBSON. That is right. I did not interpret Governor Partee as saying that the Fed takes the targets loosely. Rather I thought he said he did not want to commit what the Federal Reserve would do because conditions might change and the Fed might have to change the target range, not that the Fed was going to ignore the target range.

Chairman MITCHELL. Let me get one more question. If we are talking about definitive, critical target ranges for M_1 and M_2, what would be the feasibility, going back to your theory of looking at the entire economic base, of establishing definitive ranges across all of the M spectrum? Is that workable? Could we begin to do it in terms of M_1 and M_2?

Dr. GIBSON. I personally would not recommend that.

Chairman MITCHELL. It sounds like a planned economy, does it not?

Dr. GIBSON. You would have to know a lot more than we know. I mean, just on a theoretical ground. Chairman Burns, a year or two ago, set forth eight different M's. Now there are more candidates because we have new aggregates we did not have back then. You have to know an awful lot about the interrelationship between the demand for one of those aggregates and the other. I do not really know that it is very fruitful in that when all is said and done, you need to kind of hitch your wagon to one or the other. That is, you have to have faith in a specific measure when various measures are moving in different directions.

The other thing is, from the standpoint of monetary policy, if you have 10 aggregates, you will typically hit the target on over five of them at any one point in time, anytime. If your main concern is really with M_1, it is irrelevant to have somebody come in and say, "Well, I hit M_4 through M_{10}, and only M_1 is out of line." If you think M_1 is the most important variable for the economy, as I do—and as I think the Federal Reserve really does—then how we are hitting those ranges is not so important as what we are doing on M_1.

Chairman MITCHELL. Do either of you gentlemen want to comment on that?

Professor LAIDLER. Could I add a supplementary comment? I agree with everything Dr. Gibson has said. I think the difficulty of setting targets for more than one monetary aggregate is compounded at the moment by the way in which rates of return on components of the various aggregates are either administered or set. A zero rate of interest on demand deposits, for example and, the operation of regulation Q on the return on less liquid deposits, make it much more difficult to forecast in the short run the way in which the aggregates will grow relative to one another than it need be.

Chairman MITCHELL. Professor Dewald?

Professor DEWALD. There is an article in the most recent issue of the Journal of Money, Credit and Banking by Roger Wurd that looked at the period prior to the last recession. He found M_1 was a

more effective measure of tightening monetary policy in that period than M_2, M_3, et cetera. There are those who have favored M_2 or some broader definition of money because it is possible for them to look at data that go back further in history, but there is something comforting in a way about M_1. It does represent the principal transactions medium. That kind of money is something that remains pretty much the same in terms of its function in the economy.

Even though there are a lot of factors that can affect the demand for M_1, I think it is a reasonable target that the Fed and the Congress have selected. It is interesting that in Germany, the monetary authorities have gone in the other direction and picked monetary targets that are more narrowly defined than M_1. In Germany the monetary target in terms of which their monetary growth rates are announced is the monetary base.

In any event, I think M_1 in the United States is probably the major variable that should be looked at.

Chairman MITCHELL. Thank you. Mr. Barnard?

Mr. BARNARD. Mr. Chairman, I apologize that I had to leave for a short period of time.

Chairman MITCHELL. I did it for you. [Laughter.]

Mr. BARNARD. I hope that the questions I have will not be repetitious, but if they should be, please feel free to stop me.

The public seems to hold the Fed responsible for monetary policy. But should we not consider the factors outside of what the Fed controls that come into play? I think Professor Dewald addressed some of these conditions we are experiencing today: the export imbalance; the fiscal policies; Government spending. Is there not some way of coordinating the activities of other responsible players with those of the Fed?

Professor DEWALD. Well, I would hope so. I believe that the Federal Reserve cannot be faulted for all of the ills that the economy experienced in recent years. Surely the four-fold increase in oil prices is something that is not attributable to the Federal Reserve. Fiscal policy over the course of the years has also tended to be destabilizing, just as monetary policy has been.

We cannot really blame the Federal Reserve for inflations that may be induced by huge Government deficits such as we have experienced in war time, including the most recent war. Nevertheless, the Federal Reserve is perhaps in a unique position with respect to economic policy. It is very difficult for Congress to get tooled up to change tax laws or to change Government spending. In fact, Congress can get tooled up to change Government spending and for some reason these days the bureaucrats cannot figure out how to spend it. Maybe that will change.

In any event, monetary policy is in a unique position with respect to being able to make decisions and take actions quickly that can affect the economy with a lag as estimated in a matter of only 1 year or 1½ years. So monetary policy is in a position where it can offset some of the problems that may have been introduced by disturbances that have come from elsewhere.

Mr. BARNARD. What facilities do other countries use to monitor and control monetary policy—for example, Switzerland?

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Professor DEWALD. Switzerland emphasizes monetary policy to the extent that nothing else matters. It is very difficult for any kind of fiscal action to be taken in Switzerland. It is a confederation. To change basic fiscal policy would require something like an election. They do have, however, a central bank, the Swiss National Bank. Central banks have the power to buy and sell assets and thus affect the monetary base and the money supply. The Swiss have been willing over the years to fight inflation more effectively and more vigorously than other countries have. In any event, it is a country that emphasizes monetary policy for more than anything else. They also, by the way, are a country that have very low tariffs and consequently they have a situation where the economy can operate quite efficiently on the basis of taking advantage of comparative advantage in international trade.

Mr. BARNARD. Dr. Gibson, did you want to respond to that?

Dr. GIBSON. It is true the Federal Reserve's life is complicated. It does have the tools to carry out its responsibilities and it has been given a number of responsibilities by the Congress to help in the Congressional function of coining money and regulating the value thereof. So I think the Federal Reserve ought to be looked to to exercise those responsibilities. It is somewhat like your situation as an elected official.

As a Congressman, you are in part responsible for the well-being of your constituents on, say, economic grounds. There is an awful lot of things that happen outside of your control: The OPEC price increase, farm price increases, everything.

You do have some tools at your command to offset those and mollify the damage. In the end you are held accountable by those who elected you and who expect you to use your tools.

Mr. BARNARD. The reason I asked that question is because I am a new Member of Congress, but I am very much interested in this subject, and I try to come to as many of these hearings as possible.

In the early part of the year, you see, they were accusing the Fed of overreacting 2 years ago, and consequently, not enhancing the recovery sufficiently.

Now we are turning back around and saying, "Well, they let this bubble develop. Now we have a monetary growth of 10 percent."

So I said—you know, I am sympathetic with these people. They are damned if they don't, damned if they do.

How quickly should they react? Monthly, weekly, daily? That is what is troubling me now.

Dr. GIBSON. The Federal Reserve has had a tendency over time to have a procyclical effect on the economy.

Mr. BARNARD. Can I interrupt you on that point? They accused the Fed, when they put in the economic stimulus some years ago, that they counterbalanced it immediately. As a result, they didn't get the effect.

Dr. GIBSON. I do not agree with that interpretation. I do remember that. Anyway, you asked how quickly the Federal Reserve should respond. That is a very tough question. That gets into this whole issue that has been lurking here: how do you identify an underlying trend in money growth versus a 1-week blip or a 2-week blip? The Federal Reserve has been saying for a long time that you cannot expect the Federal Reserve to respond to these weekly things. This is true, although in

August and September, the weekly numbers got so bad they did start responding on a weekly basis.

I think you need to watch the monetary aggregates and you also need to watch the monetary base. If you see the monetary base, which is sort of a leader of these other moves, moving up rapidly, and if you see everything falling into place, I think you start responding very promptly. If you see moves that appear to be aberrations not confirmed by movement of the base, then I would wait awhile. I would wait perhaps a month or two before responding.

I think you need to look at what the foundation of the growth is, plus how sustained and how permanent the short-term fluctuations in the aggregates appear.

Professor DEWALD. Could I comment on that? I did empirical work in early years related to this subject. The conclusion drawn from this is that the Federal Reserve could directly control money rather than use the indirect method that is currently employed and has been throughout history. What the Federal Reserve does is to pick a Federal funds rate target for a short period of time. That is what the buying and selling of securities by the Federal Reserve Open Market desk aims at; not at a particular monetary growth. That interest rate target is manipulated by the Federal Open Market Committee in order to achieve a particular target monetary growth.

Now an alternative—and it is something very simple—would be for the Federal Reserve to look at a target growth in money, or the monetary base, or something like it that is in dollar terms; and then aim at that and not at an interest rate. They could pick a quantity of Government securities to buy or sell that would, on the basis of their best estimates of the demand for money on that particular day or that particular week, pump money into the system by Open Market operations; and then essentially they could let the banking system adapt to that.

We have observed in foreign exchange markets how willing private entrepreneurs are to absorb shocks that hit that market from a variety of sources. We have not had enormous day-to-day or minute-to-minute fluctuations in foreign exchange rates. Why? Because there is a market mechanism that tends to stabilize those rates, just as in stock or commodity markets.

The same thing could operate in money markets if the Federal Reserve would pump in the amount of base money on the basis of which they would expect to achieve the target level of monetary growth and let the short-term interest rate variations be absorbed by the market.

We have got fine institutions that can accomplish that. There is really no reason why the Federal Reserve has to take the responsibility of acting as a shock absorber with respect to interest rates. Let the market do it. Let the Federal Reserve aim at monetary growth and let these short-term interest rate variations be worked out in the market.

Professor LAIDLER. Could I just make one comment, Congressman, on your very first question?

I would like to associate myself with everything Professor Dewald said just now about the choice of monetary instruments. I think that comes back to what I was saying earlier about the Fed trying simul-

taneously to hit interest rate and monetary aggregate targets and missing both.

You asked about the role of the Federal Reserve System in the formation of economic policy. I think it is clear that there are many legitimate targets of economic policy: income distribution; the balance between the public and the private sector; the balance within the public sector between the Federal Government and the State Governments. There are a whole host of questions that the Federal Reserve has nothing directly to do with. However decisions taken about those other aspects of economic policy ultimately come down to questions of dollars and cents; and unless the value of those dollars and cents is predictable, the outcome of those decisions is not going to be what is intended. That is what makes the role of the Federal Reserve System, which does have the power and the special responsibility to influence the value of those dollars and cents, so central to the behavior of the economy. If they mess it up, everything goes wrong. If they would only provide the background of stability against which the other arms of Government could take these decisions, then it would be possible to get to grips with all those other important economic policy problems.

Mr. BARNARD. I have no further questions.

Chairman MITCHELL. This is somewhat difficult for me to do. I know something about the personality of the economist. Nonetheless I am going to ask unanimous consent that an article by Milton Friedman be inserted into the record at this time.

I do so with reluctance because I know that economists vary in terms of their approaches. I am not at all sure at any given time with which school of economic thought I am dealing. So just give me my unanimous consent and let me get that in the record.

Mr. BARNARD. I not only give it to you, I endorse it.

[The article referred to follows:]

[From Newsweek magazine, October 3, 1977]

WHY INFLATION PERSISTS

(By Milton Friedman)

Nearly three years ago, I wrote in this space: "Four times in the past fifteen years we have started on a cure for inflation. Three times we have abandoned the cure before it had time to complete its task—in 1963, 1967, 1971. Each time, the result has been a higher plateau of inflation, producing a new attempt at a cure. Will we make the same mistake the fourth time in 1975? Or this time, will we have the courage and the wisdom and the patience to see the cure through?" (NEWSWEEK, Nov. 4, 1974.)

ABANDONING THE CURE

As of today, the answer is that we have made the same mistake a fourth time. Once again, we have paid the cost of a recession to stem inflation, and, once again, we are in the process of throwing away the prize. From a high of more than 12 percent in 1974 (from December 1973 to December 1974) inflation fell to less than 5 per cent (December 1975 to December 1976). It has now risen sharply, may temporarily recede as we work through the bulge produced by the special problem of the hard winter, but then, I fear, will resume its upward march, not to the "modest" 6 percent the Administration is forecasting but to at least several percentage points higher and possibly to double digits again by 1978 or 1979.

There is one and only one basic cause of inflation: too high a rate of growth in the quantity of money—too much money chasing the available supply of goods and services. These days, that cause is produced in Washington, proximately, by

the Federal Reserve System, which determines what happens to the quantity of money; ultimately, by the political and other pressures impinging on the system, of which the most important are the pressures to create money in order to pay for exploding Federal spending and in order to promote the goal of "full employment." All other alleged causes of inflation—trade union intransigence, greedy business corporations, spendthrift consumers, bad crops, harsh winters, OPEC cartels and so on—are either consequences of inflation, or excuses by Washington or sources of temporary blips of inflation.

There is one and only one basic cure for inflation: showing monetary growth. But that cure is easier to state than to put into effect: witness our repeated abandonment of the cure. The Fed is supposedly independent. But, as Dooley said of the Supreme Court, "It follows the election returns." Its behavior reminds me of nothing so much as the remark attributed to a U.S. Army officer in Vietnam, "We destroyed the village in order to save it." Similarly, the Fed refrains from using its independence because it is afraid of losing it.

Listen to Chairman Arthur F. Burns in testimony to the House of Representatives (July 29, 1977):

"The trend of growth in monetary aggregates, I regret to say, is still too rapid. Even though the Federal Reserve has steadily sought during the past two years to achieve lower ranges for monetary expansion, the evolution of its projections has been extremely gradual; indeed, at the pace we have been moving [*note: with respect to projections, not behavior*] it would require perhaps a decade to reach rates of growth consistent with price stability. I must report, moreover that despite the gradual reduction of projected growth ranges for the aggregates during the past two years, no meaningful reduction has as yet occurred in actual growth rates."

Meaning: promises have been in the right direction but too modest; performance has been in the wrong direction.

THE PERFORMANCE OF THE FED

The following documents Chairman Burns' description of performance: the high rates of monetary growth from 1971 to early 1973 fostered the inflation that peaked in 1974. The sharply lower monetary-growth rates from 1973 to 1975 produced the serious recession of 1974–75 and the subsequent tapering off of inflation. The sharp rise in early 1975 sparked the recovery; the slowdown in late 1975 produced the economic pause in the second half of 1976 that played such a prominent role in the Ford-Carter election battle. Since then, monetary-growth has been rising, not falling, and is now about back where it was in 1972.

Inflation will not be stopped by words, only by actions. At the moment, we have the worst of two worlds. Nominal independence of the Federal Reserve without its effective exercise permits Congress and the President to evade responsibility for the creation of money to finance large government deficits. The power of Congress to legislate and of the President to approve such deficits without explicit responsibility for the resulting monetary growth gives the Federal Reserve an excuse for its inflationary behavior.

Again, let me quote Chairman Burns, this time from a speech on Aug. 13, 1977, proclaiming "The Importance of an Independent Central Bank":

"Theoretically, the Federal Reserve could thwart the non-monetary pressures that are tending to drive costs and prices higher by proving substantially less monetary growth than would be needed to to accommodate these pressures fully. In practice, such a course would be fraught with major difficulty and considerable risk. Every time our government acts to enlarge the flow of benefits to one group or another the assumption is implicit that the means of financing will be available. A similar tacit assumption is embodied in every pricing decision, wage bargain, or escalator arrangement that is made by private parties or government. The fact that such actions may in combination be wholly incompatible with moderate monetary expansion is seldom considered by those who initiate them."

FISH OR CUT BAIT

It matters little whether the Federal Reserve is unable or unwilling to exercise its independence in deeds as well as words. In either case, let us be done with the fiction that "independence" is somehow or other a bastion against inflation. Let us put the responsibility for the rate of monetary growth—and therewith for

the subsequent rate of inflation—squarely and openly on the Administration and Congress. Instead of simply requiring the Federal Reserve to *report* its "projections" or "targets" for monetary growth, let the Congress require the Fed to *achieve* specified rates of monetary growth (or specified levels of the quantity of money) within specified ranges of tolerance. That would combine responsibility and power. It would also enable the ordinary citizen to know whom to hold accountable for inflation.

Chairman MITCHELL. Gentlemen, let me say, you hear the phrases—they almost become hackneyed phrases—about provocative testimony. Indeed, it has been provocative. I would really like to dig deeper in terms of how we might begin to shift our approach and look at the monetary base as the target, as is being done in some other countries. Your testimony has been tremendously stimulating and tremendously helpful.

Thank you very much for appearing.

[Whereupon, at 11:05 a.m., the hearing was adjourned, subject to the further call of the Chair.]

[The following briefing papers with attached exhibits were submitted by the subcommittee staff for inclusion:]

BRIEFING PAPERS

FOR

MONETARY POLICY OVERSIGHT HEARINGS

SUBCOMMITTEE ON DOMESTIC MONETARY POLICY

OF THE

COMMITTEE ON BANKING, FINANCE, & URBAN AFFAIRS

SEPTEMBER 27, 1977

PREPARED BY STAFF, SUBCOMMITTEE ON
DOMESTIC MONETARY POLICY

EXHIBIT I. STORY. M1 is shown in billion-$. So is the target range. It was converted to $ levels by multiplying observed M1 in billion-$ each quarter by the Federal Reserve's percentage growth targets and using the result to show target levels four quarters later.

After entering the target range in March 1976 at its lowest end, M1 crawled along the bottom until last fall. In October, M1 was increased to the middle of the range and kept there through March. In April, M1 growth increased at an annual rate of almost 20 percent and hit the top of the target. In July, growth again approached 20 percent per year and now M1 burst through the top of the range. In mid-September M1 stood at $331.6 billion, putting it $4-5 billion above the top of the target.

The monetary policies that were followed from early 1975 to October 1976, and which laid the foundation for recovery together with reduced inflation, have ended. Recent rapid money growth places the economy's stability in jeopardy.

The situation that is developing is reminiscent of a few years ago when rapid M1 growth from early 1971 to mid-1973 fueled the inflation which began in 1973, and which in turn, contributed to the 1974-1975 recession.

The rapid M1 growth since last winter, if long contintued, will surely recreate the 1973-1975 inflation-recession cycle. But it will be a tricky business reducing M1 growth back into the target range. Decelerations nearly always slow economic growth for a time, but if we don't decelerate M1 growth now, we face the danger of accelerating inflation and bringing a deep recession later on.

The options would appear to be (a) to decelerate quickly and risk a short but sharp economic slowdown, or (b) to decelerate gradually and risk extra inflation with the risks which in turn would carry for production and employment in two or three years, a deeper and longer recession.

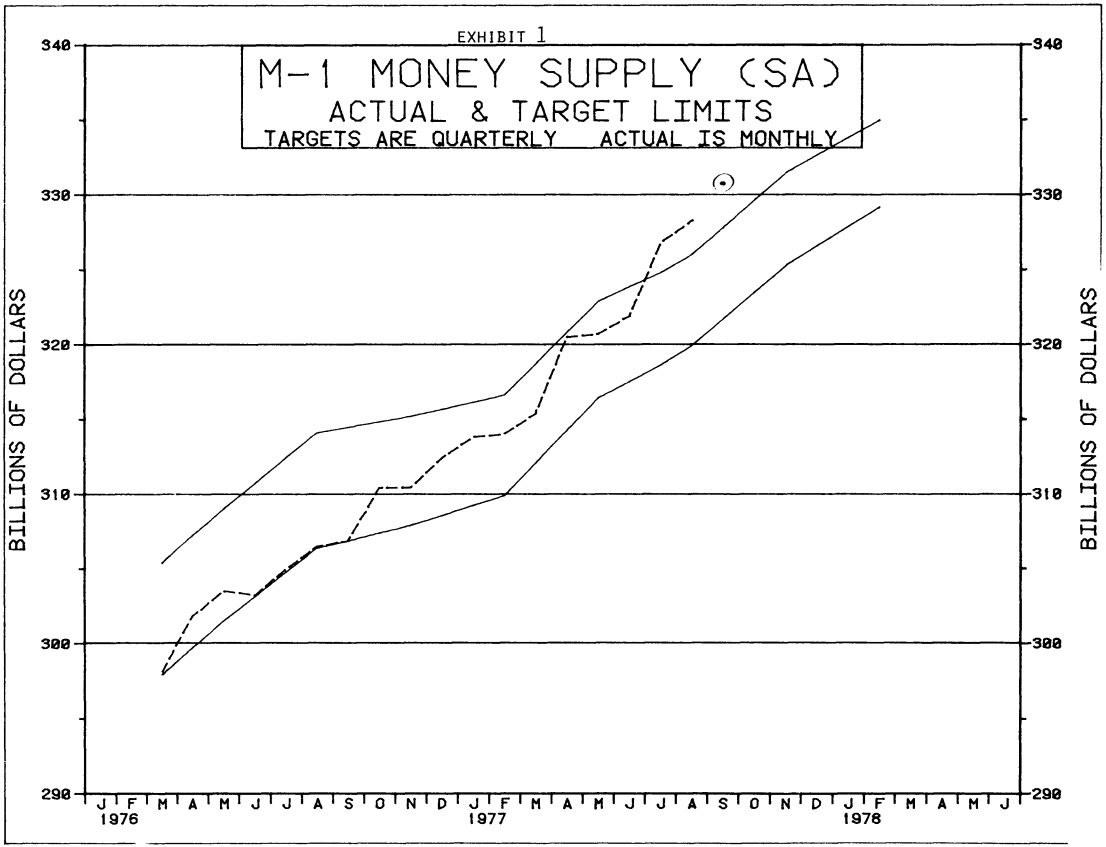

EXHIBIT 2, STORY. This graph shows the percentage change from a year ago of three money supply measures, M1, M2, and M3.

M1 is currency plus demand deposits.

M2 is M1 plus time deposits excluding CD's

M3 is M2 plus nonbank thrift deposits

Roughly speaking, the growths of the three M's move up and down together. Thus, it would not appear to matter very much which of the M's is monitored in measuring the thrust of monetary policy.

EXHIBIT 2

MONEY STOCK, YEAR TO YEAR PERCENT CHANGE

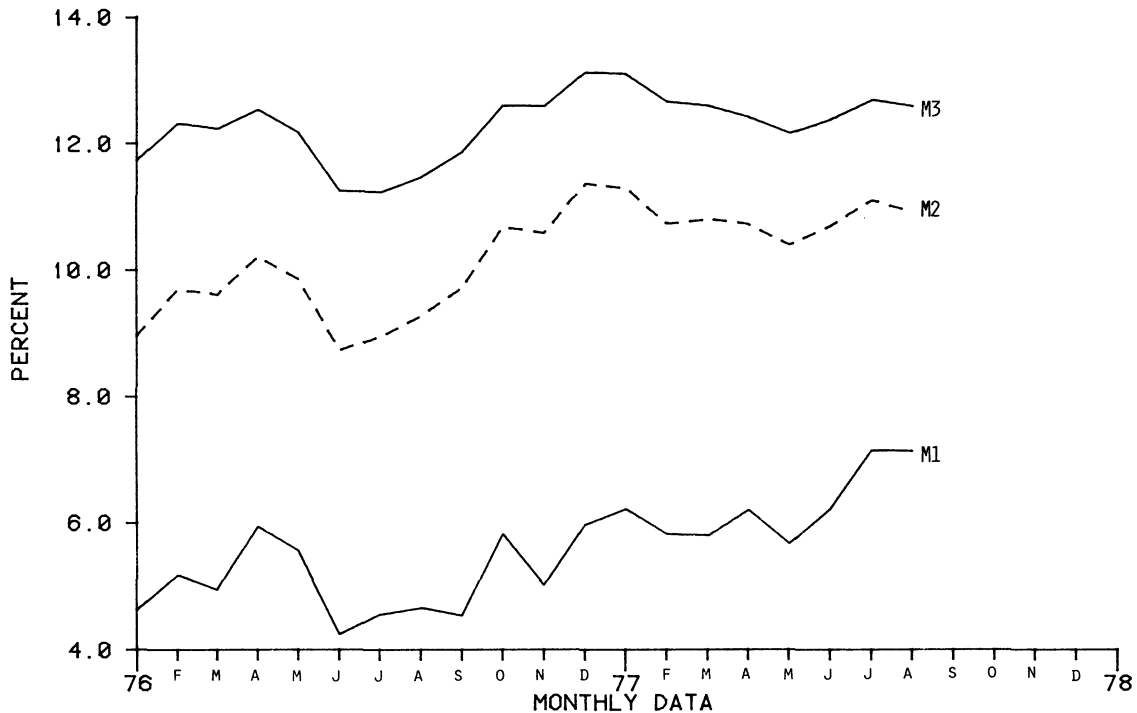

EXHIBIT 3, STORY. This graph shows the percentage change in the Consumer Price Index between the same months from one year to the next (January to January, etc.) versus the percentage change in the narrowly defined money supply, M1, also between the same months from one year to the next. The money growth line is lagged 23 months -- that is, e.g. the datum for the 12 months ending January 1974 is plotted in December 1975 (23 months later). The money growth series is lagged 23 months to take into account that money supply changes have a delayed impact on prices. Twenty-three months was chosen because it best approximates the average lag from money growth changes to changes in consumers' prices. The evidence indicates that inflation follows fairly closely what happens to money growth 23 months earlier.

EXHIBIT 3

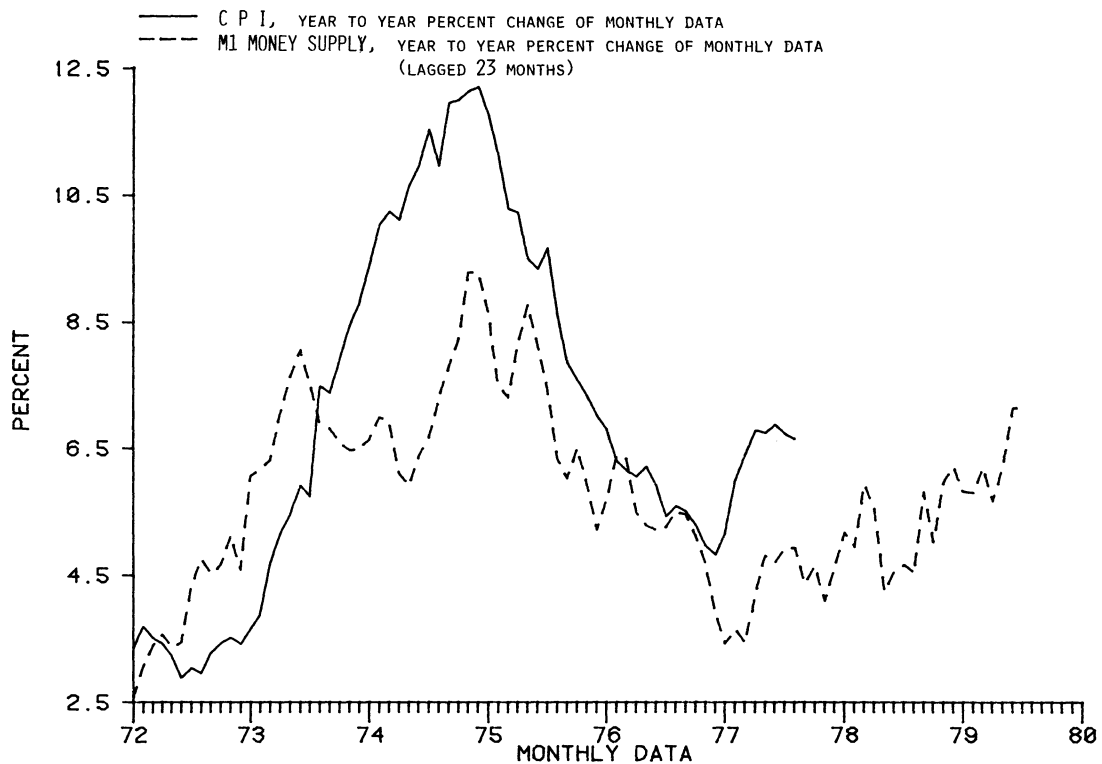

EXHIBIT 4. STORY. This graph plots actual percentage changes in the CPI between the same months from one year to the next (solid line) against predicted changes (dashed line). The predicted changes were computed from past M1 growth and changes in import prices. The M1 growth used is measured between the same months from one year to the next and is lagged 23 months. Changes in import prices, also measured over twelve month periods, are weighted by imports as a percent of GNP and lagged one month.

Lagged changes in M1 growth were multiplied by .79 and the changes in weighted import prices by 1.26. The two were then added to obtain the predictor (dashed line). The multipliers (.79 and 1.26) were derived by computer analysis estimating how changes in money growth and weighted import prices affected inflation in the period 1966-1976.

It is important to note that the M1 multiplier exhibits extraordinary long term stability. For the 1947-1965 period its value was .76. This is powerful evidence of the stability of the relationship between lagged money supply and inflation.

In view of the evidence, it is naive to believe that inflation can be licked without reducing money growth, or that accelerating money growth will not accelerate inflation.

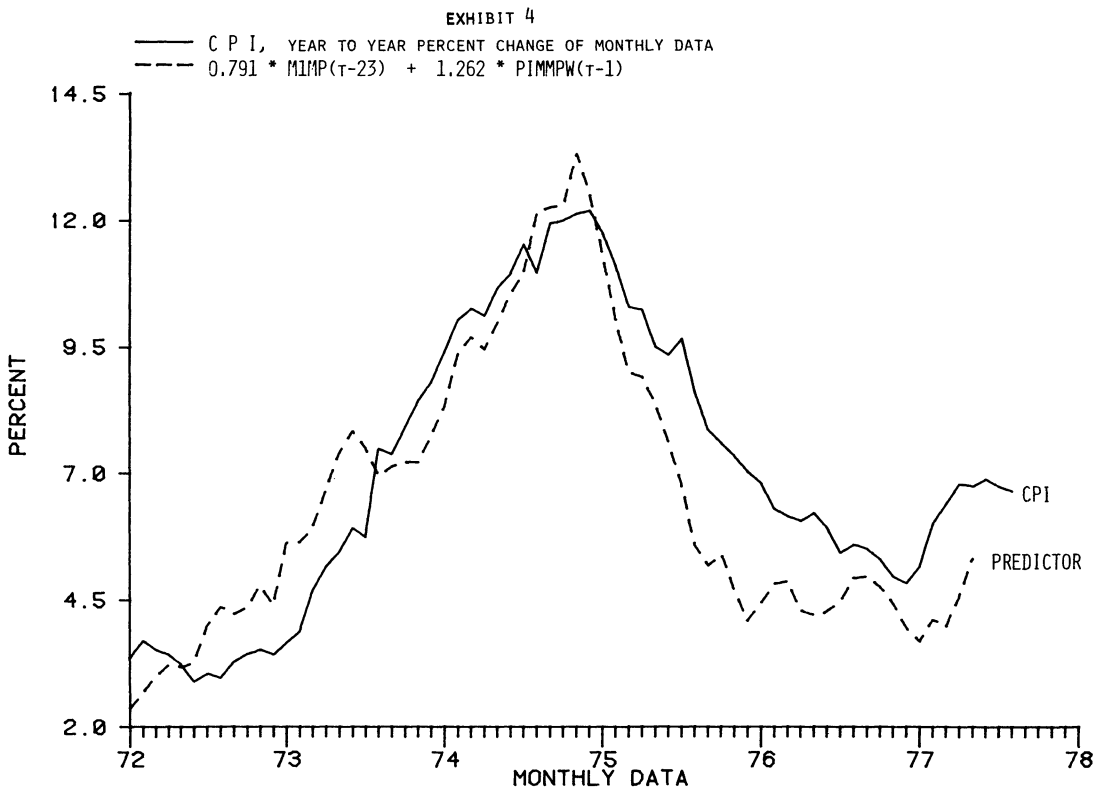

EXHIBIT 5. STORY. This graph or scatter diagram maps year-over-year changes in the CPI last year against this year's average unemployment. That the inflation rate is lagged one year means that the 1975 inflation rate and the 1976 unemployment rate are labeled '76'. The graph connects contiguous years. The evidence plotted in this exhibit indicates that apart from the Vietnam War period, accelerating inflation was followed by increased unemployment.

EXHIBIT 5

SCATTER DIAGRAM

C P I (LAGGED 1 YEAR) vs UNEMPLOYMENT

YEARLY AVERAGE OF MONTHLY DATA

1954 - 1976

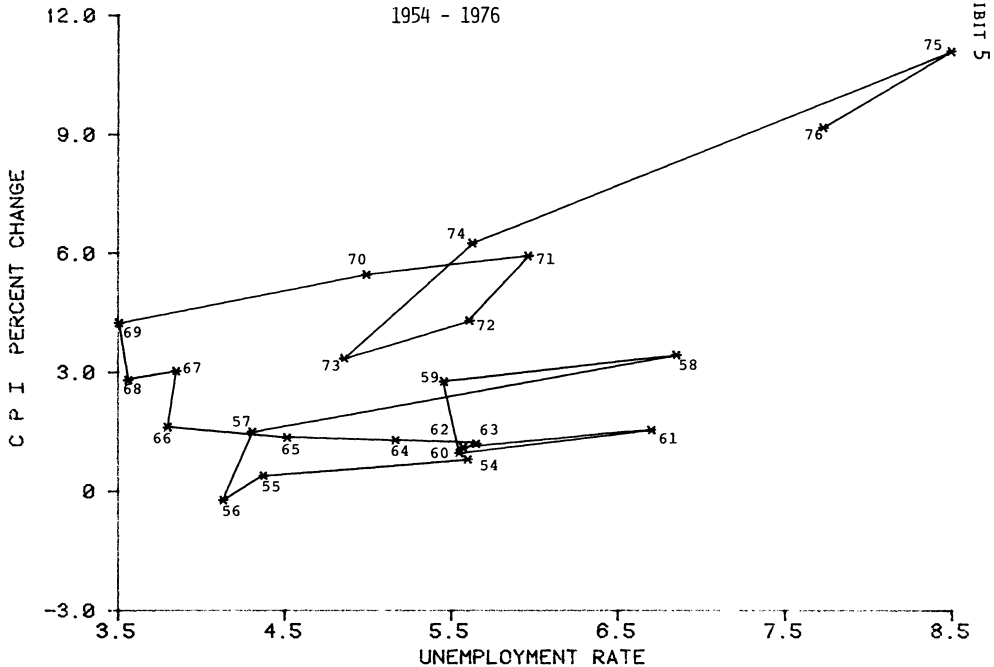

EXHIBIT 6. STORY. This exhibit graphs monthly yields on five and 20-year U.S. Treasury bonds in the 1972-1977 period. It is not surprising that rates on these maturities tended to rise in 1973 and 1974, to fall in 1975 and 1976, and to move up a notch in early 1977. These trends followed closely changes in inflation. An important principle of monetary economics is that interest rates, at least longer term rates, will tend to follow inflation rates -- rising with inflation and falling as inflation tapers-off. Inflation accelerated in 1973 and 1974, tapered-off in 1975 and 1976, but began to accelerate again somewhat in 1977.

EXHIBIT 6

MARKET YIELD ON TREASURY SECURITIES

5-YEAR & 20-YEAR MATURITY YIELDS

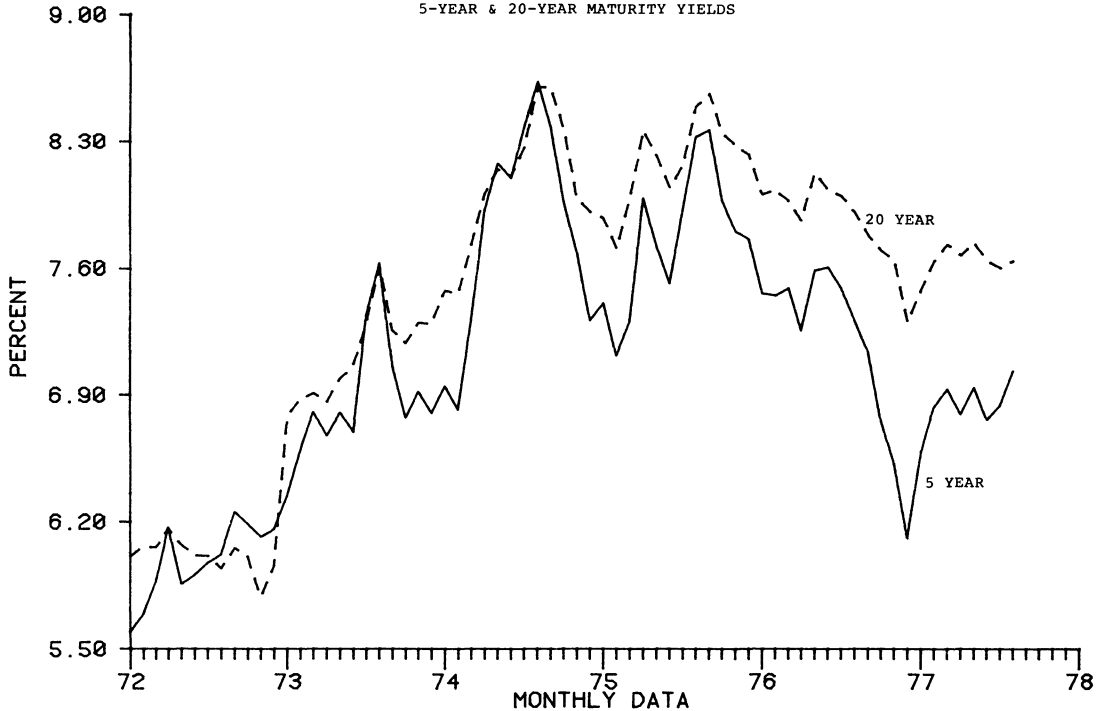

EXHIBIT 7, STORY. This graph plots percentage changes in the CPI measured between the same months from one year to the next (CPI) and the Federal funds rate (FFR). It shows that monthly movements in the funds rate occur very nearly in lock step with changes in the inflation rate measured from the same month a year ago. The evidence thus indicates that even short-term interest rates are very powerfully affected by immediate past inflation experience.

EXHIBIT 7

C P I, PERCENT CHANGE FROM A YEAR AGO
VS
FEDERAL FUNDS RATE (AT N.Y. BANKS)

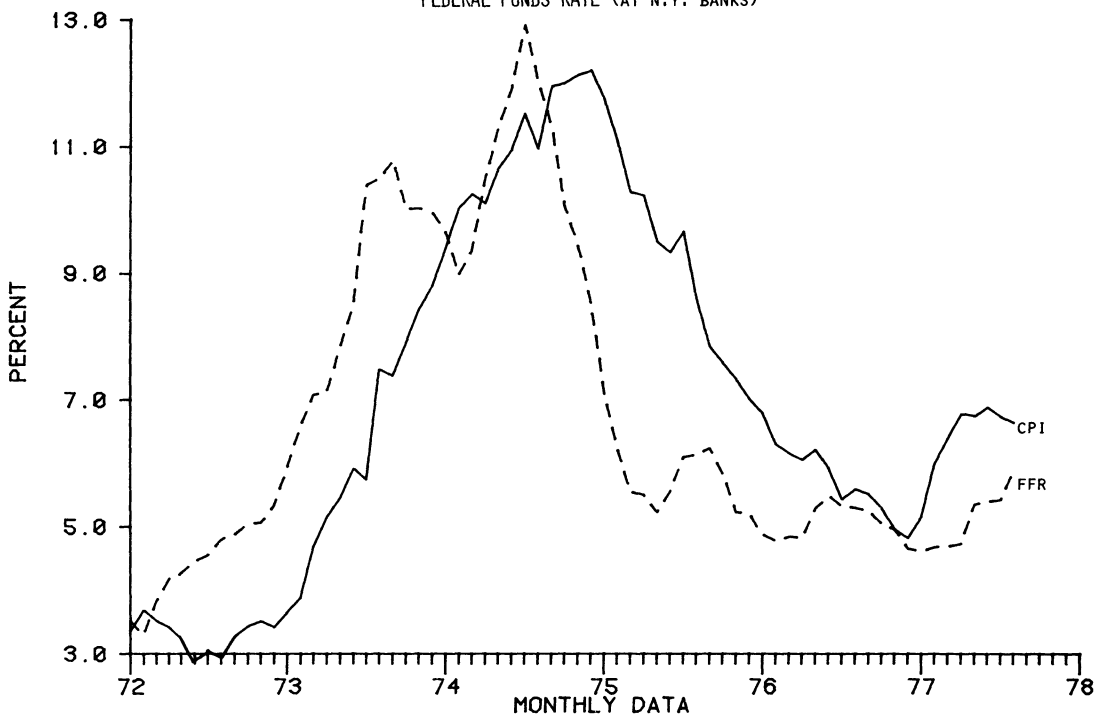

EXHIBIT 8. STORY. This exhibit graphs the interest rate which the "average homebuyer" paid to secure a mortgage during the last two and one-half years, and the interest rate on long term (20 year) government securities during the same period. The graph reveals the "stickiness" of mortgage rates.

EXHIBIT 8