SECOND MEETING ON THE CONDUCT OF MONETARY POLICY

HEARINGS

BEFORE THE

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

NINETY-FIFTH CONGRESS

SECOND SESSION

ON

OVERSIGHT ON THE CONDUCT OF MONETARY POLICY
PURSUANT TO PUBLIC LAW 95-188

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SECOND MEETING ON THE CONDUCT OF MONETARY POLICY

MONDAY, APRIL 24, 1978

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

The committee met at 10 a.m. in room 5302, Dirksen Senate Office Building, Senator William Proxmire (chairman of the committee) presiding.

Present: Senators Proxmire, Riegle, Lugar, and Schmitt.

OPENING STATEMENT OF CHAIRMAN PROXMIRE

The CHAIRMAN. The committee will come to order.

This morning we begin 2 days of oversight hearings on the conduct of monetary policy by the Federal Reserve System. These hearings are now required by the Federal Reserve Reform Act of 1977 that was enacted into law last November. Today we will receive testimony from five very talented economists, and tomorrow Mr. William Miller, the new Chairman of the Board of Governors of the Federal Reserve System, shall be our only witness. Chairman Miller's appearance shall mark his first meeting with the Senate Banking Committee on the subject of monetary policy.

Before we begin I would like to make a few remarks about current monetary policy and the reporting procedures that are currently required by law.

First, I would like to indicate my disappointment in the apparent move by the Federal Reserve late last week to further tighten credit availability by letting the Federal funds rate rise to 7 percent. In my opinion this comes at a particularly crucial time for our economy and is not called for by current economic conditions, by economic conditions that have been forecast for the second half of 1978 and beyond, or by recent growth in the monetary aggregates. The funds rate increase seems entirely inappropriate and may be costly to the economy as the year progresses. The reasons for the increase are not at all clear, and I hope that we can identify them through these hearings.

Real economic growth during the first quarter was negative—the first time that has occurred since 1975. The growth of the monetary aggregates in the first quarter was near the lower limits of the ranges established by the Federal Reserve; and in fact, growth in the monetary aggregates has been low on average over the last 6 months. We may get a "snap-back" in economic activity during the current

quarter with real growth accelerating, and this may cause money growth to be somewhat faster as a result. But after that the outlook is for slower growth in the economy, perhaps below 4 percent in real terms.

If we consider the monetary aggregate targets of the Federal Reserve, the current tightening makes no sense. They are well within the ranges that the Federal Reserve said it was willing to tolerate. Therefore, it would seem that the Federal Reserve could easily accept moderately faster growth in the near term. This pickup may take place because of the temporary acceleration in economic activity this quarter. Moreover, there are signs that even the interest rate levels we had during the past 6 months were having a dampening effect on the growth of the monetary aggregates and on the flows of funds to thrift institutions. Further stringency could create serious problems for the thrift institutions and the housing market.

If we consider the forecasts for economic developments over the remainder of the year, the increase in the Federal funds rate also does not seem justified. Monetary policy does not work instantaneously; it takes time to have an effect on the economy. Higher interest rates now indicate that tighter monetary and credit conditions will prevail during the second half of the year, and this could further dampen the economy which is already expected to be growing more moderately than during this past year. Furthermore, although the outlook for inflation has deteriorated recently, tighter monetary policy can do little to reduce the type of inflation we find ourselves shackled with.

It should also be recognized that a tighter monetary policy at this time may result in demands for more fiscal stimulus later this year or next year, thus increasing the size of the Federal deficit that is already far too large. The President has already asked for a $24-billion tax cut to take effect October 1. The October 1 timing is important for it conveys information about the economic conditions expected by the administration this fall. In fact, the President said in his Economic Report that:

> These tax reductions are essential to healthy economic recovery during 1978 and 1979. Prospects for continuation of that recovery in the near term are favorable. Consumers have been spending freely, and many other economic indicators recently have been moving up strongly. Without the tax reductions I have proposed, however, the longer term prospects for economic growth would become increasingly poor. Because of the fiscal drag imposed by rising payroll taxes and inflation, economic growth would slow substantially in late 1978, and fall to about 3½ percent in 1979.

The mix of monetary and fiscal policies is extremely important. I favor a mixture that would have less Federal spending and an easier monetary policy, one that would induce the private sector to invest in new and more productive capital. Unfortunately, it is likely that the Federal Reserve's tighter monetary policy will be mismatched with more fiscal stimulus.

This leads me directly into the short comment I want to make at this point about the type of information the Federal Reserve provides to the Congress and the public about its policies. Clearly, information about the desired growth in the monetary aggregates

alone is insufficient to understand what the Federal Reserve's monetary policy intentions are and what they are attempting to accomplish with regard to the economy 6 months or 1 year from now. To understand monetary policy the Congress must receive from the Federal Reserve not only its plans and objectives for growth in the monetary and credit aggregates—to paraphrase the law—but also its own quantitative forecasts of where the economy is going over the next several quarters and how current monetary policy actions will affect those expected developments. One of our witnesses said in his testimony that the current system does not make economic sense. He is correct. But I am sorry to say that the Federal Reserve is not going to volunteer this needed information. They won't even provide it when Members of the Congress ask for it. The Federal Reserve claims that such information would make them less "independent." The truth may be closer to the fact that it would make them more accountable for their actions.

Both the current and the past Chairmen of the Federal Reserve Board have said publicly that they wanted to foster greater understanding of monetary policy. At the same time, both Dr. Burns and his successor Mr. Miller refused to give Congress any more information about the Federal Reserve's policy strategy and the numerical economic forecasts that go with it.

The Congress has a responsibility for overseeing the actions taken by the Federal Reserve and that responsibility must be taken very seriously. We want to know more about monetary policy, how it works, and what it means for the future. We don't want to take away the Federal Reserve's independence or their responsibilities for conducting monetary policy. I hope that the witnesses we shall hear from today will help us to understand monetary policy a little more and advise us as to the correct monetary policies given current economic conditions and the economic outlook.

We are very pleased to have as our first witnesses Dr. Otto Eckstein, president of Data Resources, Inc., and a professor of economics at Harvard University and a member of the Council of Economic Advisers under President Johnson; and Dr. Leonard Santow, senior vice president and adviser to the board of the J. Henry Schroder Bank and Trust Co.

Gentlemen, we have had an opportunity to read your statements, and they will be placed in full in the record. You might summarize your statements if you can in ten minutes or so and then we will be happy to go right into the questioning.

STATEMENT OF OTTO ECKSTEIN, PRESIDENT, DATA RESOURCES, INC., LEXINGTON, MASS.

Dr. ECKSTEIN. Thank you, Senator Proxmire. My statement is rather long and a bit on the heavy side, so I will summarize it, but I would like to take you through some of the tables and charts in the testimony because that's really what it revolves around.

[The complete statement follows:]

THE CONDUCT OF MONETARY POLICY

Testimony submitted to the Monetary Policy Oversight
Hearings of the
Committee on Banking, Housing, and Urban Affairs
United States Senate

by
Otto Eckstein
President, Data Resources, Inc., and
Paul M. Warburg Professor of Economics, Harvard University

April 24, 1978

Monetary policy requires some difficult choices during the next twelve months. The economy is back on its growth track after a rough winter quarter. The employment situation has improved dramatically despite a lack of output growth in recent months, indicating poor productivity performance. Temporary gains in the fight against inflation achieved in the second half of last year have been lost in yet another winter inflationary bulge and the "hard-core" inflation rate seems to be edging from 6 toward 6½%. While the President's new anti-inflation measures are welcome, the inflation rate is very stubborn.

Will the most recent monetary targets be sufficient to permit the economy to move, in orderly fashion, toward its potential? Will they raise increased dangers of accelerating inflation? To aid in your deliberations, my testimony will

(1) present the current DRI outlook and compare it to Administration goals;

(2) assess the tax cut and its relation to monetary policy;

(3) assess targets for monetary growth by means of an elaborate new stochastic simulation exercise which shows the probability distributions of the growth rates for M1, M2 and M3 over the next four quarters and relates them to the economy's performance.

(4) recommend a policy posture for the monetary aggregates and interest rates.

THE OUTLOOK

The first quarter results of the 0.6% rate of decline in real GNP contained one unpleasant surprise: the $22.6 billion trade deficit (NIA basis) is a serious blow to our hopes of an improving international position for U.S. industry and for the dollar. The $4½ billion trade deficit (Census basis) in February, the largest in our history, probably is a fluke which will be partially reversed. The recent measures, including the limited gold sales and the beginning of the development of an export program, are welcome, and have helped to stabilize the dollar's dangerous slide. But if a quick turn does not occur in the trade results, U.S. international economic policy will face an emergency situation with which it will have to deal forcefully.

The rest of the first quarter performance can be attributed to the disruptions of the winter. The domestic economy is snapping back very sharply. Retail sales are advancing rapidly; even auto sales, which had been sliding for eight months, are currently advancing well. Housing starts are again above 2 million. Production rose a big 1.4% in March and a further big increase is expected for April. Purchasing power was slowed much less than sales or production during the worst of the winter months because the disruptions were too brief to create major layoffs. As a result, employment rose well, helping to create the purchasing power to support a moderate further advance in consumer spending. Business fixed investment, which was also hurt by the winter, shows signs of resuming large advances in the second quarter. As a result, the current DRI forecast looks for an 8.7% rate of growth in the current quarter. Table I summarizes the April DRI forecast.

TABLE I - Data Resources Forecast of the U.S. Economy
April 22, 1978, Preliminary

	1977	1978				1979	Years				
	IV	I	II	III	IV	I	1976	1977	1978	1979	1980
Gross National Product	1961.8	1992.9	2070.5	2123.6	2174.0	2223.5	1706.4	1889.6	2090.3	2306.5	2567.3
Real GNP (1972 Dollars)	1360.2	1358.3	1387.0	1402.1	1413.3	1424.1	1274.7	1337.3	1390.2	1444.9	1512.9
Implicit Price Deflator(%Ch)	5.9	7.1	7.1	6.0	6.4	6.1	5.3	5.5	6.4	6.2	6.3
Real Disposable Income (%Ch)	9.5	1.3	4.7	3.9	8.3	1.7	3.9	4.5	4.9	4.1	4.2
Saving Rate (%)	5.6	5.9	5.6	5.6	6.5	6.0	5.6	5.1	5.9	5.9	5.8
Housing Starts(Mil. Units)	2.146	1.732	2.060	1.894	1.823	1.781	1.533	1.967	1.877	1.831	2.006
Unemployment Rate (%)	6.6	6.2	6.1	6.0	6.1	6.1	7.7	7.0	6.1	6.0	5.7
Federal Budget Surplus (NIA)	-60.1	-57.2	-46.0	-41.8	-69.1	-58.2	-54.0	-49.5	-53.5	-54.5	-34.8
Money and Interest Rates											
Money Supply (MI)	335.3	339.5	345.7	349.7	355.0	359.2	311.1	335.3	355.0	375.1	401.6
Annual Rate of Change	7.4	5.1	7.4	4.7	6.2	4.8	5.7	7.8	5.9	5.7	7.1
New AA Corp. Utility Rate (%)	8.45	8.82	9.20	9.16	9.11	8.92	8.67	8.33	9.07	9.03	9.38
New High-Grade Corp.Bond Rate (%)	8.18	8.62	8.93	8.86	8.79	8.60	8.33	8.06	8.80	8.70	9.04
Federal Funds Rate (%)	6.51	6.75	7.26	7.07	6.90	6.60	5.05	5.54	7.00	6.71	7.19
Prime Rate (%)	7.67	7.98	8.22	8.13	8.04	7.85	6.84	6.82	8.09	7.94	8.29
Composition Of Real GNP --- Annual Rates of Change											
Gross National Product	3.9	-0.6	8.7	4.4	3.2	3.1	6.0	4.9	4.0	3.9	4.7
Final Sales	6.0	-1.4	8.6	4.2	4.0	3.9	4.5	4.7	4.0	4.2	4.4
Total Consumption	9.3	-0.3	5.7	3.9	4.2	4.1	6.0	4.9	3.9	4.1	4.3
Nonres. Fixed Investment	4.1	1.6	8.9	7.7	5.2	4.7	3.6	8.6	5.0	5.7	7.2
Equipment	3.7	3.2	9.2	7.3	4.4	4.4	4.2	10.9	5.0	5.5	7.5
Nonres. Construction	5.2	-2.0	8.4	8.7	6.9	5.4	2.2	3.5	5.3	6.3	6.7
Res. Fixed Investment	17.8	-5.9	16.2	-4.8	-7.1	-5.2	23.1	19.2	5.5	-2.3	6.5
Exports	-18.6	10.1	16.8	8.8	9.0	6.3	6.5	1.8	4.2	7.5	5.2
Imports	6.1	17.7	-13.2	3.8	6.4	3.1	18.4	10.2	3.4	2.8	4.7
Federal Government	3.5	-7.8	3.0	2.5	3.8	1.9	-0.1	5.0	1.8	2.4	2.0
State and Local	5.0	0.0	6.9	4.7	4.4	4.4	1.0	1.1	4.0	4.5	3.5

From mid-1978 to mid-1979, the second half of this year and in the opening quarters of next year, the economy is likely to show only moderate growth, averaging about 3½%. Interest rate increases have diminished inflows into savings institutions by 35%, which will gradually affect housing activity, bringing starts down by 20% from their peaks. Consumer outlays are held back by an above-normal debt burden. Inventories showed surprising strength in the first quarter, leaving little room for further increases. By mid-1979, the economy will be ready for another acceleration, and 1980 should be quite a good year.

The inflation rate reached 7% in the first quarter, renewing fears of acceleration. However, the data must be seen in the perspective of last year's pattern. During the second half, the GNP deflator rose by an average of only 5.3%, aided by a decline in agricultural prices. These price declines could not be expected to be permanent, so it is not surprising that farm prices have led the current inflation bulge. The GNP deflator is up 6.2% over the past four quarters; the CPI is up 6.4% in the twelve months ending in February and the WPI is up 6.5% in the twelve month ending in March. These are better indicators of the inflation picture.

There is no reason to look either for an escape from the hard-core inflation rate or for a major acceleration. Cost inflation continues: expectations which form the basis of wage claims are built on the hard-core inflation rate, and so wage increases will persist between 7% and 8%. Total compensation, including fringe benefits and payroll taxes, will be up by over 8%. Energy prices will help produce a cost trend near 6½%. The case against accelerating inflation is also clear: physical capacity and labor are in ample supply at home and abroad. There is substantially more slack outside the United States with the growth prospects in both West Germany and Japan continuing abnormally low. The world-wide glut of industrial capacity limits the dangers of demand inflation. The cost factors alone will not produce a significantly accelerating inflation, just persistence of the hard-core rate.

THE FORECAST COMPARED TO ADMINISTRATION GOALS

The DRI forecast calls for an average growth rate of 4.2% for the years 1978 to 1980. The Administration goals are somewhat more ambitious (Table 2), and are way-stations on the path to the more ambitious goals of the Humphrey-Hawkins Act. But if the path of the DRI forecast were actually achieved, the record of economic performance would be considered a good one by most observers, and would represent a big improvement over the situation of the mid-1970s.

TABLE 2 - President's Goals[1] and DRI Forecast, 1977-80

	Goals	Forecast
Real Growth	4½ % to 5%	4.2%
Inflation	-½% a year	no change
Unemployment	-½% a year	-0.3% a year

[1] Economic Report of the President, pp. 5, 19, 154-6.

Recent developments show great progress on the unemployment targets, but setbacks on the inflation front. Furthermore, the international problem has reached pressing proportions. In this circumstance, great caution must be applied in pursuing the Administration goals. A quick dash toward expansion, as exemplified by easy budget policies and easy money policies, will not hasten the accomplishment of the goals but will simply accentuate the cyclical character of

the economy. History amply demonstrates that once the economy reaches a boom condition, it is beyond the ability of policy to control events. Recession follows, with its large increases in unemployment and the long deferral of the reaching of full employment goals.

The economy is not in a boom condition, and under the DRI forecast would avoid it between now and 1980. Chart 1 shows the DRI composite Boom Monitor Index, a collection of indicators which has identified previous periods of boom. There is an excellent prospect of achieving several more years of solid expansion if policy extremes are avoided.

THE MIX OF FISCAL AND MONETARY POLICIES AND THE TAX CUTS

The 1979 budget is too expansionary. The full employment budget deficit was proposed to deepen in 1979, after having already expanded in 1978. A policy of expanding full employment deficits in years four and five of an economic expansion must be interpreted as highly stimulative and can be rationalized only on the assumption that the economy is inherently extraordinarily weak. There is ample evidence that the economy is doing pretty well on its own.

Table 3 shows DRI's current estimates of the full-employment budget deficits for the years 1975 to 1980. The policy assumptions include retention of the social security tax increases, passage of the wellhead tax as in the current House bill, and the President's $25 billion tax cut proposal on October 1. It can be seen that the full-employment budget deficit shrank from $14 to $9 billion in 1977, before the initial Carter stimulus program became effective. In the current fiscal year, the deficit widens to $16 billion, and for 1979 it would surge to a dangerous $26 billion figure. By 1980, the deficit would shrink once more as the second stage of the wellhead tax becomes effective.

CHART 1 - DRI Boom Monitor

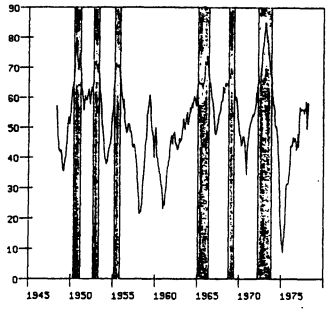


TABLE 3 - Full-Employment Budget Deficits, 1975-1980, (NIA Basis, Billions of Dollars)

Fiscal Years (October-September)	
1975	-14.0
1976	-13.9
1977	-8.7
1978	-16.3
1979	-26.5
1980	-12.8

What would be a prudent budget policy, to be combined with a moderate monetary policy, to enhance the prospects for continued orderly expansion? Past experience has shown that it is impossible to devise a fiscal policy that will precisely correct the short-run fluctuations in the private economy. In the current circumstance, where the economy is moving well and inflation is worrisome, a policy of gradual reduction of the full-employment budget deficit recommends itself.

The current $16 billion full-employment budget deficit could be wiped out over a 5-year time span. This would imply a full-employment budget deficit of less than $14 billion in fiscal 1979, and of about $10 billion in 1980. Comparing these goals to the current prospects, a deficit reduction of about $12 billion is necessary for fiscal 1979, and of about $2 billion in fiscal 1980.

Postponement of the tax cuts until January 1, 1979 would reduce the budget deficit by about $6 billion, leaving another $6 billion of reduction to be found. A scaling back of the net tax reduction from $25 to about $20 billion would put the budget on the recommended path to balance on the full-employment basis by 1983.

TABLE 4 - Effect of 3-Month Postponement of Tax Cuts

	Fourth Qtr. 1978	Year 1979	Year 1980
Real GNP (% Diff.)	-0.3	-0.2	0
Consumption (Real, % Diff.)	-0.4	-0.3	-0.1
Housing Starts (Thousands)	-16.0	0	+7.0
Business Fixed Investment (Real, % Diff.)	-0.2	-0.4	-0.2
Inflation Rate (% Diff.)	*	-0.1	-0.1
Unemployment Rate (% Diff.)	*	0.1	*
Budget Deficit, NIA, (Diff. in Bil. $)	-21.3	-0.3	0.2
Fed Funds Rate (% Diff.)	-.04	-.13	-.10

*Less than .1

The effects of the postponement are very small, about 2/10 of a percent on real 1979 GNP, concentrated in consumption, which gradually brings a near equal improvement of inflation. This makes no allowance for the benefit of avoiding the confusion created by tax changes effective during a taxable year, including the changes in 1978 withholding schedules and the uncertainties of the April 15, 1979 settlement payments.

The effects of postponement plus the modest scaling-back of the cuts are also quite moderate. Real GNP is off 0.4% for 1979 and inflation improves by 0.2% in 1980, and slightly more in the succeeding few years. The smaller budget deficits help financial conditions. Unemployment is up by a tenth of a point. The policy change would allow monetary policy to be a little more generous, though this is not assumed in the simulation.

TABLE 5. - Effect of Postponement Plus $5 Billion Cut in Personal Tax Reduction for 1979 and $2 Billion Cut for 1980

	Fourth Qtr. 1978	Year 1979	Year 1980
Real GNP (% Diff.)	-0.3	-0.4	-0.1
Consumption (Real % Diff.)	-0.4	-0.5	-0.2
Housing Starts (Thousands)	-16.0	-5.0	10.0
Business Fixed Investment (Real, % Diff.)	-0.2	-0.5	-0.4
Inflation Rate (%)	0	-0.1	-0.2
Unemployment Rate (% Diff.)	0	0.1	0.1
Budget Deficit, NIA	-21.3	-4.4	-0.8
Fed Funds Rate (%)	-.04	-.19	-.20

A PROBABILISTIC ANALYSIS OF THE MONETARY TARGETS AND THEIR RELATION TO ECONOMIC PERFORMANCE

According to the DRI forecast, the narrow money supply (M1) will increase by 5.8% between the first quarter of 1978 and the first quarter of 1979, comfortably within the most recent target range. Higher interest rates and a slower economy are likely to produce this modest M1 growth. This result assumes an increase of nonborrowed reserves provided to the banking system through open market operations (or changed reserve requirements) of 5%. The Federal funds rate averages 7-1/4% in the second quarter, stays over 7% in the third quarter, and fades after the economy has clearly embarked upon its period of moderate growth. The broad money supply (M2) rises by 9% over the same interval, at the upper limit of the most recent Federal Reserve long-term targets. M3 is forecast to grow by 9.9%, also near the upper end of last quarter's targets.

These single-point estimates produced by the large-scale DRI econometric model are helpful in showing the average relationships between policy, the economy, and the growth of the various measures of money under the assumptions of the forecast. These estimates are part of the general forecasting work of DRI, and a good deal of effort, data, and computer resources has gone into them. They are our best judgment estimates and we stand solidly behind them.

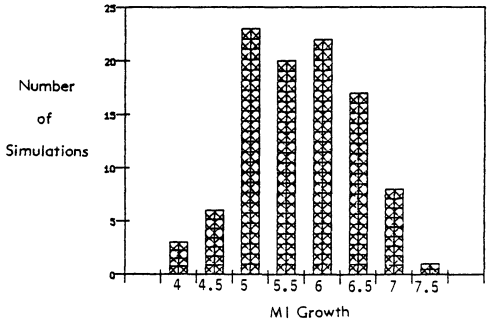
However, the economy contains much that is unpredictable. The model equations did not explain the past perfectly, but included observed errors. Policies are not predictable, and there are other exogenous influences, including the world price of oil, the availability of world crops, and the behavior of foreign economies generally, about which assumptions must be made which are subject to error.

As a result of these unknowables, single-point calculations must be combined with risk analysis to determine the range of uncertainty to assess the resultant uncertainties for the economy. For the purpose of these hearings, DRI has applied its recently developed stochastic simulation facility to the question of one-year monetary growth. The results are instructive.

What was done was this: for each of 350 equations, an error term was entered for each of the next four quarters. These terms were drawn from distributions which are normal, with a standard deviation equal to the standard error of estimate of each equation, but also embodying the persistence of errors through serial correlation and the coincidence of errors across equations as reflected in the covariance matrix.[1] Error terms for about 100 policy and other exogenous variables were defined by assuming variations around trend values distributed as in history. The set of error terms was entered in a simulation of the full model, and this process was repeated 100 times in order to generate a distribution of simulation solutions for all the variables. This procedure has approximated our actual ability to forecast; that is, the variables with small distributions in the experiment are also the variables which have been forecast with relatively small errors and vice-versa.

Table 6 summarizes the experiment, using the forecast solution as the base line. Chart 2 displays the distributions for M1.

CHART 2 - Distribution of Outcomes for Money Supply Growth (M1), 100 Simulations, 1978:1 to 1979:1



[1] Two early papers applying stochastic simulations to macro models are: J.S. Duesenberry, O. Eckstein, and G. Fromm, "A Simulation of the U.S. Economy in Recession," Econometrica, and I. Adelman and F.L. Adelman, "The Dynamic Properties of the Klein-Goldberger Model," Econometrica, October 1959, pp. 596-625. The present study generally follows the technique developed by M.D. McCarthy, in "Appendix," to "Prediction and Simulation of the Wharton Model," in Econometric Models of Cyclical Behavior, B. Hickman, editor, pp. 185-191, but adding shocks to the exogenous variables. See Joe Kelley, "Forecast Risk—A Stochastic Simulation Analysis," Data Resources Review, November 1977, pp. 17-30, for a full account of the DRI method and initial results.

The range of growth of M1 stretches from 7.5% to 4.2%, taking the extreme simulation answers as determining. Ninety percent of the solutions produced M1 growth between 4.8% and 7.1%; 50% of the solutions falls between 5.3% and 6.4%. Twenty-three percent of the solutions showed M1 growth above the upper end of the target range; 5% exceeded 7%. Table 6 shows the comparable figures for M2 and M3, and the distributions for various other important variables. Table 7 shows the probabilities of the monetary aggregates staying within the last set of target ranges.

TABLE 6 - Risk Ranges from the Stochastic Simulation

	Growth Rates 1978:1 To 1979:1 (Unless Otherwise Indicated) Stochastic Simulation Percentiles						
	High	95%	75%	50%	25%	5%	Low
Real G. N. P.	7.4	6.7	5.4	4.9	4.2	3.3	2.6
Consumption	6.9	6.1	5.0	4.4	3.9	3.1	2.4
Fixed Investment							
Business	10.5	10.0	8.1	6.6	5.2	2.7	0.9
Residential	18.1	11.6	4.5	-0.2	-4.2	-11.8	-14.1
Exports	17.6	16.1	12.6	10.8	8.3	4.1	2.4
Imports	7.0	5.3	1.9	-0.2	-3.3	-6.5	-8.9
Government Spending							
State & Local	6.9	6.2	5.4	5.1	4.7	4.1	3.5
Federal	9.3	7.0	4.9	2.9	1.3	-0.9	-3.2
Wages and Prices							
Avg. Hourly Earnings	7.9	7.7	7.4	7.1	7.0	6.7	6.5
G. N. P. Deflator	7.1	7.0	6.7	6.3	6.1	5.8	5.5
Wholesale Prices	9.4	8.8	7.7	7.0	6.5	5.1	4.8
Consumer Prices	7.8	7.3	6.7	6.4	5.9	5.4	5.0
Incomes							
Personal Income	12.1	11.6	10.5	9.7	9.1	8.2	7.7
Real Disp. Income	7.2	6.2	5.1	4.5	3.8	3.1	2.7
Corporate Profits							
Before Tax	26.8	23.6	16.7	13.7	8.6	4.3	0.3
After Tax	31.3	29.1	23.1	19.0	15.5	9.1	7.5
Other							
Money Supply	7.5	7.1	6.4	5.9	5.3	4.8	4.2
MONEY2	10.0	9.7	9.2	8.8	8.2	7.7	7.1
MONEY3	14.7	13.7	11.2	9.7	8.4	6.7	5.1
Indust. Production	12.2	10.5	7.8	6.4	5.1	2.9	0.0
Housing Starts	26.4	20.3	8.6	3.0	-1.7	-8.9	-20.7
Car Shipments	14.4	8.8	5.1	1.7	-0.8	-4.8	-8.1
Stationary Series: Average for 1978:2 to 1979:1 (Percentages Except For Federal Surplus)							
Unemployment Rate	6.8	6.5	6.2	6.1	5.9	5.7	5.4
Fed Surplus (Bill.$)	-32.7	-43.6	-49.9	-53.6	-58.2	-62.6	-67.3
Interest Rates							
Federal Funds	9.02	7.87	7.30	7.07	6.69	6.20	5.74
Prime Bus. Loans	9.44	9.00	8.35	8.05	7.78	7.49	6.88
New Corporate Bonds	9.29	9.13	8.95	8.83	8.7	8.55	8.42

The range of outcomes for real GNP growth is even wider, stretching from as low as 2.6% in the worst solution to as high as 7.4% in the most favorable. This range probably exaggerates the range of uncertainty. If the economy really entered upon one of the extreme paths, policy would take countering moves. On the monetary side, the day-to-day operational target is the Federal funds rate, and it, in turn, is affected by the achievement of the two-month money targets. Thus, there is a loop from results back to policy that would narrow the range of outcomes beyond the figures in Table 6, at least assuming that these short-term policy loops are stabilizing rather than destabilizing.

TABLE 7 - Probabilities For Growth of Monetary Aggregates 1978:1 to 1979:1, Classified According to the Target Range

	M1	M2	M3
Last Target Range (77:4 to 78:4)	4-6½	6½-9	7½-10
Greater Than Target	.23	.29	.45
Within Range	.77	.69	.43
Below Target	0	0	.12

The lesson from this initial set of exercises is clear: the range of outcomes for the monetary targets, in the actual economy, is large. To set the monetary targets is not to set the future path of the economy. Setting the targets for nonborrowed bank reserves does not determine the range of outcomes for the monetary aggregates because the demand for money is itself a result of the behavior of the economy. Clearly, the one-year monetary targets are not a sufficient guide to monetary policy.

I argued earlier in my testimony that the path of the economy embodied in the DRI forecast falls somewhat short of Administration goals, but would still represent a handsome accomplishment in terms of economic performance. That path, in the forecast solution, is consistent with a 5.8% increase in M1, and thus on the single-point basis, an M1 target of 6.5% appears to be adequate. However, the stochastic simulations make it clear that there is one chance in four that the actual M1 growth will exceed 6.5%. Thus, if the economic scenario itself is considered acceptable and policy proves sufficient to accomplish it, when you meet one year from now the chances are one-in-four that the Chairman of the Federal Reserve will be apologizing for the continued overrun of M1 above the upper end of the range.

Is there any meaning to the lower end of the last target range? A simulation was developed which cut nonborrowed reserve growth to the point that held M1 growth to 4%. The result is recession. The Federal funds rate reaches double-digit levels, which would produce a full-scale credit crunch and recession. The stochastic experiment run on this base produced few good answers out of the 100 runs.

THE CURRENT FINANCIAL CONDITIONS AND THE RISKS OF A CREDIT CRUNCH

The Federal funds target was raised to 7% last week, and according to the DRI forecast, a move to 7-1/4% is due quite soon. M1 will respond to the high GNP growth, moving out of the target range. Chairman Miller has indicated that his contributions to the fight against inflation is just beginning.

The critical question for monetary policy—and therefore for the economy—is this: how high can interest rates go before they unloose a cumulative disturbance in the financial system? In considering this question, it should be recalled that there is not a single instance of success in raising interest rates to moderate the economy without creating a major disturbance. The Federal Reserve has carried the policy too far every single time.

Despite the 35% decline in savings flows and the increased volume of bank loans, the financial system is still in good condition and able to finance further expansion. DRI's Credit Crunch Monitor is giving just a few warning signals, no more. Business and household balance sheets are strong, and financial institutions are cautious. The only emerging trouble spot is the falling supply of mortgage money, which is part of the forecast. The stochastic simulations show the limits of our knowledge, however. It takes very little to combine bad luck with policy to produce a cyclical disturbance.

The danger lies in Federal Reserve overenthusiasm. The Federal funds rate cannot be raised again and again and again. With every move from here on, the risk of disintermediation and a credit crunch mounts. When government—including the central bank—gets excited about only one objective, whether unemployment or inflation, it usually overreacts. Let's hope the people in authority have learned that lesson from the experience of the last twenty-five years.

CONCLUSION

Retention of the current monetary targets is the appropriate policy. To raise the targets would signal a lessened concern with inflation and the exchange rate. To lower the targets would either raise the risks that they will be exceeded by actual experience, or that policy will create a credit crunch.

There is one chance in four that the targets will be exceeded. Our stochastic simulations indicate the range of uncertainty about the monetary targets and the economy. We should not be surprised if this contingency develops. On the other hand, with current interest rate levels and the prospects for moderate economic growth, there is a better chance for staying within the targets than there has been in quite a few years.

There is room for modest interest rate increases from current levels. But the margin for error is becoming small. If the current interest rate move is the first of an extended series, we will replay history once more, and plunge the economy into a credit crunch and recession.

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To hold monetary policy near the center of the spectrum, fiscal policy should do its part. The full-employment budget should be on a path toward balance, which requires a scaling back of the proposed tax reductions or tougher spending policies.

With centrist monetary and fiscal policies, the economy has an excellent prospect of achieving several further years of good growth without accelerating inflation. These hearings play an important role to help bring about this result by focussing on monetary policy. Let us hope that other committees and the Congress will help achieve the fiscal policy and the improvements in various structural policies that will make achievement of our economic goals possible.

The CHAIRMAN. Thank you very much, Dr. Eckstein. Dr. Santow.

STATEMENT OF LEONARD SANTOW, ADVISER TO THE BOARD AND SENIOR VICE PRESIDENT, J. HENRY SCHRODER BANK AND TRUST CO., NEW YORK

Dr. SANTOW. I have a few remarks to make which were not part of my official statement because I wrote the statement on Monday and Tuesday and the Federal Reserve tightened policy on Wednesday. These remarks will center on what happened and why it happened.

Analysts in the money market generally did not expect a tightening of the Federal Reserve policy at the April open market meeting. I think there was a feeling among most analysts that the Federal Reserve would wait for a second month of numbers on such things as the money supply, industrial production, personal income, housing starts, before they moved; 1 month's numbers would not be sufficient. Thus, the tightening was a surprise at least in terms of timing.

In my judgment it would be very difficult to justify the recent tightening on the basis of the international side where the dollar at least in the last few weeks has done better and where tightening of money rates doesn't really help the United States a great deal since we generally have higher short-term rates than other countries.

As for some other considerations, the money supply showed a minus growth in February, a small plus in March, a fairly decent size plus in April, and then will probably move to a slower rate of advance in May. In my judgment, there was not enough evidence to firm policy on the basis of these numbers.

I believe there were two basic reasons for the firming. First, I think the Federal Reserve used the change as a signpost—call it a warning, if you will—that they are concerned about inflation and that they want more help from the administration and from Congress in that area. They can get that message across with one-quarter of 1 percent increase in the funds rate just as easily as they can with a large increase.

Second, and possibly the more important reason, is the aspect of credibility. When the Chairman and other senior Federal Reserve people make numerous statements about what they are going to do if other people do not act, they cannot maintain creditability unless they put something behind those statements. This is especially important for a new Chairman who is attempting to indicate both his capabilities and his leadership.

I will now turn to my formal statement which is rather short but I think to the point.

[Complete statement follows:]

AN ANALYSIS OF OFFICIAL POLICY

by
Dr. Leonard J. Santow
Senior Vice President and Advisor to the Board
J. Henry Schroder Bank & Trust Co.
Presented before the Senate Banking Committee
Washington, D. C.
April 24, 1978

A. Introductory Remarks

1. Monetary and fiscal policies should be viewed as a package, not as separate entities. This approach should be used by both the Administration and by Congress when judging policy. Two basic questions need to be asked. First, does the combination of monetary and fiscal policies give the proper amount of restraint and accomodation and second, is the balance between monetary and fiscal policies an appropriate one? At the present time, while the overall posture of the two policies may be relatively reasonable, the balance between the two is totally inappropriate. The budget deficit is far too large for this point of the business cycle, and the deficit is likely to become larger, while monetary policy in terms of interest rates is too restrictive since it is courting disintermediation. Thus, while the private sector of the domestic economy has few imbalances or excesses that could create a recession, the public sector has major imbalances. A huge budget deficit not only saps the creditability of an Administration and Congress, but it also creates upward pressure on interest rates at a time when the Federal Reserve may feel compelled to firm policy because of inflation and money supply problems.

2. An incomes policy, even if it is well conceived, is not a substitute for appropriate monetary and fiscal policies. If it is to be successful, an incomes policy can act only as a complement to monetary and fiscal policies, or it can buy some time in order to get one's monetary and fiscal policies in order. An incomes policy does not attack the causes of inflation, it only moderates the effects. Moreover, there is a momentum to an incomes policy towards an even greater amount of Government intervention as loopholes are closed or voluntary policies are reinforced. This in turn leads many to believe that wage and price controls are the likely result which in turn induces the private sector to obtain wage and price increases before controls limit such advances. This situation, of course, adds to near-term inflation and puts more pressure on the Government to impose controls.

B. Fiscal Policy

1. The budget deficit in the current fiscal year will be between $50 billion and $55 billion; in the next fiscal year (1978-79), it is likely to be between $65 billion and $70 billion; and if no major steps are taken, in fiscal 1979-80 it could approach $75 billion or $80 billion. The main reason for the deterioration in the 1978-79 budget is that the proposed tax reductions will not generate enough economic stimulation to offset the revenues lost from the tax reduction. A $22 billion tax reduction in a $2 trillion economy that is losing momentum will do little to maintain the recovery while the loss of considerable tax revenues will have a substantial adverse impact on the size of the budget deficit, on interest rates, and on the "crowding" problem in the credit markets.

The period of main near term credit market concern should be from October 1978 to March 1979 when interest rates are likely to reach their peak for this business cycle.

2. The large budget deficit at this late point in the business cycle substantially hinders fiscal policy flexibility. After three years of a business recovery, the proper status of the budget is to be near balance. Because of the large size of the deficit, Congress is no doubt inhibited (and correctly so) as to how much it can afford to stimulate the economy even if it appeared that business was slipping into a recession. Then, should there be a recession in 1979 or 1980, the huge deficit would no doubt limit what Congress would do to stimulate an economic recovery.

C. Monetary Policy

1. Monetary policy is likely to be dominated principally by domestic considerations since raising interest rates will not get at the basic dollar problems. Moreover, raising interest rates by a considerable amount will do more harm to the domestic economy than help the U.S. international situation.

2. The Federal Reserve will probably firm policy over the next several quarters, but more reluctantly and by smaller amounts than last year. In 1977, the Federal Reserve provided impetus to higher short-term rates, while this year the monetary authorities are likely to be a rather reluctant follower of credit market pressures. Financing problems, mainly from the Treasury, will be the primary force moving interest rates higher.

3. The Federal Reserve's flexibility at a 6 3/4% Federal funds rate is far more limited than it was in early 1977 when the rate was 2% less. Another 1/4% or 1/2% increase in the Federal funds rate and there could be noticeable changes in both the direction as well as the magnitude of savings flows.

4. The Open Market Committee will not speak with one voice as it did last year. Moreover, the Board staff will have greater influence and power. This probably means smaller and less frequent moves by the Federal Reserve in changing policy.

5. The money supply (M-1) growth for calendar 1978 is likely to average between 6% and 7%. Since the rate for the first quarter was about 4%, one can expect a notably higher average in the last three quarters of the year. The second quarter will probably show an especially rapid rate of advance as the economy recovers from the first-quarter doldrums. With nominal GNP likely to rise about 11% this year (4% real growth and 7% price), a 6% to 7% rate of advance in the money supply would not be surprising.

6. The monetary authority will probably place less emphasis on M-1 compared with last year, although it will still probably be the single most important consideration. The Open Market Committee will probably place more emphasis this year on a combination of factors -- inflation, unemployment, industrial production, and the U.S. international position. Therefore, it will be harder to predict in advance when and by how much the Federal Reserve is likely to change policy.

7. The Federal funds rate, which is currently at 6 3/4%, is likely to move up to 7 1/2% by the end of the year. These disintermediation levels will create considerable pressure to raise the current Regulation Q ceilings. The rate levels in the Government market that will trigger substantial disintermediation are 7% on three-month Treasury bills and 8% on two-year notes.

8. In summary, Federal Reserve policy will be walking a tightrope because the Federal funds rate in my judgment will probably move to levels higher than it should but the money supply will probably be growing 1% or 2% more rapidly than it should. Thus, the monetary authority will not be accommodative enough from an interest rate viewpoint but too accommodative from a money supply standpoint. A major part of this dilemma is due to an excessively large Federal budget deficit with all its adverse ramifications.

D. Recommendations

1. Every year the Administration in its Budget message and Congress in its budget committees should set targets for a package of four variables, making sure that each target is consistent with the other three -- the size of the budget deficit, the maximum percentage increase to be allowed in Government spending, the path and level of Federal funds rates and the growth in the money supply. In order to attain creditability, these targets should have a reasonable possibility of achievement. For example, in the case at hand, an 8% ceiling on Federal spending growth, a $50 billion budget deficit for the current calendar year, a Federal funds rate basically unchanged from the 6 3/4% level, and a growth of about 5% in M-1 would be reasonable for 1978. Then in the following

year, a smaller 6% growth ceiling on Federal spending, a smaller $40 billion budget deficit, a lower 6% Federal funds rate and a smaller growth in M-1 of about 4% would be approximately targets.

2. In order to hold down the budget deficit to $50 billion this year and then bring it down to $40 billion next year, not only would we need an 8% growth ceiling on spending this year and a 6% ceiling next year, but we would also need virtually no loss in revenues from a tax reduction. What can be done is to pass a tax reduction that does not become effective until sometime in 1979, and then have small yearly reductions spread over a period of five years. For example, the reductions could be $8 billion to $10 billion each year for five years. While it currently may not be of great cash flow help to businesses and individuals, such a tax reduction would allow both to make longer run plans with more assurance.

3. An argument that will be made against these proposals is that they would risk a recession in either 1979 or 1980 because it is highly unlikely that fiscal-monetary policy coordination and the fine tuning would work that well. It will also be argued that even if such a program were accepted, it would take a year or two to put in place. Both of these arguments are valid. However, it should be pointed out that the risk of a recession in 1979 or 1980 is already substantial since the Federal Reserve is likely to tighten more than it should in order to compensate for excessive increases in Government spending and an overly large budget deficit. The important difference between the two alternatives is that when we try to come out of a 1979 or 1980 recession it will be much easier to do so if these imbalances in public policy have been rectified.

E. Enclosures

1. On the next page, budget estimates are broken out in some detail. This presentation will allow Committee members to monitor budget numbers as they come out each month.

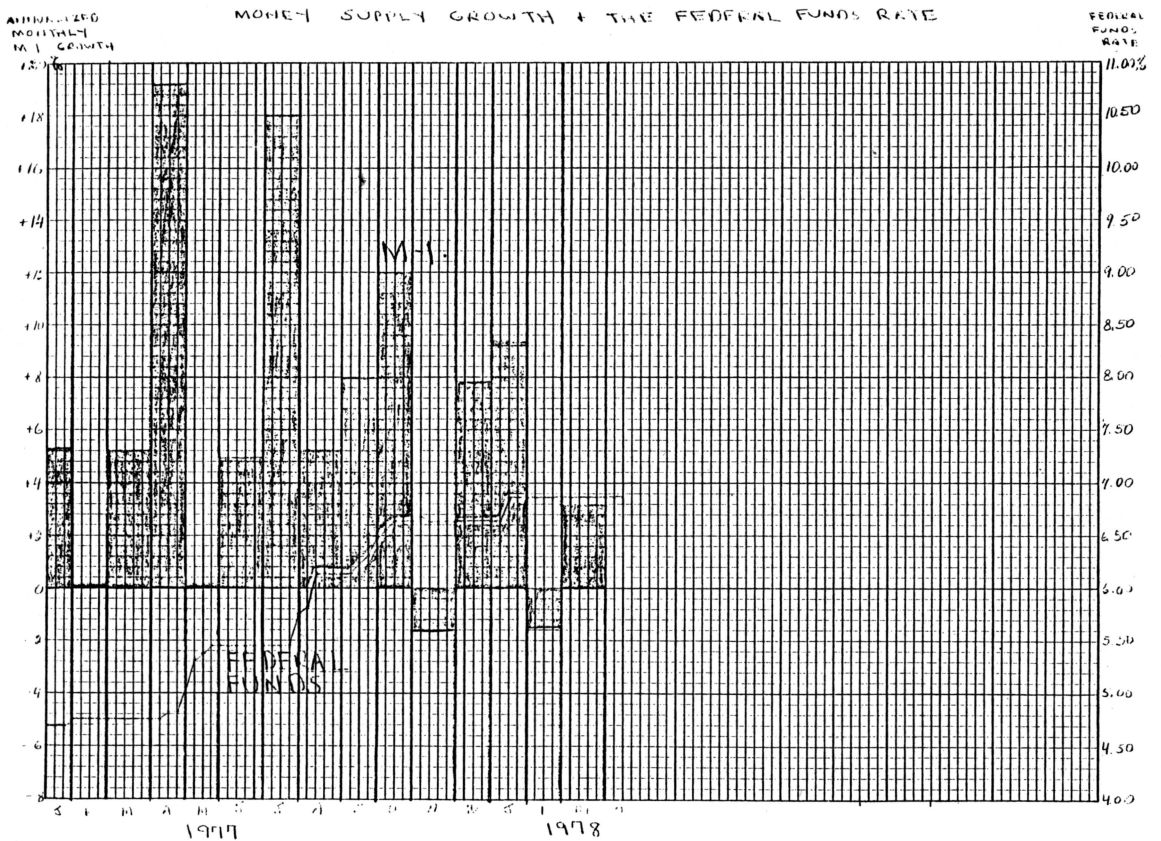
2. On the following page, the monthly growth in the money supply and changes in the Federal funds rate are presented. This allows Committee members to look at monetary policy in the last year, both in terms of monetary aggregates and interest rates.

BUDGET ESTIMATES
(billions of dollars)

	RECEIPTS			EXPENDITURES			DEFICIT OR SURPLUS		
	1976-77	1977-78	1978-79	1976-77	1977-78	1978-79	1976-77	1977-78	1978-79
October	21.0	24.1	27.0	34.0	38.8	42.0	-13.0	-14.6	-15.0
November	25.7	27.6	31.0	33.1	36.9	41.0	- 7.4	- 9.3	-10.0
December	29.5	32.8	36.0	31.9	37.6	41.0	- 2.4	- 4.9	- 5.0
January	30.0	33.2	36.0	32.6	36.9	40.0	- 2.7	- 3.7	- 4.0
February	24.3	26.8	29.0	30.9	33.8	38.0	- 6.6	- 7.0	- 9.0
March	25.1	28.0	30.0	34.6	38.0	41.0	- 9.5	-10.0	-11.0
April	40.0	45.0	48.0	35.5	38.0	42.0	+ 4.4	+ 7.0	+ 6.0
May	27.7	31.0	33.0	33.7	38.0	42.0	- 6.0	- 7.0	- 9.0
June	43.1	49.0	52.0	32.9	38.0	42.0	+10.2	+11.0	+10.0
July	25.0	28.0	30.0	33.6	38.0	42.0	- 8.7	-10.0	-12.0
August	29.7	33.0	35.0	34.7	39.0	43.0	- 5.0	- 6.0	- 8.0
September	36.6	42.0	45.0	35.1	40.0	44.0	+ 1.5	+ 2.0	+ 1.0
	356.9	400.5	432.0*	401.9	453.0	498.0	-45.0	-52.5	-66.0
			(439.6)			(500.2)			(-60.2)

* Assuming a $22 billion tax reduction, with most of it effective 1/1/79.

( ) Official numbers.



The CHAIRMAN. Thank you, Dr. Santow. I want to thank both you gentlemen for very thoughtful and impressive statements. I say that because I agree with some of them.

Dr. Eckstein, given your economic forecast for the next year or so, how would you judge the Federal Reserve's current decision to let the Federal funds rate rise to 7 percent at this time?

Dr. ECKSTEIN. Well, it came very quickly. If you accept a budget policy, if you take that for granted, then the increase in interest rates is not a totally inappropriate response to the worsening inflation in the recent months or of the really dangerous situation in international trade. The Federal Reserve cannot sit there and ignore what is happening to our trade deficit and what is happening to the actual price performance. So I'm not critical of the move that was made last week.

The CHAIRMAN. What you said, however, as I followed you, was that we are in a position now where that kind of interest rate activity is unlikely to have much effect on inflation in view of the enormous amount of unused capacity we have and particularly foreign countries have. We are not at this kind of a stage in the cycle, although we have been recovering for a long, long time, where we are pressing against capacity, either manpower capacity or factory capacity.

So what good does it do to slow things down? The Wall Street Journal reported this morning that there's going to be considerable pain in corporate board rooms as interest rates are expected to rise. What good does that do now? How does that slow down inflation?

Dr. ECKSTEIN. Well, any single eighth of a point interest rate is only an eighth of a point interest rate move, and my concern is really with the now widely held viewpoint in the business community that the rates will go up and up and up until there is a recession and an even worse feeling from some people that they welcome that.

The impact of monetary policy on inflation is very, very slow. It takes 2 or 3 or 4 years before that tighter monetary condition can itself effect more moderate inflation. The benefit is initially on the output side. The cost comes much later. So the current situation is not unsatisfactory from my point of view.

The CHAIRMAN. Well, what effect is it likely to have on the economy during the last half of the year in your view, if any?

Dr. ECKSTEIN. Well, the interest rate increases of last year which of course were much more massive, as the chart in the room here shows——

The CHAIRMAN. And that adds to it. That's one of the reasons we put these charts up. The Federal funds rate, as you noticed, has been going up steadily. This is the latest push in it.

Dr. ECKSTEIN. The Federal funds rate went up 200 basis points. The bond yields have gone up over 100 basis points and, as a result of that, we are forecasting a substantial slowdown in the growth rate to about 3½ percent from mid-1978 to mid-1979.

This means that during this period the economy will not improve; unemployment significantly might even worsen a little bit; but that's water over the dam and that really in a sense is also the old team.

The CHAIRMAN. Let me ask you, Dr. Santow, what effect, in your judgment, will the 7 percent Federal funds rate have on the money and credit markets and is the move appropriate at this time in your view?

Dr. SANTOW. As I said before, I would not have firmed monetary policy at this point. I would have waited at least another month for substantiating data and therefore believe the change was used to develop credibility, given all of the Federal Reserve statements made in the last month or so. A trend towards a firmer monetary policy, which incidentally is in my economic forecast, will be a factor leading to only a 2- to 3-percent real growth rate in GNP for calendar 1979.

The CHAIRMAN. Dr. Eckstein, what's your estimate of the lag between interest rate changes and the changes in the money stock? You said there was a long lag in changes in the money stock and the changes in the economic activity. First, between interest rate changes and then changes in the money stock—how long is that?

Dr. ECKSTEIN. It's a gradual process. It can take as long as a year and a half before the full effect is felt on the money supply.

The CHAIRMAN. What is the first effect? You say the full effect.

Dr. ECKSTEIN. There is little effect right away, of course.

The CHAIRMAN. Then you say it's a gradual effect over a period of a year or year and a half?

Dr. ECKSTEIN. You see some effect in a month or two. You probably have a peak effect in 6 months or 1 year. The process is pretty much complete a year and a half later.

The CHAIRMAN. How about changes in the money stock and economic activity?

Dr. ECKSTEIN. The effect of the entire package of credit costs and availability on real activity is very quick. Some occurs within a quarter or two. Then it mounts for some additional period, as much as a year and a half, but the effect on prices comes 2 or 3 or 4 years later.

The CHAIRMAN. Now I'd like for each of you gentlemen to give me your personal forecast for real GNP, unemployment, and inflation for the next year, the first quarter of 1978 to the first quarter of 1979. First, real GNP, Dr. Eckstein.

Dr. ECKSTEIN. Well, all that material is in my table 1 for the year 1978, our real GNP rose 4 percent and the growth rate at the beginning of 1979 is 3.1 percent.

The CHAIRMAN. All right. Dr. Santow.

Dr. SANTOW. By the first quarter of 1979 the U.S. economy will be running at about a 3-percent real rate of growth.

The CHAIRMAN. All right. Unemployment by the end of 1979, Dr. Eckstein?

Dr. ECKSTEIN. We look for an unemployment rate at the end of 1979 of 5.9 percent.

Dr. SANTOW. Let me ask you, on the real growth, did you want the first quarter of 1979 or the last?

The CHAIRMAN. First quarter of 1978 to the first quarter of 1979.

Dr. SANTOW. Okay.

Dr. ECKSTEIN. Let me correct the record. I thought the question was during that quarter. Our growth average for the four quarters covered by this hearing is about 4.9 percent.

The CHAIRMAN. That's the first quarter of 1978 to 1979 is 4.9 percent?

Dr. ECKSTEIN. Yes.

Dr. SANTOW. I'd say 3 percent to 3½ percent.

The CHAIRMAN. Now unemployment by the end of 1979 Dr. Eckstein has given us. Dr. Santow?

Dr. SANTOW. About 6½ percent.

The CHAIRMAN. Inflation, Dr. Eckstein, first quarter of 1978 to the first quarter of 1979?

Dr. ECKSTEIN. On the GNP inflator we are projecting 6.4 percent.

Dr. SANTOW. 7 percent.

The CHAIRMAN. Dr. Eckstein, you had a fascinating indication of the fact that you assumed that there was zero chance that the M_1 range would fall beyond the M_1 range and go below the 4 percent increase. I agree with that. I have been almost insulted by the Federal Reserve's—I have been insulted, I'll put it that way, by the Federal Reserve's target, their range. It doesn't make any sense to have this big a range. When we put this together we wanted some indication of what the Federal Reserve's goal was for the monetary aggregates. When they give us an enormous range it doesn't make any sense. They had an M_1 aggregate range from 1 percent to 6 percent for the short-term M_1. That was a month or so ago. Now you say they have no change whatsoever of going below their range. Would it make sense under these circumstances for them to narrow their range? Would there be a benefit from that?

Dr. ECKSTEIN. We did another study. We did an experiment in which they aimed to achieve a 4-percent. That is, they really hold down the nonborrowed reserves so low that the model in the single value calculation produces 4 percent in M_1 growth, but if you do that, you get an 11-percent in the funds rate. You get a credit crunch of great severity. I assume that's not the goal of the Federal Reserve.

The CHAIRMAN. Do you see any difficulty in making the range 5 to 6½ percent? Is anything wrong with that?

Dr. ECKSTEIN. No. A range of 5 to 6½ percent would be very satisfactory.

The CHAIRMAN. Now I'd like to ask both you gentlemen, given your economic projections for next year, what would be the growth rate changes for the monetary aggregates over that period? Dr. Eckstein, for M_1, what would be the appropriate growth rate range for M_1?

Dr. ECKSTEIN. Well, our scholastic exercises make it difficult to estimate that because the range has so many things not under the control of the Fed.

The CHAIRMAN. You made that clear in chart 6.

Dr. ECKSTEIN. Now again, as a target to be set as the mean of distribution, recognizing apologies may be due a year from now if they exceed it, we think that a 6½-percent money target is a reasonable target for M_1.

Dr. SANTOW. I think I have made it clear that I would bring the M_1 growth rate down slowly so I would say probably about 6 percent would be a reasonable rate of advance.

The CHAIRMAN. M_2?

Dr. ECKSTEIN. On M_2, the same logic applies so the current target is satisfactory.

The CHAIRMAN. 6½ to 9?

Dr. ECKSTEIN. Nine percent is a good target.

The CHAIRMAN. Nine percent?

Dr. ECKSTEIN. Yes, for M_2.

The CHAIRMAN. All right. Dr. Santow?

Dr. SANTOW. Eight percent.

The CHAIRMAN. All right. M_3?

Dr. ECKSTEIN. Well, M_3 poses a problem because they brought that down and 10½ is a better target for M_3, although I recognize the symbolic situation at this time. With a few months bad inflation history it may be better to apologize for failing to have reached that.

Dr. SANTOW. About 10 percent.

The CHAIRMAN. My time is up. Senator Lugar.

Senator LUGAR. Both of the witnesses have brought to the fore with some clarity the problem of having a monetary policy oversight while at the same time taking a look at budget deficits that are horrendous. This whole conversation seems to have an Alice-in-Wonderland quality.

For example, as I just heard the colloquy between the chairman and you gentlemen trying to specify ranges for M_1, M_2 and M_3, in the face of the fact that the budget deficit that we may be voting on the floor, is clearly $57 billion-plus, maybe more than that. My first question to both of you is, granted that monetary policy may be a partial stymie that may offer a psychological block to inflation, is it even reasonable to be discussing monetary policy within these ranges given the budget deficit that is being discussed in other forums?

Dr. Eckstein, you mentioned the full employment deficit and how that might come into balance by 1983, but that of course is a very different sort of assumption than the $57 billion variety that I was discussing earlier on and which Dr. Santow has addressed himself to.

Really what can be anticipated with a monetary policy in any range, given this size of the debt and the trend for the debt to grow larger?

Dr. ECKSTEIN. Senator Lugar, when we did our analysis of the monetary targets, we did not assume our recommendation on the budget. We assumed a realistic assessment of the budget which is pretty close to the joint congressional resolution we think that will in fact continue and that's even in our forecast, but it does assume pretty much the present fact. So the figures I have given are consistent with a situation where the money and the fiscal policy are not resolved and what I then really say, in effect, is that the Federal Reserve considers that as part of its logic and therefore ups their rates a little bit more. But there's no question in my mind that the goals of the Federal Reserve are simply more conservative than the goals of the rest of the Government.

Senator LUGAR. What sort of a dilemma does this pose? For instance, the chairman in his questioning consistently raised these questions. I don't necessarily disagree that raising interest rates onward and upward has a lot of sad effects on the economy and all sorts of components of it, but where does the Federal Reserve Board find itself in a situation politically in which the Congress and the President are still determined to have deficits of this size—where really are we headed ultimately with monetary policy except to say that interest rates are too high and therefore we just sort of give up the game altogether? Isn't there a tendency at this stage, given the secular increase in inflation, for the Federal Reserve Board to be forced to higher and higher interest rates over the course of time and is there any relief in sight from this?

Dr. ECKSTEIN. Well, the Federal Reserve is relatively independent and the question then becomes how can they best exercise this independent power. The Federal Reserve cannot dictate to the rest of the Government or to the country what the path of the economy should be. When it attempts to do that as it did in 1974, you get a very severe recession. We had a near depression out of that kind of a clash and I believe that they have learned—certainly Dr. Burns learned and perhaps his successor as well—that the central bank cannot substitute its judgment totally for the judgment of the rest of the political process. All it can do is moderate the outcome to a moderate degree. That's really what we're asking them to do.

Furthermore, the Federal budget stands a reasonable prospect of improving after fiscal 1979, and even in 1979 if the tax cuts are reduced. The 1979 budget—and we pointed this out at the time it came out—is simply too aggressive and the Congress hasn't passed it yet and I urge you not to.

Senator LUGAR. Dr. Santow, following on Dr. Eckstein's admonition that the budget is too aggressive and that we ought to tailor it, you have offered an outline of goals in which this might occur incrementally over several years that I think is intriguing. Would you expand on your advice really with regard to the budget this year because this plays a very heavy role in your analysis of where monetary policy could take us and you talked about the budget and interest rates side by side quite appropriately, but what should we be doing as a Congress or as Members of the United States Senate presently debating this budget?

Dr. SANTOW. I believe I have made this clear. We ought to have an 8 percent ceiling this year on Federal spending and 6 percent ceiling in the following year. One of the problems we now have is that the congressional budget committees are going through on-the-job training and they are using dollar spending ceilings that do not indicate the full gravity of the size of the increase.

Turning to the concept of underspending, with a few exceptions it really never did occur. We are going to have an increase this year in Federal spending of 12 percent which after 3 years of a recovery is a ludicrous increase, and the fact that 15 percent has been recommended is even more ludicrous. If Congress had been working with increases in percentage terms, it might have added some fiscal frugality.

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Senator LUGAR. Now on the 12 percent, 12 percent from what to what? I'm not certain I follow.

Dr. SANTOW. This year, Federal spending will go up approximately 12 percent, from $401 billion up to $453 billion, about a 12-percent increase.

Senator SCHMITT. That's outlays?

Dr. SANTOW. Yes; and I think that's going to be within a couple billion of being right. One of the problems with respect to the current budget picture is the fact that while the administration's estimates for expenditures next fiscal year of about $500 billion should prove to be quite accurate, if basic conditions are not changed, the receipts estimates are not accurate. The receipts estimates are too high. With a tax reduction plugged in, a receipts estimates next year of about $440 billion or even more, is just too high. Thus, you are going to see a much larger budget deficit. You think you are going to hold the deficit to $57 or $58 billion and still have a $20-some-odd billion tax reduction. If you pass the tax reduction you will have a deficit of $65 to $70 billion because the receipts will not come in at that $440 billion level. I think I have made it very clear that I would not pass the current tax reduction bill. I would spread a tax reduction out over 5 years, $8 to $10 billion each year in order to minimize the revenue loss. We don't want to lose $20 billion of revenues since it will not be made back in tax receipts and will make it almost impossible to cover the increase in spending.

Senator LUGAR. What is your counsel on the spending, whether it's 5 or 1 or 498 or thereabouts, where does that fall with regard to the plan of incremental budget balancing you presented?

Dr. SANTOW. It's an increase I think of about 9 to 10 percent. As I said, if I had my choice, I would hold the increase to about 8 percent which would be about $35 or $36 billion, and that would mean spending of about $490 billion which is a level that seems much more appropriate.

Senator LUGAR. That's roughly a $10 billion decrease in the President's budget on the spending side?

Dr. SANTOW. Correct.

Senator LUGAR. And then on the revenue side, you're postponing or at least stretching out very substantially the tax reduction because otherwise you're projecting we could run into a deficit of $65 to $70 billion if we went straight ahead with the tax reduction and all the spending?

Dr. SANTOW. Right now that's my best estimate. That's not merely a fear, it's my best estimate.

Senator LUGAR. If that occurred and it becomes apparent we're heading to $65 or $70 billion, what are the effects on monetary policy?

Dr. SANTOW. The Federal Reserve will tighten it too much.

Senator LUGAR. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Schmitt.

Senator SCHMITT. Thank you, Mr. Chairman, and I thank our two witnesses. I found it very intriguing testimony, and Mr. Santow's discussion of goals are very similar to the ones I jotted down on an airplane last night, so obviously I like that.

I would like to draw both your attentions to the charts in the back of the room which the minority members of this committee have prepared and included in the report from last year, and just ask you to comment on those trends from 1950 to approximately the present.[1]

The first one is the change in the money supply, M_1. The second is the relation between GNP and M_1, and the third is the correlation between the rate of inflation and the Federal funds rate. Do you gentlemen agree with the general averaging that's been done there? Do you think it's significant?

Dr. ECKSTEIN. I assume that the calculations have been done correctly. They look familiar. As for the substance of the charts, they really reflect—at least two of them reflect—indeed, all three reflect the fact that after the period of the Korean war we had a limited period of worsening inflation with a happy period of the 1960's. The money supply response to the increased volume of transactions partly facilitates that. The nominal GNP is bloated by inflation. The problem is how do you get this straight line to become a curve which decelerates and doesn't go up and up through the ceiling.

Senator SCHMITT. Exactly. Not only the ceiling, but to try to reduce that gap between real GNP and the rate of growth of the nominal GNP which is a rough measure of inflation.

Dr. ECKSTEIN. Well, my recommendation is fairly simple. You need a prudent budget policy of the type I described. You need a money policy which doesn't become overly heroic but does fight inflation within limits of their ability, and you need other measures such as those in the President's program to try to reduce the amount of inflation created by the private sector and policy not related to demand.

The process will be slow unless we are prepared to impose price controls, which hardly any sensible person considers. It is going to be a drawn-out process to work our way out of the inflation into which we stumbled over 10 years. It can be done on a deceleration of a half a percent a year if we toughen a variety of policies, such as agriculture and regulation and a long list—and payroll taxes and what have you—and if the President uses at least a bit of his good offices to try to get key price and wage decisions to come out a little better for the public.

Senator SCHMITT. Dr. Santow, would you like to comment?

Dr. SANTOW. I have commented on these points in other hearings. The Federal Reserve, to be quite frank, does not have considerable control over the money supply. They never have. I'm not sure that they ever will. That's one of the problems we've got when we start talking about 5 or 6 percent money supply targets. I think that such a narrow M_1 range overestimates their capabilities in this regard.

Another problem in analyzing Fed policy and money supply growth is that we don't know how much is cause and how much is effect. It could be grossly unfair to the Fed to say that those wide M_1 fluctuations were due to Federal Reserve actions and Federal Reserve policy. Some of the wide M_1 fluctuations are no doubt due to the Fed and some are not.

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[1] See S. Rep. 95–610, Dec. 7, 1977.

Looking at the chart on the right, all that chart indicates is that the Federal Reserve reacts quite quickly to jumps in consumer prices. In a cost-push inflation, such as we had in the mid-1970's, Fed tightening proved to be quite ineffective in stopping inflation, at least in the short run. Thus, Fed firming at that time showed considerable effort but for a long period not a great deal of success before they finally managed to substantially cut back inflation. Obviously, in a cost-push inflation Fed policy has minimum effectiveness.

Senator SCHMITT. Well, now the charts aren't necessarily meant to be a commentary on the Fed and how successful they are. They are just to reflect history. And the biggest concern, of course, is that there's this general upward trend. We have been unable to put a damper apparently on the growth of the money supply. At the same time we have been unable to really increase our real GNP, and the two correlate very directly I think in most people's minds with the inflation rate that we have.

One thing that disturbs me a little bit about what has been said here about the private sector—and I include labor as well as management in that—is that they have a significant amount of control over inflation. I'm not sure that they do. Generally, they tend to be reacting to inflation that's already there rather than creating it themselves.

Now I agree that there are certain instances where a wage negotiation may be unfair to one side or the other, particularly on the side of labor, and you get a large increase in wages beyond productivity increases and, therefore, that would be a contributor to the inflation rate; but don't you believe, in general, the private sector is reacting to inflation rather than creating it?

Dr. SANTOW. I think your point is a good one. However, while the private sector may not create the initial causes of inflation, it can help to create an inflation bandwagon. For example, when an incomes policy is instituted, if the incomes policy doesn't work and there are some large price increases or large wage settlements, this can often create a snowballing type of effect. So while the business community of the labor unions may not have created the basic problem, they can be involved in a process which adds further momentum to the inflationary process.

Dr. ECKSTEIN. The difference in the attitudes of people in the private and public sector isn't all that great. In a way, the Congress and the administration and the Federal Reserve are situated very similarly to a business leader or a labor leader. There is the inflation. The point is, you would like to get out of the inflation, and you will not unless there is a general feeling that some sacrifice is required from all parties. That includes the Congress controlling spending. It includes the unions not pushing for that final penny in the cases where they are exceptionally powerful. It includes the case of the largest businesses that they give some consideration to the overall problem when they set their prices.

Senator SCHMITT. I agree, but isn't the long-pull intent the question of what the Congress is willing to do with respect to holding down the deficit, reducing the deficit? Because it's only a limited amount of time that labor and management can hold their discipline. If the

Congress continues to pump $60, $70, and $80 billion annually into the economy, the major force on inflation is there, and sure, there can be discipline for a year or two maybe, but it can't be indefinite or business and labor both start to go in the hole.

Dr. ECKSTEIN. Well, inflation is the handiwork of everybody, and big mistakes have been made in the past, the most prominent being the financing of the Vietnam war. The current deficit is still largely the result of the economy being relatively weak. There would be somewhat less inflation if the budget were straightened out, but if we would get rid of these budget deficits it would not all by itself cure the inflation. You would still have the hangover from the past. You would still have costs feeding on each other and producing rising inflation. The tragedy of it is that there isn't any one action that can get us out of it. It's really a common trap. We can only get out of it with some kind of coordinated approach where private and public and fiscal——

Senator SCHMITT. I agree that it's going to take a coordinative approach. It's going to take many different policies acting together, but there is a tendency, at least in the administration's policy, to say that labor and management, the private sector, is more of a culprit than is the administration and the Congress. I think we've got to realize we are all culprits, as you both I think are saying, but that without fiscal discipline on the part of the Congress, monetary discipline on the part of the Fed, and in fact regulatory discipline on the part of the administration, it's awfully hard to expect the private sector to hold the line very long. I think they can hold it for a year or two, as I say, but you're going to reach a point where the internal pressures that exist even now on individuals are so great that they are going to have to let go.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Schmitt. I just have a couple of quick questions. We have another distinguished panel following you.

First, I would like to have both of you give me your frank evaluation of the current reporting system of the Federal Reserve, their quarterly reports to Congress. I would like to get your recommendations on how the reports to Congress can be improved, and your judgment on whether economic forecasts by the Federal Reserve would impair its independence or its ability to set monetary policy.

Dr. ECKSTEIN. I see no reason why the Federal Reserve should not make its forecasts public. By now there are so many of them, no one would impute to them any more foresight than one would impute to anyone else's.

The CHAIRMAN. Even though you would have a new and prominent competitor?

Dr. ECKSTEIN. That is implicit in my remark, we are not afraid of them.

The CHAIRMAN. You answered the last part of the question. How can they improve their reports to Congress, in your view?

Dr. ECKSTEIN. It is a little hard for an outsider to discuss that in specific terms. Clearly, they could provide more material on how they reached their conclusions, for example, the kind of material

I brought here this morning could be provided by them. There are some kind of analytical exercises that underlie their conclusions which I am sure are first quality work, because the Federal Reserve has an outstanding staff and which would do well in the free marketplace of ideas.

The CHAIRMAN. Wouldn't it be helpful to us to understand why they reached the aggregates they did, the goals of the monetary aggregates, by spelling out what that would mean in terms of employment, in terms of inflation, areas we can understand, discuss, and that will mean more to the Congress and to the public?

Dr. ECKSTEIN. Indeed in my testimony this morning we have tried to show them some ways in which they could do it. So there is a way to indicate uncertainty, along with forecasts.

Dr. SANTOW. I have some strong feelings in this area. No. 1, I really don't like the current system, with the Federal Reserve coming back every quarter and giving new annual growth rates; it turns attention away from the Fed's performance in previous quarters. The current approach can also be quite misleading.

The committee would be much better off if it asked the Fed at the beginning of the year for a target range on a single monetary aggregate. In any given quarter if that indicator proves misleading, the reasons can be explained. As an example of such an approach, the Fed would have come before the committee at the beginning of this year and state that they are going to aim for a money supply growth rate of say 4 to 6 percent or 5 to 7 percent for the calendar year. The Fed Chairman would have to come back every quarter and tell how well they are doing with respect to the established target range and why there were any deviations. They should not make new four-quarter estimates each quarter, but should instead explain how well they are doing with respect to the target range established at the beginning of the year. This would create some accountability during the period.

I would also have the Fed establish likely Federal funds rates consistent with the monetary aggregate target presented. For example, in early January if they would have used a 4- to 6-percent M_1 target, they might also have said this range would be consistent with a funds rate of between 6½ percent and 8½ percent by yearend. Every quarter the Fed would be required to testify on how they are moving compared with these paths and to explain any deviation. This approach would definitely improve accountability.

The CHAIRMAN. That is an excellent suggestion. I think we will do exactly that, to the extent we can in the short time we have available tomorrow. I think it is a good time to do it because obviously Chairman Miller can't be held responsible for the goals that were set or the performance since he has been Chairman for only a short time. But it indicates how the Federal Reserve as an institution has been able to function in the last reporting period.

Dr. SANTOW. I think you have to use this target approach for both Fed funds as well as for the money supply. Moreover, don't muddy the waters by trying to use many varieties of the money supply because this allows people to choose the "M" that best suits their needs or justifies their case.

[The following information was received for the record:]

RESPONSE TO A QUESTION ASKED BY SENATOR PROXMIRE, CHAIRMAN OF THE SENATE BANKING COMMITTEE, ON HOW TO MAKE THE TESTIMONY OF A FEDERAL RESERVE CHAIRMAN MORE MEANINGFUL

BY
DR. LEONARD J. SANTOW
SENIOR VICE PRESIDENT AND ADVISOR TO THE BOARD
J. HENRY SCHRODER BANK & TRUST CO.
NEW YORK

With respect to the Federal Reserve Chairman testifying before the Senate Banking Committee, I offer the following suggestions and procedures to be followed:

(1) Approximately two weeks after the President has presented his Budget message and Economic Report in late January-early February, the Chairman of the Federal Reserve should testify before the Senate Banking Committee.

(2) In his testimony at that time he should address himself specifically to the following points:

(a) What estimates in the President's Economic Report or the Budget did he disagree with and what would be the Federal Reserve's estimates in these areas.

(b) What targets or goals in these reports did the Federal Reserve believe were inappropriate or unrealistic and what are the Federal Reserve's targets or goals in these areas.

(3) A statement should then be made by the Chairman giving the Federal Reserve's M-1 growth target from the fourth quarter of the previous calendar year to the fourth quarter of the new year. The M-1 growth target should have a 1% range. After this target range is stated, then the Federal Reserve Chairman should further state whether it can be achieved by the current level of Federal funds rates. If not, then how much per quarter would the funds rate need to move up or down in order to achieve such an M-1 growth target. A range of 1/4% for each quarterly period should be used when specifying such changes in the funds rate. To be specific, the Chairman might state that the Federal Reserve wants an M-1 growth from the fourth quarter of 1977 to the fourth quarter of 1978 of 5% to 6%, and that in order to achieve this growth, the funds rate would probably have to be unchanged to up 1/4% per quarter in order to achieve this M-1 target.

(4) The Chairman should then state that if his M-1 and funds rates did materialize what the likely rate effect would be on 25-year U.S. Treasury obligations. Again, the information would be stated in terms of quarterly interest rate changes with a 1/4% range per quarter used.

(5) Approximately one week after the Chairman has made his presentation, several people outside the Government should be asked to testify, with emphasis placed on analyzing the Chairman's comments.

(6) The presentation by the Chairman in early February would be the only one during the year when four-quarter targets or expectations are given. In his next three quarterly presentations, the focus would be on how and why the Federal Reserve has deviated from the numbers presented in February. Therefore, the focus would be on the current calendar year and there would be no attempt to use a continuing four-quarter outlook as is done now.

(7) Again, a week or so after each of these quarterly updates by the Chairman, experts from outside the Government would testify as to the appropriateness of Federal Reserve policy and the Chairman's statements.

(8) In order to make the Chairman's testimony as meaningful as possible, an attempt should be made to stay as close as possible to the practical side of monetary policy, and to avoid becoming sidetracked by theoretical differences. For example, with respect to the monetary aggregates only the growth target for M-1 should be given. If the Federal Reserve Chairman wants to state why for a certain period M-1 is not the most meaningful indicator, it should, of course, be his prerogative to do so. However, what should be done is to get away from allowing a continuing shift of emphasis from one "M" to another based on what suits one's needs or desires. Hopefully, by using one monetary growth target and two interest rate changes (Federal funds and long-term Treasury issues) in the Federal Reserve's early February presentation, the running battle between the monetarists and Keynesians, which frankly has no place in these hearings, can be limited.

(9) Finally, when the Chairman makes his presentation in early February, the initial part of his discussion should be an analysis of what happened over the previous year, addressing himself primarily to Federal Reserve's targets and estimates made a year earlier. Emphasis should be placed on the deviations from those expectations and why they occurred.

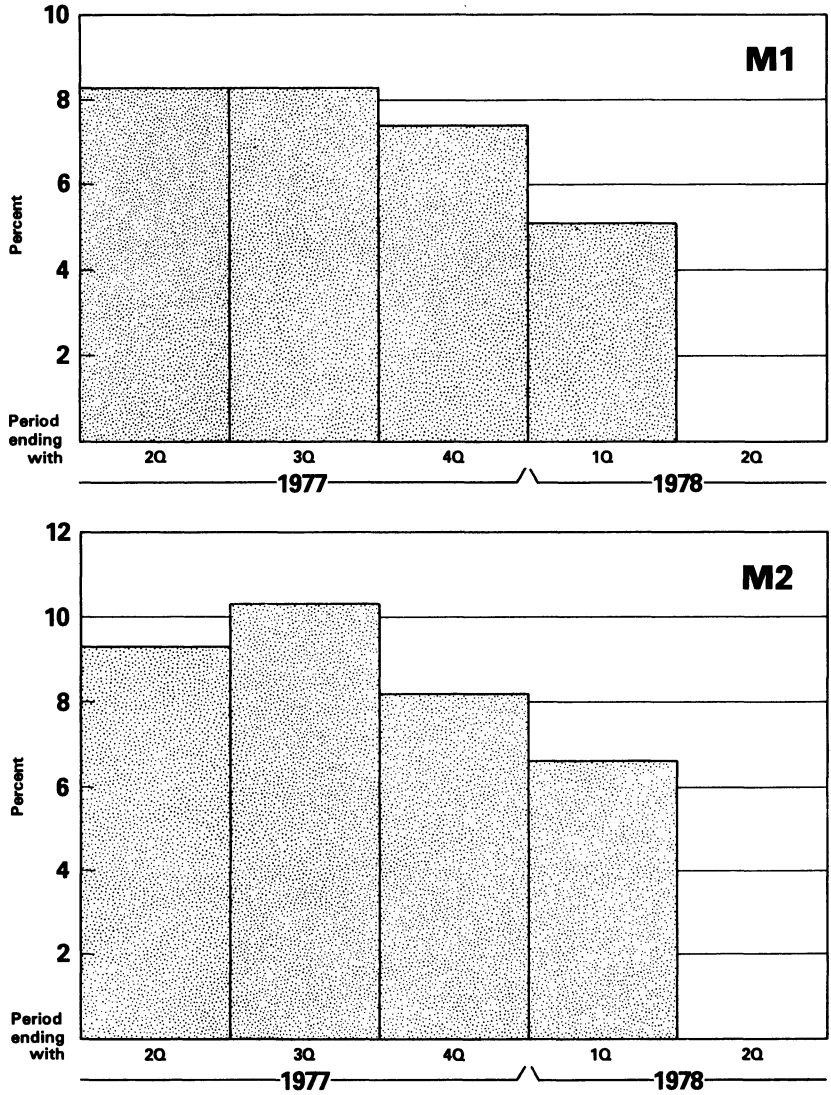
(10) While the M-1 target range that is presented by the Chairman in February will not be changed during the course of the year, the Federal Reserve should be allowed some latitude without severe criticism for being modestly outside the target range if important factors are not working out as expected. However, in the May, August and November presentations no new M-1 ranges should be given but rather justifications for being outside the range presented in February should be stated. Staying with the initial range will avoid the Federal Reserve changing the target range every quarter and thus reducing the ability of Congress to measure how accurate the Federal Reserve was in its February targets and estimates.

The CHAIRMAN. Dr. Santow, Chairman Miller has been quoted as thinking about the need to raise the ceiling rates on time savings deposits. Do you think this would be appropriate, and what would be the effect on the mortgage interest rates and the availability of funds for housing?

Dr. SANTOW. No. 1, assuming that my interest rate forecast is relatively accurate and Federal funds rise, when funds reach 7½ percent, raising the ceilings will become a burning issue. I think there is a reasonable chance that such a change will happen, and the increases would probably be a quarter or a half percent. However, I do not think it will do the economy or housing market a great deal of good unless the funds rate were to stop its upward movement. If the funds rate were to stabilize, it would definitely help savings inflows into the financial institutions.

GROWTH OF MONEY STOCK, M1 AND M2, QUARTERLY

(Seasonally adjusted compound annual rates)

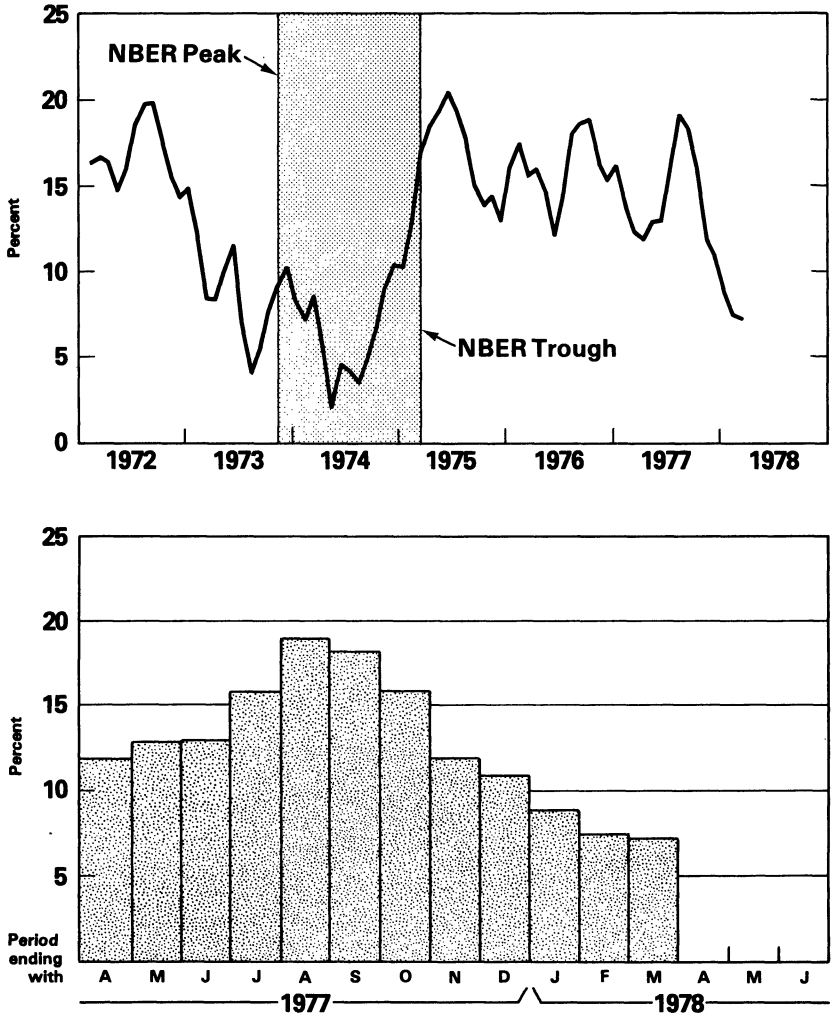


Data Source: Calculated from money supply series of The Board of Governors of the Federal Reserve System, as revised in March 1978.

Prepared by Congressional Research Service, Library of Congress

GROWTH OF DEPOSITS AT SAVINGS AND LOAN ASSOCIATIONS, CREDIT UNIONS AND MUTUAL SAVING BANKS, MONTHLY

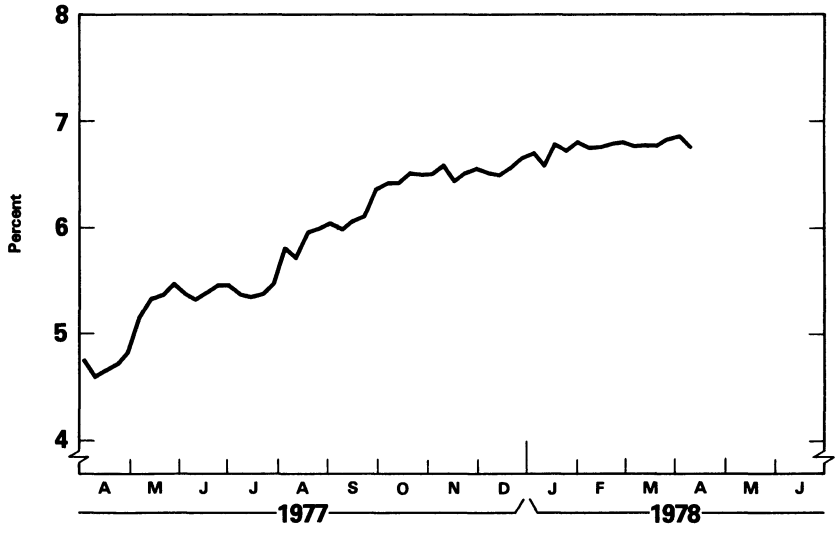
(Seasonally adjusted compound annual rates)



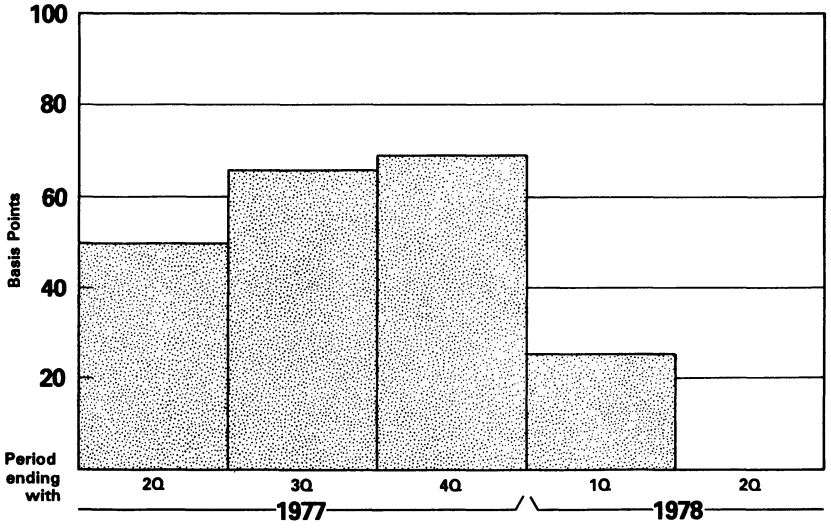
Data Source: Board of Governors of the Federal Reserve System

Prepared by Congressional Research Service, Library of Congress

FEDERAL FUNDS RATES



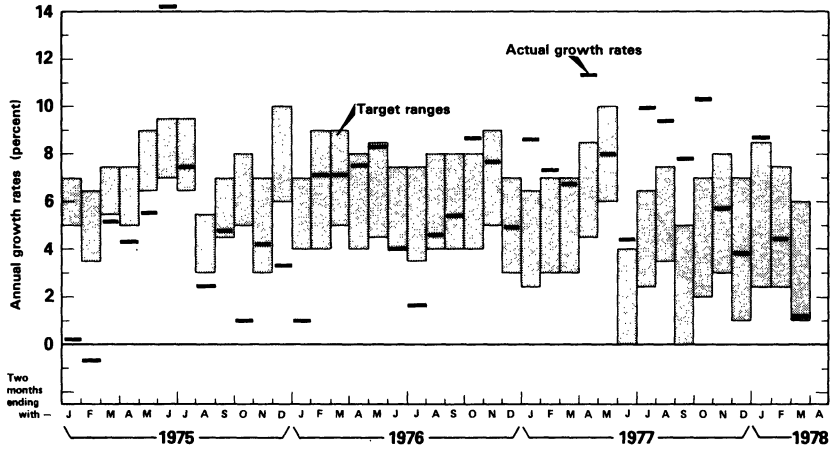
QUARTERLY CHANGE IN FEDERAL FUNDS RATES



Data Source: Board of Governors of the Federal Reserve System

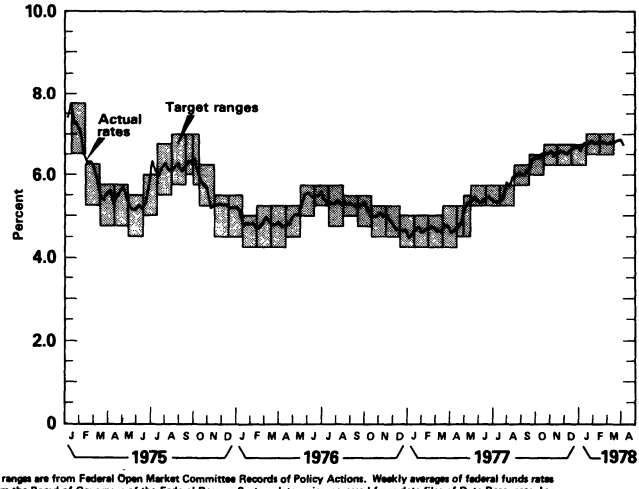
Prepared by Congressional Research Service, Library of Congress

MONEY SUPPLY (M1) GROWTH RATES AND TWO MONTH FEDERAL OPEN MARKET COMMITTEE TARGET RANGES



SOURCE: Target ranges are from Federal Open Market Committee Records of Policy Actions. Actual growth rates are calculated from money supply series of the Board of Governors of the Federal Reserve System as of March 1978.

FEDERAL FUNDS RATES AND FEDERAL OPEN MARKET COMMITTEE TARGETS



SOURCE: Target ranges are from Federal Open Market Committee Records of Policy Actions. Weekly averages of federal funds rates are from the Board of Governors of the Federal Reserve System data series, accessed from data files of Data Resources, Inc.

Prepared by Congressional Research Service, Library of Congress.

The CHAIRMAN. One of the reasons you have these first three charts, you have an indication of what has happened to the savings and loans, and particularly the third chart, and there is a disintermediation, a milder disintermediation as a matter of fact, because it is harder to take money out, money is not flowing in the way it has in the past.

This would tend to counteract that, if we raised the ceiling on time and savings deposits to recognize the increased competition.

Dr. SANTOW. I think the real problem is what I stated before, and that is the funds rates will be too high at that point. Even the current 7-percent funds level creates a disintermediation problem.

The CHAIRMAN. Senator Lugar?

Senator LUGAR. No more questions.

The CHAIRMAN. Senator Schmitt?

Senator SCHMITT. Just that if you gentlemen would, for the record, provide us with your short- and long-term assessment of the effect of productivity changes on the problem of inflation, and our balance of payments, I would appreciate it.

We didn't really get into productivity today, but that is another factor that does relate to this problem, and I would appreciate any comments you might have on that for the record.

Dr. ECKSTEIN. Productivity performance, we have analyzed this, and concluded that after the substantial decline in the trend in the late 1960's, there has not been a second major stepdown in our productivity advance. There is a current poor performance, and it is due to the current business cycle circumstance; indeed, we expect a big productivity gain in the second quarter. Longer term, the United States is clearly neglecting productivity performance; we are shrinking our commitment to research and development. I see the best students where I teach mainly going into law or medicine, and hardly any into technology. The opportunities are not there any more, our tax system is not that conducive to investment.

The only thing we have going for us is an industrial relations system that is better than most countries, which still has our labor force trying pretty hard on the job.

Senator SCHMITT. Dr. Santow?

Dr. SANTOW. Frankly, I didn't find the first quarter economic results very consistent. It appears that the productivity figures in the first quarter will be awful because total employment went up by quite a substantial amount and overtime seemed fairly strong, yet real GNP went down. Possibly, we will see some revisions in the economic data for the first quarter that will put real GNP on the plus side.

I believe Dr. Eckstein is right, the big jump in the second quarter in the GNP will cause a snapback in productivity, at least for one quarter. However, I am deeply concerned over productivity on a longer term basis. With a $27 billion trade deficit last year and a similar amount this year, there is reason to be concerned over productivity.

Senator SCHMITT. Have either of you analyzed the effect of Federal regulations on productivity?

Dr. ECKSTEIN. No.

Dr. SANTOW. I have not.

Senator SCHMITT. Thank you very much.

The CHAIRMAN. Thank you, gentlemen, very much for a most helpful and enlightening presentation.

Now we are honored to have a distinguished panel of three outstanding economists. I am happy to introduce them.

Prof. Donald Hester, who hails from the University of Wisconsin, I am happy to say, where he is a professor of economics. And he is Yale educated, I believe.

Dr. Thomas D. Thomson, first vice president, and chief economist of the Detroit Bank & Trust Co., and who is Indiana University educated. I think Senator Lugar will be interested in that.

Then we have Prof. Joan Walters, with a fine background, who, incidentally I might mention is listed in American Men of Science, among many other honors. So we will start off with Professor Hester. We are going to give you a suggestion here with a little light. The green light will be on for 9 minutes, then the yellow light for a minute, and then the red light.

I am going to have to leave, because of the persuasive arguments of Senator Lugar and Senator Schmitt, I am going to the floor at 11:30 to introduce a resolution which would put a ceiling on spending at $475 billion.

This committee, incidentally, is unfortunately typical of a microcosm of other committees up here, we are going to entertain proposals to increase the President's budget by over $1 billion in the next few days, when we come to mark the budget up. This is the kind of very tough problem we face. The proposals come from both sides of the aisle.

But we are happy to have you, Dr. Hester, go right ahead.

STATEMENT OF DONALD D. HESTER, ECONOMICS DEPARTMENT, UNIVERSITY OF WISCONSIN

Dr. HESTER. Thank you very much. In my statement I have not made many statements about the current situation, because it is changing so rapidly and I anticipated that. I will just make a brief statement, because other speakers have spoken more about the present situation.

I think it is important to have a broad view. I was very concerned about the increase in the funds rate to 7 percent, and I anticipate that it will be going up an additional quarter or half percent in the next few weeks. If that should happen, I think we will have serious disintermediation. The economy is not as strong as you have been hearing. Quarterly changes in real GNP have declined steadily since the first quarter of 1977. The current decline, an absolute decline in real GNP has been attributed to the weather. I would call your attention to the fact that in the first quarter of 1977, which was also part of a bad winter, GNP grew very rapidly. So I think you should not just write this off to the weather. I am not so confident that the second quarter GNP will be as expansive as others have projected. Therefore, I would urge a looser monetary stance and a lower Federal

funds rate target by the Federal Reserve, and I would also be very opposed to reducing the tax cuts that are proposed.

My testimony adequately indicates that I am also concerned about the size of the deficits, but I think there are a tense few quarters coming up and I don't think that one should err on the side of being tight at this point.

Now I will briefly summarize my statement. The statement takes a different perspective than other statements you are hearing today, partly because I think some important institutional changes have been occurring in the capital markets. These have not been adequately taken into account when people are making statements about targets for monetary aggregates. I don't want to go through this in detail, because time is obviously scarce. Since I understand that the statement will be in the record, I will skip several important points.

The most important thing, I think, is to realize that the Fed's ability to control large monetary aggregates——

The CHAIRMAN. Dr. Hester, I have to interrupt for a minute. That bell means the Senate is going into session, we are going to have the morning hour right away, and I have to make a statement on the floor. I will be back. The distinguished Senator from Michigan, Senator Riegle, will chair the meeting in my absence. Go right ahead.

Dr. HESTER. Thank you. The larger aggregates, M_2 and M_3, have been growing rapidly relative to M_1 and I believe the Fed's ability to control these larger aggregates is always less than its ability to control M_1. The ability of the Fed to control broad monetary aggregates has declined. In addition, I think M_1 itself is being increasingly misinterpreted by monetary and financial analysts.

I want to spend some time talking about that. What has been happening is that other commercial bank liabilities, nondeposits liabilities, have been growing much more rapidly than any of the deposit aggregates. These other liabilities consist largely of Federal funds purchased and securities sold under agreements to repurchase. Federal funds purchased are "good" funds that have been purchased from banks and an assortment of other authorized sellers. A repurchase agreement is a transaction in which a bank sells securities overnight to either a State and local government or a private nonfinancial corporation, and then buys the securities back from the purchaser the next morning.

The securities typically are in the bank's portfolio and never change hands, but are simply put in a different account for the firm at the bank; in effect they serve as collateral for an overnight loan. The bank's balance sheet continues to show the securities after the transaction and also shows that the bank has acquired a matching liability in the amount of the funds purchased. These transactions are undertaken by banks partly to obtain funds at short notice to meet their reserve obligations. Suppliers of funds benefit from being able to sell excess funds at short notice and to earn interest on funds that might otherwise be idle overnight.

In effect repurchase agreements permit the payment of interest on demand deposits, but they are not counted as demand deposits. Two features of the transactions make them important for interpreting monetary aggregates.

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First, neither Federal funds purchased nor funds acquired through repurchase agreements are subject to reserve requirements. This means that a bank can reduce its future reserve obligations if it chooses to buy funds from its own depositors.

Second, the transactions are often negotiated so that the seller of funds does not have to deliver funds until near the close of a business day. Thus, the seller can use his funds all day long, say, until 4:59 p.m., when they must be delivered. All day they are money. When they are delivered the bank does not record the funds as demand deposits, but shows its liability appropriately as funds acquired through repurchase agreements. If 5 p.m. is the close of the business day, that is the time that a bank calculates its deposits and reports them to the Fed. For purposes of calculating the money stock, the Federal Reserve only uses close-of-day figures. Therefore funds acquired through repurchase agreements are not counted as money even though they may have been used that way all day. If the transaction is an overnight deal, at 9 a.m. the next morning the Federal funds or repurchased funds revert to the seller's demand deposit account and thus are available as money all day long again.

Now you might ask how important are such transactions? In order to answer this question one needs detailed data on the average daily net Federal funds purchased by the banks in the system, just as demand deposits are measured. No such information is presently collected by the Federal Reserve. One of the useful things you could do is to seek better information about this quantity. However, one can make some rough estimates. Fragmentary evidence has been assembled by subtracting Federal funds sold by all commercial banks from the sum of Federal funds purchased and securities sold under repurchase agreements by all commercial banks on different dates. This series is shown in table 2 in my statement.

On the most recently published call report the volume of such net funds purchased was $45.8 billion or about 15 percent of M_1. In the previous quarter it was $41.7 billion or 13 percent of M_1. The 15-percent figure refers to September 1977 and the 13-percent figure refers to June 1977. The increase in net Federal funds purchased in the third quarter was on the order of magnitude of the change in M_1, but it did not count as an increase in the monetary stock. Between 1970 and 1976, net Federal funds purchased has grown 14-fold.

There are several other recent technological and legislative innovations that have also changed the spendability and convenience of consumer-type savings accounts at financial institutions. In addition to the evolution of the share drafts and NOW accounts, the widespread introduction of electronic tellers for regular savings accounts has made these interest-paying accounts at least as convenient as a commercial bank checking account.

Surely the relevant concept, which used to correspond to M_1, should be more broadly defined than in the past. A new money stock measure is necessary in order that these newly transactable balances be appropriately accounted for within the monetarist framework.

We can make similar statements for small business savings deposits and for funds of large multinational corporations that appear increasingly to be placed in offshore banking centers. The latter are

likely to be compensating balances that are placed abroad to evade reserve requirements on demand deposits that would apply if these funds had been left in domestic branches. At present, offshore deposits of domestic corporations are excluded from measures of the domestic money stock. Little information is published about the extent to which offshore deposits have been substituted for domestic corporate accounts.

I would like to turn briefly now to a discussion of velocity and point out that velocity has been growing very rapidly. M_1 velocity has doubled in the last 25 years. M_2 velocity has risen about 20 percent in that period of time, although almost all of the rise in the M_2 velocity occurred before 1960, when banks began to pay interest in a competitive fashion on their time and savings deposits.

These velocity measures should not be taken too literally, because they involve a great deal of very messy aggregation. Velocity is the ratio of some income measure to some monetary aggregate. Different components of M_2 have been growing at very different rates relative to GNP.

In a recent dissertation, a Wisconsin graduate student, Cynthia Wood, discovered it was possible to analyze each of these components separately and learn a great deal more about fluctuations in GNP. An implication of her findings is that there are significant aggregation losses when one sums the components to form M_2; each of the components should be studied separately.

Now I turn to interest rates, because I see my time is running out. In recent years there has been a great change in the relationship between the commercial paper rate and the prime loan interest rate relative to what existed in the U.S. in the preceding 10 or 12 years.

The prime commercial paper rate tends to move very closely with the Federal funds rate, especially once allowance is made for the longer maturity of commercial paper. Commercial paper is the basic rate among the lowest risk nonbanking institutions. Traditionally that rate has moved closely with the prime loan interest rate. Only twice before 1974 did these two interest rates differ by as much as one percent. However, beginning in 1974 the two rates have always differed by at least 1 percent. Evidently a basic structural change has occurred in the market for loans to "prime" borrowers; borrowers who do not have access to the commercial paper market recently have begun to pay considerably more than commercial paper borrowers. This is disturbing since many commercial and industrial loans to a broad spectrum of firms are tied to the prime loan rate. Plant and equipment expenditures have been weak in the current recovery and commercial and industrial loans at large money center banks have been very weak. It is surely worth investigating whether the prime loan rate has been maintained at an artificially high rate, a situation that would account for both of the foregoing facts.

[The complete statement of Professor Hester follows:]

Money, Velocity, Interest Rates, and Policy

Donald D. Hester
Professor of Economics
University of Wisconsin-Madison

This paper probably presents a minority opinion about how to assess monetary policy. At the outset I should state that I believe that all observable features of money and capital markets -- not just measures of monetary aggregates -- shed light on how monetary policy and economic activity in general are proceeding. There are no reliable simple touchstones that permit economists, the Federal Reserve, or this Committee to see whether or not everything is going well. The next section of this paper briefly examines the motion of several monetary aggregates in recent years, and proposes an interpretation.

The second section focuses on the relation between measures of the money stock and both the volume of transactions in the economy and the level of gross national product. It argues that severe informational losses occur when one restricts attention to a small number of monetary aggregates or velocity measures, and that technical progress in moving funds threatens to increase these losses considerably in the near future. The third section presents interest rates and attempts to interpret their movements since 1965. The final section pulls the various strands together and makes several explicit proposals and suggestions about how policy formulation and implementation can be improved.

Before taking up this ambitious agenda, there are three important issues that should command your attention whether or not you are persuaded

by my approach. I cannot treat them fully and cover my assignment in the available time. They are:

a. Technical problems in controlling monetary aggregates. The dual banking system that permits a majority of nonmember commercial banks to have low effective or nonexistent cash reserve requirements on demand deposits is a serious obstacle to controlling monetary aggregates closely. Even member banks have different marginal reserve requirements, a fact that seriously complicates the task of controlling monetary aggregates. Banks with off shore branches and subsidiaries have devised a host of complex techniques for obstructing the control of monetary aggregates that have been documented by Little [1975] among others. Finally, reporting by nonmember banks is very incomplete except on call report dates when data are subject to "window dressing". Therefore, benchmark revisions such as the substantial revision announced on March 23, 1978 become necessary. Although you have heard the recommendation before, a strong case still exists for requiring that all banks and other domestic financial institutions that offer demand deposits or their equivalent to American controlled firms be subject to uniform reserve requirements. As proposed in the recent FINE Discussion Principles [1976], membership in the Federal Reserve System should be nondiscretionary. Better control of monetary aggregates and equal treatment of equals are ample justification.

b. Monetary policy and the international value of the dollar. The international purchasing power of the dollar has declined sharply in recent months for several reasons, some of which are suggested in section 4 below.

During the 1960's the exchange value of the dollar was artificially supported by some major European central banks that sought to perpetuate a fixed exchange rate system. Both the recent and the earlier events are more the outcome of political decisions by the governments involved than of independently conceived monetary policies. Central banks may respond to these situations by intervening actively or by sitting on the side line. The world has neither a fixed nor a cleanly floating flexible exchange rate system, so neither response is automatically justified. Your deliberations should focus on the extent to which the strategy of the United States in this very serious confrontation is 1) the outcome of a coordinated plan involving both the Federal Reserve and the several relevant executive departments and 2) whether or not that plan makes sense.

c. Contracts, indexation, and the redistributive consequences of policy. It is often alleged, and much less often documented, that unanticipated inflation has substantial redistributive effects on the economy. These effects are the consequence of contracts and agreements which must exist if production is to be coordinated in a decentralized economy. (Contracts and other enforceable agreements are the "laissez faire" counterpart of the "plan" in socialist economies.) Because people consume and firms produce very different bundles of goods in a decentralized economy it is not feasible to index contracts fully against inflation. Often people justify policies designed to combat inflation on the grounds that they serve to protect society from divisive redistributional struggles. There is some merit to their argument, but it is seriously incomplete. Policy itself often has severe redistributional effects. In my view the 100-year-high interest rates

that occurred in 1973 and 1974 were largely the consequence of restrictive monetary policy and were the major causative agent underlying the recent mini-depression; an experience from which black unemployment has yet to recover. Large firms and affluent individuals can partially escape the burdens of inflation by dealing in a rich variety of assets and in financial instruments whose interest rates float freely, but middle-class America and small enterprises took a severe beating on their demand and savings deposit balances that were subject to policy determined interest rate ceilings. It is important that you verify in your deliberations that policy induced cures are not more lethal to the American economic system than the ailments.

I. Monetary and Other Aggregates

The definition of the money stock is inherently arbitrary. In the words of Friedman and Schwartz: "There is no hard and fast formula for deciding what to call 'money' [1970, p. 104]." This section reviews several definitions and argues that they are in need of modification. Table 1 provides an historical summary of how several measures of money have evolved since they were first systematically compiled and published by the Federal Reserve. I do not report recent weekly or quarterly movements in these aggregates for, as the announced revisions of March 23 indicate, they are preliminary; for this and other reasons short-term measures are "noisy" and are not reliable guides for formulating policy, when taken alone. The two widely publicized measures, M1 (demand deposits adjusted plus currency outstanding) and M2 (M1 plus small denominational time and savings deposits

TABLE 1

SELECTED MONETARY AGGREGATES SINCE WORLD WAR II[a]

Year end	(1) Member Bank Reserves NSA	(2) M_0 NSA	(3)[b] M_1 SA	(4) M_2 SA	(5) M_3 SA	(6) M_4 SA	(7)[c] DD NSA	(8)[c] TD NSA	(9)[c] OL NSA	(10)[c] CAP NSA
1945	15.8	NA	NA	NA	NA	NA	117.9	30.0	1.1	8.7
1950	17.4	42.4	116.2	152.9	NA	NA	117.0	36.5	1.6	11.3
1955	19.2	47.0	135.2	185.2	NA	NA	141.0	50.0	3.1	15.0
1960	19.3	48.3	144.2	217.1	319.3	217.1	155.7	73.3	6.7	20.7
1965	22.2	58.5	171.3	301.3	471.7	317.7	183.8	147.7	14.0	29.9
1970	29.1	78.2	219.6	423.5	656.2	448.8	247.2	235.3	51.2	42.6
1971	31.2	83.8	233.8	471.7	745.1	505.0	261.0	274.5	49.8	43.8
1972	31.4	88.3	255.3	525.3	844.9	568.9	294.9	318.1	59.5	48.1
1973	35.0	96.5	270.5	571.4	919.5	634.9	307.6	369.7	87.3	53.5
1974	36.6	104.4	283.1	612.4	981.6	702.2	312.8	428.8	97.2	58.8
1975	34.8	108.5	294.8	664.3	1092.9	747.2	319.8	455.5	96.3	64.1
1976[d]	35.0	115.5	312.4	740.3	1237.1	803.5	332.3	492.7	107.0	72.1
1977[d]	36.2	126.2	335.4	806.5	1374.1	881.2	332.3	515.0	118.1	75.5

[a] Sources: Board of Governors of the Federal Reserve System, Banking and Monetary Statistics 1941-70, Annual Statistical Digest 1971-1975, and various issues of the Federal Reserve Bulletin.

[b] M_0 is sometimes called "outside money"; it is the sum of member bank reserves and currency outside banks.

[c] These data refer to the domestic balance sheets of all insured commercial banks.

[d] All 1977 data are preliminary, except for last four columns which come from the June 1977 Call report.

at commercial banks), have been available only since 1947; although researchers such as Friedman and Schwartz [1970] have extended the latter back as far as 1867. The broader measure, M3, which includes deposits at thrift institutions, emerged in 1959 when it became evident that these institutions were growing much more rapidly than commercial banks. M4 is M2 plus large denomination certificates of deposit at weekly reporting banks; it became distinctive in 1961 when CD's became important. The purest definition of money is M0, currency outstanding plus member bank reserves; it measures direct monetary liabilities of the Federal government.[1]

While the Federal Reserve is technically unable to control any of these quantities exactly, most economists would agree that, with the possible exception of M4, the Fed's problem of control tends to increase with the numerical subscript on the monetary aggregate. The components of M2 and M3 are quite heterogeneous and thrift institutions do not report their conditions as completely as do member banks. It is disconcerting to note that these less easily controlled aggregates have been growing much more rapidly than M1. Evidently the controllability of the more broadly defined monetary aggregates is deteriorating with the passage of time, simply as a consequence of differences in growth rates.

Since 1970 currency, time deposits, and deposits at thrift institutions have been rising much more rapidly than either member bank reserves or demand

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[1] An early Chicago economist, Henry Simon [1936], was advocating this pure definition of money when he urged that bank demand deposits be subject to a 100% reserve requirement. His successor, Milton Friedman, also urged that it be given serious consideration at one time [1948].

deposits adjusted. Before 1970 a similar pattern is evident except that currency grew at about the same rate as demand deposits; the early pattern was often attributed to differences in the paths of interest rates paid on different types of deposits.[2]

The post-1970 pattern occurred during a period in which interest rates on deposits at thrift institutions and on small denomination time and savings deposits at commercial banks were highly controlled and largely invariant. The most likely explanation for the observed pattern is associated with the occurrence of technical progress and institutional changes that are mentioned below. An existing amount of demand deposits can accommodate more transactions, and a growing volume of transactions balances have been omitted completely from conventional measures of money. Fluctuations in large denomination certificates of deposit can perhaps be interpreted in terms of fluctuations in interest rates paid on them, especially after regulation Q ceilings were lifted.

The post-1970 pattern can also be seen in the case of commercial banks alone if one looks at aggregated domestic liabilities of all insured banks that are reported in the last four columns of Table 1. All data are from call reports that are subject to window dressing. Nevertheless, it is apparent that time deposits (which include savings deposits and certificates of deposit) have been growing four or five times as fast as demand deposits

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[2]Serious technical questions exist about the validity of such interpretations since it is doubtful that behavioral relationships have actually been identified.

It is also apparent that other liabilities of banks have been growing even faster than time deposits. In order to communicate an appreciation for how the definition of money should be changing, I shall now argue at some length that a substantial part of these other liabilities are for all intents and purposes money.

Other liabilities include bankers acceptances, miscellaneous other liabilities, and debt capital. But the lion's share, $70 billion at the end of 1976, are Federal funds purchased and securities sold under agreements to repurchase. No breakdown of the total into Federal funds purchased and securities sold under repurchase agreement is published for all commercial banks. For the purposes of this discussion it will suffice to define Federal funds purchased as "good" or "collected" funds that a bank buys from a) other commercial banks, b) certain Federal government agencies, c) savings and loan associations and mutual savings banks, d) foreign commercial banks, and e) certain subsidiaries of a bank holding company. These transactions typically are overnight transactions, but they may last for several days. A repurchase agreement is a similar sort of transaction that may be engaged in by a bank with any of the foregoing, but commonly is between a commercial bank or a securities dealer and either a non-financial corporation or a state or local government. In this transaction a bank sells some of its securities to a firm, say, and agrees to buy them back at an agreed upon price one or more days later. The securities typically never change hands, but are put in a separate account for the firm at the bank. The bank's balance sheet continues to show the securities after the transaction and also shows that the bank has acquired a matching liability

in the amount of the repurchase agreement. These transactions are undertaken by banks partly to obtain funds at short notice to meet their reserve obligations. Suppliers of funds benefit from being able to sell excess funds at short notice and to earn interest on funds that might otherwise be idle overnight.

Two features of the transactions make them important for interpreting monetary aggregates. First, neither Federal funds purchased nor funds acquired through repurchase agreements are subject to reserve requirements. This means that a bank can reduce its future reserve obligations if it chooses to buy funds from its own depositors. Second, the transactions are often negotiated so that the seller of funds does not have to deliver funds until near the close of a business day. Thus, the seller can use his funds all day long, say, until 4:59 p.m. when they must be delivered. All day they are money. When they are delivered the bank immediately reduces the supplier's demand deposit and shows its liability appropriately. If 5:00 p.m. is the close of the business day, that is the time that a bank calculates its deposits and reports them to the Fed. For purposes of calculating the money stock, the Federal Reserve only uses close of day figures. Therefore funds acquired through repurchase agreements are not counted as money even though they may have been used that way all day. If the transaction is an overnight deal, at 9:00 a.m. the next morning the Federal funds or repurchased funds revert to the seller's demand deposit account and thus are available as money all day long again.

All overnight repurchase agreement funds and many but not all Federal funds purchases are money in everything but name.[3] However, Federal funds purchased by a member bank from other commercial banks should not be counted as money, since they represent only a redistribution of excess reserves within the banking system. How much of the other liabilities shown in Table 1 are in fact money? Very fragmentary evidence has been assembled by subtracting Federal funds sold by all commercial banks from the sum of Federal funds purchased and securities sold under repurchase agreements by all commercial banks on different dates. The results are shown in column 8 in Table 2. On the most recently published call report the volume of such net funds purchased was $41.7 billion or about 13% of M1. Between 1970 and 1976 this volume had grown twelve fold. Goldfeld [1976] among others has noted that traditional estimates of the demand function for money began to overestimate the demand for money, M1, near the end of 1973 by very substantial amounts. A plausible conjecture is that this empirical instability is associated with the contemporaneous (and possibly transitory) rapid growth of net funds purchased by banks. Better data than presently exist are required before this conjecture can be rigorously tested.

Several recent technical and legislative innovations have also changed the spendability and convenience of consumer type savings accounts at financial institutions. In addition to the evolution of share drafts and NOW accounts, the widespread introduction of electronic tellers for regular savings accounts

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[3] A somewhat similar inference has been reported in an unpublished paper by Lombra and Kaufman [undated].

has made these interest paying accounts at least as convenient as a commercial bank checking account. Surely the relevant concept, which used to correspond to M1, should be more broadly defined than in the past. A new money stock measure is necessary in order that these newly transactable balances be appropriately accounted for within the monetarist framework.

A similar case can be made for small business savings deposits and for funds of large multinational corporations that appear increasingly to be placed in off-shore banking centers. These funds are likely to be compensating balances that are placed abroad to evade reserve requirements on demand deposits that would apply if these funds had been left in domestic branches. At present, off-shore deposits of domestic corporations are excluded from measures of the domestic money stock. Little information is published about the extent to which off-shore deposits have been substituted for domestic corporate accounts.

Other examples can be suggested, but perhaps the point is clear. The different components of monetary aggregates, currency, demand deposits, and various types of time and savings deposits, have been performing very different functions in recent years as compared to the 1960's. Technical progress in data processing and funds transfer has been very rapid; many new money-like instruments have emerged in recent years. The relationships of different money stock measures to one another are likely to have been permanently altered and to be subject to further large unpredictable changes. In this rapidly changing setting, it is very doubtful that policy can be reliably based on movements in one or more monetary aggregates.

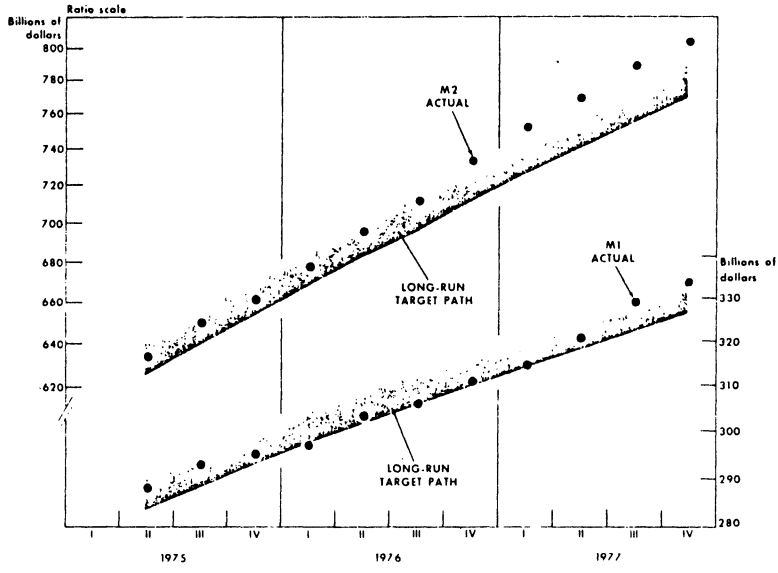
Figure 1 which is from the most recent annual report of the Federal Reserve Bank of New York illustrates the point well. It shows the relation between actual values and target ranges of M1 and M2 that were established by the Federal Open Market Committee since 1975. It is apparent that in the fourth quarter of 1976 and the first quarter of 1977, M1 was at the bottom of its desired range when M2 was beyond its upper range. This situation is particularly remarkable when it is recalled that 40% of M2 is M1! Also, in the figure it often happens that the quarterly growth rate of M1 is moving in one direction when the quarterly growth rate of M2 is moving in the other. It is hard to steer a car when its wheels are turning both right and left. An analysis of interest rate movements and other information about the economy's inflation and unemployment problems is likely to provide better guidance than are the wiggles in some monetary aggregate.

II. The Velocity of Money

In this section information is provided about how fast money has been turning over and about how money has been growing relative to income. The two principal velocity of money concepts that economists use are 1) the transactions velocity and 2) the income velocity. The transactions velocity concerns how fast money changes hands in an economy and can be only very approximately measured by the ratio of the volume of debits to balances in demand deposit accounts. Income velocity refers to the ratio of income to money; it is easily measured once one settles on appropriate measures of income and the money stock. In this discussion the income measure used is nominal GNP. The two concepts of velocity are related if, as seems likely,

Figure 1

MONEY STOCK LEVELS RELATIVE TO THE FEDERAL OPEN MARKET COMMITTEE'S LONG-RUN PROJECTIONS



The long run target paths are constructed by extending a trend line (not shown) for each monetary aggregate from its actual value in the second quarter of 1975 at rates equal to the midpoints of the one year ranges adopted each quarter by the FOMC. The shaded areas shown are drawn parallel to each trend line with the upper and lower bounds 1½ percentage points above and below it. This reflects the FOMC's practice of expressing its one year projections as ranges, which have averaged about 3 percentage points in width.

Source: Federal Reserve Bank of New York, Annual Report, 1977.

there is some relation between the rate that transactions occur and the flow of income.

Table 2 reports information about two measures of income velocity, V1 and V2, that correspond to M1 and M2 respectively, and one measure of transactions velocity, turnover. All have the dimension "times per year". The income velocity of M1 has risen steadily since 1950 although in a somewhat erratic fashion. Thus, even if one accepted the economic meaning of M1, its relation to GNP is changing in a way that probably reflects both technical progress in the payments mechanism and rising interest rates that are distinctive features of the post World War II era. In Table 2 it can be seen that V1 has about doubled in the last 25 years.

The velocity of M2 has also risen about 20% in this period, but most of the rise had occurred before 1960 when commercial banks first began to compete aggressively for time and savings deposits by increasing the interest rates they paid. An interpretation of the comparative stability of V2 since 1960 is that commercial banks managed to hold their share of household savings balances and that such savings balances have been roughly a constant fraction of GNP. If one bothered to calculate a velocity for M3, it would have fallen over time since M3 has grown much more rapidly than GNP. It is not clear that the apparent constancy of V2 is more than an historical accident.

In a recent Wisconsin Ph.D. dissertation, Cynthia Wood [1976] tested the hypothesis that different components of M2, currency outstanding, demand deposits adjusted, and time and savings deposits, were similarly related to GNP and several other macroeconomic variables. The hypotheses were rejected.

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TABLE 2

DEPOSIT TURNOVER AND THE VELOCITY OF MONEY

Year end	(1) $GNP[a]	(2) M1	(3) M2	(4) V1	(5) V2	(6) Debits	(7) Turnover	(8) Net Purchases	(9) DEFL[a]
1950	308.2	116.2	152.9	2.65	2.02	1.5	23.2	NA	55.46
1955	410.0	135.2	185.2	3.03	2.21	2.2	28.6	NA	61.94
1960	514.7	144.2	217.1	3.57	2.37	2.8	35.6	NA	68.98
1965	720.6	171.3	301.3	4.21	2.39	5.2	48.1	0.3	75.54
1970	1022.9	219.6	423.5	4.66	2.42	10.9	77.0	3.2	93.69
1971	1117.3	233.8	471.7	4.78	2.37	12.4	83.7	6.9	98.01
1972	1238.9	255.3	525.3	4.85	2.36	14.8	90.7	9.5	102.90
1973	1359.8	270.5	571.4	5.03	2.38	18.6	110.2	19.1	110.91
1974	1470.9	283.1	612.4	5.20	2.40	22.2	128.0	18.5	121.60
1975	1617.7	294.8	664.3	5.49	2.44	23.6	131.0	19.7	130.53
1976	1798.5	312.4	740.3	5.75	2.43	28.9	153.3	32.6	137.60
Mid-quarter									
1976: 1	1651.2	296.5	678.5	5.57	2.43	25.5	140.9	27.8[b]	131.47
2	1691.9	303.0	697.2	5.58	2.43	25.5	139.4	29.8	133.06
3	1727.3	306.4	710.8	5.64	2.43	27.9	148.6	NA	134.56
4	1755.4	310.4	732.3	5.66	2.40	28.1	147.2	32.6	136.35
1977: 1	1810.8	314.0	750.7	5.77	2.41	30.1	153.3	36.5	138.13
2	1869.9	320.7	767.6	5.83	2.44	32.0	158.2	41.7	140.52
3	1915.9	328.4	787.7	5.83	2.43	NA[c]	NA[c]	NA	142.19
4	1965.1	333.2	802.6	5.90	2.45	NA[c]	NA[c]	NA	144.34

[a]The annual figures have been calculated by averaging successive enclosing calendar years so that the dating of GNP and monetary aggregates corresponds. Both variables are taken from the 1978 Economic Report of the President.

[b]This number was interpolated for all commercial banks by using data for all insured commercial banks. All other data concerning net purchases of Federal funds refer to all commercial banks. All data are from Federal Reserve Bulletins, The Annual Statistical Digest 1971-1975, or other public sources.

[c]The basis for calculating debits and deposit turnover was substantially revised in June 1977. The reported data refer to 233 clearing centers that were reporting monthly deposits and debits. The sources for these two series are the same as those in Table 1.

An implication of her findings is that there are significant aggregation losses when one sums the components to form M2; each of the components should be studied separately.[4]

No doubt the most dramatic velocity changes in the post war period are evident in the turnover series. Demand deposit turnover calculated from data for 233 clearing centers has risen more than six fold since 1950. The volume of debits to demand deposit accounts in these areas, which include all large and medium sized cities and towns in the United States, has risen almost twenty times -- or three times faster than GNP. A representative dollar in a demand deposit account was being withdrawn about once every ten business days in 1950; it was being withdrawn in less than two business days in 1977.[5] The data exclude debits to and balances of interbank deposit accounts. Nevertheless, the turnover rate for all commercial bank demand deposits is slightly overstated by the reported statistics which are based on a disproportionately large number of large banks. There is no reason, however, to doubt the accuracy of the rates of increase of turnover.

It is notable that both bank debits and deposit turnover experienced large jumps between 1972 and 1974 when this country experienced large increases in its GNP price deflator (col. 9), and rather ominous to note

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[4]Specifically she rejected the hypothesis of functional separability which is a necessary and sufficient condition for consistent aggregation.

[5]Associated with this growing rate of turnover is growing reliance on wire transfers of funds relative to transfers effected by writing checks. While data are contaminated by the presence of interbank transfers, the pattern can be readily discerned from data published in annual reports of the Federal Reserve Bank of Chicago. In 1961, 192 and 334 billion dollars were respectively cleared by the Chicago Bank through checks and wire transfers. The corresponding numbers in 1977 were 906 and 7100 billion dollars. Numbers of items cleared shows a similar pattern.

the further large increases that began to occur in the second half of 1976. No coincident spurts in year-end levels of M1 or M2 are evident; the action was in turnover. Turnover can be affected by growth in the volume of repurchase agreements, since overnight transactions do necessitate debits to a corporation's demand deposit account. It can be seen in Table 2 that large increases in net funds purchased were accompanied by jumps in debits and deposit turnover.

III. Interest Rates and Their Interpretation

The preceding sections have attempted to illustrate that a great deal can be learned by carefully studying movements in monetary aggregates and their velocities. In this section, interest rates are compared in order to draw additional inferences about events in the economy since 1965. Table 3 reports quarterly series for nine prominent money market interest rates. I wish to call your attention to six features of the table.

First, the basic interest rate or "shadow price" for funds at commercial banks is the Federal funds rate. When banks are under pressure this rate rises relative to rates on other short-term assets which are more broadly held, such as 90-day Treasury bills. Using the arbitrary criterion that if the two interest rates differ by as much as one percent policy is active, the first two columns indicate that monetary policy was contractionary between 1969:2 and 1970:1 and between 1973:1 and 1974:4, but not active at other times. However at the end of 1977 and in early 1978 the gap between the two rates again seems to be widening which suggests that policy is growing more stringent.

TABLE 1

RECENT HISTORY OF INTEREST RATES

Last Month in Quarter		(1) Federal Funds	(2) Market Yield 90 day bills	(3) 4-6 Month Prime Com. Paper	(4) Prime Interest Rate	(5) U.S.Govt. Long Term Bonds	(6) Moody's Corporate Aaa	(7) FHLBB Effective Rate	(8) Moody's Corporate Baa	(9) Moody's State & Local Aaa
1965:	1	4.04	3.93	4.38	4.50	4.15	4.42	5.81	4.78	3.09
	2	4.04	3.80	4.38	4.50	4.14	4.46	5.80	4.85	3.15
	3	4.01	3.92	4.38	4.50	4.25	4.52	5.79	4.91	3.25
	4	4.32	4.38	4.65	5.00	4.43	4.68	5.85	5.02	3.39
1966:	1	4.65	4.59	5.21	5.50	4.63	4.92	5.98	5.32	3.55
	2	5.17	4.50	5.51	5.75	4.63	5.07	6.20	5.58	3.60
	3	5.40	5.37	5.89	6.00	4.79	5.49	6.43	6.09	3.93
	4	5.40	4.96	6.00	6.00	4.65	5.39	6.58	6.18	3.79
1967:	1	4.53	4.26	5.24	5.50	4.45	5.13	6.47	5.85	3.47
	2	3.98	3.54	4.65	5.50	4.86	5.44	6.35	6.15	3.80
	3	4.00	4.42	5.00	5.50	4.99	5.65	6.44	6.40	3.81
	4	4.51	4.97	5.56	6.00	5.36	6.19	6.54	6.93	4.15
1968:	1	5.05	5.17	5.64	6.00	5.39	6.11	6.64	6.85	4.28
	2	6.07	5.52	6.25	6.50	5.23	6.28	7.03	7.07	4.21
	3	5.78	5.19	5.82	6.13	5.09	5.97	7.24	6.79	4.23
	4	6.02	5.96	6.17	6.75	5.65	6.45	7.23	7.23	4.50
1969:	1	6.79	6.02	6.82	7.50	6.05	6.85	7.47	7.51	4.97
	2	8.90	6.44	8.23	8.50	6.06	6.98	7.76	7.70	5.58
	3	9.15	7.09	8.48	8.50	6.32	7.14	8.05	8.05	5.83
	4	8.97	7.82	8.84	8.50	6.81	7.72	8.25	8.65	6.50
1970:	1	7.76	6.63	8.33	8.00	6.39	7.84	8.47	8.63	5.81
	2	7.60	6.68	8.21	8.00	6.99	8.48	8.48	9.25	6.81
	3	6.29	6.13	7.32	7.50	6.63	8.09	8.48	9.39	5.90
	4	4.90	4.87	5.73	6.75	5.97	7.64	8.38	9.12	5.21
1971:	1	3.71	3.38	4.19	5.25	5.71	7.21	7.66	8.46	5.00
	2	4.91	4.75	5.45	5.50	5.94	7.64	7.50	8.75	5.65
	3	5.55	4.69	5.75	6.00	5.56	7.44	7.83	8.59	5.09
	4	4.14	4.01	4.74	5.25	5.62	7.25	7.77	8.38	4.99
1972:	1	3.83	3.73	4.17	4.75	5.66	7.24	7.52	8.24	4.99
	2	4.46	3.91	4.64	5.25	5.59	7.23	7.55	8.20	5.07
	3	4.87	4.66	5.14	5.50	5.70	7.22	7.57	8.09	5.12
	4	5.33	5.07	5.45	6.00	5.63	7.08	7.66	7.93	4.91
1973:	1	7.09	6.09	6.85	6.50	6.20	7.29	7.68	8.03	5.07
	2	8.49	7.19	7.99	7.75	6.32	7.37	7.79	8.13	5.05
	3	10.78	8.29	10.23	10.00	6.42	7.63	8.17	8.63	4.90
	4	9.95	7.45	9.08	9.75	6.35	7.68	8.49	8.48	4.90
1974:	1	9.35	7.96	8.42	9.25	6.81	8.01	8.64	8.65	5.20
	2	11.93	7.90	10.96	11.75	7.03	8.47	8.85	9.34	5.95
	3	11.34	8.06	11.23	12.00	7.30	9.24	9.19	10.12	6.49
	4	8.53	7.15	8.98	10.50	6.78	8.89	9.37	10.55	6.65
1975:	1	5.54	5.49	6.06	7.50	6.73	8.67	9.06	10.29	6.28
	2	5.55	5.34	5.79	7.00	6.86	8.77	8.96	10.40	6.28
	3	6.24	6.42	6.86	8.00	7.29	8.95	8.94	10.38	6.70
	4	5.20	5.44	5.97	7.25	7.17	8.79	9.01	10.35	6.50
1976:	1	4.84	5.00	5.37	6.75	6.87	8.52	8.93	9.99	5.99
	2	5.48	5.41	5.94	7.25	6.92	8.62	8.89	9.72	5.85
	3	5.25	5.08	5.45	7.00	6.70	8.38	9.08	9.30	5.40
	4	4.65	4.35	4.70	6.25	6.39	7.98	9.10	9.12	5.07
1977:	1	4.69	4.60	4.87	6.25	7.20	8.10	8.95	9.12	5.21
	2	5.39	5.02	5.49	6.75	6.99	7.95	8.98	8.91	5.21
	3	6.14	5.81	6.17	7.25	6.94	7.92	9.04	8.80	5.27
	4	6.56	6.07	6.64	7.75	7.23	8.19	9.08	8.99	5.07

Second, the prime commercial paper rate tends to move very closely with the Federal funds rate, especially once allowance is made for the longer maturity of commercial paper. Commercial paper is the basic rate among the lowest risk nonbanking institutions. Traditionally that rate has moved closely with the prime loan interest rate. Only twice before 1974:4 did these two interest rates differ by as much as 1%. However beginning in 1974:4 the two rates have always differed by at least 1%. Evidently a basic structural change has occurred in the market for loans to "prime" borrowers; borrowers who do not have access to the commercial paper market are paying about 1% more than previously, relative to commercial paper borrowers. This is disturbing to me since many commercial and industrial loans to a broad spectrum of firms are tied to the prime loan rate. It is no secret that 1) plant and equipment expenditures have been very weak in the current recovery and 2) commercial bank loans at large money center banks have not kept up with lending at other banks. It is surely worth investigating whether the prime loan rate has been maintained at an artificially high rate -- a situation that would account for both of the foregoing facts.

Third, a comparison of columns 5 and 6 shows a similar change in the structure of financial market interest rates that is unfavorable to Aaa rated quality corporate borrowers in the bond market. Before 1970 in only one quarter did the gap between United States Government long-term bonds and the Aaa rate amount to as much as one percentage point. In every quarter between 1970:1 and 1976:4 the gap was at least this wide, and the

gap was only trivially less than 1% throughout 1977. Apparently the market's evaluation of top quality corporate bonds was revised downwards relative to government issues, perhaps because of 1) massive corporate bond flotations that began with the crunch of 1969 or 2) the greater incidence of call options in new debt issues. For whatever reason, the effect was to increase considerably the cost of raising funds in the bond market and to discourage new plant and equipment expenditures by corporations. Between 1965 and 1976 the increase in the cost of debt issues by corporations was 40-50% greater than the increase for the Federal government, a fact that was in no small way abetted by the extremely high interest rates that the Federal Reserve permitted to exist in 1969, 1973, and 1974.

Fourth, although the picture is much muddied by the effects of revenue sharing, a similar and even more extreme effect of rising interest rates is evident in column 9, which concerns Aaa rated state and local government securities. For example, between 1965 and 1970 the interest rates on these securities nearly doubled. The probable explanation for this is that, as interest rates rise, investors' demand for these securities is likely to fall because a smaller number of securities will suffice to generate the relatively fixed amount of tax exempt income that is desired by certain institutional investors. The supply of new issues began to slacken after revenue sharing was enacted and after taxpayer antipathy to bonded indebtedness began to grow during the 1970's. As a result, by the end of the period interest rates facing the highest rated issues had not risen proportionately with other market interest rates.

Fifth, a comparison of columns 7 and 8 suggests that Federal programs to support housing and to hold down mortgage interest rates have had a profound impact on the relation between the cost of borrowing by Baa rated corporate borrowers and that of households acquiring mortgage loans. The programs began to emerge after the crunch of 1966. At the end of 1967 Baa interest rates briefly rose above mortgage rates. Beginning with the 1969 crunch, the corporate rates were almost always above the effective mortgage interest rate quoted by the Federal Home Loan Bank Board. It is no coincidence that the Federal National Mortgage Association was actively expanding its mortgage portfolio during this period. It is truly remarkable that the greatest house building years by far, 1972 and 1973, only drove the conventional mortgage rate trivially above the interest rate that highly reputable private sector corporations could borrow at. Through housing programs Congress and the Johnson and Nixon administrations caused capital market funds to be diverted away from corporations and towards residential construction. Partly as a consequence, capacity limits were reached in several industrial sectors. The rate of real nonresidential fixed investment reached a peak in 1973 which it has yet to surpass. The only large major domestic sector implicit price deflator to show double digit inflation between 1972 and 1973 was residential construction. Between 1970 and 1977 the same deflator rose more than the deflator on any other domestic sector in the GNP accounts. In the four quarters ending 1977:4 the construction deflator was again rising at a double digit rate. Beginning in 1977:2, the effective mortgage rate finally fell below the Baa rate, but at year end the Baa rate was rising much faster than the mortgage rate. By today the mortgage rate is probably again lower.

Sixth, to further reinforce this interpretation, compare columns 6 and 7 in Table 3. The interest rate gap between the highest rated corporations and a representative home buyer has been substantially diminished by government largesse. Only once before 1967:2 had the differential between the two rates been as little as one percent. Since that quarter only once until 1976:4 has the differential been as much as one percent, and in four quarters the representative home buyer could buy a house at a lower interest rate than the most credit-worthy corporations in the land. I am no dyed in the wool defender of large corporations, but I do believe that housing and monetary policies in this country have severely increased the costs of borrowing by corporations and have impaired capital formation in manufacturing. Corporations will only be willing to borrow at existing high interest rates if they expect inflation to continue, since only then can they expect to earn a positive rate of return on their investments. Indeed, it is very likely that corporations will need to have either a higher future expected rate of inflation or lower market interest rates in order to be attracted into the bond market these days because the rate of return they earn on their plant and equipment investment is almost surely low and falling relative to the previous 25 years.

IV. Policy

From the preceding section it is evident that programs which subsidize or assist sectors of the economy also have major effects on interest rates in capital markets. Monetary policy can have very different impacts on the economy when different programs are in operation, whether gauged by the

course of some monetary aggregate or some interest rate. Technical and institutional changes described in the first two sections make the measurement and interpretation of monetary aggregates much more difficult today than in the past (and it was never easy then!). A modest conclusion is that this Committee and the Federal Reserve should greatly reduce the weight they place on movements in conventional monetary aggregates when attempting to assess and formulate monetary policy. The conventional measures exclude quantities such as NOW accounts and funds acquired through repurchase agreements that are operationally indistinguishable from money for purposes of executing transactions, and that are growing rapidly and unevenly. These excluded quantities obviously affect the relation between economic activity and conventional monetary aggregates.

Monetary aggregates do cause excitement on Thursday afternoons when weekly figures are announced, primarily (probably solely!) because they give investors a cue about what the Federal Reserve is likely to do in the coming weeks that will affect interest rates. The Federal Reserve would help its own cause by renouncing any intention of adhering inflexibly to its target growth paths. Its preoccupation with aggregates provides an incentive for banks and others in the private sector to invent money substitutes -- not that they really require such incentives.

Interest rates are not perfect touchstones for evaluating monetary policy either. However, many of them are measured accurately and they do convey a picture of what is happening in different sectors of the economy. They are treacherous because a given level of interest rates may be too high or too low depending upon what rate of inflation is expected in some sectors or in

the economy at large. They should be consulted more than they presently are when evaluating monetary policy -- but cautiously.

Since information about both conventional monetary aggregates and interest rates conveys an incomplete picture about the conduct of monetary policy, additional information is desirable. Very little published information is available about the volume of Federal funds that the banking system purchases from institutions that are not commercial banks or about the volume of funds raised by banks through repurchase agreement transactions. Also, very little information is currently available about the extent to which balances at foreign branches of domestic banks are owing to domestic corporations or their foreign subsidiaries. The volume of wire transfers is not reported for the country at large. These data should be collected and reported if one hopes to interpret monetary aggregates even partially. The Federal Reserve, of course, has additional information at its disposal which helps the Federal Open Market Committee (FOMC) to reach policy decisions. If the performance of the central bank is to be fairly appraised, this information and its interpretation in FOMC meetings should be released promptly, as soon as tactical considerations in the money market permit, but surely with a lag of no longer than a year. I believe that complete minutes of FOMC meetings should be made public after a lapse of one year.

While such information is not available to me, I would like to comment briefly on the Federal Reserve's continuing and apparently losing battle with inflation. Between 1971 and 1977 the Federal Reserve succeeded in having both member bank reserves and M1 grow at a slower rate than the GNP price deflator (see Table 2) so that their real, constant dollar counter-

parts actually declined over a period in which real GNP was growing. Many interest rates reached 100 year highs in 1973 and 1974, and restrictive monetary policy played a major role in precipitating the sharpest economic decline in forty years. Long-term United States government interest rates appear to have reached a plateau in the neighborhood of 7% which has continued for about four years. Quite frankly I am very doubtful that the Federal Reserve has the tools to reduce the rate of inflation appreciably without inflicting unacceptable damage on capital market institutions and the level of economic activity. This pessimistic view stems from four considerations.

First, monetary tools are just like any other tools; with prolonged use they wear out. The money market has been remarkably innovative in countering restrictive monetary policy and in exploiting the high interest rates that accompanied it. The first two sections contain some examples of innovations, but do not stress the ingenious use of the bank holding company corporate form and the innovations implicit in evolving electronics fund transfer systems. When interest rates get high it pays to innovate and the Federal Reserve may not be able to do much more than stay even with the innovators.

Second, inflation is often a consequence of disequilibria in markets where individuals tend to adjust to shocks either by raising prices or by holding them constant as the case may be. It apparently is a matter of sociology that individuals are not happy walking away from negotiating sessions if they must accept a nominal wage or price cut. In the last decade this country has faced an unusual sequence of large shocks, some

of its own making, that resulted in large upward price and wage adjustments. For the most part these shocks were beyond the control of the Federal Reserve, and they continue to occur.

Third, there is at least one hideous example of what can happen if the Federal Reserve were to succeed in reducing the rate of inflation precipitously through restrictive high interest rate policies. Between 1926 and 1929 the inflation rate was becoming increasingly negative; a debacle resulted when the Federal Reserve unconscionably drove up interest rates in 1928 and 1929. On several occasions since 1969 the Federal Reserve has rattled the China in the capital market cupboard with high interest rates as corporations, cities, and large banks failed or just escaped insolvency. It is a tribute to the skill of the Federal Reserve that these crises were contained, but one could get unlucky.

Fourth, the origins of the current inflation are at least as much in bad fiscal policy as they are in bad monetary policy. The Federal Reserve's anti-inflationary stance can easily be frustrated by other elements in the government. Table 4 reports information about six important debt measures over the last thirty years. All sectors of the private economy have been incurring large debts in the post-war period as should be the case in any healthy economy. Until 1965 the Federal government had been exceedingly responsible; neither it nor its agencies had increased the outstanding public debt appreciably. This pattern changed greatly in the Vietnam era for reasons that are well known. Between 1971 and 1976 the Vietnam era pattern persisted and full faith and credit debt (FFCD) of the Federal government rose almost as rapidly as GNP. Debt of agencies

Table 4

DEBT AND INCOME SINCE 1945

	(1) GNP	(2) Federal Debt	(3) Agency[a] Debt	(4) State & Local Debt	(5) Total Private Debt	(6) Corporate Debt	(7) Mortgage Debt	(8) Federal Debt ÷ GNP	(9) Federal and Agency Debt÷GNP
1945	212.3	252.5	--	13.4	140.0	85.3	35.5	1.19	1.19
1950	286.2	217.4	0.7	21.7	246.4	142.1	72.8	.76	.76
1955	399.3	229.6	2.9	41.1	392.2	212.1	129.9	.58	.58
1960	506.0	239.8	3.5	64.9	566.1	302.8	207.5	.47	.48
1965	688.1	266.4	8.9	98.3	878.9	454.3	333.3	.39	.40
1970	982.4	301.1	38.8	144.8	1397.2	797.3	474.2	.31	.35
1971	1063.4	325.9	39.9	162.7	1538.8	871.3	526.5	.31	.34
1972	1171.1	341.2	41.4	178.0	1739.2	975.3	603.4	.29	.33
1973	1306.6	349.1	59.8	192.3	1961.1	1106.7	682.3	.27	.31
1974	1412.9	360.8	76.4	211.2	2145.1	1223.0	742.5	.26	.31
1975	1528.8	446.3	78.8	222.7	2281.0	1286.6	801.5	.29	.34
1976	1706.5	515.8	81.4	236.3	2521.5	1414.7	889.1	.30	.35

Source: Economic Report of the President, 1978, pp. 268, 336-7.

Note: Units in columns 2 through 7 are billions of dollars; units in column 1 are billions of dollars/year; and units in columns 8 and 9 are years.

[a]Agency debt is debt of agencies in which there is no longer any Federal proprietary interest.

more than doubled in these same years. Agency debt is understandably a close substitute for FFCD in the eyes of financial market traders; in effect, they believe that the issuance of such debt is only a ruse to reduce the apparent growth of the Federal debt. In the private sector, only mortgage debt rose conspicuously faster than GNP in the same years, in large part because a significant fraction of mortgages were laundered through sponsored agencies like FNMA.

In short, agencies and the Federal government have been flooding financial markets with high quality paper and, as columns 8 and 9 in the table indicate, the ratio of such paper to GNP has been rising rapidly in recent years. All the Federal Reserve can do is control the extent to which this gusher is converted into high powered money, such as currency or member bank reserves.

I do not wish to be misinterpreted to be saying that government spending is too large. Real Federal government expenditures on goods and services are about of the same dollar magnitude as they were during the years of the Kennedy administration; as a percentage of real GNP they have declined from 12.9% in 1962 to about 7.6% in 1977. Serious problems face the country's urban areas, its environment, and its people that require increased expenditures and tax revenues. The government must make the politically difficult decisions about who will pay for these programs and not sweep them under some agency rug.

I wish to close this paper by making some suggestions for legislation that may improve the condition of the economy. I realize that some of them are not in the jurisdiction of this Committee, but the problems being faced are also not entirely within your jurisdiction:

1. Impose reserve requirements on deposit balances that American firms and their foreign subsidiaries carry with foreign branches of American commercial banks. This proposal presumes that issue a) at the beginning of this paper is accepted. There is no good reason why American firms should be encouraged to keep their balances abroad where they add to the dollar overhang. Why should reserve requirements only impact on domestically held compensatory balances?

2. Eliminate the deferring of income taxes on income realized by foreign subsidiaries of American corporations. Again, there is no good reason why these firms should be encouraged to retain their earnings abroad where they probably add to the dollar overhang. Why should multinational firms benefit at the expense of their domestic rivals? A strong case can also be made for reducing the tax credit which multinational firms take when they pay taxes to foreign governments, for similar reasons. Why should the United States serve as a remainderman?

3. Legislation should be drawn up that severely limits the volume of debt issues that agencies may have outstanding. The reasons for this proposal should be clear from the foregoing discussion.

4. I support the administration's proposal to eliminate the exemption which applies to interest on state and local government debt on Federal income tax forms. The reasons were provided in section 3 where it was noted that municipal interest rates were abnormally volatile. This proposal can also, of course, be defended on efficiency grounds.

5. I support imposing taxes to discourage the use of imported petroleum products on the grounds that a continuation of the current devaluation of

the dollar will seriously increase the domestic inflation problem. A one-time rise in domestic oil prices is not likely to be as inflationary as a continuing devaluation.

6. I would like to see the growth rate of commercial banking system assets held to about 8% on the grounds that bank profits are not keeping pace with banking assets. Elsewhere I [Hester, 1976] have argued extensively that the ratio of capital to assets at commercial banks, especially large commercial banks, is too low and should be increased. Recent newspaper reports indicate that ratios of net income to assets fell at nine out of the ten largest bank holding companies in 1977 when compared to 1976. Incidentally, I continue to believe that many proposals from the FINE study merit favorable consideration.

7. Finally, I believe a case exists for imposing reserve requirements on funds acquired from nonbanks through repurchase agreements. They should be treated as demand deposits. Also, in the interest of full disclosure commercial banks should be required to show separately on call reports the volume of government securities that they have sold through repurchase agreements.

Madison, Wisconsin April 10, 1978

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Senator RIEGLE [presiding]. Thank you very much. I know it is difficult to try to summarize such complicated information and observations in such a short time. We appreciate your efforts. We certainly are going to make your full statement a part of the record, and I am confident we will have a chance to discuss it soon and give you a chance to elaborate on some of these things.

Dr. Thomson, let me welcome you before the committee with the same sense of home state pride that Senator Proxmire had with Dr. Hester. I have the same feeling toward you and am especially pleased we are having someone here who not only is a top professional in the field, but has a MBA from a Big Ten university, which is certainly not a minus when you are dealing with either Senator Proxmire or myself. I don't know if Senator Lugar has one, but we may give him an honorary one before the year is out.

In any event, we are pleased to have you here speaking on these issues, representing not only your own opinion, but the Detroit Bank and Trust Co. Let's try to stay within the same format, if you can, give us an overall summary, and then we will get into detail later.

STATEMENT OF THOMAS D. THOMSON, FIRST VICE PRESIDENT AND CHIEF ECONOMIST, DETROIT BANK AND TRUST CO.

Dr. THOMSON. Thank you very much, Senator. I am honored to have this opportunity to talk to this committee. I will give a brief summary of my testimony, and highlight those points which I think are the most important.

We are all aware that the economy was at a standstill during the most recent quarter. Although economic activity will rebound from the depressed first quarter, growth in the latter part of 1978 is likely to remain quite moderate. Let's review the current situation in some detail before discussing what I consider to be the more relevant longer term issues.

As I say in the statement, 1978 has been programed by past events and the direction of current policy will have only a minimum effect until 1979 or 1980. The growth of real GNP is likely to be 6 or even 7 percent this quarter, which will represent a first-half growth rate between 3 and 4 percent—a fairly mediocre performance and one that will not lead to significant declines in the current rate of unemployment. It is unlikely that economic activity will accelerate appreciably during the second half. Economic growth for the year of about 4 percent can be expected, thus a significant gap between actual and potential output will remain. Even in this kind of environment, inflationary pressures are likely to remain disgustingly high.

I might summarize the situation by saying that although the consumer has led this recovery, consumer well being is not presently showing healthy signs. The have reduced their savings rate below that rate which they presumably desire. The ratio of consumer debt to income is currently very near its all-time high. If we look at the economy sector by sector, and try to forecast a better economy than most of the forecasts you have heard this morning, it becomes a very hard task. The sectors which can be conceived of doing significantly

better are scant. Just to take a few key sectors, autos, for example, will not reach a sales level of last year's 11.2 million units. The last 6 weeks of auto sales have been very good, however. Housing starts, another example, will do well to match last year's 2 million units.

Senator RIEGLE. Let me ask you, when someone like Tom Murphy of General Motors continues to make very bullish forecasts on auto sales, which runs counter to the suggestion you have just made, do you as a professional, being based in Detroit, tend to write that off as kind of standard optimism, positiveness that the auto industry tends to promote as a way of sort of trying to create a more positive pyschology, or do you think he really believes that and you and he just disagree on this point?

Dr. THOMSON. Of course, it is impossible to tell what anyone really believes. I do think the forecast he is still espousing is far too optimistic. If you look in the past record of chief executives in forecasting auto sales has been pretty bad. I think it is a natural human tendency to be optimistic at the beginning of the year. There has always been an error in that direction. I suppose if one were a pessimist, it would feed back on sales. So I think that to indicate that we are going to have a record year right now is on the far side of optimism.

I don't want to appear to be very gloomy on the economy since it is still void of any serious excesses. Despite inflationary fears, business-firms have not been buying in anticipation of future price rises. Credit demands, although fairly vigorous, are not expected to reach crunch proportions this year. We are probably in a period somewhat similar to late 1976 when the well-publicized consumer "pause" took place. Given the unfortunate economic experiences in the middle part of this decade, businesses and consumers are very fearful of an overheated economy. Moderate pauses serve to partially alleviate these fears. If we continue to have these periodic and brief sideway movements, we may be able to avoid an overheated economy and subsequent recession for many more quarters.

Turning to monetary policy, I find it hard to quarrel with the policies executed in 1977. During most of the year money was clearly growing at a rate faster than that consistent with longer term price stability. The Federal Reserve had to respond, even though a 200 basis point rise is hard medicine for money markets and the economy. Indeed, the recent revisions in the money supply data indicate that an earlier, more vigorous response might have been appropriate. Had they not responded, the effect on current inflationary expectations and future actual inflation would have been very harmful. The Federal Reserve was counseled by many that they were aborting the housing recovery and taking too much edge off the economic expansion. The reduction of the rate of inflation, however, appropriately remained a high priority of monetary policy.

I would, however, quarrel with the quarter-point rise in the Federal funds rate in early January 1978. This was clearly not needed for purposes of domestic monetary control. It was prompted by a wish to support the dollar even though U.S. domestic interest rates were very competitive with those in most industrialized countries. Domestic

money market participants were already expecting very large increases in short-term interest rates later in the year and the surprise discount and Federal funds rate change confirmed their worst fears. The price of intermediate and longer term Government and corporate bonds fell sharply and the Dow Jones stock averages dropped another 50 points. It is hard to make the case that the value of the U.S. dollar is presently any higher than it would have been in the absence of a tightening in policy.

My statement was written before this past Wednesday, and I would naturally be critical of the latest move toward tightening which brought the Federal funds target up to 7 percent. This is simply not needed. Indeed, it is dangerous for the economic health of the country especially for the period between mid-1978 and mid-1979.

Since January the growth of the monetary aggregates has been quite slow. The level of M_1 balances, for example, were about the same at the end of March as they were at the end of January. Markets became exuberant week before last when the expected early April blip in the money supply failed to materialize. The slowing of this growth rate is not just a random movement in a very volatile series. It has two primary causes. First, and most important, is the endogeneous nature of money in the short run. The primary function of Money, M_1, is to facilitate transactions. Transactions obviously have not grown much during the last few months. This is not to imply that money reacts solely to current transactions. Since people adjust their transaction needs rather slowly, it is also a function of past economic activity.

If we use nominal GNP to measure the change in transaction demand, we see that GNP has slowed from a 13-percent rate of increase in the first half of 1977 to about a 10-percent change in the last half. Since the rate of GNP growth slid even further in the first quarter of 1978, it is no wonder that money has been behaving during recent months. Current money growth is slowly because economic activity has been slowing for almost 1 year.

The second reason for the recent slowing in money growth is the lagged effect of the 200 basis point rise in short-term interest rates in 1977. The assumption of money market participants, especially the Federal Reserve, seems to be that a quarter point change in the Federal funds rate does wonders in that quarter in which the change is made. In every piece of quantitative work of which I am aware, the first quarter effect of an interest rate change is very small. Money reacts very slowly to interest rates. The biggest effect of an interest rate change comes two or three quarters hence. Thus, in 1978, we are seeing the result of 1977 interest rates. It is in the context of these lags that recent tightening appears inappropriate.

Based on my analysis of the economy and the nature of the money supply, I see money growth averaging about 6 percent for the remainder of this year without a further rise in the Federal funds rate. There is a good chance, however, that as the economy accelerates from the depressed first quarter, money growth will appear to be on a path somewhat faster than this. Nominal GNP growth of 13 or 14

percent is likely this quarter and money demand may well move in partial sympathy to this acceleration. It would be a mistake, however, for the Fed to raise interest rates in response to a temporary resurgence in monetary growth. That growth would be an accident of the nature of the winter and not the beginning of several quarters of high economic and monetary growth. The chance of having two successive quarters of 13 or 14 percent nominal GNP growth, as we experienced in the first two quarters of 1977, seems very remote.

Thank you.

[The complete statement of Dr. Thomson follows:]

Statement by Thomas D. Thomson
First Vice President and Chief Economist
Detroit Bank and Trust
Before the Committee on Banking, Housing, and Urban Affairs,
U.S. Senate
April 24, 1978

Mr. Chairman, I am honored to have this opportunity to express my views to this committee. This seems to me to be a very crucial time in the conduct of both monetary and fiscal policy. We are all aware that the economy was in a virtual standstill during the most recent quarter. Although economic activity will rebound from the depressed first quarter, growth in the latter part of 1978 is likely to remain quite moderate. Let us review the current situation in some detail before discussing what I consider to be the more relevant longer term issues. As I will elaborate in the latter part of my testimony, 1978 has been programmed by past events and the direction of current policy will have only a minimum effect until 1979 and 1980.

The growth of real GNP is likely to be six or even seven percent this quarter, which will represent a first half growth rate between three and four percent -- a fairly mediocre performance and one that will not lead to significant declines in the current rate of unemployment. It is unlikely that economic activity will accelerate appreciably during the second half. Economic growth for the year

of about four percent can be expected, thus a significant gap between actual and potential output will remain. Even in this kind of environment, inflationary pressures are likely to remain disgustingly high.

As has often been repeated, the consumer has lead this recovery. This has been financed by reducing the saving rate below that level probably desired by the consumer. The average ratio of saving to income has averaged about 6.3 percent since 1960 but fell to slightly over five percent last year. The present very high ratio of consumer debt to income is another indication of the strained nature of consumer finances. In short, consumers may show signs of exhaustion at a time when business investment is having less than a normal cyclical upswing. If one sets out to build an economic forecast of a more buoyant economy, it is difficult to find the sectors that will provide the strength. Housing starts, for example, cannot be expected to exceed last year's almost two million units. There are few optimists (even in Detroit) who see auto sales able to exceed last year's 11.2 million domestic and imported cars. In 1977, the consumer increased purchases of real durables other than autos by a very strong 7.3 percent. Even purchases of nondurables ended 1977 at an exceptionally strong pace. These acts are hard to follow.

I do not want to appear to be reciting a litany of travail and gloom. The economy is still void of any real excesses. Despite inflationary fears, business

firms have not been buying in anticipation of future price rises. Credit demands, although fairly vigorous, are not expected to reach "crunch" proportions this year. We are probably in a period somewhat similar to late 1976 when the well publicized consumer "pause" took place. Given the unfortunate economic experiences in the middle part of this decade, businesses and consumers are very fearful of an overheated economy. Moderate pauses serve to partially alleviate these fears. If we continue to have these periodic and brief sideway movements we may be able to avoid an overheated economy and subsequent recession for many more quarters.

Within the context of this general outlook, I would like to review current policy. I find it hard to quarrel with policy as it was executed in 1977. During most of the year, money was clearly growing at a rate faster than that consistent with longer term price stability. The Federal Reserve had to respond even though a 200 basis point rise in short-term rates is hard medicine for money markets and the economy. Indeed, the recent revisions in the money supply data indicate that an even earlier, more vigorous response might have been appropriate. Had they not responded, the effect on current inflationary expectations and future actual inflation would have been very harmful. The Federal Reserve was counseled by many that they were aborting the housing recovery and taking too much edge off the economic expansion. The reduction of the rate of inflation, however, appropriately remained a high priority of monetary policy.

I would, however, quarrel with the quarter point rise in the Federal funds rate in early January 1978. This was clearly not needed for purposes of domestic monetary control. It was prompted by a wish to support the dollar even though U.S. domestic interest rates were very competitive with those in most industrialized countries. Domestic money market participants were already expecting very large increases in short-term interest rates later in the year and the surprise discount and Federal funds rate change confirmed their worst fears. The price of intermediate and longer term Government and corporate bonds fell sharply and the Dow Jones stock averages dropped another fifty points. It is hard to make the case that the value of the U.S. dollar is presently any higher than it would have been in the absence of a tightening in policy.

Since January the growth of the monetary aggregates has been quite slow. The level of M1 balances, for example, were about the same at the end of March as they were at the end of January. Markets became exuberant last week when the expected early April blip in the money supply failed to materialize. The slowing of this growth rate is not just a random movement in a very volatile series. It has two primary causes. First, and most important, is the endogenous nature of money in the short run. The primary function of money (M1) is to facilitate transactions. Transactions obviously have not grown much during the last few months. This is not to imply that money reacts solely to current transactions. Since people adjust their transaction needs rather slowly it is also a function

of past economic activity. If we use nominal GNP to measure the change in transaction demand, we see that GNP has slowed from a 13 percent rate of increase in the first half of 1977 to about a ten percent change in the last half. Since the rate of GNP growth slid even further in the first quarter of 1978, it is no wonder that money has been behaving during recent months. Current money growth is slowing because economic activity has been slowing for almost a year.

The second reason for the recent slowing in money growth is the lagged effect of the 200 basis point rise in short-term interest rates in 1977. The assumption of money market participants, especially the Federal Reserve, seems to be that a quarter point change in the Federal funds rate does wonders in the quarter in which the change is made. In every piece of quantitative work of which I am aware, the first quarter effect of an interest rate change is very small. Money reacts very slowly to interest rates. The biggest effect of an interest rate change comes two or three quarters hence. Thus in 1978, we are seeing the result of 1977 interest rates. It is in the context of these lags that the early 1978 tightening appears inappropriate.

Based on my analysis of the economy and the nature of the money supply, I see money growth averaging about six percent for the remainder of this year without a further rise in the Federal funds rate. There is a good chance, however, that as the economy accelerates from the depressed first quarter, money growth will appear to be on a path somewhat faster than this. Nominal GNP growth of 13 or

14 percent is likely this quarter and money demand may well move in partial sympathy to this acceleration. It would be a mistake, however, for the Fed to raise interest rates in response to a temporary resurgence in monetary growth. That growth would be an accident of the nature of the winter and not the beginning of several quarters of high economic and monetary growth. The chance of having two successive quarters of 13 or 14 percent nominal GNP growth, as we experienced in the first two quarters of 1977, seems very remote.

Given the picture of fairly modest economic growth that has been presented, the question of an ease in policy could well be raised. Perhaps some easing will be appropriate during the last half of 1978. The degree should be modest, however since a significant easing might add too much stimulus to next year's economy. It is likely that after a "pause" in 1978, the economy next year will be ready for a somewhat stronger advance. It seems even more certain that inflation will still be our largest economic problem. By 1979 we will be in our fifth year of economic growth and our human and other capital resources will have less slack. In such an environment, inflation will not drop below the five to seven percent range and indeed may very well worsen.

We are far enough into the planning process for fiscal 1979 to know that the Federal deficit will be very large given the advanced stage of the business cycle. It would be a major mistake to lay the groundwork this year for both tools of policy, fiscal and monetary, to push the economy too hard in our current

inflationary environment. Next year's deficit will have to be financed in markets in which private credit demands will be increasing. Too low a Federal funds rate will increase the rate at which that debt is monetized. Given the delicate state of today's economy and the potential worsening of inflation, prudent policy calls for a very steady hand this year.

Thus far I have made no specific comment whether the Federal Reserve should raise or lower its monetary target ranges for the period ahead. Rather than address that narrower issue, I would like to comment on the present scheme of monetary targets and congressional oversight. The periodic trips to the Capitol by the Chairman of the Board of Governors has some comic aspects. Serious discussion takes place concerning the appropriateness of a quarter or a half point change in the monetary growth targets. The money supply subsequently misses the target by degrees which makes the previous discussion seem trivial. Seldom is it recognized that monetary growth during the subsequent quarter will be little affected by anything the Federal Reserve will do even though their actions will have a powerful effect several quarters hence. The discussion proceeds as though the money creation process were a precise mechanism with strong immediate linkages although in reality it is a rather blunt instrument with long delays.

Given the nature of economic data and economic forecasting, the process for control and oversight will always be difficult. The present procedures, however, can be

greatly improved. It is hard to understand how well meaning people can continue the process of the "moveable base." The growth rate targets are calculated using the average of the previous quarter as the base from which growth is measured. If money misses the target range, a new quarterly average is calculated and there is no attempt to get the level of the money stock back on path. This procedure tends to impart a pro-cyclical bias to the monetary aggregates. Since economic activity from one quarter to the next tends to be correlated, we are likely to see the base for calculation change in successive steps in the same direction. During a period of accelerated activity, for example, money growth exceeds the target. This is forgiven and the growth ranges are again established. The next quarter also exhibits strong economic activity and monetary growth and the base is again changed. After several quarters, the level of the aggregate is far above the target path of several quarters ago. Not much attention is focused on this, however. The reverse process would take place during periods of slow growth or during an economic downturn. Successive misses would mean successive changes in the rules of the game.

Another needed improvement in present procedures is the attainment of timely data on deposits at banks which are not members of the Federal Reserve system. The recent upward revision of 1977's M1 growth by almost a half percentage point well illustrates this deficiency. Banks and their regulatory agencies resist an increase in reporting burden but the needs of policy should dominate. The control

of money and currency is unambiguously the province of the Federal government and accurate, timely, data is absolutely essential.

Although the appreciation of the importance of monetary policy has grown during the past few years and our understanding and even the execution of policy has probably improved, there is still a tendancy for money to be pro-cyclical. In the economically depressed years of 1974 and 1975, for example, money (M1) grew at a less than five percent rate. In the far more prosperous year of 1977, money grew 7.8 percent. The primary reasons for this have already been mentioned in this testimony but deserve further elaboration. One is the problem of the sliding quarterly average. The most important reason, however, is the loose linkage between short run changes in reserve availability or money market conditions and current money growth. The pre-ordinated nature of short run money growth is simply not appreciated. There are at least two possible conceptual remedies to the current method of policy formation. One solution would be to change money market conditions by whatever degree necessary to achieve short run monetary aggregate goals. The effect of Federal Reserve actions in the current quarter is not zero but very small. The Manager of the Open Market Account could conceivably achieve a given target if enough reserves were withdrawn or injected. Interest rate fluctuations would be far greater than they have been in the past. If the economy is very strong and the transaction demand for money is growing, a very large rise in interest rates would be necessary. The Federal funds rate might

very well fluctuate ten points in a given quarter.

The movement of other interest rates would be slightly less volatile than the fund's rate. Treasury bill, commercial paper, and even intermediate and long-term rates, however, would move considerably further and more often than they have in the past. This scheme, which can be described as a strict monetarist approach, would result in strains upon the present institutional framework. The economic system could probably adapt but the transition to this system would create considerable uncertainty. The minimization of the importance of an economic forecast would be viewed by many as its primary virtue. The monetary screws are turned hard enough to make money hit a particular target regardless of the demand side of the money market. The more powerful lagged effects might well have to be undone in later quarters.

The monetary control system described above might work very well. A less pro-cyclical monetary growth would result and cycles in real economic activity might be moderated. Much more research and public policy discussion would have to be done before it was advisable to move in this direction, however. As a practical matter, it seems unlikely that the Federal Reserve on its own or at the request of Congress is about to make dramatic changes of this type. Public policy change is slow but some change from the present system must evolve. This development might well be along the following lines. The Federal Reserve should report what it expects for monetary growth during the next two years as well as for the current quarter.

They should make explicit the complete economic outlook upon which this projection is made. The Federal Reserve and the Congress should recognize that the near term is a pure forecast. The longer term, however, can be called a target or goal. Various monetary policy tools may be used to achieve these objectives. At the present, for example, the Chairman might well report that monetary growth in the second quarter of 1978 is expected to be more vigorous than last quarter but is likely to moderate somewhat in the last half of this year. He should go on to describe the monetary policy actions that are needed this year to achieve the economic goals of 1979 and 1980. The public policy tradeoffs between, say, inflation and employment in arriving at the policy strategy should be made explicit. The Congress and the public would be able to comment upon the strategy. Much more useful debate could take place than the present system of commentary on monetary growth targets that are often not achievable in the short run and will be ignored in the process of reinitializing the base of calculation in any event.

In mid-1977 the Council of Economic Advisors set out a game plan for the ensuing four years. It was possible to evaluate the reasonableness and consistency of the numbers. The difficult policy questions were recognized. There was an awareness, for example, that the cost of a very rapid closure between potential and actual GNP would be too great a sacrifice of the goal to reduce inflation. A balanced budget was targeted for the early '80's. Many thought the implied goals were too ambitious. Many of us in the private sector are chagrined that

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the goal of a balanced budget seems to have been an early casualty. It was possible, however, to know the thinking of the economic policy makers and offer criticism. As you are well aware, the Federal Reserve has never offered us as much substance.

The Federal Reserve's game plan should include all major economic variables in the economy including, of course, Gross National Product, employment, inflation and interest rates. In the past, the Federal Reserve has been extremely reluctant to give an indication of their interest rate expectations. They feel that their interest rate projection will immediately become the pervasive expectation in the money market. Because of these feedbacks, it is feared that the execution of policy will be undermined since interest rates might rise or fall sooner than is optimal from a policy viewpoint. Few would argue, however, that the formulation of fiscal policy in full view of the private economy renders fiscal policy ineffective. (There are some "rational expectationists" who do believe this.) People will soon learn that the projections of even the Federal Reserve often go awry. Because of events independent of policy, targets and goals that appeared consistent will have to be altered. The private sector will not have an anchor that they can accept as truth. The public and the Congress will, however, gain far better insights into the policy options and the implications of current policy.

The Federal Reserve's simultaneous willingness to discuss monetary aggregates and reluctance to mention interest rates makes no economic sense. One cannot affect

money without affecting interest rates. Interest rates are the price variable in the money market. Slowing down an overly expansive money supply will depend upon raising the price of money. Perhaps the basic reason the interest rate implications of money targets are avoided by the Federal Reserve is the realization that they would be creating additional political problems for themselves. Congress has shown a rather consistent bias for low interest rates. Almost everyone prefers low interest rates. Many groups are especially adversely affected by tight money. The housing industry, including labor groups and housing related financial institutions, realize that housing suffers in periods of high interest rates. These groups naturally get a hearing in Congress. There are times, however, when high interest rates are necessary to slow down the pace of the economy. This last statement can be agreed with conceptually but in practice the public feels the time is never quite right for an increase in monetary stringency. Although in today's environment I too find no need for a policy induced rise in interest rates, there is little doubt that within the next couple of years, interest rates will have to rise considerably. For the past three years, short-term interest rates have been at or below the rate of inflation. This was possible because the economy was far below potential. We should not expect, however, to see such a relationship between inflation and interest rates go on indefinitely.

Monetary policy during 1972 should remain as an object lesson for a long period of time. During that year, monetary expansion was far too great. The cost of

the relative inaction on the part of the Federal Reserve was the overheated economy of 1973 and 1974 and the ensuing recession. A touch of medicine in 1972 would have been preferable to the near financial panic of 1974. Most of the blame for that episode can be placed on the Federal Reserve, but Congress should not put itself in the position of being the culprit the next time restraint is needed. If more comprehensive plans and numbers are demanded and received by Congress, it must be willing to share responsibility for the tough decisions.

Senator RIEGLE. May I just ask you one thing on that point, before we go to the next panelist. That is that I think those of us who come from areas like Michigan, which is very interest rate sensitive, and I have always tended to view it as being on sort of the whip end of the economy, I wonder whether the position there of being really very sensitive, almost in an early warning kind of way tends to influence either my observations or your own?

To what extent, as you try to identify that factor and think about that versus really looking at this thing from a national standpoint, do you feel that your position tends to make you even more apprehensive about the kinds of swings that we may be starting to make right now?

Dr. THOMSON. I suppose you have a good point, Senator, since automobiles are obviously a very durable good, they can be postponed in times of economic downturn. However, I do not believe my views of monetary policy are heavily influenced by my particular environment. On the contrary, as a banker, I know high interest rates help profits. I think, though, for the good of the country and consequently the long run good of the banking industry and industry in general, that it would be far better to draw out the current expansion longer. I wish the Fed could see their way to being a little more moderate in putting on the brakes this year. I think perhaps next year they may have to be firmer.

Senator RIEGLE. Dr. Walters, we are delighted to have you here. As Senator Proxmire noted, you bring a very distinguished background here, and we would be pleased to hear from you at this point.

STATEMENT OF JOAN G. WALTERS, PROFESSOR OF ECONOMICS, FAIRFIELD UNIVERSITY, FAIRFIELD, CONN.

Dr. WALTERS. Mr. Chairman, I have a summary statement which I will read, but I understand the full statement will be available to the committee.

Senator RIEGLE. That is correct, and printed in the record.

Dr. WALTERS. My remarks focus upon the interaction between public expectations, inflation, and Governmental policy.

Consumers and businessmen, as well as participants in the financial markets, are uncertain and hesitant about the economy, about inflation, and about future Government economic policy.

My suggestion is that Congress, the administration and the Federal Reserve allay this uncertainty by clarifying Government's economic goals for the coming 2 years. Control of inflation should be a prime commitment. The statement of goals should be reinforced with cooperative action by Congress, the administration and the Federal Reserve to implement and coordinate fiscal and monetary policy.

The public's expectations about inflation can be affected by Federal fiscal policy and debt financing. Rising deficits are interpreted as precursors of future inflation.

In the realm of monetary policy, expectations about inflation play a significant role in determining the public's demand for money and credit. At the same time, the public's expectations are affected by monetary policy. Monetary target information can lead to expecta-

tions of greater inflation and higher interest rates or can be interpreted in just the opposite manner if the public anticipates lessening inflation.

Expectations come into play again when investors see that announced monetary targets are not being met. Then some guessing about future Federal Reserve corrective action arises.

Questions can be raised about the nature of official Government estimates of economic variables. What is their meaning and significance? Are they professional estimates or political expressions of hope? How do these estimates affect the public's financial behavior?

After the administration makes clear its determination to control inflation, fiscal and monetary policy must be used deftly. Both Congress and the administration must decrease the size of the deficit. This will be politically difficult, but nevertheless imperative for it can have both a real and a psychological impact in moderating inflation.

Monetary policy traditionally has been the main instrument to achieve price stability, and it must continue to play a major role. The aim should be to slow the growth rate of the money supply. Fear of rising interest rates may be excessive. Flexible interest rates have an important function in a free market economy.

Perhaps undue concern has arisen about the impact of interest rates on the vitality of the housing market. Recently, expectations of future inflation have lessened the dampening effect of interest rates as more investors have turned to buying houses in preference to financial assets. The interest rate component in decisions to invest in housing has been swamped by expectations of future inflation in the value of the asset.

Interpretation of the level of interest rates as high must make a distinction between the nominal rate of interest and the real rate. Both borrowers and lenders include an inflation premium in their calculations of the effective interest rate, although we cannot be precise about the amount.

Rather than emphasizing these aspects of interest rates, however, more concern should be directed toward the possible adverse impact of interest rates on business expenditures on plant and equipment. Business sector spending has lagged during this recovery. In implementing slower growth rates for money, great care must be exercised to insure that business has access to debt financing at reasonable rates of interest. This objective necessitates a lower Federal Government deficit to avoid crowding out in the later stages of the present recovery.

A policy to encourage business capital expenditures, through tax policy and monetary policy, will help in the struggle to control inflation by leading to increased productivity. In this context, fiscal policy must back up monetary policy to simultaneously achieve greater growth and less inflation.

Comment is in order on two ideas which run counter to those expressed in this paper. A Phillipsian type of analysis envisions no beneficial role for monetary policy. It claims an increase in the money supply leads to inflation; a decrease leads to unemployment. I find this position unacceptable because it assumes a fixed relationship

between the unemployment rate and the inflation rate. No such link can be shown over different periods of time. September 1977 to March 1978 showed a moderate growth in the money supply, stabilized inflation, and unemployment.

Some analysts point out that the present inflation is caused by cost-push, and not by demand-pull. Therefore, they recommend faster growth in the money supply and believe it would lead, not to increased inflation, but to increased employment. Cost-push elements are rightly singled out and should be the basis for one set of policies. However, increasing the rate of monetary growth cannot be viewed as harmless. General cost increases usually are financed partly with an increase in the money supply. It is doubtful all prices can rise unless the money supply accommodates the increase. Furthermore, the public's expectations about inflation could be adversely affected. Apprehension about inflation could also spread to our international trading partners. The complex nature of inflation and the lack of precision in economic policy tools do not permit a tight policy for costs and an easy policy for demand.

In summary, I suggest a strong Government commitment to control inflation. Fiscal policy should be aimed at reducing the Federal deficit. Monetary policy should try to gradually decelerate the rate of growth of the money supply, while allowing only very moderate increases in interest rates. This is, admittedly, no easy task.

Thank you.

[The complete statement of Dr. Walters follows:]

EXPECTATIONS AND MONETARY POLICY

Joan G. Walters
Professor of Economics
Fairfield University
Fairfield, Connecticut

Mr. Chairman, members of the Committee, I thank you for this opportunity to speak to you about monetary policy.

My remarks focus upon the interaction between public expectations, inflation, and government policy. Consumers and businessmen, as well as participants in the financial markets, are uncertain and hesitant about the economy and about future government economic policy. My suggestion is that Congress, the Administration, and the Fed try to allay this uncertainty by clarifying the government's economic goals for the coming two years and by stressing their commitment to controlling inflation. Monetary policy must serve as the main instrument in moderating price increases, but fiscal policy must accommodate monetary actions to prevent excessive increases in interest rates.

I will first consider the role of expectations, and for the purpose of these remarks I define "expectations" as the public's anticipation of future economic matters and future government economic policies. Expectations involve a behavioral variable which is difficult to measure. There are many allusions referring to the public's sentiment, mood, psychology, confidence, uncertainty, and expectations in the economic literature, in the press, and in Congressional hearings. Economists recognize that expectations play a significant role. We know expectations can affect the economic behavior of the market participants and the response of the public to governmental policy actions--to monetary and fiscal policy in particular.

The public's expectations play a vital role in controlling inflation.

The amount and the type of spending by the public, that is, by the consumer, are profoundly affected by uncertainty and by expectations about inflation. Psychological factors can and do cause erratic, unanticipated fluctuations in saving as the consumer swings from spending to saving and back to spending. This behavior influences flows of funds into financial markets and financial institutions. Additionally, the expectations of entrepreneurs change, causing fluctuations in investment and in capital spending--Keynes noted that long ago.

Economists can only approximate psychological factors. Surveys of public sentiment and of businesses' capital spending plans have been more successful than quantitative models, but leave much to be desired. George Katona's work is important, but his information is not often incorporated into models or policy decisions.

To become more specific, I should like to consider expectations about fiscal policy and then about monetary policy.

First, the public's expectations can be affected by Federal fiscal policy and debt financing. Rising deficits are seen as precursors of future inflation. The response, therefore, to proposed tax cuts may be perverse, for the public may anticipate larger deficits and so an increase in the inflation rate. Furthermore, unfulfilled campaign promises to balance the budget leave people uneasy and uncertain about government economic policies and, therefore, hesitant in their financial

planning. Larger federal deficits cause the financial markets to anticipate higher interest rates, but the timing and amount are uncertain. Congressional budgetary behavior affects the public's expectations about inflation.

Secondly, in the realm of monetary policy, expectations play a significant role in determining the public's demand for money and credit. The rise in demand for money in 1977 has been attributed in part to uncertainty about the job market, future prices, and foreign exchange rates. In addition, the velocity of money is linked to expectations as well as to financial market technology. Part of the Federal Reserve's difficulty in maintaining control over the supply of money during short periods in 1977 has been attributed to shifting public psychology.

The public's expectations are influenced by monetary policy. There are two types of responses involved: one, the response to announcements of new target ranges for the monetary aggregates; and two, the reaction to the Federal Reserve's failure to achieve the target goals.

In FOMC policy releases and in testimony before this Committee, the Federal Reserve provides information about future monetary policy. The public's interpretation of this data cannot be fully ascertained. If a new lower range for the aggregates is mentioned, the public expects tighter money and higher interest rates to follow. On the other hand, some people, perhaps encouraged by the Fed's strong stand against inflation, anticipate better economic conditions and lower future inflation rates.

Another psychological response could follow. Aware that the Federal Reserve is not attaining a previously stated goal, sophisticated participants in the financial markets anticipate future central bank corrective action, then act according to their estimates of possible later Fed actions.

Perversely, the newly-required information on monetary targets, rather than eliminating an unknown, has injected an additional variable---second guessing the Fed's future corrective actions. The financial markets are now measuring weekly money stock performance against the target goals, and considerable short-term instability has developed. Federal Reserve statements of target ranges, unfortunately, have been misinterpreted as hardline weekly goals. Attention has been diverted from real factors to guessing policy.

The intention behind House Concurrent Resolution 133 and Public Law 95-188 seems admirable, and a call for more information seems innocuous. Projections with the imprimatur of the Fed, however, have a special significance.

Turning to the subject of official government estimates, let me raise some questions. Various government spokesmen have inundated us with estimates of GNP, of inflation rates, of unemployment rates, and of international deficits. The statements are not always in agreement. What is the significance of these estimates? Are official forecasts realistic? Or are they official "hopes?" How much is professional projection and how much political statement? This situation probably has led to confusion on the part of the public about the administration's

overall economic plans. The public has failed to discern a commitment to controlling inflation and to managing our international finances. Public confidence could be enhanced were the administration to indicate its economic objectives and its determination to bring greater price stability and to rebuild our international financial stature. More than one press conference will be required.

Official statements expressing a commitment to stabilize prices must be reinforced with two types of government policy to achieve that goal, namely fiscal policy and monetary policy.

The present situation calls for moderation of Congressional and Administrative budget policies. Congress faces some hard political choices. Federal fiscal behavior can have both a real and a psychological impact in controlling inflation. A restrained growth in Federal government budgets would help to dampen inflation and should remove debt financing pressures from the financial markets, thus moderating the need for interest rates to move up. Besides the real impact on the economy, a sign of moderation in government spending could mollify the public's apprehension of an uncontrollable budget.

Monetary policy, traditionally, has been considered the major instrument to control inflation. In view of the current state of economic knowledge, it must continue to assume the primary role in our search for price stability. A conservative monetary policy which attempts to gradually decelerate the rate of growth of the monetary aggregates should be followed. This policy would have beneficial real and psychological impacts.

Monetary policy can achieve greater success if it is backed up with moderate fiscal policy. I wish to stress the desirability of a cooperative effort by Congress, the Administration and the Federal Reserve, in attempting to control inflation and in implementing policy. Slower monetary growth rates without increases in the long-term interest rates can only be achieved if Federal debt financing requirements decrease.

Some reluctance to rely on a flexible monetary policy has been evident. This hesitancy stems from a misunderstanding about the role of interest rates, a fear of the impact of interest rates on housing, and a failure to recognize the impact of inflationary expectations on interest rates.

Let me consider the role of interest rates. All too often, interest rates are viewed solely from the point of view of the borrower, with the emphasis on the cost element. There are two sides to debt, however. By fostering low interest rates, are we not forcing the saver to subsidize the borrower? A policy continuing to favor borrowers over lenders is misguided. Federal tax laws allow the costs of borrowed money to be deducted from gross income before taxes. Such policies indicate emphasis on distributional equity to the detriment of efficiency objectives. Higher interest rates are not per se bad policy.

Interest rates perform valuable services if allowed to do so. They allocate credit in a free market. Constant concern with maintaining low borrowing costs for all sectors of the economy at all times does not make sense. Rather, this attitude

arises from a basic mistrust of the functioning of the market system and from a bias against maximizing efficient performance of the economy.

Commentary on past monetary policy often indicates displeasure at rising interest rates. The fear is expressed that high interest rates will spill into the mortgage market and have a negative impact on housing. The implication is that any tightening of monetary policy is to be avoided.

Let me comment on the relationship between mortgage interest rates and housing. In the past, an inverse link was observed between mortgage rates and the quantity of housing activity. This traditional pattern has not been so obvious in the past five years. Other considerations on the part of the potential home-buyer seem to have assumed greater importance than the interest rate.

Expectations of the public about the future inflation rate have affected housing demand. It seems the general public may be ahead of the economics profession in evaluating the impact of inflation on real property as opposed to financial or paper assets. Home-buyers have seen the value of houses increase much more than the value of financial assets. This is a typical pattern under inflationary conditions, indicating the investors' distrust of dollar-denominated financial assets. My point is that the public's expectations of continuing inflation override or "swamp" the interest rate component in decisions to invest in housing. Expectations about inflation shift the demand curve for housing. Hence, in

assessing monetary policy, we overemphasize the detrimental effects of interest rates in the housing market.

Mention should also be made of the effect of inflationary expectations on the level of interest rates. The borrower, expecting continued high inflation, reasons that debt will become less burdensome as inflation continues. The future dollars to pay back debt have less purchasing power and are less valuable. Furthermore, the borrower, as well as the lender, sees that all prices have risen and views increases in the interest rates as reasonable. (Please remember: this has occurred at a time when greater information for the borrower has become mandatory and has increased the borrower's knowledge of borrowing costs.)

Borrowers and lenders evidently make a distinction between "real" and "nominal" rates of interest. The stated rate of interest contains a payment for the use of money over a period of time and also an inflation premium reflecting expectations about the future rate of inflation over the term of the loan. This is an idea first expressed by Irving Fisher.

My point here is that it is difficult to classify a particular level of interest rates as being "high" unless we know the amount of inflationary expectations built into the nominal figure. Simply stated, inflationary expectations drive nominal interest rates higher.

I have commented here on some misconceptions about the role of interest rates, on the effect of interest rates on housing and on the effect of inflationary expectations on nominal interest rates.

It is more important to be concerned about the possible impact of interest rates on businesses' expenditures on plant and equipment. In implementing monetary policy, great care must be taken to judge the impact of higher interest rates on investment. Spending by business in this recovery has lagged behind rates in past recoveries. Furthermore, the real profits of business are unlikely to provide sufficient funds for capital spending, necessitating reliance on outside financing. With equity prices depressed, borrowing is likely to be crucial. Therefore, government must design both corporate tax policies and monetary policy to accommodate increased corporate borrowing.

A policy of encouraging business capital expenditure is vital in the struggle to control inflation because increased capital per worker leads to increased productivity. Recent low increases in productivity bode ill for future prices.

Delicate handling of money supply growth rates must assure business of adequate financing. Congress and the Administration must control the size of the deficit, hopefully lowering it. Then business will not have to compete with the public sector, and rising interest rates can be avoided. During the early phases of the current recovery, interest rates remained steady. As the economy moves into the later phases of the upswing, federal debt financing needs should be decreasing in order to allow the private business sector to finance expansion without interest rates moving up. Let me stress that the higher

interest rates result in part from Federal government fiscal policies.

Let me comment on two ideas about the role of monetary policy that I consider misleading. Some doubts have been raised about the importance of monetary policy. Believers in a simplified Philippsian relationship between jobs and inflation tell us that an increase in inflation buys employment. A dilemma thus arises. An increase in the money supply growth rate means more inflation; a decrease in monetary growth rates means more unemployment. This view presents a no-win situation, indicating no possible beneficial role for monetary policy.

The relationship implied between jobs and inflation can be questioned. No evidence of a consistent fixed relationship between the unemployment rate and the inflation rate can be shown. We now associate higher prices with higher unemployment. The period from September 1977 to February 1978 showed moderate growth in the money supply, stabilized inflation and a falling unemployment rate. This performance would seem to discredit the idea that monetary policy can only be used for one objective at a time.

Another line of analysis says that the present inflation is caused by "cost-push" factors, not by "demand-pull." It goes on to suggest faster growth in the monetary aggregates as a way to spur employment. Since demand is moderate and unused capacity exists, no acceleration of inflation is likely to follow the increased rate of growth in the money supply.

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"Cost-push" elements are rightly singled out and should be the basis for one set of policies. I would disagree strongly, however, with the statement that nothing is to be feared from an expansionary monetary policy at the present time. First, general cost increases must be financed with increases in the money supply. It is doubtful all prices can rise unless the money supply accommodates the increases. Secondly, the argument overlooks the effect of monetary policy on expectations. Should consumers notice faster growth in the money supply, their fears of future increases in the inflation rate would increase. In addition, an expansionary monetary policy would not be viewed favorably in the international markets. The complex nature of inflation does not permit a tight policy for costs and an easy policy for demand.

My position is that monetary policy can be used effectively to control prices. A flexible monetary policy will require slower growth rates for the money supply.

If decreased Federal government deficits can be achieved, upward pressure on interest rates could be eliminated, and business expenditures on plant and equipment would be encouraged. This would extend the recovery and slow inflation via productivity increases.

In summary, my comments today have centered on the interaction of the public's expectations, inflation, and government policies. One suggestion is that the Congress, the Administration, and the Federal Reserve address the problem of confidence

by clarifying government economic policy objectives for the next two years. Make the general public aware of a coordinated official set of economic priorities. Identify the moderation of inflation as a prime commitment.

Actual policy implementation must come on two fronts: fiscal policy and monetary policy. Congressional and Administrative awareness of the importance of their respective spending policies on the rate of inflation are mandatory. Political choices must be made by Congress and the President, and some seemingly desirable programs must be cut or postponed. The rate of growth of Federal spending must be related to GNP growth.

Monetary policy remains the main technique for moderating price increases. Gradually decelerating monetary growth rates are necessary. The policy must be implemented with care in order to avoid sharp increases in interest rates that could shut business out of the credit markets and slow investment spending. Presumably this difficult task for monetary policy can only be achieved with the cooperation of Congress and the Administration in decreasing the Federal deficit. It is important to restore the public's belief in government's willingness and ability to deal with its own finances and, hence, with inflation.

Senator RIEGLE. Well, let me thank all of you again for your testimony.

Let me ask you to react, if I may, to an item in a Federal Reserve press release dated April 21. It was just released last week. It makes reference to certain policy actions that the Federal open Market Committee took at its meeting of March 21 of this year.

One of the interesting quotes is this:

"The Committee members agreed that the rate of price advance was likely to remain relatively rapid in 1978 and they expressed a great deal of concern about this prospect. The comment was made the pace in increases in price appear to be accelerating in this country, while decelerating in European countries.

And this is the part I want to call your attention to.

Several members observed that inflation led to recession, and it was suggested the greater the inflation, the worse the ensuing recession. For that reason it was suggested special emphasis should be given to the Committee's longstanding objective of helping to resist inflationary pressures while simultaneously encouraging continued economic expansion.

I wonder in terms of what causes what, a very complex multifaceted economic picture, whether you would agree with this notion, that inflation leads to recession, and the greater the inflation, the worse the ensuing recession. Dr. Hester?

Dr. HESTER. I believe that it is not a demonstrated fact that inflation leads to recession, other than in the simple sense that something that goes up often eventually comes down. But that is not an operative or useful bit of information. One needs to know when it comes down and under what circumstances it comes down. The Federal Reserve may itself be responsible for bringing it down after an inflationary period by raising interest rates excessively. It is irresponsible to suggest that just because there is some inflation a recession will follow.

This country had high rates of inflation in 1950 and 1951, shortly after the start of the Korean war, and we managed to get out of that without a sharp recession. We had high rates of inflation between 1946 and 1948 and didn't go into a severe recession. There was a period of fairly high inflation from 1956 until 1960 and we did manage to produce recessions, but that was because the Federal Reserve drove interest rates up to high levels both in 1957 and in 1959 and 1960.

Senator RIEGLE. Dr. Thomson.

Dr. THOMSON. I think in that record they are setting up a case for a more stringent monetary policy. I think one, though, has to realize that you can't take an edge off inflation without taking an edge off the whole economy.

Inflation is a result of ill-conceived policies or mistakes, perhaps, of the past. The inflation we are having in 1978 thus far has little to do with anything that is being done on the policy front in 1978. If one tightens policy now one will also reduce future real growth as well as inflation. So the cost of an aggressive inflation policy now is quite high in the face of an economy which still has a lot of slack.

The economy by almost any standards can't be conceived as being one in which we are bursting at the seams. The unemployment rate

is still 6.1 percent. Capacity utilization rates according to the Federal Reserve are still 83 percent. One doesn't look around the economy and see anything like the conditions we had in 1973, in which everybody was buying in anticipation of price rises, and there were many isolated shortages in paper, steel, and other sectors of the economy. We don't have those conditions now. So what tight money will probably do now is take some slight edge off the future inflation, but it will also take a greater edge off our real growth. It seems to be a poor tradeoff now. At some future time, maybe 1979 or 1980, the economy will be up to full capacity and tighter policy will be called for. Right now I don't think so.

Senator RIEGLE. I might just comment in passing that the thing that disturbs me, unless we are talking about a major recession, major downturn, if it is something less than that, but still a downturn, there is a question in my mind of the degree to which that finally translates itself into an antiinflation effect.

In other words, as I look at the pattern of price and wage increases over a period of time, and the generalized inflationary pressure we are getting, it seems to me certain key components are not all that much affected in a very basic way by whether or not the economy is in a sliding phase. There is some of that, but some of the places where the biggest components of price increases are coming in are so strongly entrenched and so squared away, it seems to me we are likely to get about as much with or without an upturn or downturn in the economy, which is another issue or problem, but it may also say the notion of a recession to cure inflation is becoming more a myth than fact.

Dr. THOMSON. I think you make some relevant observations. We do have the disease of inflation, it is a disease we are not going to get rid of for quite a while. It doesn't mean we should not strive to get rid of it, but the process of getting rid of it is a 4- or 5-year project.

It is not a project you launch at a time when the economy is not looking all that healthy.

Senator RIEGLE. Yes. Dr. Walters?

Dr. WALTERS. Boiling it down to "inflation causes a recession" is a little over-simplified. Nothing in economics is that easy, as any economics professor can tell you. I can't accept this neat process that says when the inflation rates get high, it must necessarily be followed by a recession. It certainly happened in the 1970's. The factors operated together in the downturn in 1974–75, but certainly a combination of other things occurred. I think inflation causing a recession is sometimes referred to as the "new" theory, but there is always a newer theory that comes later. I would say in terms of monetary policy, I don't think fighting inflation can be done in terms of any single instrument. I think you have to combine monetary policy and fiscal policy. When I say move to slower rates of growth in the money supply, I do not mean to jump into tight money. But one way you can avoid this over-reaction which monetary policy usually falls into is with cooperative Congressional action in terms of the budget. Because if we have high interest rates, they don't come from monetary policy alone. There is a great big money market, a debt market,

and one of the big competitors in the debt market is the U.S. Government. As long as the U.S. Government is financing a deficit of $60 billion or more, it creates huge demands for this pool of funds and has an impact on the interest rate just as much as does the Federal Reserve trading in the bond market.

So when I say evening out monetary policy, the Fed can't do it alone. I think it is only one policy tool, particularly, in this so-called predominantly cost-push inflation. But I think it is important in the cost-push aspect of inflation, to increase productivity. I don't think enough has been said this morning about the lags in business spending and the consequent fall in productivity. I think that is why again interest rates must rise very severely because the weakest element at this point is not the consumer, but the business sector. And plant and equipment expenditures have been much slower than in other upswings, and changes in plant and equipment affect productivity. That is the basic attack on cost-push inflation.

Senator RIEGLE. I appreciate the point on productivity. The statistics that we have were levelled out in terms of productivity again over the last several years and are not particularly encouraging, when one matches that with what we see in terms of increases in wages and goods.

One area that concerns me and where I am seeing that happening right now is in the communications business. AT&T is in the process of automating at a rapid rate at a number of facilities in Michigan, and I assume elsewhere, so we are finding an awful lot of people who have been employed as switchboard operators and so forth are now being replaced by electronic circuitry, so we are getting pockets of displaced workers.

Now in a sense we may or may not be getting a productivity gain in terms of what we finally get in the way of the volume of AT&T service per dollar spent, but it seems to me we will be picking up a different kind of problem over here in terms of people who are pushed out of the labor market and it might be very hard, I think will in fact be very hard to absorb.

I want to come back and raise another item with you. That is, it seems to me implicit in what all of you are saying to a greater or lesser degree is—this is my own sort of summary of it, so if you care to dissent, please do—but it seems to me that you are expressing a concern that maybe the Fed is reacting in perhaps almost an irresponsible fashion for a variety of reasons. It is not surprising that they might be doing that, and perhaps over-reacting to a problem where a reach for the conventional remedy, namely, tighter money in terms of trying to deal with what is obviously foreseen as a serious inflation problem is exactly the wrong reflex to use at this time.

I can see why that might happen, because we have a new person at the Fed, who I think wants to get off to a strong start and wants to show action, and I also think that we have got something of a leadership vacuum that exists in terms of national policy setting of economic strategy.

This is no secret, everybody is writing about it. It is perceived by international observers as well as domestic observers that pay atten-

tion to it, and both in terms of some of the difficulties that the Carter Administration has had in its overall efforts, as well as some of the changes in the Congress in terms of our ability to provide alternative Congressional leadership if that is what is required, I think has created a situation where there may be something of a real gap in terms of taking the lead in economic policy strategy and formulation.

It is easy for me to see why that is generally the case, that the Federal Reserve, particularly with somebody new at the helm, who is a charger out of business, would be inclined to want to say, you know, let's do something that is visible. In other words, let's take a step everybody can see and react to, so they know at least this shop means business and unless we get the restraint other places, wages, prices, government spending, various other things, we are going to wrap the system around ourselves.

If that is generally the case, then I am alarmed, and I may well be more alarmed than you are, although I detect a sense of alarm from each of your statements, to the effect you would be very reluctant to see monetary policy used at this point as the central tool for trying to deal with an inflationary problem that could basically throw the country off track and into an economic tailspin that no one wants.

That, essentially, is the summary I get here. I would appreciate any comments that anybody wants to make along that line.

Dr. HESTER. I would like to react briefly. First of all, I think your general characterization of what the Federal Reserve is trying to do is correct.

I would like to comment briefly—Dr. Eckstein is not here now—on what he said this morning about the possibility of a rapid growth in consumer spending. As I read the statistics, consumer saving is still quite low, and I don't see a large increase in consumer spending in the coming quarter. I do see the possibility of rapidly rising interest rates inflicting a certain amount of damage on household solvency.

I am not talking about prices, I am talking about pressure, which may curb further spending increases. Consumer demand will not be as high as he estimated. Rising interest rates will defer spending further. It is important at this stage not to rock the boat in that direction.

The second thing which should be said is that it is extremely dangerous to attempt to deflate the economy very rapidly. By deflate, I mean reduce the inflation rate from perhaps 7 percent, which we are likely to have this year, or 8 percent next year, by 2 or 3 perment. If you try to do that rapidly, you will cause people's expectations to be adversely affected, and it is quite possible people will find themselves in some difficulty.

We have had occasions when sharp changes in credit conditions have produced crises. The Penn Central incident is an example.

Dr. THOMSON. I would like to echo what Don said, except I want to make clear that 3 months from now it may look as though the consumer has been on a rampage. I think we have to be careful in interpreting the current data. The consumer decreased spending in January and February. We naturally are getting a bounce right now and the data are indicating this.

The second quarter will probably have high growth rates. I personally wouldn't estimate the second quarter GNP growth rate as high as Professor Eckstein, but I think it can be 6 percent real growth, maybe even 7 percent. But that is an accident of the way the year unfolded. I think that inflation can only be brought down, as I mentioned before, very gradually. If we attempted to cure the disease within a year's period, it would do so by setting off a very severe recession.

Dr. WALTERS. I am not sure I am as worried about the consumer as I am about business. I think the consumer traditionally has been rather insensitive to interest rates. Consumer interest rates do not change that much, consumer finance rates.

I also think the consumer has plunged into housing, in spite of rising interest rates, because they think the interest rate is not as important in terms of the inflation as the price of the house or the price of the asset they are buying.

In other words, usually the expectations about future inflation affect the consumer's behavior more than the interest rate. Even before the higher rates of inflation, the consumer was traditionally insensitive to interest rates, even with the new truth-in-lending information with all sorts of statements about understanding the interest rates charged over the long term.

That is why I said I think business is much more sensitive to changes in interest rates, and therefore that is the area where we have to be concerned about instant monetary policy, which I certainly would be afraid of. I say that nothing should be done quickly, and business investment decisions come over long periods of time, and they can be postponed.

It is my understanding that business liquidity is not extremely high at this point, so they must rely on the debt market, not on the equity market, and therefore they will be very sensitive to changes in the interest rate.

Senator RIEGLE. You know in the professional financial and economic circles in which you all work and travel, is it a fair characterization to say that most of you and your colleagues are feeling that there is something of a leadership vacuum at the moment in terms of Federal economic strategy?

Is that a fair characterization, not laying the blame on any one door step, but the entire picture?

Dr. HESTER. I think the general conception is there has been a leadership vacuum since perhaps 1967, when the Vietnam——

The CHAIRMAN. Since when did you say?

Dr. HESTER. 1967. I think there is a great deal of concern about that. I think that has happened for various reason, which we shouldn't go into now.

Senator RIEGLE. Is it the perception in today's situation, where we are today, that it is somewhat different and more distressing than what we may have seen in 1967 or 1972, or some point along the way?

In other words, are you saying it is basically more the same or are you saying there is a perception now that maybe because conditions have changed, and other factors are loose, maybe our margin for

error is diminished, but now there is even a heightened concern about a perceived leadership vacuum?

Dr. HESTER. I think there has been a cumulative effect of the oscillations in 1972, 1973 and 1974. Events of those years have tended to raise people's awareness and concern, people are becoming more uneasy. As nearly as I can reconstruct, what must have happened here is shown thus.

I would also like to react briefly to an earlier statement by Dr. Walters. I agree consumers are not ordinarily too sensitive to interest rates. But the important area where inflation is occurring is in housing. If you really crack down on housing badly, house prices would fall rapidly and then some fairly severe losses could be created for the consumers. It is not like buying oranges and apples.

Senator RIEGLE. If interest rates go up and housing starts to go down, it is hard to break the price of housing.

Dr. WALTERS. Has the price of housing gone down in the last 30 years, except in places where large industry has moved out? I am not aware of any housing in the country that has fallen in price.

Senator RIEGLE. I am hard-pressed to remember a time in the last 15 years where it has risen as rapidly as in the last couple of years.

Dr. WALTERS. I think the consumer has noted that and gone into housing more heavily.

Senator RIEGLE. Senator Proxmire.

The CHAIRMAN. [presiding]. I will follow right up on that, Dr. Walters. I would agree with you that business can be very sensitive to interest rate changes. But I think there is no question that all the studies indicate that the credit crunch really comes down awfully hard on housing. Chairman Maisel's study in 1967 showed housing suffered on the basis of his analysis—and I haven't seen it questioned by anybody—70 percent of the credit crunch was visited on housing, constituting 3½ percent of the GNP. The reason is simple, of course. When interest rates go up, the monthly payments increase and you just knock out hundreds of thousands of families out of the housing market, and as a result you go into the kind of devastating slump we went into.

That is the consumer who is unable to pay.

Dr. WALTERS. I think the credit crunch came because of disintermediation, which meant no funds were available. I don't think we are near that point right now. I think the mutual savings and savings and loans are pretty well stocked.

The CHAIRMAN. Look at chart 3.

Dr. WALTERS. I am aware of that. It is still a net inflow. Money is still available for housing. I think the availability of it is more important than the interest rate.

Technically, there shoudn't be two things, except with a regulated ceiling, we do have two questions, the price and the availability. Money is very available.

The CHAIRMAN. You can have plenty of money available at 10 or 15 percent mortgage rates, and you have lots of people who would be able to buy at 9, a lot of people at 8, and a tremendous number at 7. As you go up, you can say it is available all right, but it will just knock people out of the market.

Dr. WALTERS. I guess I don't feel that housing is sacrosanct, that part of the role of interest rates is to allocate a pool of credit, and that at all times housing should not be maintained at a steady rate and always favored over some other part of development, some other borrower.

The CHAIRMAN. We certainly are a long way from that. My God, think what happened in 1973. In 1968 it was my amendment that was adopted by the Congress that provided for a goal of 26 million housing starts over the ensuing 10 years. That was arrived at after a considerable amount of thought and it may have been a little too high, but that was the goal, 2.6 million starts a year. The 1975 housing starts were 1 million—1 million. Absolutely appalling.

Now that kind of effect in housing which of course is not only important in itself, but affects so many other purchases of furnishings, automobiles, many other things that go with people buying a home.

It seems to me it was a central element in the recession we suffered.

Dr. WALTERS. The recession of 1969?

The CHAIRMAN. I am talking about 1975. There are a lot of other elements that came into that in 1975, including energy, of course. But I think the housing recession was important.

Dr. Thomson, your scheme for the Federal Reserve reporting to Congress is very close to one I would like to see in place. The Federal Reserve argued, however, if it gave out forecasts, the policies could be misconstrued.

Do you see any harm in the Fed giving out economic forecasts?

Dr. THOMSON. Absolutely not. I think that the fear of giving out the forecasts is greatly overdone. They fear if they put out a forecast and include interest rates, the market woud immediately adopt their expectations and interest rates would move as soon as announced.

I think the public would soon learn the Federal Reserve's forecasts are no better than the rest of our forecasts. I know they do a good job and I have a high respect for the staff of the Fed. I don't however, believe that monetary policy should come out of a black box any more than fiscal policy should come out of a black box.

Fiscal policy is considered effective, even though we all read in the paper each day how fiscal policy is evolving, as proposals are made by the Executive and the Congress makes modifications. I can see nothing wrong with the Fed releasing its staff projections of expected GNP and its staff projections of monetary growth.

I think that in a democracy it is absolutely essential.

The CHAIRMAN. Dr. Hester?

Dr. HESTER. I see nothing wrong with releasing staff projections either. While Federal Reserve staff forecasts are very good, like every other forecaster, they make large errors. No sensible person would take the forecasts seriously as being accurate or "right." Furthermore, people are not so foolish as to respond only to such a forecast. The Federal Reserve is looking at a large number of variables all of the time, responding to things above and beyond the GNP forecast or some estimate of price inflation. They are responding to many different sectors. Nevertheless, publication of their forecast would facilitate coordination of government policy.

Dr. WALTERS. I would agree with my colleagues. I see some problems but I have no objection to their publishing forecasts. I hope the public is aware of the problems of all forecasts.

The CHAIRMAN. Dr. Walters, I would like to—incidentally I neglected to commend you on the fact that you were Outstanding Educator of America in 1974–75. And I understand why, because one of your pupils, I understand, was Jerry Buckley. Anybody who can educate Jerry Buckley deserves an award.

Dr. WALTERS. Thank you.

The CHAIRMAN. He is a tremendously valuable member of our staff.

Dr. WALTERS. I am delighted he is a credit to Fairfield University.

The CHAIRMAN. Mr. Hester, could you explain in more detail the advantages to a bank to receive deposits through its offshore branches rather than its domestic offices?

Also could you explain the problems this creates for monetary policy?

Dr. HESTER. If a firm manages to have a compensating balance on deposit in London, say, its bank would not have to hold reserve requirements against those funds. Therefore the value of those deposits as compensation to the bank would be worth about 20 percent more to the bank in profit terms, because those funds, all of them, can be invested for example in Eurodollar securities. If the balances are kept in a domestic branch only a fraction, one minus the reserve requirement, can be invested.

The CHAIRMAN. Is there any tax advantage for the bank in that?

Dr. HESTER. The tax advantages to the bank do not occur in the foreign branches, because foreign branches must pay taxes on their earnings immediately upon receipt. However, the banks will be able to realize tax advantages if they operate in such a way as to locate their earnings in foreign subsidiaries. The income tax regulations do not require subsidiaries to consolidate their income for tax purposes. A firm doesn't have to pay taxes on subsidiaries' earnings until they are repatriated.

The CHAIRMAN. In light of the fact that there has been a great change, with a colossal affluence in the Middle East and elsewhere, can you explain the problem this creates for monetary policy?

Dr. HESTER. It creates problems. In my statement I indicate that the recent international monetary situation cannot be examined independently of political postures.

Banks frequently are rewarded for providing services, loans and other information processes by receiving compensating balances. Funds offshore can provide such balances and also finance loans to be made to domestic firms. Once balances are located in offshore branches, multinational firms may easily be able to borrow from those offshore branches, and disclosure may not be quite as complete in terms of business loans outstanding. The Federal Reserve would not necessarily recognize a loan which is made abroad as the equivalent of a loan made domestically. If the Federal Reserve is using measures on loan volume to generate information about the state of the economy, it might be misled.

In general information flows to the Federal Reserve about "domestic" monetary aggregates are deteriorating as a result of operations

abroad. I should add, as I stated in the paper, that we do not really know the extent to which this is occurring. We know there are statements made by various Chairmen of the Federal Reserve to discourage that. But we don't know the volume of offshore business that is truly of a domestic character.

The CHAIRMAN. In recent weeks, Dr. Hester, the growth of demand deposits has been very slow. You said in your statement that repurchase agreements, that is, overnight purchase of funds by banks from nonbank customers, has been increasing.

Dr. HESTER. Yes, very rapidly. The latest data we have suggest that they are considerably more than 10 percent of M_1.

The CHAIRMAN. This could affect the amount of demand deposits in the system. I missed your oral presentation, so I would appreciate your explaining this again.

I would also like to know how important you think this factor is in terms of the growth of M_1. Is it really a big enough factor for us to be concerned about it?

Dr. HESTER. I did mention while you were absent that an estimate of the volume of repurchase agreements outstanding is $45.8 billion, or about 15 percent of M_1.

This estimate was obtained by summing funds which have been purchased by banks in the Federal funds market and through repurchase agreements and subtracting all funds which the commercial banks have sold. So the number is net acquisitions of funds from other than banks.

The CHAIRMAN. Should that be included in M_1?

Dr. HESTER. I would be inclined to—if one wishes to stick to M_1. I think it should be included in M_1, yes, because it is overnight money, and it can be used all day long. It is constantly being used as demand deposits.

The CHAIRMAN. Wouldn't that make a one-time increase of about 15 percent?

Dr. HESTER. It would be a 15-percent increase. But it has already occurred, of course.

The volume of repurchased funds could grow considerably larger. If one interprets repurchased funds as money, as I recommend, member banks theoretically could monetize almost all of their holdings of U.S. Government and agency securities. Their holdings were about $93 billion at the end of September 1977. In my statement I point out that agency issues are growing rapidly; together with continuing Federal deficits the volume of potential repurchase is likely to expand considerably in coming years.

The CHAIRMAN. We have to simply acknowledge it?

Dr. HESTER. Yes, we have to acknowledge it. It has already happened.

The CHAIRMAN. Dr. Walters, you said in your statement that monetary policy should attempt to gradually decelerate the rate of growth of the monetary aggregates.

Should that be interpreted as a steady decline in the growth rates over time, or a more flexible approach of bringing them down taking into account economic conditions?

Dr. WALTERS. Taking into account economic conditions. But I think we should have longer term goals. I think in concentrating on quarterly estimates, quarterly targets, we can get figures that have gotten us out of line.

I welcome Mr. Santow's suggestion this morning of setting a target on a yearly basis, and making judgments in terms of the whole year, instead of every quarter changing targets.

The CHAIRMAN. So if, when Chairman Miller comes before us tomorrow, his targets were not changed, you couldn't consider that as a signal that they are not following the policy of gradually changing or reducing them?

Dr. WALTERS. No; I think they are hesitant to make a decisive move to change the direction of monetary growth rates. On the other hand, I don't think we should recommend higher targets, because I think you are getting expectations about more inflation, expectations about the future which upsets the financial markets.

The CHAIRMAN. I want to thank you all very much; this has been an excellent panel, a fine morning. I apologize for missing some of your responses. You have made an excellent record for us, which is going to be very useful in questioning Chairman Miller tomorrow.

The committee will stand in recess until 10 o'clock tomorrow morning.

[Thereupon, at 12:35 p.m. the hearing was recessed to reconvene at 10 a.m. the following day.]

SECOND MEETING ON THE CONDUCT OF MONETARY POLICY

TUESDAY, APRIL 25, 1978

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

The committee met at 10 a.m. in room 5302, Dirksen Senate Office Building, Senator William Proxmire, chairman of the committee, presiding.

Present: Senators Proxmire, Morgan, Sarbanes, Tower, Lugar, and Schmitt.

STATEMENT OF CHAIRMAN PROXMIRE

The CHAIRMAN. The committee will come to order.

I apologize, Mr. Chairman, for keeping you waiting. We expected another Senator who's on his way, and he wanted us to hold it up, but I think he will be here shortly.

This morning we continue our oversight hearings on the conduct of monetary policy by the Federal Reserve System. We have with us today the Chairman of the Federal Reserve Board, Mr. G. William Miller, who will explain to the committee the Federal Reserve's monetary policy strategy for the coming year.

Chairman Miller, it has become very clear during the last several weeks that you intend to let everyone know from the outset that even though you are the new boy in town, and at the Federal Reserve, you are going to take a hard line on inflation and replace Dr. Burns as the Nation's No. 1 inflation fighter. Like Dr. Burns, you have been right up in the forefront giving advice to the President and the Congress on how they should manage fiscal policy matters.

Under your leadership the Federal Open Market Committee has recently decided, it appears, to tighten credit by moving the Federal funds rate target up to at least 7 percent, and perhaps higher. Some accounts of this change in policy, not my own, have attributed it to a determination by the Federal Reserve to give strong signals to the financial markets and business that inflation is the No. 1 economic problem confronting this Nation, and you will restrain credit growth to keep inflation from rising. However, all the analyses of our current inflation that I have seen indicates the basic inflation problems as being structural in nature and related to supply rather than demand. Thus, it is difficult to see what real advantage tighter monetary policy will provide against inflation, unless, of course, the Federal Reserve's policies get so restrictive that another recession is induced.

I hope that in your testimony and afterward you will take this opportunity to explain the Federal Reserve's policy objectives for the next year in very clear and precise terms that will allow this committee and the Nation to know exactly what effects monetary policy is intended to have on inflation, on unemployment, and on production. On all counts your recent tightening seems to be inappropriate. The economy has slowed down over the last year on a pretty steady basis with the growth of real GNP getting progressively lower in each of the last four quarters and turning negative during the first quarter of this year. The monetary aggregates on a quarterly basis have followed a similar pattern as can be seen quite clearly by the charts we have set up over on the left. Currently, those monetary aggregates are well within the ranges specified by the Open Market Committee as they were announced to this committee last November.

Yesterday we received testimony from several witnesses, including Dr. Otto Eckstein of Data Resources Inc., and Dr. Thomas Thomson of Detroit Bank & Trust Co., as well as three other distinguished witnesses. Both Dr. Eckstein and Dr. Thomson indicated their expectations for weaker economic conditions in the second half of the year and beyond. These forecasts are consistent with the President's Economic Report and with part of the policy record released last Friday of the Open Market Committee's March 21, 1978, meeting. On page 17, the Open Market Committee record says:

> It was also suggested that a firming of money market conditions in the absence of actual evidence of excessive growth of the monetary aggregates would be premature, given the weakness of recent economic statistics, the still unsettled coal strike, and uncertainty about the strength of the prospective rebound in economic activity.

All indications are that we are experiencing a "snapback" in economic activity that had been dampened by the winter and the coal strike. This rapid pickup is abnormal, and few economists expect it to continue beyond the second quarter. Given the lags between policy-induced changes in interest rates and changes in the monetary aggregates, especially M_1, the Federal Reserve's current policy of fostering a Federal funds rate of 7 percent or more carries with it the very real possibility of creating very serious difficulties for the economy later this year—slowing economic growth, creating serious financial conditions for the housing markets, while doing very little, or nothing, to reduce inflation.

It is increasingly evident to me that the Federal Reserve must do a better job in explaining its policies. The growth ranges for the monetary aggregates are just not enough. In deciding upon monetary policy, the Federal Reserve considers current economic conditions as well as forecasts for the future before it decides on its monetary aggregate target ranges. And if we are to understand those ranges, we must also know what specific relationship the monetary aggregates targets have to the economy in rather precise terms, and over a fixed time period, rather than periods that change and continually shift forward from one base period to another each quarter. All of our witnesses yesterday agreed that these changes in reporting need to be made, that the Federal Reserve's numerical economic forecasts

ought to be provided, and that the Federal Reserve's ability to conduct monetary policy would not be impaired if that were done. These witnesses were the most distinguished group of economists the committee has ever had before it in the conduct of monetary policy.

Mr. Miller, you have not been at the Federal Reserve very long at this point. Most of the changes in the economy and in the monetary aggregates that we see developing now were determined by decisions made before you became Chairman. We cannot hold you responsible for these results. But that is not true of the recent increase in the Federal funds rate to 7 percent and any additional increases that may be forthcoming. Every witness we heard from yesterday expressed surprise at the timing of this interest rate rise, and the consensus was that it is unwarranted. They may be wrong and you may be correct; time will tell. If they happen to be correct, the prospects for the economy are not at all satisfactory from my viewpoint.

I am looking forward to hearing your statement and to getting your explanations of recent events.

Senator Tower.

STATEMENT OF SENATOR TOWER

Senator TOWER. Thank you, Mr. Chairman.

Chairman Miller, I'd like to welcome you in your first appearance before the committee and note that you have taken the job under rather difficult and trying circumstances and that you will undoubtedly hear a lot of troubling questions and well-intentioned advice today. This is nothing new, as any of your predecessors could tell you, but you are in a somewhat enviable position today. You don't have to take responsibility for actions taken by the Federal Reserve in the past and you have a rare opportunity to influence its actions in the future.

Like other members of the committee, I have great respect for the independence of the Fed. Nevertheless, I can't pass up this opportunity to encourage you and other members of the Board, as well as the Federal Open Market Committee, to pursue a noninflationary monetary policy. I recognize that the Fed can't fight the battle alone. It will take the combined and determined efforts of the administration, the Congress, and the public in general if inflation is ever to be brought under control.

I also recognize that you will be receiving a lot of conflicting advice on the matter. There are those who will encourage you to pursue a more expansionary course for monetary policy over the months ahead and an expansionary monetary policy has a great deal of appeal to it under existing conditions. Unemployment is still unacceptably high. Interest rates are higher than desirable and saving inflows at mortgage lending institutions appear to have moderated. Nevertheless, we should not lose sight of the damaging effect which inflation brought on by rapid monetary growth has on the long run health of our economy. It makes employment unstable, financial markets uncertain, and real economic growth unachievable. The record is rather clear on this matter.

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The rate of growth in money has been on an upward trend, particularly since the mid-1960's. Yet there's been no discernible upward trend in real output over that same period and the rate of inflation is higher and so are interest rates.

In my view these events should sound a note of caution in continuing to rely on monetary policies that push the economy beyond its long-run ability to increase real output. I might add that I think that the restoration of the confidence of the business community in Government is enormously important these days and I hope, Mr. Chairman, that you share my concerns on this matter.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Lugar.

Senator LUGAR. No statement.

The CHAIRMAN. Senator Schmitt.

STATEMENT OF SENATOR SCHMITT

Senator SCHMITT. Thank you, Mr. Chairman. And I also welcome you, Mr. Miller.

Mr. Chairman, I continue to be encouraged by what I hear out of the Federal Reserve Board this year, although the overall economic indicators are equally disturbing in many respects. I'm looking forward to Mr. Miller's first evaluation of the actual performance of the economy. On the other hand, the administration's activities get more and more disturbing as there is a continuing impression that it, the administration, blames the country rather than the Government for our economic problems. The President's influence on monetary policy is through fiscal and other policy recommendations to Congress and through moral persuasion. Frankly, in the eyes of this Senator, both the policy recommendations and the moral persuasion are inadequate.

Tax cuts without spending cuts and the recently imposed coal settlement are the most recent examples one can point to.

The most critical economic problems facing us domestically and internationally are inflation, productivity, unemployment, and the export-import imbalance. Although the symptoms of these problems reinforce each other, there are commonsense solutions to each problem. If we begin to solve the problems the symptoms will begin to recede.

Let me suggest the following commonsense approaches to these four problems. These approaches should be thought of as an interrelated package. I will ask our witnesses to comment on each of them during my question period and in detail for the record and, Mr. Chairman, I might mention to some considerable degree yesterday in our first panel we had some excellent commentary on these types of approaches.

First, with respect to inflation, our 5-year fiscal policy should (1) Reduce the net Federal deficit by $10 billion a year; (2) permanently reduce taxes on the productive portions of our economy by $10 billion a year; and (3) reduce the rate of growth of the Federal budget by 2 percent per year. The Federal funds rate should be held below 7 percent so that the credit market can stabilize and related pressures

toward the recession can be reduced or eliminated. Monetary policy should reduce the gap between the quarterly average growth rate of M_1 and the quarterly average growth rate of the real GNP by one-half percent per year until rough equality is reached. Congress should allow for graduated mortgage rates to reduce any short-term adverse effects of possible increased interest rates as a consequence of tighter money growth. Management and labor policy in the private sector must pointly bear the burdens of reducing the demands for price and wage increases as a strong incentive for the Government to also show restraint.

Second, in the area of productivity, regulatory policy should set limits on the cost impact of new and old regulations above which specific congressional authority would be required before such regulations could be enforced or continue to be enforced. Tax policies should be reformed so as to encourage business and personal reinvestment in modern plants, new technologies, and export stimulation. Federal research and development policies should accelerate the national investment in future technologies that are presently beyond investment capabilities of the private sector.

Third, with respect to unemployment, tax policies should establish annual permanent decreases in personal and business taxes which will (1) encourage small business development in hiring; (2) create increased long-term demand; and (3) create investment and increase labor intensive production. Congress should gradually increase the incentives for able-bodied persons on welfare to seek private sector employment or training for future private sector employment. Monetary policy should be one of restraint, such as Senator Tower has advocated, such that business and investment confidence can contribute directly to the creation of private sector jobs. Regulatory and tax policies should be one of general reduction so that the bottom rungs of the economic ladder are restored for unemployed youth and for those with dreams of starting their own business.

Finally, with respect to the export-import balance, regulatory and tax policies should be one of creating the incentives for production and efficient use of our vast domestic resources of oil, natural gas, coal, uranium, geothermal, and solar energy so that energy costs can be driven down by competition and increase domestic supply. Research and development policies should be aimed at creating higher efficiency and minimal environmental impact on energy use and eventually making this country a net exporter once again of clean, low-cost energy and energy technology. Congress should create, finally, a national trade policy coordination commission with the mandate to help coordinate the trade-related policies of various Federal agencies which are now almost completely uncoordinated so there can be a strategic capacity in the U.S. trade policy.

Chairman Miller, I realize that many of the things I have mentioned are beyond the purview of the Fed. However, they are not beyond the purview of the Federal Government of which the Fed is a part, and I hope that in your testimony and in your future communications with me and with this committee that we can use these types of hypothetical policies at the present time as a basis for discussion to see if there can't be a coordinated attack on the four problems I have mentioned.

I look forward to hearing your testimony and your comment.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Morgan.

Senator MORGAN. Thank you, Mr. Chairman.

Mr. Miller, I know I have a lot of problems but no solutions, so I'm just going to wait for your solutions this morning.

The CHAIRMAN. Senator Sarbanes.

Senator SARBANES. I have no statement.

The CHAIRMAN. Mr. Chairman, go right ahead.

STATEMENT OF G. WILLIAM MILLER, CHAIRMAN, BOARD OF GOVERNORS, FEDERAL RESERVE SYSTEM

Mr. MILLER. Mr. Chairman, I submitted, yesterday morning, copies of my prepared statement that reviews the economic situation and the ranges for the monetary aggregates which have recently been established by the Federal Open Market Committee.

It's a pleasure for me to be here this morning in my first official appearance at monetary oversight hearings before your committee. I welcome this discussion and look forward to the opportunity in the future to carry on our dialog and to cover the very important matters which you and others have already mentioned.

Rather than read my testimony, I thought I might just highlight its points. Perhaps that would be helpful as an introduction to what I hope will be a chance for questions and answers during which we can get at the matters on your mind and the ones I have on my mind.

Just to set the stage, I think we are all aware that the economy is currently coming back very strongly from a weak first quarter that was much influenced by the weather and the coal strike. Employment has been growing steadily, and unemployment has been edging down.

I have prepared some charts which are attached to my testimony. On chart 1, we can see the relationship of the growth of real GNP to the growth of employment since 1974. As you know, we now have the highest percentage of our adult population employed that we have ever had; and the unemployment rate has been coming down.

The consumer sector of the economy continues to show promise of further gains. Chart 2 shows the performance of retail sales over the last few years; and, as an indication of whether those sales will continue, two measures of consumer attitudes. The conference board index shows that consumer confidence continues to be strong. The Michigan survey index continues to be at a high level, although yesterday it was announced that there was a dropoff in the level of consumer sentiment in the Michigan survey of households.

In addition to the consumer sector, I have been very interested, as you know, in investment activity. In terms of nonresidential fixed investment, we have had a continuing cyclical recovery. On chart 3, we can see how, during the current cycle, nonresidential fixed investment, on an indexed basis, has been recovering. The thing that has concerned me, however, is that the current cycle is still lagging behind the patterns of previous economic cycles and that it has not yet returned, in real terms, to the level of investment of its prior peak.

On the other hand, contracts and orders for plant and equipment continue to grow. I did not have this information in my prepared statement because it was only reported yesterday that orders for machine tools hit a new high, which is encouraging.

The problem with this otherwise rather encouraging outlook for the economy, however, is that inflation has worsened and, as I have noted before, since my nomination the actual performance of various price indexes and the outlook for inflation have become much worse than I expected. If you will look at chart 4, you can see the earlier progress we made in bringing down inflation, using various price measurements, but that we have suddenly seen a significant increase in the first quarter of this year. Wholesale prices rose at 9.6 percent in the first quarter. Consumer prices also increased at an accelerated pace. And so inflation has become a matter of considerable concern. In particular, it's of concern that last year compensation per hour in the private business sector increased at 9 percent, while productivity increased at only 2.5 percent. So we have had a significant—more than a 6-percent—increase in unit labor costs, which is a matter of real concern.

While we have been seeing the inflation situation worsen, Government actions have been adding to the problem. Something that needs to be considered is ways in which the Government can start a deceleration effort to counter the trends toward higher prices and lower real incomes.

The decline of the dollar is also relevant in discussing this particular period. On chart 5, you can see the tremendous expansion in our merchandise trade deficit, which reached a record in 1977 and widened considerably further in the first quarter of 1978. This has been one of the factors contributing to the decline in the trade-weighted value of the dollar—which is shown in the lower panel on chart 5. And the decline of the dollar has itself been inflationary, since the lower value of the dollar has increased the cost of our imports and has released competitive pressures in our markets that have accelerated the general trend of inflation. The decline of the dollar since last September probably will have added, by the end of this year, about three-quarters of a percent to the inflation rate; so it, too, is a matter of concern.

Since last fall, the trade-weighted value of the dollar had dropped about 8.5 percent through the end of March. But I am encouraged by the fact that in recent weeks we have seen a strengthening of the dollar. Even since this chart was prepared, the dollar has recovered: On a trade-weighted basis, it is back where it was at the beginning of the year, which is an encouraging development.

In the face of all this, the President has introduced an anti-inflation program, a deceleration program. It's a broad program, and I hope that the President will find support for the steps he's initiated. I hope that all of the sectors of the economy, public and private, will join in a combined effort to take concerted action toward reducing the rate of inflation.

In the past year, there have been increases in interest rates. Long-term interest rates have gone up one-half to three-quarters of a percent. Monetary policy has been adjusted during this period to

try to restrain the undue growth in the monetary aggregates. If you will look on the last two charts, you will note the ranges established by the FOMC over the last year and the actual growth in the aggregates.

For most of the current cyclical expansion—going back to 1975—the growth of M_1 was well within the FOMC ranges, but in 1977, as you can see on chart 6, there was a general tendency for M_1 to exceed the growth ranges established by the FOMC. These charts are designed so that you read from the bottom up; the solid lines show the actual level of M_1 and the dotted lines show the ranges established quarterly, starting at the bottom with the first quarter of 1977 and in each case projecting for a year. The ranges established at the beginning of 1977 indicated a desire for a maximum growth of M_1 of 6½ percent; the actual growth was 7.3 percent. Since that time, there's been better performance, and so far in 1978 the aggregates have stayed within the ranges.

On chart 7, you see comparable data as to M_2, and here performance has been better. M_2 has actually stayed within the upper limits of its growth ranges for most of the period; and now, in the early part of 1978, it is in the lower part of the growth ranges established for this particular measure.

Senator SCHMITT. Mr. Chairman, just quickly, what are the limits of error on the measurement of actual value of M_1 and M_2? Do you know that offhand?

Mr. MILLER. The figures, of course, are corrected once benchmarks are established; so the figures going back through 1977 are now accurate figures.

Senator SCHMITT. Plus or minus what?

Mr. MILLER. Our experience has varied. Steve?

Mr. AXILROD. Often, an annual figure might be revised by plus or minus a half percent, something like that. These figures have been benchmarked through September so you wouldn't expect substantial revision.

Senator SCHMITT. But you believe their accuracy is plus or minus half a percent?

Mr. MILLER. Yes. The benchmarks are done, Senator, on a quarterly basis, to pick up nonmember institutions. Last year, there was a delay in benchmarking because the data that we get from other institutions had not been edited, and because of the technical problems in getting accurate information. We skipped a number of quarters; the recent revisions were a catchup.

The program is set up now so we will be getting those benchmark adjustments accurately on a quarterly basis which will help us make sure that the figures you see are as up to date as possible.

With credit demands strong, the liquidity of banks and thrifts has come under some pressure. Commercial banks have moved out of some of their securities in order to gain liquidity for making loans. There's been a slowdown in the flow of funds to thrift institutions, which could affect mortgage lending at some point. So far, with the greater stability we have today in thrift institutions because of both their longer term deposits and their access to nondepository sources of funds, we do not expect serious credit difficulties. Credit remains generally ample.

As to the ranges for the coming year, the new ranges established for the first quarter of 1978 through the first quarter of 1979 are the same as the ranges shown on charts 6 and 7 for the fourth quarter of 1977 through the fourth quarter of 1978. The FOMC recently reestablished these ranges: 4 to 6.5 percent for M_1 over the next four quarters; 6.5 to 9 percent for M_2; and 7.5 to 10 percent for M_3.

Your chairman has pointed out to me that it would be appropriate to adopt a range for bank credit, which for some reason was not included in the past. You will note that in my formal testimony I have indicated our range for bank credit to be 7.5 to 10.5 percent over the four quarters ahead.

The ranges that have just been adopted contemplate that actual monetary growth in 1978 and early 1979 will be slower than last year. Because there have been signs of resurgence in M_1 growth over the last few weeks, the Federal Reserve has recently been less accommodative in supplying reserves in order to keep monetary growth within reasonable bounds over the long run. The money market, in consequence, has tightened a bit over the past few days.

Chairman Proxmire, you indicated that this tightening is of concern to you. It's of concern to me when it's necessary to see a tightening in the money markets, but failure to tighten would mean that we would unleash the potential for greater inflation downstream. When we see the money growth figures jumping ahead too rapidly, I think we have no responsible choice but to begin to counter this trend so that we don't feed inflation in a few quarters later.

It was the consensus of the Federal Open Market Committee that expansion of monetary and credit aggregates within these ranges would be consistent with moderate growth in real GNP over the coming year and with some further decline in the unemployment rate. However, upward price pressures remain strong, and the rate of increase in the average price level, therefore, might be somewhat more rapid over the year ahead than it was in 1977.

Full and effective public support of the administration's anti-inflation program, and success in keeping the budget deficit under control, would aid in restraining upward pressure on prices and would help create conditions whereby we could look forward to a gradual deceleration of the inflationary process.

Let me supplement the FOMC's views with my own outlook for the economy in quantitative terms. My personal expectation is that, over the year ending the first quarter of 1979, real GNP will increase at a rate of 4¼ to 5 percent; unemployment will drop to the 5¾- to 6-percent area, and the GNP price deflator is likely to rise at a 6¾- to 7¼-percent rate. It's hardly necessary to add that quantitative projections such as these are necessarily subject to considerable margins of uncertainty. They must be reevaluated as conditions in the economy change and as we have real data on which to base our judgments.

Specifying growth rates for the monetary aggregates, too, is subject to considerable uncertainty. The growth in the narrowly defined money supply, M_1, needed to support economic expansion, depends in part on changes in velocity, and this sometimes is hard to predict.

The behavior of the broader aggregates, M_2 and M_3, will be affected a year ahead also by the constraint placed on the ability of depository institutions to attract funds under existing regulatory ceilings on interest rates.

The Federal Reserve believes that its determination to hold monetary growth within the ranges just adopted will work to curb inflation over the longer term and at the same time provide adequate money and credit for continued economic growth. However, under current conditions, when inflationary pressures are to a great extent embodied in the structure of the economy, any deceleration in monetary growth rates has to be undertaken with caution. The pace of deceleration cannot proceed much more rapidly than the pace at which built-in inflationary pressures are wrung out of the economy if satisfactory economic growth is to be maintained. Thus, bringing inflation under control urgently requires the cooperative efforts of the administration, the Congress, the Federal Reserve, and the private sectors of the economy. The Federal Reserve should not be left to combat inflation alone. Thank you, Mr. Chairman.

[Complete statement follows:]

Statement by

G. William Miller

Chairman, Board of Governors of the Federal Reserve System

Mr. Chairman, members of the Committee, it is a pleasure to meet with you and to report, on behalf of the Board, about the outlook for the national economy and about the course the Federal Reserve has charted for monetary policy over the year ahead. I look forward to a continuing dialogue with you on these matters at this Committee's regular monetary oversight hearings.

· · ECONOMIC ACTIVITY IS REBOUNDING

The economy is currently rebounding from a slack period early in the year when economic activity was constrained by severe weather and the long coal strike. Retail sales and industrial production have risen sharply since mid-winter. Auto sales have strengthened. Housing starts increased markedly in March from the relatively depressed levels of January and February.

Employment has grown steadily since the beginning of the year. Although the length of the average workweek declined in the first quarter, the number of people on the nation's payrolls rose substantially between December and March, and the unemployment rate edged down from 6.4 to 6.2 per cent. These favorable trends in the labor market are depicted, along with the behavior of real gross national product, in the attached chart 1. The continuing uptrend in employment suggests that businessmen have had sufficient confidence in the underlying strength of the economy to be positioning themselves for further increases in production.

Looking ahead, growth in economic activity is expected to be sustained over future months by expanding consumer and business

demands. As shown in chart 2, the near-term prospects for good gains in consumer spending appear favorable, as indexes of consumer sentiment have remained at high levels.

Business spending also should provide impetus to expansion. Inventories generally remain lean, and businesses are likely to be building their stocks in the next few quarters. Business investment in plant and equipment, after lagging early in the economic upswing, has increased at a good pace over the past two years, as shown in the upper panel of chart 3. Surveys of capital spending plans and other advance indicators suggest at least moderate further growth in the year ahead.

Although State and local governments by and large continue to pursue cautious financial policies, they also may register significant increases in real expenditures in the period ahead. Residential construction should show sizable increases in the next few months before tapering off gradually in the second half of this year. And the foreign trade deficit, while remaining large, should moderate somewhat from the very high first quarter rate.

• • BUT INFLATION HAS WORSENED

While the prospects for economic activity thus appear to remain favorable, there are other aspects of recent economic performance that reflect fundamental problems which will not be put behind us quickly. Inflation undoubtedly is the most troubling of these to the American people. Even as growth in real GNP was

interrupted in the first quarter, the rate of increase in prices accelerated. Wholesale prices rose at a 9.6 per cent annual rate during the past three months--well above the already uncomfortably high rates experienced last year. Consumer price increases also accelerated. To be sure, a substantial spurt in volatile food prices contributed importantly to the advance in the broad price indexes, but prices of industrial commodities and of services also have continued to rise at a brisk pace. These unfavorable trends in prices are displayed in chart 4.

• • UPWARD COST PRESSURES REMAIN

There is little reason to be optimistic about the likelihood of achieving a significant reduction in underlying inflationary forces in the near future. Cost pressures remain strong. In 1977, for example, total compensation per hour in the private business sector rose almost 9 per cent, while productivity increased only 2½ per cent; as a result, unit labor costs rose more than 6 per cent. There has been no sign of any abatement of the advance in wage rates, and at this stage of economic expansion there is little likelihood of a sustained pick-up in productivity growth. Therefore, rising unit labor costs can be expected to continue to exert considerable upward pressure on prices.

• • GOVERNMENTAL PROGRAMS HAVE ADDED TO COSTS AND INFLATION

Price pressures have been exacerbated by governmental actions. Certain tax actions, while they have helped to reduce the budgetary deficit and in this way have worked to restrain one of the

forces feeding inflation, simultaneously have added to labor costs. This has been the case, for instance, with increases in employer contributions for social security and unemployment insurance. Some other governmental actions also have added to inflationary forces without any compensating restraint. In this class are the increase in the minimum wage, agricultural price supports, and various import restrictions. In general, there has been a tendency by government over the years to treat the problems of individual sectors without adequate regard to the cumulative inflationary bias the programs have imparted to the economy.

• • SO TOO HAS THE DECLINING INTERNATIONAL VALUE OF THE DOLLAR

Another disturbing aspect of economic performance in the opening months of this year has been the pronounced widening of the foreign trade deficit and the weakness of the international value of the dollar. As may be seen in chart 5, the estimated trade deficit was greatly enlarged in the first quarter of 1978, as exports remained sluggish and imports in nearly all categories increased sharply. Against this backdrop, the dollar declined on exchange markets, and by the end of March its trade-weighted value against other major currencies was 8½ per cent lower than early last fall. The depreciation of the dollar is tending to raise the domestic price structure in various ways: higher prices of imported finished goods raise directly the prices paid by consumers; higher prices of imported materials raise the costs of domestic manufacturers; and

higher prices of foreign goods reduce the pressure to hold down prices of the domestically produced goods with which they compete in our markets.

In recent weeks, the dollar has risen relative to other major currencies. Such a trend, if continued, will help moderate inflationary pressures.

• • THE PRESIDENT'S ANTI-INFLATION PROGRAM OFFERS HOPE OF BREAKING INFLATIONARY PSYCHOLOGY

President Carter recently outlined a broad program to help deal with the problem of inflation. The Federal Reserve welcomes this initiative. Given the support of the Congress and of the general public, the program is a constructive step toward breaking the inflationary patterns and psychology that today are so firmly entrenched. The job of containing inflation requires a concerted effort on the part of all Americans. The Federal Reserve will play its part in supporting the President's initiative by exercising appropriate restraint in the provision of bank reserves, credit, and money.

The prospects for inflation will play a major role in shaping future financial developments. The strength of the dollar on foreign exchange markets is influenced by expectations about inflation. So, too, is the level of interest rates in domestic credit markets. The increase in interest rates during the past 12 months--especially the ½ to ¾ percentage point increase in long-term bond rates--may be attributable in part to heightened inflationary expectations.

• • MONETARY POLICY HAS BEEN ADJUSTED TO RESTRAIN UNDULY RAPID MONETARY GROWTH

Yields on most short-term market instruments today are about 1¾ to 2 percentage points higher than a year ago. This rise occurred gradually as the Federal Reserve adjusted its policies in light of the tendency for monetary expansion to exceed the growth ranges that had been established. The tendency was most pronounced in the case of the narrow money stock, M-1, which includes only currency and demand deposits. Largely as a result of the rapid expansion of M-1, however, growth in the broader monetary aggregates --M-2 and M-3--also remained near the upper ends of their ranges. M-2 is M-1 plus time and savings deposits at commercial banks (other than large negotiable certificates of deposit), while M-3 includes also time and savings deposits at thrift institutions.

For most of the current cyclical expansion, growth in M-1 had been well within the ranges established by the Federal Reserve. Indeed, early in the expansion, growth was near the low end of the range. In part, this was the result of actions by the public to shift funds from demand deposits to interest-bearing savings deposits and market instruments in response to financial innovations that made it easier to transfer funds in and out of savings deposits. In part, it seems to have reflected a lagged response to the unusually high level of interest rates reached during the 1973-74 inflation. And, in part, it may also have reflected the return of confidence during economic recovery, which made the public more willing to spend out of existing cash balances and thus reduced the need for the Federal Reserve to supply additional money to the economy.

By last year, the moderating impact on money growth of such factors had considerably lessened. Moreover, persisting upward cost and price pressures were making it difficult for the Federal Reserve to hold money growth within bounds while not risking undue interference with continued economic expansion. Finally, it is possible that the public earlier had reduced its cash balances to unsustainably low levels relative to income, and that some part of the sizable expansion in money last year reflected a restoration of cash balances to more normal levels.

• • MONEY GROWTH HAS SLOWED

Growth in the monetary aggregates slowed during the latter part of 1977 and in the early months of 1978. As can be seen in charts 6 and 7, M-1 has moved back within the FOMC's ranges, while M-2 has moved from the upper limits of the ranges toward the lower limits. M-3 has behaved about the same as M-2. This moderation of monetary expansion has reflected in part the cumulative impact of the restraining actions and rise of short-term interest rates that began in the spring of last year. The influence of interest rates has been most evident in the case of the interest-bearing components of the monetary aggregates. As market rates of interest rose relative to deposit rate ceilings, some savers shifted their funds from deposits at banks and nonbank thrift institutions into market instruments, in the process contributing to the slowing of M-2 and M-3 growth.

• • WITH CREDIT DEMANDS STRONG, LIQUIDITY OF BANKS AND THRIFTS HAS COME UNDER PRESSURE

The slowing of monetary expansion in recent months, in conjunction with strong credit demands, has been accompanied by some erosion in the liquidity of depository institutions. To finance business, consumer, and mortgage credit demands, commercial banks have turned increasingly to the short-term credit markets as a source of funds. There has been marked growth in the outstanding volume of large-denomination time deposits, which are not subject to regulatory interest rate ceilings, and in the nondeposit interest-bearing liabilities of banks. At the same time, banks have appreciably reduced their holdings of Treasury securities. Despite these changes in bank portfolios, however, customary measures of bank liquidity still indicate more comfortable conditions than prevailed a few years ago.

Thrift institutions, with the exception of credit unions, have experienced much the same pressures as commercial banks, as mortgage loan demand has remained strong. To accommodate that demand, institutions--in particular, savings and loan associations, which are the largest home mortgage lenders--have borrowed heavily from Federal Home Loan Banks and curtailed their acquisitions of securities.

The S&L's have also utilized other sources of funds, including the growing markets for private mortgage-backed bonds and mortgage pass-through securities, to sustain new mortgage lending. These markets promise ultimately to give thrift institutions greater flexibility in managing their portfolios, and to make the residential

mortgage market less dependent on thrift institutions' deposit flows. At present, however, with deposit flows running weaker and liquidity coming under pressure, S&L's have cut back on the outstanding volume of loan commitments since year-end. And mortgage interest rates have risen moderately in recent months.

• • CREDIT REMAINS GENERALLY AMPLE, HOWEVER

Despite the greater pressures experienced by depository institutions, credit generally remains in ample supply. Borrowers are experiencing little difficulty in raising needed funds at current interest rate levels. And while higher than a year ago, interest rates are at relatively modest levels after allowance is made for the effect of inflation.

• • MONETARY GROWTH RANGES FOR YEAR AHEAD ARE EXPECTED TO SUPPORT FURTHER ECONOMIC EXPANSION AND A LOWER UNEMPLOYMENT RATE, BUT INFLATION MAY NOT DECELERATE UNTIL LATER

The ranges of monetary expansion adopted by the Federal Open Market Committee for the year ending with the first quarter of 1979 reflect our belief that growth in the monetary aggregates should be moderate, with credit remaining in reasonably good supply. The Committee has specified a growth range for M-1 of 4 to 6½ per cent. For M-2, the range selected is 6½ to 9 per cent, and for M-3, 7½ to 10 per cent. These ranges are the same as the Committee had earlier specified for the year ending with the fourth quarter of 1978. Although the FOMC at this time has not made a further reduction in its monetary growth ranges, the Committee remains firmly committed to a gradual reduction in monetary growth over time to rates more

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nearly consistent with reasonable price stability. The ranges just adopted in fact contemplate that actual monetary growth in 1978 and into early 1979 will be slower than last year. Because there have been signs of a resurgence in M-1 growth over the last few weeks, the Federal Reserve has recently been less accommodative in supplying reserves in order to keep monetary growth within reasonable bounds over the long run. The money market in consequence has tightened a bit over the past few days.

In addition to adopting ranges for the monetary aggregates, the FOMC also adopted an associated range for bank credit that projects an increase between 7½ and 10½ per cent over the one-year period ahead. Such a range would allow for continued expansion in bank credit at around its recent pace.

It was the consensus of the Federal Open Market Committee that expansion of monetary and credit aggregates within these ranges would be consistent with moderate growth in real GNP over the coming year and with some further decline in the unemployment rate. However, upward price pressures remain strong, and the rate of increase in the average price level, therefore, might be somewhat more rapid over the year ahead than it was in 1977. Full and effective public support of the Administration's anti-inflation program, and success in keeping the budget deficit under control, would aid in restraining upward pressure on prices and would help create conditions whereby we could look forward to a gradual deceleration of the inflationary process.

Let me supplement this with my own views about the outlook for the economy in quantitative terms. My personal expectation is that, over the year ending with the first quarter of 1979, real GNP probably will increase in a 4½ to 5 per cent range, the unemployment rate probably will drop into the 5¾ to 6 per cent area, and the GNP price deflator is likely to rise by 6¾ to 7½ per cent. It is hardly necessary to add that quantitative projections, such as these, are subject to considerable margins of uncertainty. Necessarily they have to be re-evaluated on the basis of incoming economic data and changing conditions here and abroad.

Specifying growth rates for the monetary aggregates, too, is subject to considerable uncertainty. The growth in the narrowly defined money supply (M-1) needed to support economic expansion depends in part on changes in the velocity of money--that is, on the rate at which the public uses the existing stock of money to finance transactions. Velocity may rise rapidly or slowly, depending on shifting public preferences for demand deposits as compared with other assets and on the state of consumer and business confidence.

The behavior of the broader aggregates--M-2 and M-3--will be affected in the year ahead also by the constraint placed on the ability of depository institutions to attract funds under existing regulatory ceilings on deposit rates. If heavy demands for money and credit should place further upward pressure on market interest rates, deposits subject to regulatory rate ceilings will be placed at a substantial competitive disadvantage. In such a circumstance,

growth of M-2 and M-3 could fall short of the ranges set by the FOMC, unless there are upward adjustments in the ceiling rates on some or all categories of time and savings deposits.

• • FEDERAL RESERVE SHOULD NOT BE LEFT TO COMBAT INFLATION ALONE. EFFECTIVE ANTI-INFLATION PROGRAM REQUIRES CO-OPERATIVE EFFORT

The Federal Reserve believes that its determination to hold monetary growth within the ranges just adopted will work to curb inflation over the longer run and at the same time provide adequate money and credit for continued economic growth. However, under current conditions--when inflationary pressures are to a great extent embodied in the structure of the economy--any deceleration in monetary growth rates has to be undertaken with caution. The pace of deceleration cannot proceed much more rapidly than the pace at which built-in inflationary pressures are wrung out of the economy if satisfactory economic growth is to be maintained. Thus, bringing inflation under control urgently requires the co-operative efforts of the Administration, the Congress, the Federal Reserve, and the private sectors of the economy. The Federal Reserve should not be left to combat inflation alone.

Chart 1

OUTPUT, EMPLOYMENT, AND UNEMPLOYMENT

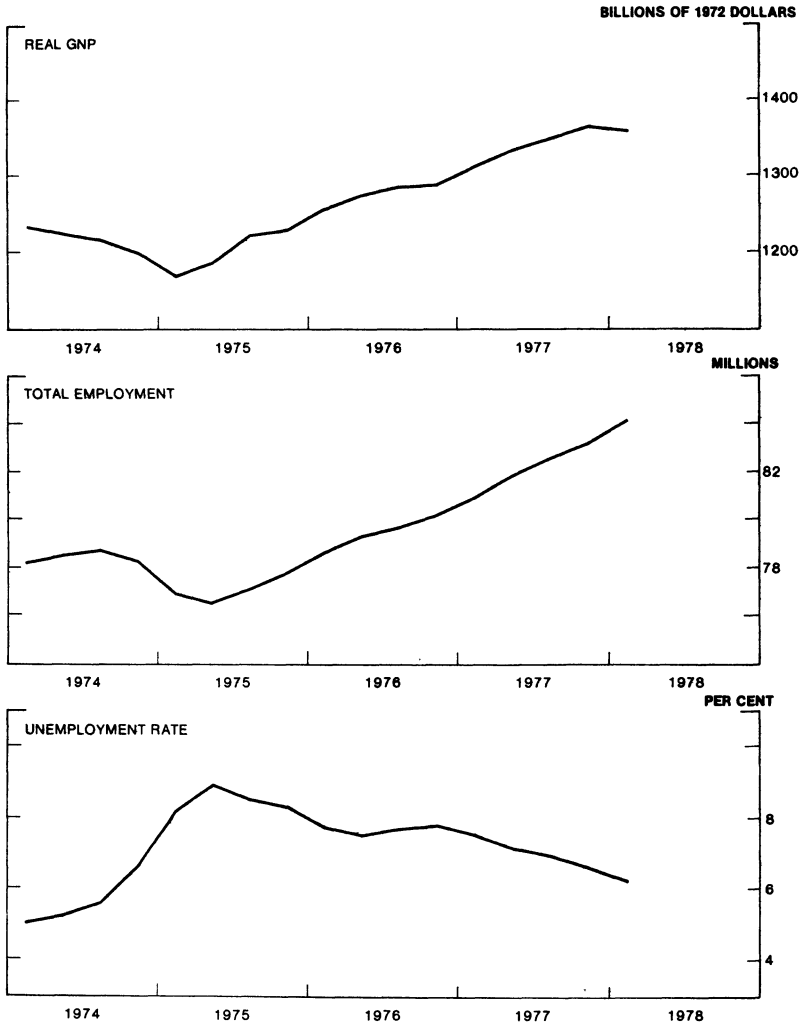
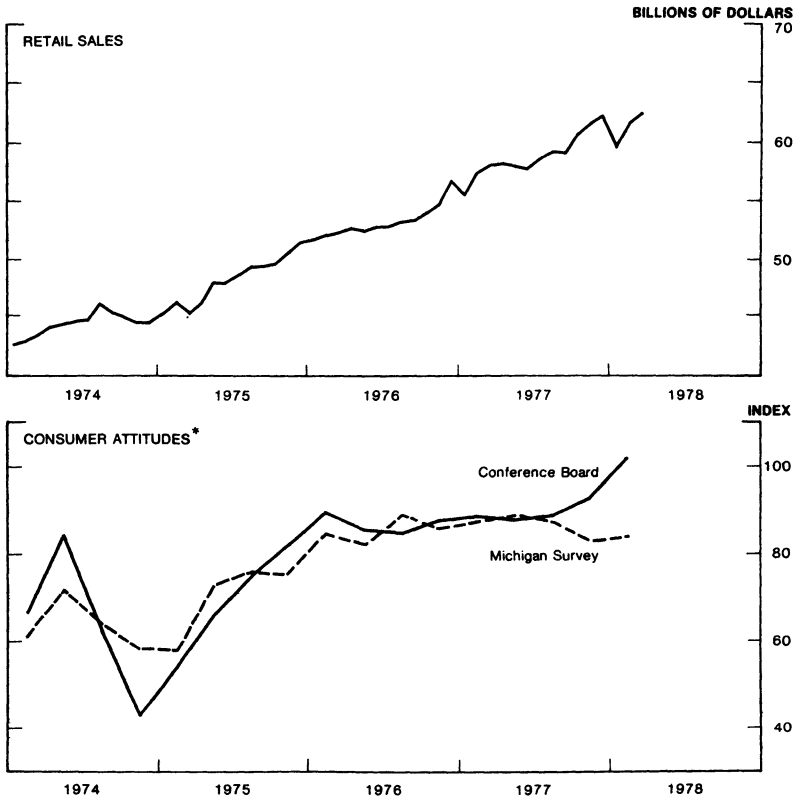


Chart 2

CONSUMER SECTOR ACTIVITY



* Conference Board index of consumer confidence, 1969-70=100.
Michigan survey index of consumer sentiment, 1966 Q1=100.

Chart 3

BUSINESS CAPITAL SPENDING ACTIVITY

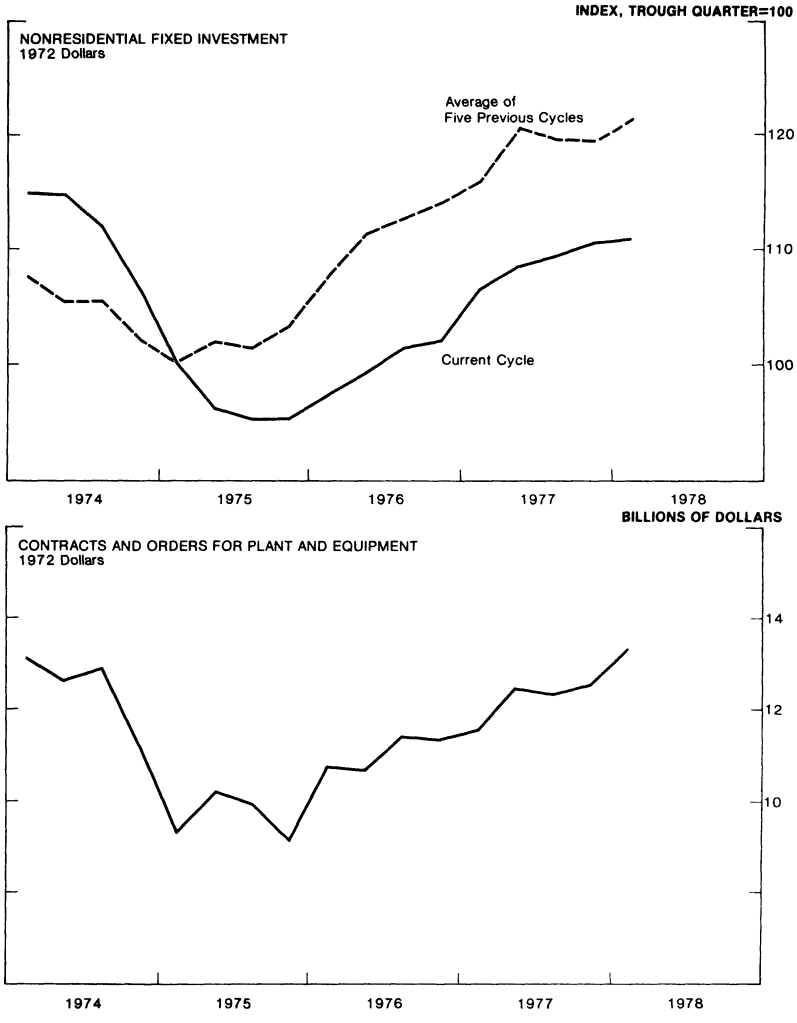


Chart 4

MEASURES OF AGGREGATE INFLATION

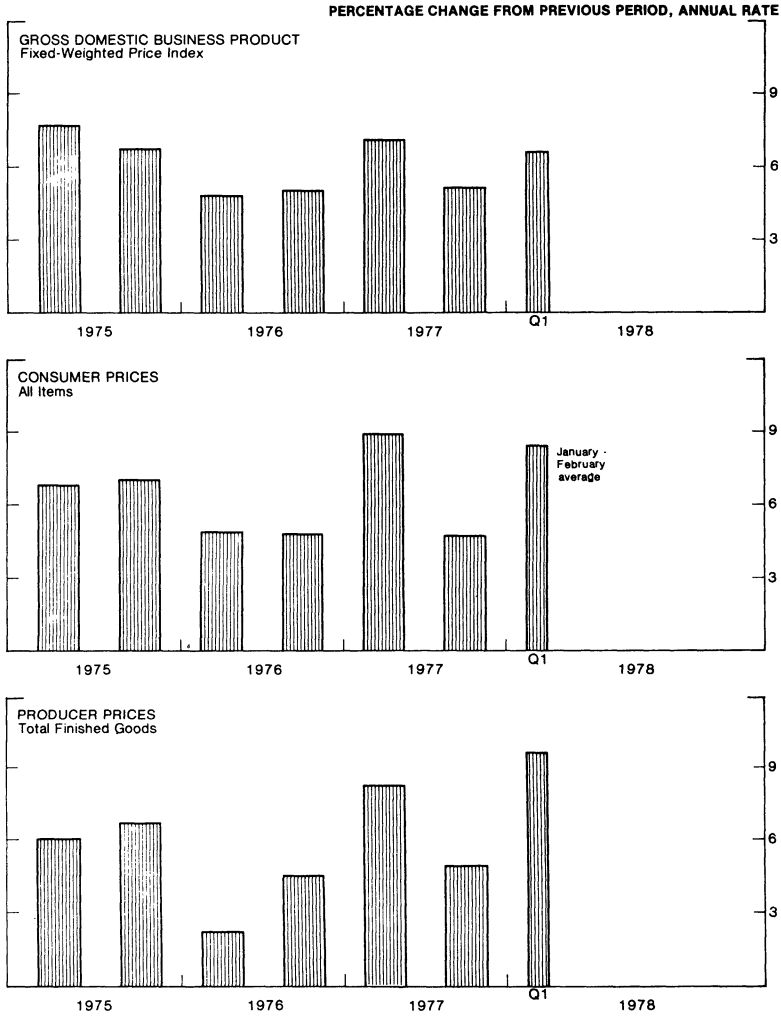
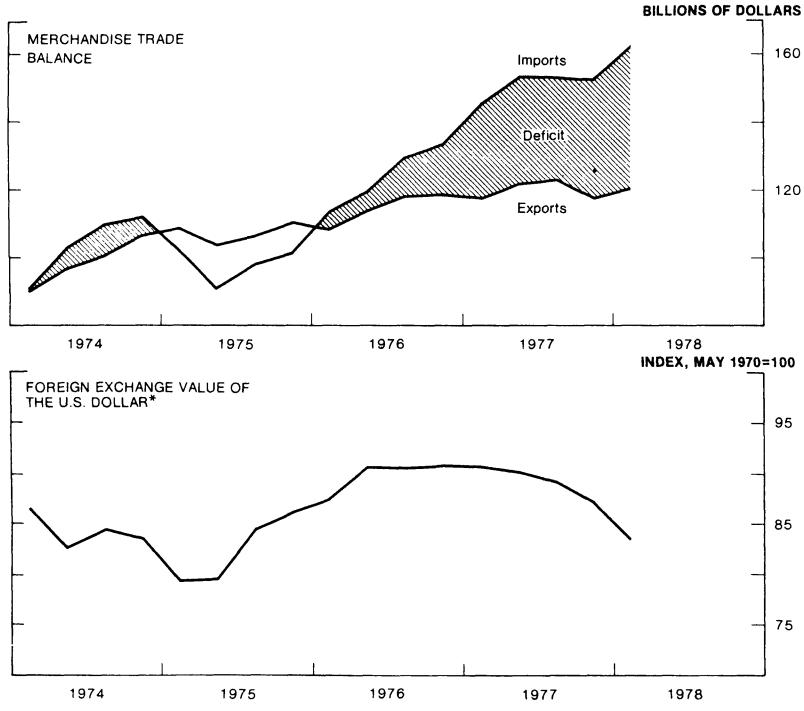


Chart 5

INTERNATIONAL SECTOR ACTIVITY



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

Chart 6

RECENTLY ESTABLISHED M-1 GROWTH RANGES AND ACTUAL M-1

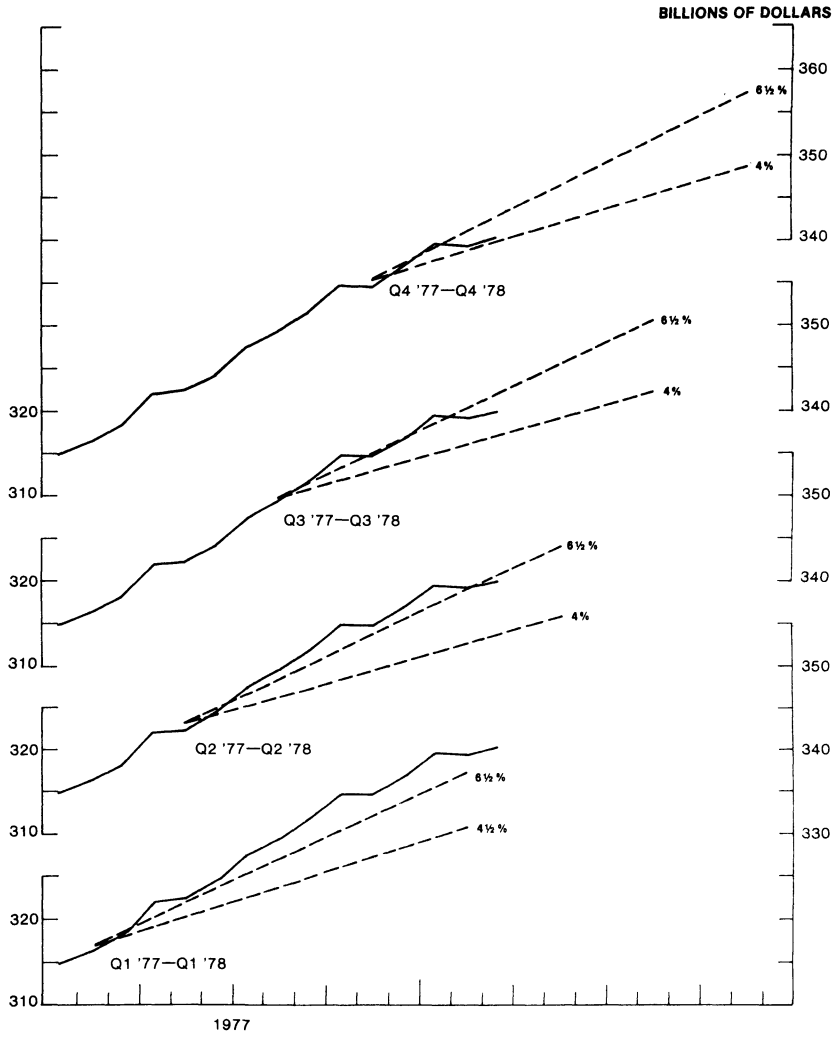
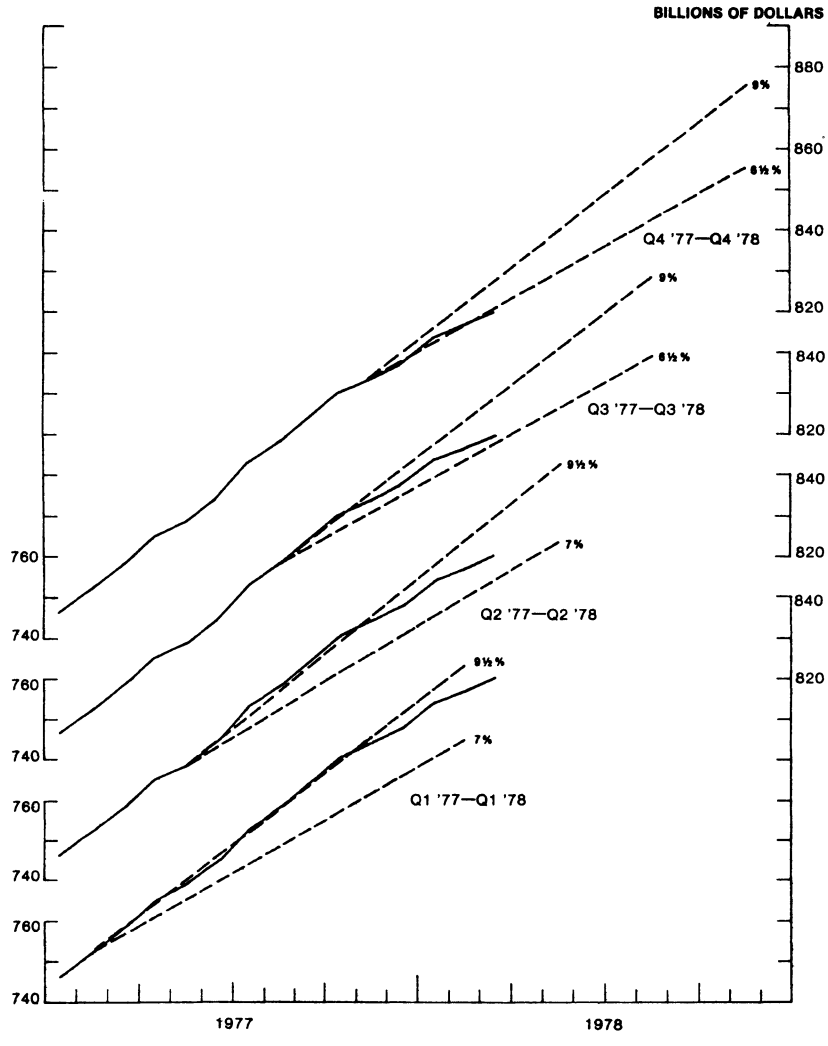


Chart 7

RECENTLY ESTABLISHED M-2 GROWTH RANGES AND ACTUAL M-2



The CHAIRMAN. Thank you, Chairman Miller.

This month and probably this quarter we can expect a snapback from the slow performance of the economy in the first quarter. During the last several quarters the growth rate of the real GNP has declined. The growth rates for the monetary aggregates have declined also, as indicated on the first chart there to your extreme right. It's obvious—and let me just go on to say thrift deposit flows have declined and the Federal fund rate has increased by almost 2¼ percentage points which is a very sharp increase. It's obvious from the charts that increases in interest rates, slow monetary growth with a lag, but not immediately.

Given all this, Mr. Chairman, how do you justify the recent further increases in the Federal funds rate and what does the Federal Reserve expect to accomplish by this move?

Mr. MILLER. Mr. Chairman, the recent tightening is in response to the increased rate of growth in the monetary aggregates that has been noted in recent weeks. During the first quarter of the year, the aggregates performed very well, and the Federal Reserve was able to maintain a steady state without any significant changes in rates; this was a very reassuring condition.

However, as the second quarter has unfolded, there has been a jump in economic activity; this, of course, is partly because of the snapback of economic activity from the depressed first quarter. And so there is a risk that the rapid expansion of money could feed some inflationary forces into the economy. I think it's important that the Federal Reserve react steadily, but promptly, and do so with restraint as I have mentioned. But we do need to lean against this situation so that we demonstrate to the world that for our part we are exercising the discipline which, when coupled with discipline from the fiscal side and with other efforts to curb inflation, will keep us on a course where we can grow and avoid any interruption of our economic expansion cycle.

The CHAIRMAN. Well, there are a couple of problems I have with that explanation. You indicated at the beginning you recognize unemployment was unacceptably high and we have to do more to diminish unemployment; we have to have policies that will do that. I think you would acknowledge that the economy did slow down quarter by quarter last year right into the last quarter. Your explanation for your reaction has been that the money aggregates increased rather sharply in the last brief period. If you look at the top chart over here you can see how terrible the performance of the Federal Reserve has been in terms of staying within the targets, the 2-month targets.

The actual growth rates, as you can see marked by the solid black figure, have been far different than what you have been able to achieve.

On the basis of this, it seems to me that your short-term forecasts haven't been very reliable and that a more sensible policy would be as was recommended to us unanimously by the witnesses who testified yesterday, that the action in pushing the Federal funds rate up to 7 percent was premature.

Mr. MILLER. Senator, I think what your chart shows is correct. It is very difficult to control the monetary aggregates in the very short run. One of the misconceptions people have is that this is

somehow something that can be maneuvered on a weekly basis; I don't believe that's true. We are all looking at the wrong targets when we set these very short-term ranges and expect to fall within them.

What we should be looking at is how we control the aggregates over the longer term. That's why I said to you that the rather prudent action by the Federal Reserve of a slight tightening is designed not as a sort of knee-jerk operation or out of some sort of impetuousness, but rather to lean in the direction of making sure we keep the aggregates within our ranges over the longer run. This, to me, makes more sense. I'm not suggesting to you that because of a short-range jump in the aggregates we are suddenly taking precipitous action. If we did that, if we took precipitous action, then in the first quarter we could see interest rates drop off very rapidly because the aggregates were performing very well; and in the second quarter, we could suddenly run the interest rates up to enormous numbers. So we are not trying—at least I don't want to try—to manage the money supply on a weekly basis. I wish that we would get away from the habit in this country of looking at those money supply figures every Thursday and assuming that the world was going up or down on a weekly basis. But I do think it's very important that we show a prudence, a soundness, in recognizing the longer trends and that we make sure to lean and to guide the ship so that we do stay within the ranges that make sense.

The CHAIRMAN. What are your money growth expectations for the next two quarters?

Mr. MILLER. The ones that we have just recited. We, of course, are looking for an M_1 growth of 4 to 6-½ percent.

The CHAIRMAN. I'm talking about the next two quarters, not the next year.

Mr. MILLER. We have not set any ranges for two quarters. The policy, as you know, has been to set two-month ranges.

The CHAIRMAN. I understand. I'm not asking for the target. That is a year, I understand. I'm asking for your projections, your expectations for the next two quarters.

Mr. MILLER. My expectation is to do the best we can, depending on how the economy is performing, to maintain the growth of these monetary measurements within the ranges we have presented to you.

The CHAIRMAN. And what do you expect? Do you expect any particular difference in the next two quarters in terms of economic activity as compared with what you have already explained to us for the next year? Do you expect the next two quarters to be fairly strong? I'm talking about the third and fourth quarter of the year.

Mr. MILLER. Senator, you bring up a very good point. Maybe it would be helpful if I just pause for a moment. My figures for growth in the next four quarters—my personal figures you must realize—take account of what I would imagine to be a very strong second quarter. Therefore, my view is that the economy is going to show a slower rate of growth, but still a very satisfactory rate of growth, in the third and fourth quarters. There's going to be a 6½ to 7 percent real growth in GNP in the second quarter, a distorted growth because of the push forward from the first quarter. We can expect, as the year goes forward, to be getting back on to the more normal path

that we would have been on had the first quarter been normal and the second quarter been normal. Under such circumstances, it would be very pleasant if the monetary aggregates begin to fall within our ranges and the pressure that we feel in managing the situation under the present, rather stimulative conditions, is eased up.

The CHAIRMAN. Well, you expect a big snapback in the second quarter, and I think that seems to be a fairly strong consensus view—8 percent to 8½ percent, something like that, real growth, with how slow a third and fourth quarter?

Mr. MILLER. I would think that the growth rate in the second quarter would not be quite that strong. My own guess is a 6½- or 7-percent real growth in the second quarter, and thereafter I would think a growth rate nearer the 4-percent level.

The CHAIRMAN. Now the Humphrey-Hawkins bill under the several different versions would have the President report annually numerical targets each year for real gross national product, employment, unemployment, real income, and price. These would be the ultimate objectives of Government economic policy. We don't have quantitative goals now, as you know, but the Employment Act of 1946 includes these broad objectives in qualitative form.

How are the Federal Reserve policies consistent with the Nation's clear need to reduce unemployment and inflation at the same time?

Mr. MILLER. The only way we can be sure that we have full employment is to be sure that we have lower inflation; the two are coupled very closely together. I don't believe we can have low unemployment with high inflation, nor do I believe we can have low inflation with high unemployment. So I think they are coupled together.

The reason that I have been particularly concerned with the inflation situation in the last 6 weeks since I have been in office is because I found it worse than I expected. Since unemployment has been at a level as low or lower than planned and since the inflation rate has been higher than planned, I felt it extremely important that we work on bringing inflation back under control. If we do that, we will encourage business investment, job creation, productivity gains, and real growth in the economy. If we fail to do that, inflation expectations and actualities will result in a dropoff in business investment, a dropoff in housing, a slowdown of the economy, and higher unemployment. So my concern with and focus on inflation is for the very purpose of creating conditions whereby we can control inflation, generate jobs, and reduce unemployment.

The CHAIRMAN. My time is up. Before I yield to Senator Tower, let me say I wholeheartedly agree with the primacy of the inflation problem right now. I feel that we have to do a far better job on the fiscal front. That's why I've got an amendment cutting the budget by $25 billion. I'm going to call it up this afternoon. But I still think that monetary policy should be as easy as possible under these circumstances.

Mr. MILLER. Senator, I hope that the fiscal side of the House will do its job; as I say, I don't want to fight inflation alone. I'd love to come before you with interest rates dropping and everything fine, but the way to do that is to balance the budget.

The CHAIRMAN. My time is up. Senator Tower.

Senator TOWER. I want to concur with Senator Proxmire in agreeing with your assessment of the inflationary problem and how inflationary expectations and inflation are themselves the cause of recession. I note in your statement in noting the causes of inflation you include increases in employer contributions to social security and unemployment insurance, minimum wage, agricultural price supports, various import restrictions, and you quite properly noted the tendency by Government over the years to treat the problems of individual sectors without adequate regard to the cumulative inflationary bias the program has imparted to the economy. I think we in the Congress have to bear the lion's share of the responsibility for that failure to consider the aggregate impact of what Government does.

In your inflationary factors there are some that you did not mention—the regulatory burden on the business community which appears to me to be substantial; the recent coal settlement, what impact that's likely to have; and the impact of conversion costs, energy conversion costs are likely to have. It seems to me these are all going to be fairly whopping factors. I don't separate out the coal settlement alone because there are problems with wages and benefits outstripping productivity in other sectors as well.

I wonder if you could comment on those other factors that I have mentioned.

Mr. MILLER. Senator Tower, I concur. Perhaps, in an effort to be brief, I did not include all the factors that are affecting inflation. Those you mention are important contributors to inflation; I think they are far more important than sometimes is recognized. I have been somewhat encouraged by what I perceive to be possible actions to deregulate airlines and perhaps some of the trucking industry. I hope we can be realistic about a whole series of regulatory matters that add to costs and perhaps don't have any compensating benefits at this particular time. You may have noticed that in my comment I tried to distinguish those kinds of inflationary actions by Government that do have certain social benefits; they have to be weighed carefully. The social security tax increase is high, but there is a social benefit to that program. How to be responsible is a tough question. Some other inflationary actions don't even have any benefits. Some of the regulatory actions, I think, come out of habits rather than realities; they are not really necessary. What we need to do is deregulate some more areas and let the private sector compete more; that's the best way. Businessmen tend to be pretty aggressive competitors if they are given the chance, and that usually brings the supply side up and the costs down.

Senator TOWER. I was thinking not only of the type of regulation that impacts on competition but the type of regulation that impacts on an individual business such as compliance with various Government regulations—occupational safety and health environmental, et cetera—any one of this range of things that doesn't deal with the flow of commerce itself.

Mr. MILLER. The other day I heard about one that was illustrative of just what you're saying. I understood there was a regulation from

OSHA saying that the harvesters of timber—the timber companies—would not be able to cut timber in a tract where hunting was allowed. Well, in many communities, if you don't allow hunting in those tracts, I don't think you get much support from the local population, and somehow a lot of fires start. I can't see why it would be inconsistent with safety to find other ways of making sure, on a more realistic basis, that hunters can hunt and that we can harvest timber. Why that regulation is needed, I don't know.

Senator TOWER. I think conversion costs are ultimately going to have a considerable impact on this. That leads me to my next question and that is my concern over future capital recovery and capital formation and what our estimated new capital needs are going to be to maintain a satisfactory rate of economic growth over the next 8 to 10 years, and I just wondered what comments you have on that; whether you have any estimates of what our new capital needs will be and our ability to supply those needs over the next few years.

Mr. MILLER. Senator, there has been a tendency in the postwar period to manage the U.S. economy mainly by dealing with the demand side. I think for only one period during the early 1960's was there significant concentration on the capital investment and supply side, and that was a period of unusual growth and price stability. I'm considerably concerned that we have had a lag in capital investment in this cycle. I'm considerably concerned that we are falling behind other industrialized nations in the percent of GNP we put into investment. I'm deeply concerned that we do not have adequate capital formation, and I have felt that, beyond the problems of unemployment and inflation, the next priority in our economic planning is to shift our emphasis from consumption and demand to an emphasis on investment.

The best way and the fastest way and the easiest way and the most efficient way to do that would be to allow a substantial liberalization in depreciation. If we could, today, establish for production equipment a writeoff life of 5 years, and for structures used for production a writeoff life of 10 years, and for commercial and office structures a writeoff of 20 years, we would see a tremendous growth in investment.

We would find employment going up; we would find costs coming down, and we would open up the best prospect I know of for long-term growth with price stability.

Senator TOWER. Well said. Do you have any comment on wage and price controls?

Mr. MILLER. I am opposed to them.

Senator TOWER. Good. Now I have noted in your statement that cost pressures are persisting because of large wage increases and low productivity. What do you think could be done to increase productivity?

Mr. MILLER. I think the first thing is increased investment, but there are many other techniques. We have seen the Jamestown experience. We need to look at a series of techniques. I have found, in business, that no one technique is always successful because people are such a key ingredient. I've found and I'm sure you've found that where there are instances of leadership, of involvement, productivity

gains are enormous. So we know there's a people factor and we know there's a factor of skill training. But we have probably done as well as we can and will probably continue to do as well as we can, on the mobilization of human resources. So I really believe the best gains in productivity we can make now will come through a substantial increase in investment, in modernization, in cost reducing facilities, so that we can get more production per man-hour through the use of more modern equipment.

Senator TOWER. You mentioned the recent stabilization of the dollar in foreign exchange markets. What role did monetary policy play in this stabilization and how do you envision the future role of monetary policy as a means of stabilizing the dollar?

Mr. MILLER. The dollar declined, in my opinion, because of fundamental problems in the balance of trade and current account, and because of our heavy dependence on imported oil. I believe that the dollar has been improving because of a perception that we are coming to grips with our problem of inflation, and that we are beginning, I hope, to face up to the problem of imported energy. And as it becomes clearer that we are serious about these matters, and if the trends are right, then the fundamental strength, resiliancy, and productivity of the American economy will result in a stronger dollar. As a matter of fact, if we can continue the momentum that has been built recently, I think the dollar will be considerably stronger, but that is because, and only because, we will be seen as being effective and dedicated to addressing the fundamentals. In that, monetary policy has played a role by showing that, despite the easier path of accommodation we might have taken, we have been willing to take the path of restraint until the other elements of the economy can marshal their forces and take up some of the burden. The prudence of monetary policy actions has encouraged foreign holders of dollars to see them as more valuable at the moment than was true three months ago.

Senator TOWER. Mr. Chairman, Senator Brooke was unable to be here today but he asked me to express his concern about the erosion of Federal Reserve System membership. Do you have any plans to help stop this continuing tendency of banks to leave the Fed?

Mr. MILLER. Moving away from monetary policy and inflation to the banking system, one of my high priorities on this side is to address the problem of membership. There are several reasons why it is of concern. The first is that if we are going to do an effective job in monetary management, then we need the broad-based participation of banking system in the Federal Reserve network. Second, the tendency of sizable banks to move out of the Federal Reserve System may erode the strength of our supervision of banks. In these troubled times, it's important that we have good supervision and that we have dedication to maintaining the soundness and integrity of the banking system.

So there are a lot of reasons why I think membership is important. The reasons the banks have been leaving, as you know Senator Tower, is because of the burden of membership; it's cheaper to be outside of the Federal Reserve System. We have to address that issue head on, and the elements of addressing it are as follows: the competitive bur-

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den relates to the maintenance of sterile reserves, and we need to provide compensation to banks for maintaining those reserves in the Federal Reserve System. I don't feel we should do that, however, without coupling compensation to a program of explicit pricing for the services of the Federal Reserve. There are many advantages to explicit pricing. One is that the services will then be used in relation to their value. Anything that's free will be abused. Once we get services properly priced, I think the marketplace will tend to see that they are used efficiently because pricing will encourage banks to look at their options, at other systems.

So I would like to see the element of compensation for reserves; I would like to see the element of pricing of services. The Federal Reserve would pay out something in compensation and it would receive something in charges, and the net between the two would be a contribution to reducing the burden of membership and would encourage banks to stay within the system.

The third element we need is to manage our program in a way that doesn't impact the Treasury because, of course, the earnings of the Federal Reserve go into the Treasury as general revenues. It's very important that the Federal Reserve maintain its level of contribution to the Treasury through a transition period so that we don't in any way impact the Treasury adversely.

If we get those three elements, I would like to see us then examine the possibility of a wider access for nonmembers to some of the services of the Federal Reserve—for example, to the electronic transfer of funds. It's important that there be a general access to this service for members, but it's also important that we price this service so that members aren't paying to provide a payment mechanism free for others.

Let me add that I have a timetable in mind for a program along these lines. I would like to see the Federal Reserve, by June, issue a proposed action plan along these lines. I would like to have that available to you and your committee and other committees of Congress and to the banking industry and the whole financial industry. I would like, perhaps, a period of 3 months for complete discussion, debate, and examination, after which we could accept your comments and suggestions and revise the plan. With good fortune, maybe we could have a plan effective by the first of the year with the objective, in my mind, of having a pricing mechanism in effect by July 1, 1979. This is the kind of schedule I have in mind.

Senator TOWER. Thank you, Mr. Chairman. I apologize for running over my time.

Mr. MILLER. I think it's my fault. You asked the question before the red light, but it's a subject near and dear to my heart. I think it's important, and I thought I would like the chance to tell you my views.

Senator TOWER. It is enormously important. We appreciate that. Thank you.

The CHAIRMAN. Senator Sarbanes.

Senator SARBANES. Chairman Miller, I am interested in an explanation of the position you have taken with respect to the tax cut proposed, and I'd like to hear you elaborate on that.

Mr. MILLER. Senator Sarbanes, we have an economy that is in its fourth year of expansion. By the time the fiscal year 1979 plan is into its second quarter we will be in the fifth year of expansion, and by any measure of postwar experience that is a very aged expansion. With good management, we should be able to continue that expansion, and I see no need to have a recession if we are wise and prudent in our management.

On the other hand, I see that we will have a recession or an economic downturn for sure if we don't have the discipline to keep this expansion within bounds and avoid shortages or bottlenecks or demand pressures that fuel an inflation that is already too high.

One of the elements that is stimulative to the economy is fiscal policy. It seems to me, as we are going into the fourth and fifth year of expansion, it would make good sense—in fact, it hardly makes sense to do otherwise—to start the deficit on a decline as we build up our employment levels and as we get our economy working at a higher level of its potential capacity. I think it would be well if we could start turning the deficit down.

Senator SARBANES. Well, at what level does the GNP have to expand in order for unemployment simply to stay still and not increase?

Mr. MILLER. If we were expanding at 3¼ percent, I think one could stabilize unemployment; but I think we now need to let the economy grow at a faster rate to reduce unemployment.

Senator SARBANES. Let me get this straight. You think with a 3¼-percent expansion of GNP that the unemployment rate would be stabilized?

Mr. MILLER. If you can maintain GNP at a 3¼- of 3½-percent real growth rate, I think you will have a fairly stable state, based on our past experience. That would change as the demographics of the labor force change, but I think it would generally be true for the next few years.

Senator SARBANES. So your working premise is that a 3½-percent increase in GNP stabilizes the unemployment rate at whatever level it then is?

Mr. MILLER. Other factors being equal. There could be an infusion into the labor force, as I say, because of demographic changes, such as those which we have had in recent years. But I think we are over those now. If we are over the bulge—and I think we are—of entries into the labor force, then we could have a stable unemployment rate.

Senator SARBANES. Well, your working premise is that we are over any unique demographic problems and that given a 3½-percent increase in GNP that would give you unemployment rates stabilized at their current level?

Mr. MILLER. Yes. That's correct.

Senator SARBANES. I'm interested in how with significant unemployment and significant unused resources you perceive the deficit as being a prime contributor to inflation.

Mr. MILLER. Senator, by the time this new fiscal year comes into being, it appears that we will be way up in the high eighties in percent of capacity utilization. And I think that capacity utilization is understated because I believe much of our capacity in this country is obso-

lete, is high cost; if we bring it into use we are going to fuel the fires of inflation even further.

Senator SARBANES. So your next working premise is that the GNP expansion that you foresee will bring us to unacceptable levels of plant utilization; is that correct?

Mr. MILLER. It will begin to impinge upon shortages in certain areas; not universally.

Senator SARBANES. If you were making fiscal policy, would you take out of the economy the spending stream that will be taken out by the increase in the social security tax and the unemployment tax—all the increases in payroll taxes which will occur at the beginning of the next calendar year?

Mr. MILLER. I would prefer to see us find some way to fund social security, with integrity, that would obviate the need for increased payroll taxes because those are direct costs and feed inflation; that may require some reforms in social security.

Senator SARBANES. Well, without getting into the specifics of tax policy, I'm interested here in terms of making fiscal policy—would you pull out of the spending stream what those increases in taxes will pull out at the beginning of the next calendar year with respect to a fiscal policy that would sustain continued growth in the economy?

Mr. MILLER. Senator, I didn't quite finish my philosophy in the comment I made. You will recall that I was commenting on the deficit that we are facing in an aging expansion. I also happen to believe that the best thing for us long term is to reduce the level of government activity in the economy and to increase the level of activity in the private sector, which means tax cuts would be desirable. In order to accomplish both—reduce government activity and reduce the deficit—and in order to be sure the tax cuts would aid both individuals and, hopefully, business capital formation, my suggestion was to defer its effectiveness for one quarter; this would mean that the tax cuts would come into effect coincident with the increase in the payroll tax. They would be an offset——

Senator SARBANES. All right. Now we're getting somewhere. I was not clear in my own mind about your comments with respect to the tax cut and other comments you have been making—you have been making a lot of them around town here recently.

Mr. MILLER. At least I have been quoted as making them.

Senator SARBANES. I hope you have not been quoted without making them. There have been comments of yours with respect to your worries about the increase in the payroll taxes. Now I take it that you want to offset that increase and you are now saying that if the tax cut took effect at the beginning of calendar 1979 rather than in October of 1978, that would remove your quarrel with the tax cut proposal.

Mr. MILLER. I have said before to this committee, as you will recall, that I thought a $25 billion tax cut package was the most that ought to be considered right now; I wasn't quarreling with the level. I am now suggesting that it be put off for a quarter. As I understand the tax package, the cuts were proposed to come into effect on October 1 and the increased revenues were to come into effect in January. If the whole package takes effect January 1, it would make an $8 or $9 billion contribution to reducing the deficit; and the tax cuts would

come into effect, for individuals, coincident with the increase in social security taxes.

Senator SARBANES. Well, I can see that strategy as part of a balanced development of the economy. I'm not certain that failure to implement tax cuts would mean that the deficit will be less because if it results in the economy not moving forward an increase in unemployment would occur and the end result of that is the deficit is going to be larger rather than smaller. That's one of the difficulties in making fiscal and monetary policy is that you have to keep the economy moving forward if you're going to actually impinge on the deficit. Otherwise, you may take measures which will result in the deficit increasing, although the measures were supposedly designed to decrease the deficit.

Mr. MILLER. Yes, I think that's correct. But my view is that the economy will continue to grow; in fact, if we let it grow too fast we will run into more inflationary problems which ultimately will cost us more. Therefore, I think pushing back the effective date of the tax cuts a little is a kind of moderation that might be very helpful.

Senator SARBANES. So your proposal in that area is simply to implement the tax cut at the beginning of the calendar year at the same time that the increases in the payroll taxes were to take effect?

Mr. MILLER. Yes. There are two ways that the deficit can be reduced, and only two, that I know of: Spend less or collect more. I was suggesting that we keep collecting for one more quarter in order to facilitate the transition into a more sustainable growth rate. We have been growing at a very rapid rate from a very slow start, so it's important that we phase things in. Now we've also got to recognize that the unemployment problem is becoming more and more structural, and that the way to solve structural unemployment is to target programs at it.

Senator SARBANES. Do you think we are at a point where the unemployment rate right now, the structural aspects of it, are the predominant aspects?

Mr. MILLER. I think they are far more important than the cyclical aspects right now.

Senator SARBANES. At 6.2 rate of unemployment?

Mr. MILLER. 6.2 is too high. As you know, I am expecting us to get down under 6 in this period.

Senator SARBANES. You say 5¾ to 6, which is not much of a drop. At that level, is it your working premise that the structural components of the unemployment rate are the primary or the dominant ones at that level of unemployment?

Mr. MILLER. Yes, because of demographics. We have had a great influx—which was good for the economy—of women into the labor force. I think that's ended and the bulge is being absorbed. The problem more and more is unemployment of minorities and young people; I think that's highly structural and we have to attack it very hard. I will not be satisfied with the levels of unemployment projected here. My forecast is actually rather optimistic, I think, compared to most forecasts I have seen, because I believe that what we have seen in the first quarter—the addition of jobs in the manufacturing sector and in many other production sectors—is very encouraging. It looks

like business has a demand for more labor which is now being put on the payroll. So my view has been very encouraging in that regard.

Senator SARBANES. If your policy of either reducing spending or increasing collections in order to reduce the deficit were to lead to a downturn in the economy, if that were to be its result, what would then be the consequence with respect to the deficit? Wouldn't it be an even larger deficit than would otherwise happen? I know that's not your working premise, but that's the judgment that has to be made, is it not?

Mr. MILLER. The tough judgment we have to make is that if we allow inflation to go ahead and run its course, and if we feed it in any way, we are going to create conditions for disinvestment and we are going to have a recession sooner or later—and it's going to be severe; and it's going to entail a very big deficit and very high unemployment. If we can lean against inflation, and take some other disciplinary actions and keep ourselves growing at a steady rate, we can avoid a recession; and, I believe, over time we can actually have more people employed for more months and make a greater contribution to the stability and growth of the Nation than if we risk inflation. If we risk inflation, we are headed for trouble for sure; if we lean against it——

Senator SARBANES. Of course, there's a peaches and cream solution which it is obvious we all seek which is to try to drive down unemployment and bring inflation under control. Now what I'm concerned about is the assumption, first of all, that a deficit at high levels of unemployment and high levels of unutilized resources—and I know you quarrel with the latter on utilization—that such a deficit is fueling inflation in a significant way. It seems to me that the inflation we have is attributable to a number of other factors as well to which we also have to address ourselves.

Mr. MILLER. Senator, to go back to what I said a moment ago, if we took the action I'm suggesting to create conditions for substantially increased business investment such as a very liberalized depreciation——

Senator SARBANES. Which would increase the deficit.

Mr. MILLER. No, it would not; because this would provide more jobs, would create activity that would work through the economy to produce profits and sales. A tax cut creates more consumption demand: We pull up demand and use obsolete facilities at too high a rate and push inflation up. If we work on the supply side, and put our jobs into building plants and equipment, we both put people to work and start reducing the unit cost of producing goods.

Senator SARBANES. I don't quarrel with that.

Mr. MILLER. That's what we ought to do.

Senator SARBANES. If you were a businessman, why would you develop more plant and equipment if you didn't feel there was going to be the demand for the product of that plant and equipment at the end of the process?

Mr. MILLER. I'll tell you one reason I would under the conditions of inflation: To reduce costs. When I was a businessman, I went out to get the costs——

Senator SARBANES. You're making assumptions about the existence of demand for the product?

Mr. MILLER. Oh, yes. And I can guarantee you that if we sent out a signal loud and clear to American industry that we were going to reduce the Federal deficit and that we were going to fight inflation, we would be sending a signal for the stock market to go up; the signal for business investment to increase; the signal that you could count on markets and you could produce goods and you could invest and bring down costs. And that's what we would see.

Senator SARBANES. Now you could send out all those signals and if you didn't have demand at the end of the process for the product of business why would they bother to respond to them? I don't minimize the importance of all of those signals, but it seems to me it has to be done in the context of the presence of demand for the product of the companies.

Mr. MILLER. Long-term demand in the United States is sufficient to continue our growth. I don't think there's any lack of underlying demand. We are underproducing in housing, and we really are shortfalling in many sectors. I'm not concerned about demand. I am concerned about supply, because if we continue to stimulate the demand side and we don't provide for the supply side, we will be doing what we have been doing for so many years: Building ourselves into a consumption society, a throwaway society that never replaces its capital base. Any society you have ever seen that consumes like that consumes itself into oblivion; it's a very untenable position. We've got to look for savings, investment, and productivity as a means to improve the standard of living and the employment opportunities and to enrich the lives of the American people.

Senator SARBANES. Well, no one quarrels with that.

Mr. MILLER. And it will be done if business people see more chance for a climate of stability——

Senator SARBANES. Nobody quarrels with savings, investment, and productivity. The problem is insuring that people are working and resources are used. If they are not working we are going to have a tremendous——

Mr. MILLER. If we let inflation get out of hand we are going to have a lot of people not working and enormous deficits. That's the problem.

Senator SARBANES. Well, I'll come back to it in my next round. I see the red light is on.

The CHAIRMAN. It's been on for 15 minutes.

Senator SARBANES. I've imposed excessively on the chairman's time.

The CHAIRMAN. Let me follow up just a little bit on what Senator Sarbanes was asking about.

In the first place, as far as the capacity utilization figures are concerned, they are the Federal Reserve figures. So if they're wrong, as you implied that perhaps they are, you ought to change them. You ought to correct them. That's your responsibility; isn't that correct, Mr. Chairman?

Mr. MILLER. Senator, there's a difference between capacity utilization and the cost of using that capacity; my point was not to quarrel

with whether we have the capacity, but to point out that much of the capacity is high cost capacity that's benched when the economy goes into a recession. Business first shuts down it least productive——

The CHAIRMAN. I understand that, but as I understand the Horton series is supposed to take that into account. They don't show that we are near 100 percent capacity. We are well under that. They also don't show much of an increase in capacity utilization in the past year despite the fact we had almost a 5-percent real growth. There was no increase in utilization of capacity between March of 1977 and February of 1978 which is the last month for which we have figures on the Federal Reserve manufacturing series, the materials series, the commerce series, or Horton series. They all show a fairly stable utilization figure and at a point where there shouldn't be pressure on resources that would be inflationary.

Mr. MILLER. Senator, you're looking at February which we know is a down month in which we had negative growth because of the weather.

The CHAIRMAN. Take 1977 or January of 1978. The February figures aren't very different. They are very close to it.

Mr. MILLER. Senator, I suppose we all have our different judgments about these figures. My judgment is there's a difference between correcting these series for obsolescence and recognizing that the last 10 percent of capacity of many basic industries in the United States are high cost capacities.

The CHAIRMAN. We have the figures here and they don't show any industries where they are close to the top. There are one or two that are 85 percent, but durable goods is 79 percent, basic metals is 75 percent, nondurable goods is 85, textile is 85. If these statistics are unsatisfactory, it would seem that the Federal Reserve should recommend some kind of a series that would tell us. Give us a signal as to when industry is moving into a high cost facility so we have some notion that we are pressing against our capacity availability and that there is an inflationary effect. Wouldn't you agree that would be useful?

Mr. MILLER. Senator, I agree it would be useful, but I don't think I've made my point. Those indexes have to do with capacity. You have capacity; I'm not quarreling with the figures. I'm saying that when you put that capacity in the stream of operations your unit costs go up, and that there's a difference between a series that has to do——

The CHAIRMAN. In general, however, it was Dr. Burns' position, and it's been the position of most of the witnesses who have appeared here, that they don't go up until you get over 90 percent of the Federal Reserve figure. Now perhaps you quarrel with that and you make it 88, but it's certainly well above what it is now.

Mr. MILLER. Senator, there's been an interesting phenomenon in the last two recessions in the United States, and that is that business investment has lagged longer and longer in the recovery cycle and therefore has come into being too late to offset inflationary pressures. My argument is still that we are late in this cycle for business investment, that we are going to run into cost pressures in using the capacity we have and that we need to change our emphasis and start creating a climate for larger and earlier fixed investment that is mostly related

to modernization cost reduction. So I think I agree with you, yes; if we had a series that would tell us at what percentage of use a steel company's capacity would add $10 a ton we'd know more; we don't have that. My experience is that when they put their last unit on line it costs them a lot more than if they have been operating without it.

The CHAIRMAN. Now you mentioned that all parties—Congress, the executive branch, and the Fed—have to show restraint, and I agree. Are you concerned about the $60 billion budget deficit proposed for fiscal year 1979?

Mr. MILLER. Yes, sir.

The CHAIRMAN. Now if the Congress were to reduce that deficit either by cutting spending or by not reducing taxes as much as has been proposed, or by a combination of the two, do you believe that the Fed could modify its monetary policy?

Mr. MILLER. I think it would take a great deal of pressure off of us. I think I would be very excited.

The CHAIRMAN. How much could short-term interest rates be reduced by the Fed if Congress cut the budget deficit by $25 billion one way or the other?

Mr. MILLER. I'm afraid, Senator, I would have to wait and see when and how it took place, but we would see the possibility of significantly lower interest rates.

The CHAIRMAN. Now this appeals to me very much. I read in the Wall Street Journal a day or two ago that corporations were now beginning to feel the pinch of higher interest rates, cutting back their borrowing, cutting back their plans for expansion, and this seems to me to be so counterproductive. It's exactly the wrong direction. Here we're having Government increasing this year about 10 or 11 percent if you compare the projected 1979 to 1978 spending, and you have the private sector cutting back. It's because your monetary policies are at least the direct villain, although I know there are reasons why, as you have explained, that you felt you had to do this.

Mr. MILLER. I think you're correct. I notice that many firms are now borrowing from banks; they don't want to go into long-term markets because of the high interest rates which are inflation-induced. If we can get that inflation down, if we can get the deficit down, I think we will see lower interest rates.

The CHAIRMAN. Now would you favor an amendment to the Humphrey-Hawkins bill to establish a specific numerical goal for the rate of price increases by 1983?

Mr. MILLER. Senator, I saw your proposal on that and I want to commend you for it. I'm not sure that specific numbers in that bill—well, let me back off a moment. I think specific targets are a good idea. The thing I was concerned about was that we must be sure we don't set specific numbers over too long a period, because times change and I think we have to leave some flexibility for Congress to review its targets in the light of future realities. But your proposal is to get down to 3 percent by a certain date and then move on to zero, and I think that's the right direction. Whether the timing or the numbers are just right or whether you want to leave more flexibility for a future Congress, I don't know; but I think your philosophy is absolutely correct.

The CHAIRMAN. Now the argument on the other side—of course I wholeheartedly agree with that and I'm very grateful for your response. The argument on the other side is that the Congress has—this is what I get from the Secretary of Labor and others who disagree with our position—is that we have considerable control over unemployment, not complete but almost. We can reduce unemployment if we have the will is the way they put it. But they say we don't have that kind of control over inflation. We might set a goal but there are so many elements that we can't control that it's more of a wish than something that we can achieve.

Mr. MILLER. I think we can achieve all of those goals, but we won't achieve them unless we set ourselves out to do so. If we do set ourselves out to do so, we can accomplish those goals. It does take some disciplining that we haven't been used to for a while, but I think we need that.

The CHAIRMAN. Let's see if I can reconcile the statements that we got yesterday from Dr. Eckstein and Dr. Santow and yourself on GNP and increasing the money supply. Your estimate for the next year of real GNP growth, 4½ to 5 percent, was different from those given by Dr. Eckstein. He had a 4 percent real GNP growth. Dr. Santow was different from yours also. He had about a 3½ percent real GNP. Now Dr. Eckstein forecasted 6½ percent M_1 growth as consistent with a 4 percent GNP growth and Dr. Santow had a 6 percent M_1 growth which he felt was consistent with 3½. Now those two figures were fairly close. What's your money supply expectation?

Mr. MILLER. Senator, were they talking about first quarter to first quarter?

The CHAIRMAN. That's right.

Mr. MILLER. That's quite a large discrepancy. And with the second quarter performance that's a very discouraging outlook, because if you have 7 percent GNP growth in the first quarter—and if Dr. Eckstein was talking about 4 percent over those four quarters—then he's got very low growth rates for the other quarters. I think the economy is stronger than that. I just have to disagree. I believe we are going to have a very big upsurge in the second quarter.

The CHAIRMAN. He thought we'd have a bigger one than you thought in the second quarter. He recognized we have a negative first quarter, number one. Number two, we have about an eighth and a fraction in the second quarter, and then about a 4 percent in the last two.

Mr. MILLER. 4 percent in the last two? 4 percent over four quarters then?

The CHAIRMAN. Well, that would figure over four quarters—8 and 4 and 4 add up to 16, divided by 4 is 4.

Mr. MILLER. But you lost a quarter there.

The CHAIRMAN. The first quarter was negative.

Mr. MILLER. I see.

The CHAIRMAN. We're starting for the whole year.

Mr. MILLER. My figures were second quarter, third quarter, fourth quarter and first quarter 1979. Therein lies the difference, I think, for M_1. I believe we can accommodate the growth in GNP that I have

projected, which I think is an encouraging growth rate, with the money supply within the ranges of 4 and 6½ percent for M_1 and 6½ to 9 percent for M_2, as I have indicated. I believe that there are all kinds of continuing opportunities for those who hold cash or its equivalent to use it more efficiently. Velocity will have to be fairly good to do that, but I believe that's likely with the new techniques that are developing for the managemnet of cash resources.

The CHAIRMAN. It would seem as if we would have to be close to the upper end. Incidentally, Dr. Eckstein had a fascinating analysis. He said he uses something like 100 different variables that they crank into their computer and they figure that the odds that you would stay within your range were about 73 percent, 27 percent you wouldn't, zero that you would go as low as 4 percent, which brings me to a question I want to bring up a little later. My time is up, but it would seem that your ranges are too wide and that your lower range—it may be for psychological purposes, but it doesn't serve any real prospect because he indicated there was just a zero possibility you were going to get 4 percent growth in the M_1.

Mr. MILLER. Well, I appreciate having those odds. Anybody who will give me a 73 percent change of getting in the range at all is giving me a pretty good mark because, as I say, we haven't been within the range for a while.

The CHAIRMAN. You can get within some ranges. Look at what you did within the Federal funds. You were within the ranges every time.

Mr. MILLER. That's kind of easy. Pick a hard one.

The CHAIRMAN. As you say, it depends on whether or not we have the will.

Senator Sarbanes?

Senator SARBANES. Chairman Miller, I wasn't sure from one of your answers to the chairman what your position is with respect to the projected Federal budget for the next fiscal year—the projection of both the Senate and the House is below that of the administration as you are aware.

Mr. MILLER. Yes.

Senator SARBANES. Now is it your view that the deficit should be even lower, other than the lowering that might come about by delaying the tax cut until the beginning of calendar 1979—other than that reduction, which might result in the deficit if you make certain assumptions about how the economy would continue to move—is it your position that the deficit should be significantly lower than that? I thought I heard a figure of $25 billion less and you sort of assented to that figure.

Mr. MILLER. No, sir. I was saying that I felt that if we could get the deficit in fiscal 1979 at or below the deficit in fiscal 1978, that the would be a substantial and encouraging improvement. My suggestion to delay the tax cuts, which, if I'm correct, would reduce the deficit by $8 billion or so in the quarter, would bring us down to about the deficit projected for the current fiscal year.

Now, Senator, I would say that I'm not trying to get into the area of responsibility of the Congress or the administration. My analysis is that that is a consistent way to reduce the deficit because it could

hold the tax program together; you wouldn't have to tear it apart to do that. There are other ways, of course, to achieve the lower budget deficit. It would not be harmful to look at reducing spending. If you could reduce spending more, then you could make more of a tax cut. So I think there would be a lot of advantage to——

Senator SARBANES. Wait a second. That's a difference in approach but that's not a difference in deficit size, is it?

Mr. MILLER. No. I'm saying I would be satisfied personally with a deficit of $53 billion in 1979 fiscal year.

Senator SARBANES. So your difference with what's been proposed is the quarter's difference in the implementation of the tax cut; is that correct?

Mr. MILLER. Yes, sir.

Senator SARBANES. Now the notion that you should reduce spending and pick it up with a tax cut, that's a difference in approach as to how a deficit can best serve you, but it's not a difference in the size of the deficit, is it?

Mr. MILLER. That's correct. The only thing I am saying is that the Congress might want to look at whether they get more bang for their buck by less Government spending.

Senator SARBANES. I understand that, just as you differ with the composition of the tax cut as I understand it.

Mr. MILLER. That's right.

Senator SARBANES. If you were putting together the details of the tax cut you would have a somewhat different program than what the administration has proposed as I understand your testimony.

Now I'm interested in this point of yours, because it has some philosophical implications, about the question of demand and supply and the encouragement of demand and the failure to encourage supply. It seems to me with high unemployment the clearest thing we are doing is encouraging demand and failing to encourage supply because if you're going to have income maintenance programs for millions of people who aren't working, then you create demand on their part and they are not producing and therefore not making any contribution on the supply side of the economy—isn't that correct?

Mr. MILLER. Yes. Every income maintenance program that I have seen starts out with the idea that we will maintain people until they can get employment in the private sector. I'm saying the way to get them permanent employment in the private sector is to stimulate capital investment. Otherwise, you just don't give them a way out; you create tremendous frustration and social problems that are enormous. That's why it's important to build the capital stock up and create a larger industrial base that, in turn, creates a more permanent employment opportunity for larger numbers of people; their demands then will become even more appropriate to sustaining even further economic growth. So it's just that if we give people spending power, but never create the underlying base of production, ultimately we run into serious problems. I see the humanistic reasons and I agree with the humanistic reasons for sheltering people from distress, but I want to lead them into something more permanent and more self-satisfying.

Senator SARBANES. But the fact is they are sheltered and the emphasis should be to put them to work; otherwise they aren't producing and you're adding to demand and not contributing to supply?

Mr. MILLER. That's right.

Senator SARBANES. What kind of monetary policy do you envision the Fed pursuing if fiscal policy proceeds along the lines that you have been suggesting, which is essentially as it is now proceeding with the exception of implementing a tax cut at the beginning of the calendar year rather than on October 1?

Mr. MILLER. Senator, the thing that has concerned me most in my role at the Federal Reserve is the prospect that the forces of inflation will continue to build, and that counter-action will be left too much to monetary policy, which would leave us at the Federal Reserve with a very difficult dilemma. We would have the choice, on the one hand, of acting against that build-up of inflation, which surely would result in interest rates being higher—inflation breeds higher interest rates; long-term interest rates really aren't influenced directly by the Federal Reserve. And higher interest rates would result in a slowdown of the economy and in not being able to sustain its growth or create the employment that you and I both want. That's an unhappy alternative. The other choice would be to go ahead and print money and finance inflation, in which case inflation would grow at a higher rate and when it got into double digits we'd have such disintermediation and such a dry-up of investment that would have to——

Senator SARBANES. I don't want to be drawn into those extremes. My question to you was if the fiscal policy pursued by the Federal Government in fiscal 1979 essentially followed your view, which I take it is pretty much what is now proposed to be done with the exception of delaying the tax cut for a quarter, its effectiveness—its effective date—what monetary policy would the Fed anticipate pursuing under those circumstances?

Mr. MILLER. Under those circumstances, we would expect the dilemma would be less difficult; we would find that there would be a reduction in the inflationary forces and we would not be pressed as hard and we would therefore be able to have a less restrictive monetary policy.

Senator SARBANES. Less restrictive?

Mr. MILLER. Significantly so.

Senator SARBANES. Significantly less restrictive than what you are now starting to pursue?

Mr. MILLER. All I can say is that I would hope that would be possible. How less restrictive depends on the change in the fiscal situation on the timing of tax cuts, on international events, and so on. But my point in telling you of our dilemma is that the choices are not happy ones. That's why we would welcome a more concerted action by all sectors of the economy, because that would allow us a less restrictive monetary policy and it would, perhaps, allow us to see interest rates trend down again. And if that happens, then I think we would all be happier.

Senator SARBANES. Well, I think that's a good point. I don't know that anybody would really quarrel with the last point made in your

statement today which was you shouldn't be left to do it all alone with respect to inflation and, in my view, with respect to the unemployment question. Those are the two things we have to address ourselves to, hopefully in a balanced way.

Let me ask you this question. Do you regard the wage increases in recent years as leading the inflation or following the inflation?

Mr. MILLER. Initially they followed the inflation, but they have led to indexes as a protection against inflation. And what happens when you have an indexed system, of course, is that you have a kind of a treadmill: There's no penalty for inflation under an indexed system, and if there's no penalty there's a tendency not to be as active in curbing inflation as I would like us to be.

Senator SARBANES. What do you think about the Okun view that you should use taxing policy to ease the impact of inflation on wages if in turn you hope to get some restraint in the wage settlements and that this is a constructive mode of thinking in trying to lower the settlements and the expectation rate. That's a way to trade off and to induce some restraint into the settlements and gear the whole thing down. Is there any benefit to be picked up by that approach?

Mr. MILLER. I think we are building in structural inflation when about 50 percent of the income recipients in the United States are indexed. If there's no penalty for inflation there's no fight against it. Therefore, any system that has an inflationary counterstructure is worth examining. There are some problems with the so-called TIP program, the tax-based incomes policy: We don't know how well it would work. There are possibilities that it would behave in a way that we don't anticipate. I welcome the studies that are going on to examine this approach. I welcome the data that's being gathered to try to analyze it, and I certainly think the general approach—that is, of finding some self-disciplining way of making the system work against the bias of inflation—is very helpful. But I would not, at this point, suggest we adopt it because I don't know that much about it. I would encourage these studies and hope they go forward.

There are two approaches, as you know: One is the carrot and one is the stick. You've got to be careful with the penalty approach because there may be some cases, outside the guidelines, where it doesn't apply, or you might get negative growth in industries that are important. If you try the carrot approach, you've got to be careful that it doesn't in any way get abused and become a monster because we haven't understood it. But I'm very much in favor of exploring these areas.

The CHAIRMAN. I hesitate to enter into what may be a Sarbanes-Miller agreement—I don't know—but it would seem to me a postponement of the tax cut from October 1 to January 1, which I understand would reduce the deficit by maybe $9 billion, would be so slight, particularly in an economy of this kind where you have 6.2 percent unemployment maybe going down to 6.6 or 5.8, and in a $2-trillion economy, that I think it could be that postponement might have some psychological effect but it would be rather slight.

Senator SARBANES. Mr. Chairman, I want to——

The CHAIRMAN. Let me just say one more thing, Paul. There's one element involved here that I think there's a great difference—maybe

no difference in the deficit, but a great difference as far as the American citizen is concerned as to whether you have a tax cut or don't have a tax cut, and instead have a spending cut. The taxes are a big element in the cost of living. They are one thing you cannot avoid. You can eat less. You can maybe spend less on housing, but you have to pay those taxes whether you like it or not. They are there and they are real. So that if you cut spending, Government spending, you do have an overall inflationary effect that is beneficent to the consumer, but if you simply postpone the tax reduction or raise taxes, I've found that most consumers say, "Thanks, but no thanks."

Senator SARBANES. Let me simply say I want to disavow any agreement here. I was simply seeking to clarify——

Mr. MILLER. Chairman Ullman is going to be very upset.

Senator SARBANES. I was simply seeking to clarify the Chairman's position.

Mr. MILLER. I will make a simple point. If you all want to negotiate, I welcome that you do, because if you can get the deficit down by less Government spending so that larger tax cuts could be passed out I would be very happy about that.

The CHAIRMAN. You really think the postponement of the tax cut from October 1 to January 1 would significantly affect inflation to an extent that you can follow a different monetary policy?

Mr. MILLER. Inflation is a combination of realities and expectations. I think a postponement would dampen expectations and therefore would be very, very helpful.

The CHAIRMAN. Is it true that what the people with the expectations are looking for is not a postponement of the tax reduction; they are looking for a spending reduction?

Mr. MILLER. They would like to see a spending reduction. Having been in Washington for 6 weeks now, I have begun to wonder whether Congress is going to cut spending, so I thought maybe the other way——

The CHAIRMAN. But I can't imagine people throwing their hats in the air and saying, "Hurrah, we don't get a tax cut."

Mr. MILLER. I have had an enormous amount of mail from people saying that would be great. They would be willing to forego a tax cut if you could cut inflation.

The CHAIRMAN. I find when they vote they don't feel that way.

Mr. MILLER. Well, of course, I don't have to run for office again; we've already been through that.

The CHAIRMAN. Well, 4 years come around pretty fast.

Mr. MILLER. So do 6 years.

The CHAIRMAN. When the Open Market Committee meets each quarter to decide on its monetary aggregate range, for example, for the year ahead, they must have a pretty set agenda and approach to policy formulation. Could you describe that approach to us? Does the staff present its economic forecast and a review of the economic conditions first? Do they forecast a growth in the monetary aggregates given current conditions? Does the staff then describe the different possibilities confronting the Open Market Committee in terms of monetary aggregate ranges and the economic factors that would result?

Mr. MILLER. Yes, sir. That's more or less what's done.

The CHAIRMAN. Now if you do that, if the Open Market Committee needs to have such extensive projections before it makes the decisions with respect to monetary aggregates to understand the full implications of these alternatives, how do you suppose the members of this committee or other members of Congress can make any sense of your policy when they are viewed only in terms of the monetary growth rate ranges? You see we are not given the other material and it seems to me we ought to have it. Don't we need the same type of information, the same forecast, that the FMOC members receive in order to understand your policies?

Mr. MILLER. Senator, I think that would create a very serious problem for us. I'd like to accommodate your point in another way, if I could. My personal thinking is that the staff work presented to the FOMC is background. The individual members of the FOMC have access to additional economic information. There are Reserve bank presidents who have information from their own economists and from the businesses and banks in their areas; and, strangely enough in this world of economics, there's not always unanimity of opinion. The Governors and I have other inputs from our experiences and our own personal contacts in general. Moreover, we want the staff to be unfettered by any tendency to speak for another audience. We want to hear the cold facts from them and then we want to massage those facts. And when we are through massaging them I would be very pleased—and I hope this presentation has been a step in the right direction—to inform you in writing of the economic outlook that I believe to be consistent with the ranges that have been established and that can be accommodated.

The CHAIRMAN. Will you give us that in quantitative terms?

Mr. MILLER. Yes, sir. It's right here.

The CHAIRMAN. When I wrote and asked you, I got the impression that you wouldn't provide that to us.

Mr. MILLER. It's right in my testimony, information in quantitative terms on the outlook of the economy and growth.

The CHAIRMAN. I understand that's your own. What I wanted was the Federal Reserve estimates. Dr. Burns used to give us his own, too, but what we would like is the Federal Reserve's.

Mr. MILLER. The FOMC is the group that sets the ranges and it has 12 members. I know how hard it is to get every member of this committee to agree on anything; it's also very hard to vote on an economic plan. What I can tell you is that I don't think there are many who straggle outside of the figures I have given you. I have listened to all of the FOMC members and, Senator, I don't think you're going to find that what I'm giving you represents any modification from the mainline of thinking of the FOMC.

The CHAIRMAN. Well, that's helpful. Let me ask you about what may be a straggler. On pages 14 and 15 of the March 21 policy record, one member of the Open Market Committee is said to have remarked, "That the unemployment rate had come close to the zone that he would characterize as reflecting full employment."

The record goes on to say that this suggests that output growth should be brought down soon toward a substainable longer term

rate. It appears that your tighter monetary policy stance as indicated by the 7-percent Federal funds rate would be consistent with this point of view.

Would you characterize that opinion about the unemployment rate and the need to reduce growth to a sustainable longer term rate as one that is widely held by the members of the FOMC at this time? Is that opinion consistent with your own view of the economy?

Mr. MILLER. As to the position that we have near full employment, I'd say that is not by any means the opinion of the FOMC. I think everybody on the FOMC would like to have a long-term sustainable rate of growth. We all have differences of opinion, but I would say that's an opinion that is outside of the consensus. We reported it because we want the record to show that opinions are widely varied.

The CHAIRMAN. In going through your statement I found it very strange that no reference at all is made to the Federal funds rate or any other interest rate. It was also strange to see only one short paragraph on credit market conditions. The Federal Reserve has got to give more consideration to financial and credit conditions than this. It seems to me if there's any agency in Government that has responsibility with respect to interest rates it's yours.

Why didn't your testimony discuss past interest rate development and credit markets in detail? Don't those have impact on the economic developments?

Mr. MILLER. Perhaps I should have expanded on the discussion of interest rate changes in the last year. I tried to note short-term and long-term changes. Maybe I should have expanded that discussion; I would be happy to on another occasion.

The outlook for interest rates in the future, I hope, is that inflation can be curbed and that interest rates can moderate. Absent that, I think we all are realists and know that if inflation continues to grow, interest rates, regardless of what we do, will be higher.

The CHAIRMAN. So you feel that interest rates are entirely exclusively a function of the inflation expectations; is that right?

Mr. MILLER. Over time, Senator, long-term interest rates have been tied very closely to inflation. All the studies I have seen show that over time the real cost of money is pretty stable and that the difference between the real cost of long-term capital and its cost in nominal dollars is inflation.

The CHAIRMAN. Well, it would be helpful if we could get a more precise notion. You say over time. That may well be.

Mr. MILLER. Month to month it may vary, of course.

The CHAIRMAN. But we would like it by quarter and certainly by the next year or two a notion of what you think would happen to interest rates.

Mr. MILLER. I will certainly see if I can be more helpful to you next time around in that regard. I apologize for not fleshing it out now.

The CHAIRMAN. In view of the conclusions that you have come to regarding inflation, what is your expectation with respect to interest rates for the next year, 1979?

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Mr. MILLER. I think interest rates are going to be under upward pressure because of the inflation level. The 6¾ to 7¼ percent inflation that I have indicated as my expectation means that there will be pressure for higher interest rates on long-term capital.

The CHAIRMAN. Does that mean the Federal funds rate is likely to move above 7 percent?

Mr. MILLER. It may or may not. Of course, that's a short-term rate and it depends on what's happening on these other fronts. I can't really predict. We are going to have to use the controls we do have on the Federal funds rate in trying to make sure that the monetary aggregates do not take off in a direction that feeds inflation. I cannot predict to you whether that will mean a higher Federal funds rate or not.

The CHAIRMAN. We were warned by Dr. Eckstein in his view you're close to—you're not at yet, but when you get to 7¼ percent, you're close to a point where you're going to have severe disintermediation where you're going to have money that's going to be leaving savings and loans and therefore coming out of the housing market and, of course, in my view, that could very easily precipitate a housing-led recession. It often has in the past when the interest rates have gone up. That's the most sensitive area of the economy to changes in interest rates.

Mr. MILLER. We are concerned about that. I would point out to you that the thrift institutions are in a little better condition than they were previously because they have more long-term deposits. You probably noticed the other day that the Federal Home Loan Bank Board reduced its liquidity requirements for member Federal savings and loans, which released some more resources for housing. So there are counter moves that can be made in case inflation seems to create a problem in the housing sector.

The CHAIRMAN. If you will look at the second chart here you will notice that the growth of deposits in savings and loan institutions on the bottom, it's very clear, has gone down very steadily from August of 1977 to date, every month below the month before. So you have had that element. Now you're dead right. The funds aren't coming out of it as much because of the long-range certificates, but you do have that steady erosion there.

Mr. MILLER. Senator, of course we had a very high level of flows to thrifts for quite a while, which is encouraging. We are concerned about this slowdown in the rate of flows and, as you've probably heard me say, it may be that attention will have to be given to lifting the ceilings on regulation Q to attract more funds. I don't think the problem is a lack of credit. What is the problem is the rate competition: When savers can go into market instruments instead of into thrifts that's where you get a runoff. If the thrifts can raise their regulation Q ceilings, they could attract those funds back.

The CHAIRMAN. Well, I want to get into that in just a minute. Before I do, I'm not sure that we left with sufficient precision the conditions under which you would feel the Federal funds rate might have to go above 7 percent. Tell us a little more precisely what conditions might persuade you to have to take that course.

Mr. MILLER. I think that if the money supply grows too rapidly, if the economy begins to heat up and inflationary forces persist, we are going to have to be very alert to leaning against those.

The CHAIRMAN. What do you have in mind as to the too rapid growth in the money supply?

Mr. MILLER. I would like to see our money supply, as I have said before, stay within the range that we have outlined for the coming quarters.

The CHAIRMAN. Well, if it goes above the top range, does that mean you might have to go to 7¼ percent or more?

Mr. MILLER. If it goes above our top range for any significant period, and we don't think it's going to go back down, I think we are going to have to do some tightening to get it back in control. But I must reemphasize that it's a mistake to look at the money supply weekly and monthly and that we, too, try to make a judgment of whether these weekly trends are ones that we have to lean against or whether they are going to be self-adjusting.

The CHAIRMAN. What else are you looking at besides money supply figures?

Mr. MILLER. We look at the performance of the economy. If the economy were slowing down, I think we would have a different view of the situation. We have to be pragmatic. I really think it would be a shame to get wedded to mechanistic solutions. But if the economy is growing, if inflation is booming, and the money supply is growing too rapidly, we would be doing the country a favor to get the money supply under control.

The CHAIRMAN. What kind of a growth rate did you have in mind as being excessive?

Mr. MILLER. If the economy performs the way we are talking about, any sustained growth above our 6½ percent upper range would concern me.

The CHAIRMAN. A sustained rate of 6½ percent in real terms?

Mr. MILLER. Yes, sir.

The CHAIRMAN. In your statement you said that if interest rates increase further deposits subject to regulatory rate ceilings will be placed at a substantial competitive disadvantage and unless there are upward adjustments in regulation Q ceiling rates M_2 and M_3 could fall short of the ranges set by the Federal Open Market Committee.

The charts we have here indicate this process is well underway because of the interest rate increase we already had since last April. Furthermore, historically, once regulation Q ceilings have been raised they have a habit of not being reduced. In fact, I think in the 35 years since we have had something like this they have never been cut back. They have always gone up and stayed there. So this would mean that an increase in these ceilings which pretty much determines the cost of funds for thrifts would rise permanently and, therefore, so would mortgage rates.

Wouldn't that be the result? And would that be a prudent move at this time, given the effect higher mortgage rates would have on inflation?

Mr. MILLER. Senator, I share your concern. It seems to me that one possibility would be to have an increase in regulation Q ceilings that would be limited in time to, say, deposit flows over the next x months or 6 months or 9 months; that way you would be sure you don't get a permanent rise.

The CHAIRMAN. I've thought of that. That's an interesting alternative. I just wonder if there would be the discipline to bring it down if it ever got up. Won't you be likely to have to maintain that if you're going to maintain the competitiveness?

Mr. MILLER. The regulatory agencies are anxious not to see the ceiling raised up, so if they did move it up for a temporary period I don't think they would feel pressure to keep it up. But the discipline would be that the increase would be put into effect only for a certain time, and the ceiling would automatically go down, and it would take additional action not to have it lowered.

If I'm correct, and if we all get together and fight inflation in unison, then we won't need higher interest rates. We would see an opportunity for lower rates.

The CHAIRMAN. I hope that would happen but, as I say, it's never happened in the past. We have a long, bleak history of it.

Mr. MILLER. That's our history on regulation Q. But we have gotten inflation down in the past and I think we can do that again.

The CHAIRMAN. We haven't got regulation Q down.

Mr. MILLER. No; this is why I'm concerned about a permanent increase. I think we ought to look at a temporary increase because it might allow us the running room to see whether we can fight the inflation battle.

The CHAIRMAN. Now you gave us a very clear and helpful statement about the Open Market Committee. It has adopted a target range for bank credit for next year of 7½ to 10 percent.

Mr. MILLER. Yes, sir.

The CHAIRMAN. But I'm not sure I understood the term "bank credit." How do you define that?

Mr. MILLER. Bank credit is made up of all the holdings of investments and loans of banks, both private and Government.

The CHAIRMAN. Can you tell us how that relates to the total of funds raised by the various nonfinancial users of credit?

Mr. MILLER. The nonfinancial?

The CHAIRMAN. Nonfinancial users of credit.

Mr. MILLER. It includes all banks—not just Federal Reserve members—so it really represents the total amount of credit being extended by banks to all financial and nonfinancial users. Of course, it does not include sources of credit such as insurance companies or other nondepository institutions.

The CHAIRMAN. Is there any way we can get a broader measure of credit?

Mr. MILLER. I know you wrote to me about a broader concept of "debt proxy" which would include the aggregate of all credits. I'm not sure the Federal Reserve could influence that aggregate, since most of the sources outside of depository institutions are also outside of any control of ours. It's a very interesting phenomena, and one of our committees is looking at whether we should use the con-

cept more. I appreciate your letter, which indicated there may be some merit in our considering it.

The CHAIRMAN. Now you said in your statement that the Federal Reserve welcomes President Carter's initiative to help deal with inflation and you have made some specific proposals with respect to how that can be done and I think you recognize that some of what you propose wasn't very popular, particularly with Federal employees.

Now you're in charge of the Federal Reserve System which, according to the 1978 budget figures, employs more than 25,000 people and will spend more than $840 million this year. It's a great place to show by example how you can hold down spending. The Board's budget allows for an increase in salaries of more than 6½ percent and the budget for the Reserve Banks where about 24,000 people are employed are budgeted for salary increases of 6.3 percent—far above the President's 5.5 percent target.

Do you plan to cut these salary increases back to the 5.5 percent figure the President says he wants Government employees to get in October and will you have this cover both regular employees and officers of the Board and the Reserve Banks?

Mr. MILLER. Senator, as you know the salaries of Governors are frozen so we don't have to worry about that. We are appreciative of your support to increase the executive level of Governors to level No. 2.

The CHAIRMAN. As well as Members of Congress. They are keyed to the same level.

Mr. MILLER. So we are taken care of there. But I do want to have a program supportive of the President. You were talking about the budget for this year. Of course, the President is talking about the coming year. I want us to curb our expenses and cost increases and salary increases in the current year and I certainly want us to go forward next year in a manner supportive and consistent with the President's goals; yes, sir.

The CHAIRMAN. Well, given the huge size of the Federal Reserve System's budget—it's just about as big as the congressional budget—why shouldn't the Congress have an annual prospective review of your expenditures so we can judge alongside all other elements in the Federal bureaucracy?

Mr. MILLER. I hope in your oversight hearings we are fully responsive to your reviewing our program. I believe an independent agency, such as the Federal Reserve, operates more efficiently on the time cycle that goes with our own planning and budgeting system. As long as you see everything we are doing and can obviously call us and bring us in at any point, I think you are getting everything you need. I think our operation is more efficient doing things the way we do them now.

The CHAIRMAN. Well, I must say, Governor Coldwell did a fine job and a very impressive report. Compared with the Comptroller and the FDIC, you were the star—your agency was—and I was impressed by that, but still, that's far different—to get a historical review with just being told what's been done—than every other regulatory agency in Government where we have the responsibility

of acting on the budget and determining whether or not expenditures should go ahead or not go ahead and have an opportunity to debate it and criticize it publicly and to have a direct accountability for what's coming up.

You're in a very privileged position.

Mr. MILLER. Senator, I may be wrong, but I think our procedure is to fix our budget and bring it before you before it is——

The CHAIRMAN. No. I wanted to do that. I asked very much to have the budget brought in. I tried to get the Federal Reserve to come in—both the Federal Reserve and the Comptroller and the FDIC said, no, they wouldn't come in before after the first of the year. Then they told us what happened during the last year.

Mr. MILLER. You may have missed my point. I think you're absolutely correct. We fix our budget and bring it in to you for your review. How much of that budget had been spent before you reviewed it? Frankly, practically none. So you were looking at expenditures prospectively, you were looking ahead to what was planned for this year; you were not looking back at last year.

The CHAIRMAN. But there was no way we could have any influence on it.

Mr. MILLER. Certainly there is.

The CHAIRMAN. No matter how outrageous we thought the expenditures were, we weren't in a position to determine by elected representatives saying how much of the public money should be spent by your agency.

Mr. MILLER. I respectfully disagree, because I think the words of this committee are very weighty with the Governors and that if you took exception with any major area we would go back and rework it very seriously. So I don't think that you are without clout in influencing it.

The CHAIRMAN. Look at the difference there, Mr. Chairman. You're very skillful. You say our words are very weighty. We had a couple of Senators in here on both sides of the aisle asking questions and listening to the testimony—no vote, no examination item by item, no consideration, no markup, no determination by the rest of the Senate or by the House, no determination by the Appropriations Committee—just a hearing in which we were told what had gone on and that was it.

Mr. MILLER. Senator, there may be areas in which we can make the Federal Reserve operate better and be more responsive and more informative. But if monetary policy is to be independent, I think that oversight of this type is fully adequate and responsive. I fear that any other process would really be an impingement upon the independent monetary authority.

The CHAIRMAN. I was waiting for that because as you know I think that your independence is certainly an independence of the executive—no question of that—but the independence from the Congress is something that I just keep coming back to—that marvelous direction that Paul Douglas gave William McChesney Martin, "You are a creature of the Congress," because that's what the Federal Reserve is. We have the constitutional authority to coin money

and regulate its value, not the Federal Reserve. We've delegated that to the Federal Reserve. You are responsible to us. We are copping out when we don't insist on going over this budget and have Congress review it and pass on it.

Let me ask, I understand S. 71, which has passed the Senate and is pending in the House, provides a salary increase for the Chairman of the Fed to level 1. Are you in favor of dropping that provision now?

Mr. MILLER. I'm in favor of making it effective for my successor.

The CHAIRMAN. For your successor? That may be 30 years from now.

Mr. MILLER. Even for the next term.

The CHAIRMAN. That's a more human and understandable response.

Mr. MILLER. After our freeze on executive salaries I would like to see the other Governors raised to level 2 maybe a year from now, but——

The CHAIRMAN. That is recommended.

Mr. MILLER. I would do that a year from now. But I think for the Chairman it should be done for the next term, because I don't want to be here arguing for compensation for myself in the term which I have agreed to serve. I don't know whether I will serve another term or not.

The CHAIRMAN. As I understand it, the other members would be raised under the recommendation.

Mr. MILLER. I think they deserve it.

The CHAIRMAN. From 3 to 2. That would be a substantial increase. Is that consistent with your argument that Federal employees should be held down to a 5.5-percent increase?

Mr. MILLER. I would freeze their salaries for the next year; I would not make an increase effective until the following year.

The CHAIRMAN. All right. Mr. Miller, you said in your statement that—yesterday Dr. Eckstein reported in his testimony that his analysis indicates there's a zero probability that M_1 growth would fall below its lower bound of 4 percent in the next year and that the same zero probability applies to the growth of M_2 and its lower bound of 6½ percent. He also said that the Federal Reserve could get these low growth rates in M_1 and M_2 with a very restrictive policy which would result in a Federal funds rate of 11 percent and a very severe recession.

I doubt that you want that to happen, so it would seem to me that the lower ends of M_1 and M_2 growth targets are simply unrealistic. There's no chance you would get them, so why have them that low? When you come in with a range as wide as 4 to 6½ percent, it isn't very meaningful for the committee or the public. When we first started talking about having a target we pointed to the German Bundesrat which had a specific numerical goal of 8 percent that year and they come up with one figure. The Federal Reserve has this range. Why shouldn't you be able to narrow that range to, say, 5 to 6½ percent?

Mr. MILLER. It's something we certainly will consider, Senator. Perhaps we can. I don't know. Our economy is far more complex than Germany's.

The CHAIRMAN. Don't you agree that that 4 percent is wholly unrealistic?

Mr. MILLER. It didn't look very unrealistic in the first quarter; we were along the bottom of the range. It may be for the next quarter because the strong growth of the economy will bring us back up in the ranges. Ideally—ideally—the midpoint of 5¼ percent would be the place to be shooting for.

The CHAIRMAN. Do you disagree with the Eckstein calculation that if you had an M_1 of 4 percent that you would have an 11-percent Federal funds rate?

Mr. MILLER. It depends on how long and when and where. For example, I don't think we are going to have an 11-percent Federal funds rate; Also, we had a 5-percent growth in the first quarter. So it depends on what period you're talking about. If Otto had spoken 3 months ago, he would have been wrong, wouldn't he, because it turned out we were at the bottom of our range.

The CHAIRMAN. It's over a full year. I think we recognize and you recognize as well that these things fluctuate from quarter to quarter, but over a full year he made that calculation.

Mr. MILLER. I can tell you about precedents. When we came out of the recession in 1975 we were in the lower end of the ranges, and we didn't have the funds rate going off the charts. So I think you have to be careful with those kind of blanket statements. I don't want to see the funds rate at 11 percent. I don't want to see a recession. On that I will agree with you.

The CHAIRMAN. Now let me come to this chart. I'm just about through here. For the past several years the Open Market Committee has given the manager of the open market desk explicit target ranges for M_1, M_2, and the Federal funds rate for the policy period between Open Market Committee meetings. The Fed's record in hitting those targets for M_1 is terrible, as you can see from the top chart. You missed more than half the time, as can be seen on the chart. Yet the desk managed to peg the Federal funds rate within the desired range consistently, I think, without exception, remarkably, and right in the center almost every time, in the lower chart.

Now I take it that you will still use this procedure and given the disastrous experience with it I'm curious why you continue to operate in that manner, why the adherence to the M_1 and M_2 target in view of the fact that you have been so far off.

Mr. MILLER. Given the upper panel of your chart, it might be well to forget those targets; we'd look better. But I think this is something that does need to be reexamined, and some of the members of the FOMC have recently been submitting suggestions to us on how we might operate differently.

The CHAIRMAN. Let me suggest what this looks like to me is that there will often be an inconsistency between hitting the Federal funds rate target and hitting the M_1 target and what your people do is to aim for the Federal funds target and hit it and in doing so that's what happens at the top. If they aim for the M_1 the Federal funds rate would be missed.

Mr. MILLER. Of course, the short-term ranges are guides for the Federal funds rate. The directive, as you will notice, ends up by saying that a particular Federal funds rate is consistent with a certain expectation; if the money supply should go outside of that, then the desk should act accordingly. I think there's an intermesh between the two. The Federal funds rate has been considered the item that can be handled and controlled; M_1 is more unpredictable. But I see your point. We shall go forth and try to do better.

The CHAIRMAN. Well, I do think—and, of course, I have great respect for the Federal Reserve. You've got a marvelous staff there, very fine, able people, but I think this does undermine its credibility and certainly doesn't do a favor to the Nation's banks and the other people in the financial area who have to operate on the basis of what the Federal Reserve is trying to do and then sees it miss so badly that they feel they can't count on a consistent, competent, effective monetary policy.

Well, I want to thank you very, very much, chairman Miller. You and I have had our differences, but I think you have been an excellent witness, a most intelligent and thoughtful and responsive witness.

Mr. MILLER. Senator, I appreciate this opportunity to be here. I enjoyed it. I appreciate your courtesy. I look forward to being back in a few months.

The CHAIRMAN. Thank you very much.

The committee will stand adjourned.

[Whereupon, at 12:20 p.m., the hearing was adjourned.]

[Additional material received for the record follows in the appendix.]

APPENDIX

POLICY STATEMENT
SHADOW OPEN MARKET COMMITTEE
March 13, 1978

A declining dollar, a falling stock market, and rising long-term interest rates describe the reaction by financial markets, at home and abroad, to our government's actions. Currently the nation does not have an economic policy to reduce inflation, balance the budget, and encourage investment growth and high employment.

The stock market, the bond market, and the foreign exchange market shout their disbelief at our government's statements about increasing investment, reducing inflation, balancing the budget, or supporting the dollar. They fear a drift to controls, a reliance on stopgaps, and increased inflation.

The Shadow Open Market Committee repeatedly has urged the Federal Reserve and the Administration to recognize that the nation's problems are long-term problems that cannot be solved by fine-tuning and by stopgap approaches. A policy that looks ahead years, not weeks or quarters, is what is required. Last year this Committee warned that the policies then proposed and subsequently adopted would have the inflationary consequences now apparent to all. This year we urge again that a long-term program be adopted and adhered to.

The problems the nation faces are not intractable. They seem intractable only because the government continues to seek short-term solutions to long-term problems and acts on the false presumption that inflation will not increase as long as resources are counted as unemployed. Such presumptions lead the Administration to solve every problem by pumping up short-term spending and to understate the role of incentives to output and capital formation -- not only tax incentives, but also reduction of business uncertainty caused by accelerating inflation.

Promises to defend the dollar, increase investment, balance the budget, and lower inflation cannot be met if the primary aim of policy is to stimulate short-term spending. Current policy will produce higher inflation, but not the high level of investment the Administration seeks to restore growth of income to the long-term potential of the U.S. economy.

What Has Been Done?

Last year the Carter Administration gave up the commitment to balance the budget by 1981. The Federal Reserve failed to carry out its announced policy of reducing the growth of money. The budget deficit remained high in 1977 and continues high in 1978.

The growth of money stock -- currency and demand deposits -- exceeded 7%, a rate last seen in 1972 and 1973, just before the major inflation began. There is cause for alarm in the continuation of so high a growth rate. No less alarming would be an abrupt reduction of this growth rate. The policy of reducing unemployment first and reducing inflation later has created the expected dilemma.

We cannot expect real investment to reach the growth rates of the 1960's if large budget deficits, highly variable monetary policies, growing restrictions on trade, and misguided policies on energy continue. We cannot expect a more stable exchange rate for the dollar until policies become stabilizing. We cannot expect inflation to slow following a period of sustained increase in money growth from 4.4% in 1975, to 5.6% in 1976, and to 7.4% in 1977. We cannot expect to avoid recession in 1979 if monetary policy shifts suddenly to combating inflation.

Because of the excessive monetary growth that was permitted in 1977, anticipations of future inflation are heightened, and interest rates are rising. To minimize the adverse effects on savings flows to thrift institutions, Federal ceilings on interest rates on consumer deposits should be abolished or raised. These price controls have never served a useful purpose and have done far too much damage. We commend Chairman Miller's recent initiative in this regard.

Last year this Committee warned the Federal Reserve that monetary growth in excess of the announced targets would be detrimental to the durability of this economic expansion. The members of the House Banking Committee cautioned the Federal Reserve to maintain monetary growth within its own announced target ranges. The Federal Reserve did not heed the advice that was given. A mistake in economic policy was made, and now a price must be paid to correct it.

What Should Be Done?

The policy of gradualism brought the increase in consumer prices down from the very high rates of 1973 and 1974 to an average of 4.5% in the last six months of 1977. The economy recovered. The dollar exchange rate remained stable. If we had avoided the burst of government spending and excessive money growth last year, we would have continued to receive the sustained benefits that can only be achieved if government policies are stabilizing. Excessive stimulus last year has continued too long to be abruptly halted.

We propose four steps:

One, the rate of monetary expansion in the last year was between 7% and 7.5%. We urge that the rate be maintained at 6% in 1978.

Two, we recommend reductions of 1% a year in the average rate of monetary expansion until a noninflationary rate of monetary expansion is achieved. The Federal Reserve should commit monetary policy to this stabilizing long-term monetary course in order to fulfill its legal responsibilities under the Federal Reserve Reform Act of 1977.

Three, the Congress should implement the Administration's pledge to reduce the growth of government spending below the growth of private spending during the next three fiscal years.

Four, to encourage investment and output, the Administration and the Congress should reduce all tax rates, individual and corporate, to offset the full effect of inflation on taxpayers. Real taxes in future years should be no higher than they would have been if there were no inflation.

SHADOW OPEN MARKET COMMITTEE

The Committee met from 3:00 p.m. to 10:00 p.m. on Sunday, March 12, 1978.

Members:

Professor Karl Brunner, Director of the Center for Research in Government Policy and Business, Graduate School of Management, University of Rochester, Rochester, New York.

Professor Allan H. Meltzer, Graduate School of Industrial Administration, Carnegie-Mellon University, Pittsburgh, Pennsylvania.

Mr. H. Erich Heinemann, Vice President, Morgan Stanley & Company, Inc. New York, New York.

Dr. Homer Jones, Retired Senior Vice President and Director of Research, Federal Reserve Bank of St. Louis, St. Louis, Missouri.

Dr. Jerry Jordan, Senior Vice President and Chief Economist, Pittsburgh National Bank, Pittsburgh, Pennsylvania.

Dr. Rudolph Penner, American Enterprise Institute, Washington, D.C.

Professor Robert Rasche, Department of Economics, Michigan State University, East Lansing, Michigan.

Professor Wilson Schmidt, Department of Economics, Virginia Polytechnic Institute, Blacksburg, Virginia.

Dr. Beryl Sprinkel, Senior Vice President and Economist, Harris Trust and Savings Bank, Chicago, Illinois

Dr. Anna Schwartz, National Bureau of Economic Research, New York, New York.

Monetary Policy at a Crossroad

By Ronald H. Marcks

My name is Ronald Marcks. I am a lawyer from Lincoln, Massachusetts, speaking as a private citizen.

My qualification for giving this statement is having studied and written on the subject. A book I published four years ago, for example, had the distinction of correctly predicting the double-digit inflation then and is still correctly predicting the inflation now.

(The name of the book, incidentally, was "DYING OF MONEY: Lessons of the Great German and American Inflations," published under the nom de plume of Jens O. Parsson.)

There should be no question that we stand at an important fork in the economic road right now. Unfortunately it is not a propitious one.

The present economic situation can be summed up in just these few words: the rate of expansion of the money supply (M_1) has now risen well over 7% on a year-to-year basis, increased over the course of 1977 from only about 5% prevailing throughout 1975 and 1976. That 7%-plus current rate is within a percentage point of the highest year-to-year rate seen at any time since World War II. (The high points of about 8% were touched momentarily in 1971 and again around the end of 1972.)

The two-point rise in the rate of money expansion that occurred during 1977 is the paramount economic fact at the present moment. No assessment of the economic situation can make sense without taking account of it. Past experience tells us without any equivocation that that rise in money expansion has these meanings:

First, the underlying base rate of inflation was also raised by two full percentage points by it.

Second, 1977 was made a substantially better year economically than it otherwise would have been by this stimulus, though the benefit was artificial and temporary.

And third, if the rate of money expansion does not continue to rise even higher, the stimulus will soon have dissipated (if it has not already) and the economy must increasingly turn sour.

Monetary policy needs to face up to two sets of very clear but not very well recognized inferences from the economic events of the last thirty years. One set has to do with the inflation side of the problem, and the other set with the stagnation side.

On the inflation side, it is an undeniable fact that rising prices have matched the expansion of the money supply to within a fraction of one percent per year over the 28 years since 1949, when a stabilized postwar condition prevailed. Prices are still doing so today and give every sign of continuing to do so in the future. That correlation held good not only over the entire 28-year span but also over each of three distinct cycles within the period. The figures are these:

AVERAGE ANNUAL INCREASE

[In percent]

	Money supply	Wholesale prices	Difference
1949 to 1953	4.2	3.6	0.6
1953 to 1962	1.4	.8	.6
1962 to 1975	5.3	4.9	.4

Thus, whether the absolute rates of rise were high or low, inflation always averaged only about half of one percent per year less than money supply expansion. This has continued. Over the two full years 1975 and 1976, money expansion averaged 5.1% and price inflation 4.5%, still maintaining that fraction of a point difference.

The clear inference is that every percentage point of increased money supply is good for just about one point of inflation, no more and not much less. We have a high inflation rate now simply because we have a high rate of money supply expansion; there is no chance that inflation can ever be reduced as long as money supply must expand so fast; and if we let the speed of money supply expansion increase any further we shall have still faster inflation.

To help visualize this, the accompanying chart presents wholesale prices for the 28 years plotted against money supply adjusted by subtracting that apparently noninflationary component of one-half of one percent per year. The appearance in this chart that prices were always gravitating toward the equilibrium set for them by money supply is inescapable.

The most striking feature of this chart is the wide gap between money supply and prices which opened and then closed over the period from 1962 to 1975. The double-digit inflation which closed the cycle, being much faster than the money expansion then prevailing, perplexed everyone, but it is not at all perplexing if we look all the way back to the beginnings of the cycle in 1962.

In 1962, money supply and prices were in apparent equilibrium with each other. Both had been edging up no faster than about 1% per year, on average, for ten years. Then, in the fall of 1962, there began a sharp acceleration in the rate of money expansion to the range of 5% or more which has been sustained ever since. For the next few years, prices were slow to begin rising as fast

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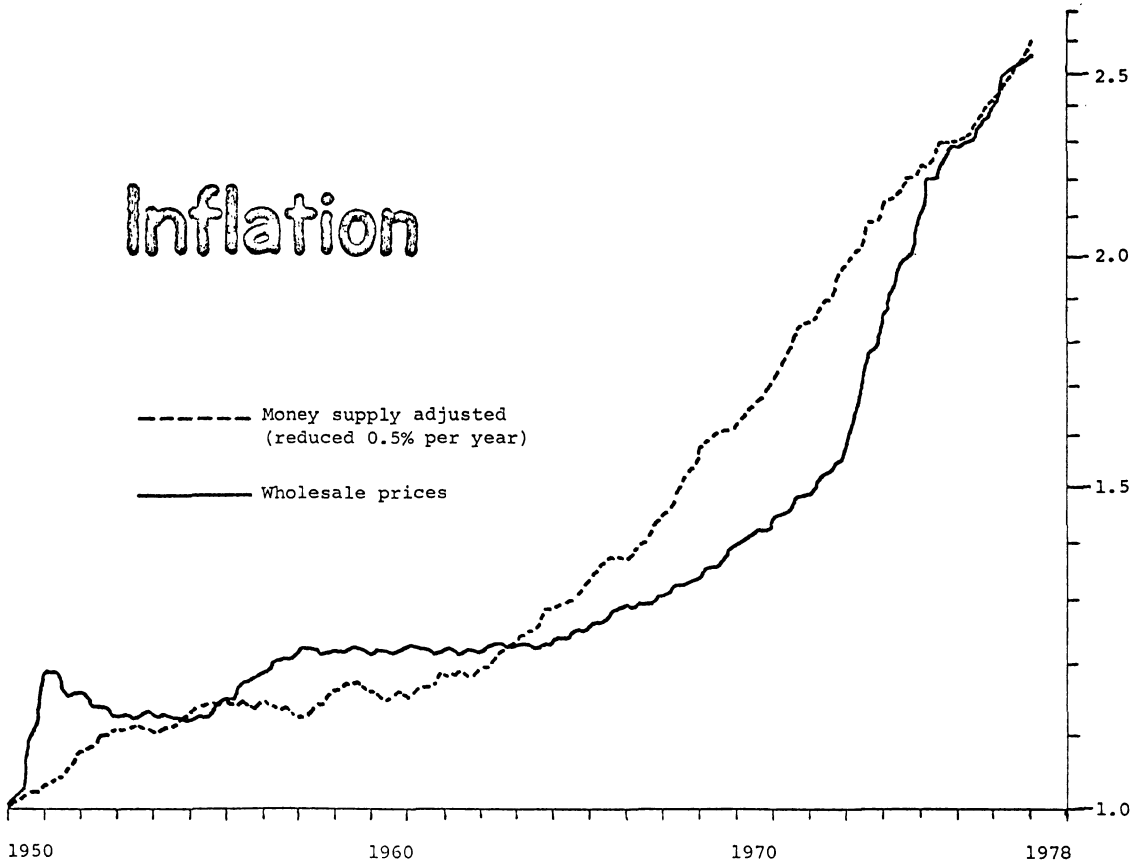


as money supply because of the inertia built up over the preceding ten years of stability, and as a result the gap opened. It can be inferred that money supply and prices were moving increasingly out of equilibrium, and that the whole gap was latent inflation which must be realized sooner or later before equilibrium could be restored.

That same temporary ability of money supply to increase faster than prices, thereby creating real purchasing power out of thin air, was also the sole foundation for the unprecedented prosperity while the gap was opening, from 1962 through 1968. Most of the double-digit inflation to come was already latent by the end of 1968.

Inflation gradually picked up speed in pursuit of money supply, briefly checked by tight money spasms and by price controls, until at last the double-digit inflation broke out in 1973 and 1974 and ran just long enough to close the gap. When it had done so, at the beginning of 1975, equilibrium was regained and inflation subsided for no apparent reason to about the same speed as money expansion.

From the moment the money expansion accelerated in 1962, something like the double-digit inflation of 1973–1974 was guaranteed to be the conclusion. The early boom and the late inflation had the same cause, namely the money expansion. At all times after 1962, the inflation to come could be mathematically predicted simply by comparing the total inflation with the total money expansion since the last equilibrium in 1962, and that was how I did correctly predict the double-digit inflation.

It is not at all difficult to understand how money supply can exercise such a controlling influence over inflation. Money supply directly determines the total amount of purchasing power in use, which is nothing more than money supply multiplied by its rate of turnover, or "velocity". For example, $300 billion of money supply turning over, say, 50 times a year would produce total purchasing power of $15 trillion per year. Total purchasing power spread over all the things to be bought with money must necessarily determine the money prices of all the things, and those prices are what determine inflation or the absence of it.

It may well be asked how it is possible for virtually every percentage point of increase in the money supply to be inflationary, as it has been, when a substantially growing money supply would seem to be needed just to service the natural growth of the economy. The answer likes with money velocity, that other factor in total purchasing power. Velocity alone has increased as fast or faster than the economy throughout the 28 years and is doing so now. In 1949, the average dollar of demand deposits turned over only 20 times a year, compared with 153 times in 1976, which works out to an average compound increase of more than 7% per year. By that acceleration, velocity supplied virtually all the additional purchasing power required by real growth, and any increase in money supply itself on top of that was bound to be inflationary. The common notion that money supply may increase as fast as real growth without causing inflation is therefore completely and dangerously false.

So there really is no reason to doubt the plain appearance that every point more of money supply is good for one more point of inflation.

This then explains what has happened to inflation over the past year and what is going to happen next. Up to the end of 1976, inflation was firmly stabilized at around 5% by a rate of money expansion which was also constant in that vicinity. Then came that two-point rise in 1977 to a money expansion rate which is now more than 7%. Inflation inevitably rose too. When it fully catches up and stabilizes again, it is sure to be close to 7% itself. For the last few months of 1977, the rate of money expansion paused in its ascent, and if it permanently levels off near 7%, so will inflation. If it resumes increasing, so too will inflation. It is as simple as that, as far as inflation goes.

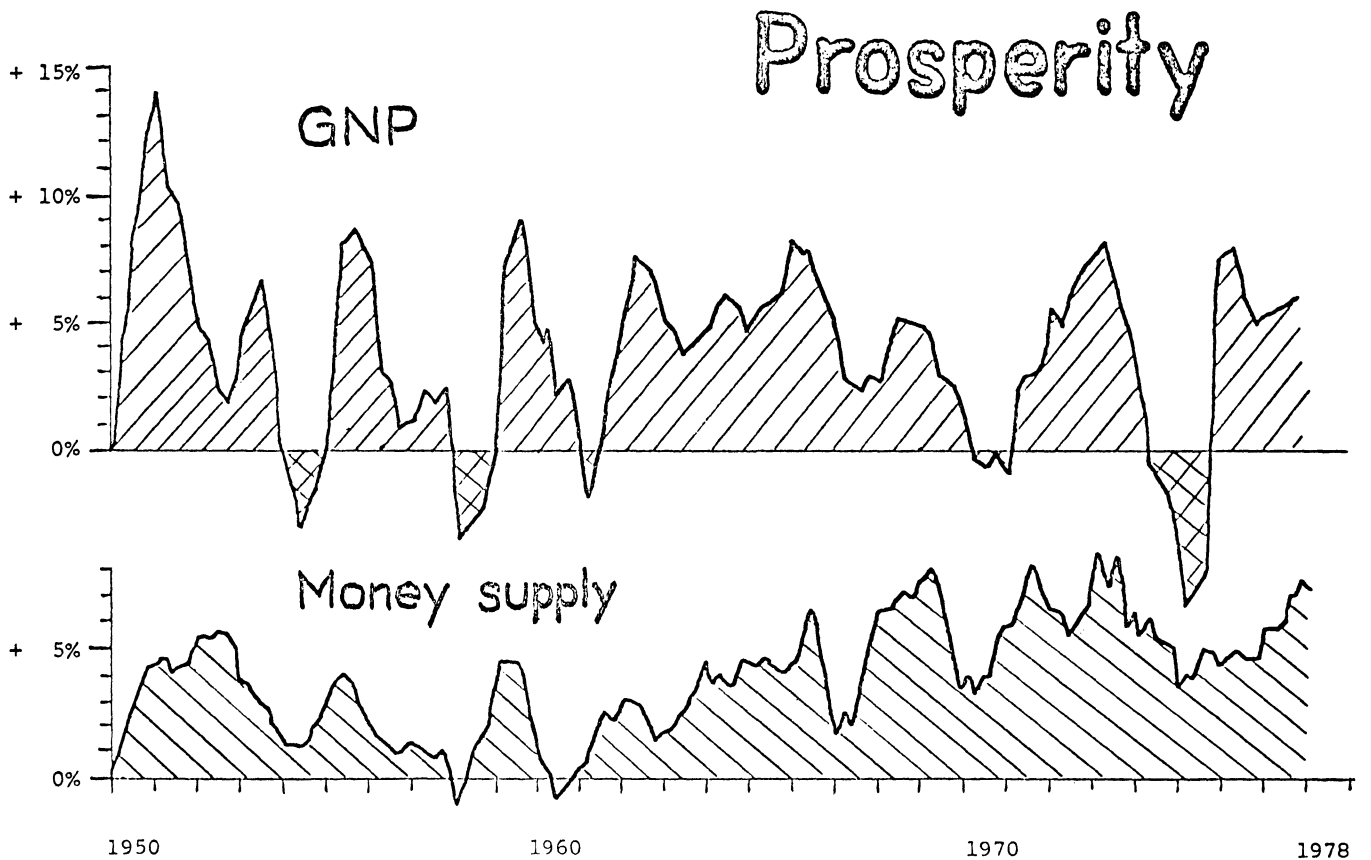
The basic idea that money supply has something to do with inflation is not a new one. It dates from at least as far back as the ancient Greeks, but it is far from being generally accepted now. No present-day economic analysis to my knowledge has recognized the point-for-point identity of inflation with money supply over the last thirty years. Most current analysis takes hardly any account of the money-supply basis for inflation at all. Most current efforts to find ways of controlling inflation focus on deterring sellers and workers from raising their prices or wages so rapidly. Those are much the same ways the Em-

peror Diocletian tried more than sixteen hundred years ago. He failed then, those methods have failed every other time they have been tried, and there is no reason to think they can avoid failing now. No price or wage can increase if there is not the purchasing power to pay it, but if there is the purchasing power, no power on earth can for long keep it from rising. Money supply is what determines the purchasing power.

I do not mean to imply that inflation is the only problem we have, or even necessarily the most serious one. Without a doubt it is possible to live with an inflation like the present one indefinitely. Obviously it is possible, because we are doing it. We shall probably have to continue doing it. My effort is merely to identify the factual reasons why we have this inflation rate, under what circumstances it will go still higher, and why it is practically impossible for it to go lower.

So much for inflation.

Meanwhile, on the stagnation side of the problem, it has been equally clear that money supply again calls the tune. Over those 28 years since 1949, growth of gross national product (GNP) has conformed to the rate of money expansion just as obediently as inflation did. The accompanying chart, plotting against each other the growth rates of GNP and money supply year-to-year (total increase since the corresponding point a year earlier), shows this.



In this chart, it is readily apparent that the ups and downs of GNP growth matched those of money supply growth to an uncanny degree. Every peak rate of GNP growth corresponded with a peak rate of money expansion, and every trough in money expansion corresponded with an economic slowdown or recession. There was no instance in the 28 years in which GNP failed more than temporarily to move in the same direction as the rate of money expansion, regardless of any other influences such as increased or decreased taxes or budget deficits.

There has been no case in which GNP growth succeeded in rising without a rising rate of money expansion. Worse yet, there has been no case in which GNP growth even succeeded in sustaining itself at a reasonably high level without a rising rate of money expansion. A non-rising rate of money growth, even though high and therefore inflationary, always produced declining GNP growth until it stagnated at a very low level. There have been no exceptions.

From what we have already seen about inflation, the implications of this are somewhat serious. Stagnation is the natural equilibrium condition whenever money supply expansion is not increasing. There is no way to accelerate the economy without more money expansion, while there is also no way to have more money expansion without more inflation. No matter how high the inflation rises, stagnation will come any time it stops increasing. It makes no difference—it never has—whether taxes, deficits, or government spending are raised, lowered, or left alone. No stimulant has ever worked except faster money expansion, but that one, when used, has always caused faster inflation. Moreover the stimulation has always been temporary while the increased inflation is permanent. None of this is likely to change until we find some new tools.

If we can grasp all this, the present situation becomes much clearer. After the last recession bottomed out at the beginning of 1975, that steady money expansion of 5% per year for the next two years initially allowed a spontaneous recovery to occur. That recovery was, however, nothing more than a reflexive bounce from an overcontracted condition, and it was short-lived. The recovery peaked in the first quarter of 1976, after which GNP growth fell steeply in each succeeding quarter until it was near zero by the end of 1976. This was the well-remembered economic "pause." The natural equilibrium associated with a permanent stabilized inflation was beginning to emerge. If the rate of money expansion had continued to stay constant at 5%, the inflation would have done so too and the looks of the final equilibrium would surely have become clear by now. In all probability, that final equilibrium rate of GNP growth would have been quite poor.

But the rate of money expansion did not stay constant. The emerging equilibrium already looked poor enough, and the two-point rise in money expansion which began in December 1976 quickly chased it away. The year 1977 was thereby improved markedly over both late 1976 and what its own unstimulated condition would have been like. All the improvement was attributable to that two-point increase in the rate of money expansion.

Now the monetary stimulation is past. Its effects both good (stimulation) and bad (inflation) have probably been realized for the most part already. The stimulation was temporary, while the increased inflation is permanent. Again the rate of GNP growth has been dropping in every quarter since the first of 1977, though not yet as low as in 1976. That natural equilibrium, whatever it would ultimately be like, seems to be coming again. That presents the question of what to do next. That is the nature of the crossroad at which we stand.

At this juncture, if the rate of money expansion does not rise any further but remains constant around its present 7%-plus, the inflation will also stabilize near its present high rate but the threatening natural equilibrium will surely arrive in due time and stay. GNP growth will continue falling until it finds its natural level and stabilizes there. There might be recession for a while, or there might only be persistent slowdown. The final natural growth rate would almost surely be low, probably less than 4% and quite possibly closer to zero. It would be permanent as long as money expansion was kept from rising, while on the good side there would also be no further tendency to fall off into recession.

On the other hand, if at this juncture the rate of money expansion does rise any further, we may obtain easier economic conditions as long as the rise continues but we will also have constantly increasing inflation. If the rate of money expansion should actually decrease, the inflation would be reduced a little but we would also have immediate recession. All of these probabilities are amply evidenced by past experience, and there have been no contrary experiences. Obviously none of these alternatives is attractive, but they are all that are open at the moment.

It is no more difficult than with inflation to explain how money supply can exercise such a controlling influence over growth and prosperity. Again the secret is total purchasing power, which is determined by money supply. No one can buy any more economic activity, regardless of the highest of confidence or the most exuberant of spending intentions, if he has no more purchasing power for it. Only increased money supply can provide the purchasing power to lift economic activity above whatever its natural level would otherwise be, and then only until the inevitable inflation robs the real value of the fresh purchasing power.

Here again, the idea that money expansion has something to do with economic growth is not new. Monetarists have been saying it for years. But it is not accepted any more than the relationship with inflation is accepted. No observer to my knowledge has recognized the apparent fact that stagnation is the unavoidable equilibrium of a non-rising money expansion. Most observers do not even accept the primary influence of money expansion on prosperity. Most current efforts to find ways of stimulating the economy focus on the traditional fiscal tools of tax cuts or increased government spending and deficits. In 30 years, however, there has not been a single instance in which any of those measures did in fact stimulate the economy in the absence of rising money expansion. There is no reason why they should, since tax cuts and increased deficits merely reallocate total purchasing power among different sectors of the economy without increasing the total. So there is also no reason to expect fiscal measures to stimulate the economy now any more than they have ever done in the past.

I certainly do not wish to leave the impression that all is hopeless, even though I do say that the familiar fiscal and monetary tools are either useless or suicidal. Undoubtedly it is possible to devise effective ways to obtain full employment, abundant prosperity, and zero inflation all at the same time. It is just not as simple as the fiscal and monetary ways we know. Our real problems are rooted deep in gross deformities of the ways we divide up our incentives and rewards. We are not about to cure the problems until we are willing to let major surgery be performed on those structural deformities. We cannot even begin to talk usefully about real cures until we forget about the easy fixes of fiscal and monetary stimulation once and for all.

From the present crossroad, there are only those three possible paths: faster money expansion, no faster money expansion, or slower money expansion—which is the same as to say constantly rising inflation, chronic stagnation, or recession. Of these, the least bad would seem to be to stop the rate of money expansion permanently from rising any higher and accept whatever conditions that brings while we go looking for some new economic tools. But that is just my judgment, on which others may differ.

Whichever course we choose, we should be under no illusions about the consequences that will follow, and we ought to be frank with ourselves about which of the unpleasant alternatives we are electing. History gives us plenty of warning that every point more of money supply will be good for one more point of inflation, while on the other hand if we do not have faster money supply expansion we shall stagnate. No other expectation for the future conforms to the plain facts of the past.

BANK OF AMERICA

A.W. CLAUSEN
President

May 17, 1978

Dear Jack:

I'm pleased to respond to your request for my comments on your statement of appropriate policies to meet four pressing problems facing our country: inflation, productivity, unemployment, and exports-imports imbalance.

I certainly agree with the constructive tone and substance of your policy proposals. I applaud the "common sense" emphasis you suggest, and particularly, the objectives to achieve many desired results over five years. You are, of course, in a much better position than I to judge how feasible this approach will be in the Congress.

My principal concern is that the Congress and the Administration recognize that our nation now faces a confidence problem at least as much as an economic problem. Complex, impractical remedies and regulations which divide or frustrate our people only intensify public anxiety and confusion.

Straightforward small income tax cuts over a period of time can be readily understood, minimize revenue losses, reward risktaking and greater human effort, and gradually help restore confidence, if government spending is held in check.

Policy target numbers can be useful, but in the field of interest rates and finance with which I am most familiar, experience demonstrates that market forces cannot be dammed up very long without major disruptions adversely affecting the public, as well as business and government. As you know, we're now marketing variable rate mortgages in California.

BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIATION · BOX 37000 · BANK OF AMERICA CENTER · SAN FRANCISCO, CALIFORNIA 94137

In my view there is growing public demand for more accountability in actual cost-benefits from government regulators and administrators, not unlike the results-oriented procedures widely used in business.

Your attention to U.S. trade and payments imbalances is timely. Our future international relations and the value of the dollar are at stake. We must, as you say, make far better use of our domestic energy resources. I would add that we must make a more determined drive to expand exports.

I agree that all these issues are interrelated, but the fundamental question is whether we have the national discipline to correct our fundamental problems. With traditional U.S. public common sense and effective leadership from public officials such as yourself, I remain confident that our country will soon turn a corner toward greater economic balance between investment and consumption against a background of fiscal and monetary restraint.

You can count on our interest and support.

Sincerely,

A. W. Clausen
President

Honorable Harrison Schmitt
United States Senate
Washington, D.C. 20510

DATA RESOURCES, INC. 29 HARTWELL AVENUE · LEXINGTON · MASSACHUSETTS 02173
617/ 861-0165

OTTO ECKSTEIN
PRESIDENT

May 15, 1978

Senator Harrison Schmitt
New Mexico
United States Senate
Washington, DC 20510

Dear Senator Schmitt:

Thank you for sending me your comments of the hearings of monetary policy. I share your general perspective and goals although there will inevitably be some differences in the nuances. I am delighted that the Senate and the Committee have added another member with a serious interest in the problems of the economy.

Inflation: Your budget proposal is generally similar to those advanced in my testimony. I am not sure it is safe to legislate tax reduction on a $10 billion per year basis without some safety valves because there could be special situations in which one would wish the taxes to go down a little faster, or in which foreign exigencies or severe inflation dangers would require the taxes to be held steady for a year. I certainly share your view that the rate of growth of the Federal budget must be slowed.

On the Federal funds rate limit of 7%, it is already too late, with the Federal Reserve having moved to 7¼%, and with apparently higher rates ahead. I do not believe it will be possible for the Federal Reserve to bring the growth rate of M1 down by ½% a year without creating a financial disturbance. I believe in variable interest rate mortgages, and, as I expressed at the hearing, believe that management and labor must share in the process of reducing the inflationary spiral.

Productivity: I agree with all of your measures to boost productivity including a reshaping of tax policy with regard to export stimulation. We are now putting tax money into this field without much benefit. We should do it better.

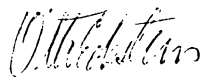
Unemployment: I agree that tax policy should be used to encourage employment and with some special emphasis for small business and labor-intensive production. The challenge in this field of employment credits is to set up the program so it really produces incremental employment. I doubt that the present employment credit does very much along those lines.

I also agree with you that welfare reform must be set up to encourage people to work, with emphasis on private sector employment. We are doing so much now on public service employment it is time to bring in more private sector incentive.

Export/Imports Balance: I agree that our trade balance really must be improved, and this must include both conservation and increased production of energy. Whether I would favor a national trade policy coordination commission would depend upon the function of this group. I am quite suspicious of coordinating commissions, the Department of Commerce really should be doing this job anyway.

Thank you for inviting my views.

Sincerely yours,



FAIRFIELD
UNIVERSITY

NORTH BENSON ROAD, FAIRFIELD, CONNECTICUT 06430 ■ (203) 255-5411

MAY 18 1978

May 16, 1978

Senator Harrison Schmitt
Committee on Banking, Housing & Urban Affairs
U.S. Senate
Washington, D.C. 20510

Dear Senator Schmitt,

Thank you for the copy of your statement on April 25, 1978 before the Senate Banking Committee.

As you requested, I am sending along my comments on some issues you raised. I hope they will provide some insight.

Yours truly,

Joan G. Walters

Joan G. Walters, Ph.D.
Professor and Chairman
Economics Department

el
Enclosure

Comments on Senator Harrison Schmitt's Statement
of April 25, 1978

Joan G. Walters

INFLATION:

Senator Schmitt's Statement rightly emphasizes that a tax cut should be accompanied by a spending cut. Since a tax cut is planned, it is well to specify that spending cuts must be undertaken simultaneously.

Over the longer term, the rate of growth of the federal budget expenditures should be linked to the rate of growth of G.N.P. If this balance is not reached, the relative role of government in the economic system will continue to increase.

PRODUCTIVITY:

Fostering investment in plant and equipment and the development and introduction of new technology should be a primary objective of government policy. During the hearings on April 24, 1978, fears were expressed concerning equipment replacing workers, thus raising the automation spectre--capital versus labor. A positive approach envisions capital as raising the worker's productivity, and hence wages. All the new entrants to the labor force (both baby-boom workers and women) must be provided with additional capital goods in order to raise total productivity.

It is time for government economic policy to promote the efficiency goals of society in terms of increasing output and jobs. Equity goals involving income redistribution have received the primary emphasis for the past fifteen years. Government policies to foster increased growth and greater incomes again must be considered a top priority.

J. HENRY SCHRODER BANK & TRUST CO.
New York, N.Y., May 23, 1978.

Senator HARRISON SCHMITT,
U.S. Senate,
Washington, D.C.

DEAR SENATOR SCHMITT: In answer to your letter of May 5 in which you enclosed a statement of what you believe to be the major economic problems facing the U.S. today, I generally concur with your comments. If I were to make my own list, I probably would have added two other factors in addition to inflation, productivity, unemployment and the export-import imbalance. The first would be a lack of coordination between monetary and fiscal policies and second would be the inability to control fiscal policy. Moreover, it is not merely control over fiscal policy that is disturbing, it is an inability to make accurate forecasts of the numbers, to understand the ramifications of the numbers, and to have the flexibility to do something about it. There are also other factors that I would look at because I find them of great importance. I have recently written an article on some of these topics which will shortly appear in "The Money Manager" and I am enclosing a draft copy.

As for your comments on one of the major problems that you listed, I have the following thoughts:

1. *Inflation.*—I concur with the idea of reducing Government spending now, but I would delay somewhat the tax reductions until there is clear evidence that the deficit is heading downward not upward. With respect to monetary policy, I want to point out that the Federal Reserve can hold down the Fed funds rate and the money supply simultaneously *only* if the underlying forces in the economy allow the Fed to do so. However, if pressures build in the economy, one or the other may have to be sacrificed. Also, the relationship between the quarterly growth in M–1 and GNP is highly imperfect, first because the statistics are imperfect and subject to major revisions and second because M–1 can grow in either amount or in turnover (volocity), yet the published M–1 figures show only the amount.

2. *Productivity.*—I contend that "cost" should be studied thoroughly before regulations are imposed because in many cases costs spring up in unexpected areas, often with a time lag. For example, unduly low prices on natural gas created a major cost in terms of gas being flared, lack of exploration, and the erroneous belief by many users that gas would be relatively inexpensive and always available in sufficient quantities (and constructing facilities on that basis).

3. *Unemployment.*—Too much emphasis is placed on a single desired level of unemployment. Emphasis instead should be placed on growth targets for employment and how they may be achieved. This growth target would vary depending upon economic, social and demographic circumstances. For example, what would be wrong with having as a prime target an attempt to put between two million and three million people to work in 1978 rather than aiming at a specific unemployment rate where the sample is small and people seem to move rather freely in and out of the labor force. If growth in employment is used as a target, it can then fit in quite nicely with business tax incentives that can be used to achieve employment growth.

4. *Export-Import Balance.*—A National Trade Policy Coordination Commission is an excellent idea. In addition to other excellent points you made in this area, I would suggest that the Government further stimulate exports while reducing the benefits of U.S. corporations sending capital abroad.

I enjoyed testifying before the Senate Banking Committee and hope that the comments I made before the Committee as well as the suggestions enclosed in this letter will be useful in designing public policy.

Sincerely,

DR. LEONARD J. SANTOW.

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STATEMENT
on
APPROPRIATE MONETARY POLICY
for submission to the
SENATE COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS
for the
CHAMBER OF COMMERCE OF THE UNITED STATES
by
Dr. Jack Carlson*
May 18, 1978

The Chamber of Commerce of the United States appreciates the opportunity to share business' concern about the Government's proposed economic policy for the next twelve months. We recommend a somewhat different economic strategy than is implied in a moderately restrictive monetary policy and a fiscal policy that is expansionary on the spending side.

RECOMMENDATIONS

We support the current monetary policy that involves no lowering of the Federal Reserve's monetary growth rate ranges for M-1, M-2, and M-3. But we are concerned that Federal Reserve credit restraint if pursued too vigorously could cause the federal funds rate to increase significantly above 7¼% which, in conjunction with heavy Treasury cash borrowing, could cause a credit crunch which would cripple housing and small business, and increase the chance of a recession next year.

Therefore, the Chamber recommends placing more of the burden of fighting inflation on the back of fiscal policy and less on monetary policy. This would best be done by limiting FY 79 federal spending to $490 billion instead of the $500 billion proposed by the Administration and the $499 billion proposed by the first concurrent budget resolution. The smaller spending total would still be an increase of nearly $38 billion over the FY 78 figure and would represent a $630 increase for the average family. But at least the proposed FY 79 deficit would

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be reduced instead of increased from $53.0 billion in FY 1978 to $59.6 billion in FY 1979, as now proposed.

We recommend against shrinking tax relief. Tax relief should be maintained at $24 billion, with a larger proportion of tax relief to encourage job-creating investment. Investment in the near term can be encouraged best by providing tax relief, first, in the form of a higher investment tax credit, second, more favorable treatment of capital gains, third, more adequate depreciation allowances, fourth, Corporate Income Tax rate reductions, and, fifth, Personal Income Tax rate reductions.

Unnecessary uncertainty and needless additional inflation-boosting costs should be avoided by maintaining the same level of expenditures for federal regulations in FY 1979 as in FY 1978.

ECONOMIC OUTLOOK

Now that the first quarter pause is behind us, real growth should rebound in the second quarter and fluctuate between 3 to 4% from the Summer of 1978 through the end of 1979. This forecast is somewhat less optimistic than the Administration's (see Table 1).

TABLE 1

ADMINISTRATION AND CHAMBER FORECASTS

	1978			1979		
	Without Tax Relief	With Adm. Tax Relief		Without Tax Relief	With Adm. Tax Relief	
	Chamber	Chamber	Carter	Chamber	Chamber	Carter
GNP, adjusted for inflation	3.7%	3.9%	4.7%	3.2%	3.9%	4.8%
Consumer Price Index	6.6%	6.8%	5.9%	6.4%	6.6%	6.1%

However, the Chamber's forecast has been more accurate than the Administration's forecast (see Table 2).

TABLE 2

ADMINISTRATION RECORD ON FORECASTING

	Forecasts made February 1977 for 1977		Actual for 1977	Differences between Forecast and Actual	
	Carter*	Chamber		Carter*	Chamber
Real GNP Increase	5.4%	4.9%	4.9%	+0.5%	None
Consumer Price Increase	5.1%	6.5%	6.5%	-1.4%	None

*Fiscal Year 1978 Budget Revisions, February 1977.

Tax relief of $24 billion is fully justified, effective October 1, 1978. It would add about three-quarters of a percentage point to real GNP growth, add very little to inflation and create about one-half million new jobs by the end of FY 1979 (see Table 3).

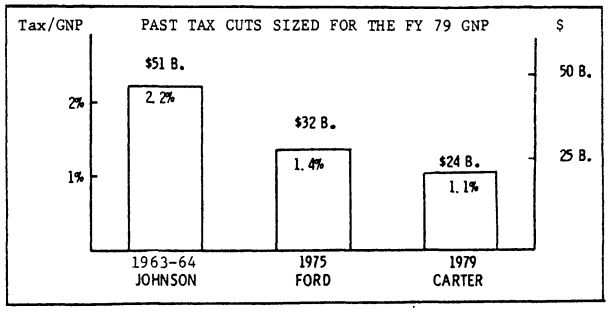
TABLE 3

EFFECTS OF $24 BILLION TAX RELIEF	
	1979
Real GNP	+0.7%
Consumer Price Index	+0.2%
Jobs	+500,000

Tax relief should not be sacrificed for gluttonous federal spending. If no tax relief were provided, federal taxes would increase by a record amount, $64.6 billion, 16% or $1,077 for an average American family. Even after providing $24 billion in tax relief, federal taxes would still increase by $39.2 billion, which would be 10% or $653 for an average American family.

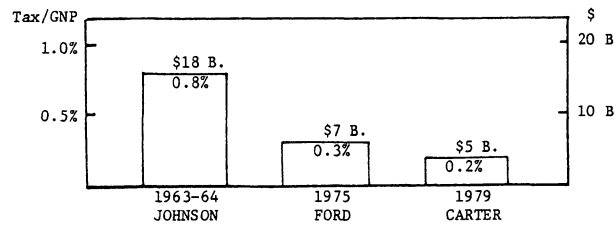
Also, the proposed tax relief is small in comparison with tax relief provided in the past for the same purpose. The tax cut of 1963-64 would be more than twice as large in today's economy. Yet that tax relief occurred at the same time interval following a business recession and for the exact same purpose. Also, the tax relief of 1975 would be larger in today's economy (see Chart 1).

CHART 1



The Administration's proposed tax relief is small for business, only $5.1 billion or one-fifth of the total tax relief. This is the smallest proportion earmarked for business tax relief in two decades. The Kennedy-Johnson Administration provided one-third of the 1963-64 tax relief for business (see Chart 2).

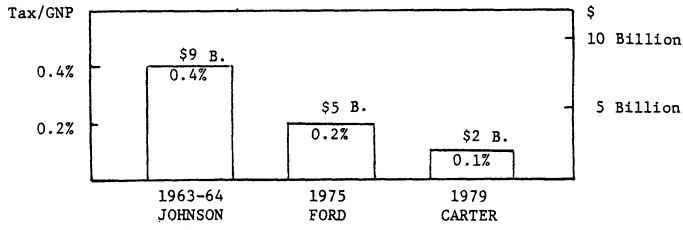
CHART 2



The Administration's proposed tax relief to directly stimulate investment is particularly anemic. The direct stimulus for investment is much smaller than has occurred in the past (see Chart 3).

CHART 3

PAST TAX RELIEF FOR DIRECT INVESTMENT
SIZED FOR THE FY 1979 GNP



The need for stimulating investment is greater today than at any other time during the last two decades. The decline in the growth of investment in plant and equipment has led to less modern equipment for each worker and thus less output per man hour, or productivity (see Table 5).

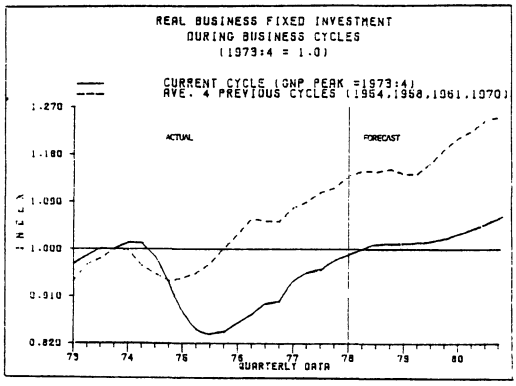
TABLE 5

GROWTH IN INVESTMENT IN PLANT AND EQUIPMENT
AND PRODUCTIVITY

	Investment Growth After Adjusting for Inflation	Capital per Labor Hour	Productivity Growth
1948 - 1966	3.4%	3.1%	3.3%
1966 - 1973	3.0%	2.8%	2.1%
1973 - 1978 I	-0.2%	1.7%	1.3%

The slow pace of business fixed investment can also be shown in relationship to the recovery from the 1975 recession in contrast to other economic recoveries (see Graph 1).

GRAPH 1



Source: National Chamber Forecasting Center

Investment is officially discouraged by the Federal government. For example, according to Chamber analysis, legislation proposed by the President, enacted by the Congress and signed into law by the President will reduce investment for each new worker by $950 by 1979, $2,000 by 1980 and $3,750 by 1985, below what it would have been without the legislation. If legislation pending at the end of 1977 which the President proposed were included, then the loss of tools for each worker would be $2,150 by 1979, $5,200 by 1980 and $11,350 by 1985 compared with conditions otherwise (see Table 6).

TABLE 6

LEGISLATION ENACTED DURING 1977	Impact on Investment For Each New Worker			
	1978	1979	1980	1985
Economic Stimulus	1,450	850	350	250
Minimum Wage	-150	-2,350	-2,600	-2,400
Social Security Taxes	0	-200	-600	-2,750
Farm Price Supports	-150	-250	-200	-250
Federal Pay Increase	-50	-100	-100	-100
Gross Impact	1,050	-2,050	-3,200	-5,250
Net Impact (remove overlapping policy effects)	550	-950	-2,000	-3,750
PENDING LEGISLATION				
Energy Taxes	-550	-1,800	-3,350	-7,100
Regulation of Intrastate Natural Gas	-600	-800	-1,150	-2,350
Labor Law Reform	0	-100	-550	-3,600
Gross Impact of Enacted and Pending Legislation	-100	-4,500	-8,300	-18,450
Net Impact of Enacted and Pending Legislation (remove overlapping policy effects)	-50	-2,150	-5,200	-11,350

This undermining of workers' productivity and their real income may be remedied by more tax relief to encourage investment. According to the Chamber's econometric analysis, first priority to encourage investment in the near term should be an increase in the Investment Tax Credit; the second priority should be a reduction in the capital gains tax; the third priority should be a more adequate depreciation allowance; and the fourth priority should be a corporate rate reduction. Tax relief for encouraging investment would greatly expand investment (see Table 7).

TABLE 7

INVESTMENT BY 1982 FROM $1 BILLION TAX RELIEF THIS YEAR FOR			
CORPORATE RATE REDUCTION	LIBERALIZED DEPRECIATION	LIBERALIZED CAPITAL GAINS TAX	LARGER INVESTMENT TAX CREDIT
$0.7 billion	$1.7 billion	$2.0 billion*	$2.2 billion

*Based on a conservative estimate of the tax change effect on the stock market. With further analysis, this estimate may adjust upward, not downward.

The latest Chamber-Gallup Business Confidence Survey reinforces the conclusion that business would increase investment with tax relief. One half of a cross-section of American business said they would invest more with tax relief designed to encourage investment.

MONETARY POLICY

During the next 12 months, assuming a continuation of present monetary policy, the Chamber forecasts money supply M-1, to increase between 5½ to 6½%, M-2 to increase 8½-9½% and M-3 to increase 9½-10½%; non-borrowed reserves to increase 5-5½%; federal funds rate to initially peak at 7½% and then decline by year-end during 1979.

If federal spending is held to the $38 billion increase level proposed by the President in January, monetary policy need not cause a harmful outflow of savings from thrift institutions (disintermediation) or a credit crunch. The President's March increase in spending of $8 billion and the Congressional Concurrent Resolution, however, add to the risk of a credit crunch, a marked slowdown in housing starts and a recession. If spending can be controlled and the planned deficit reduced, then the United States can experience a healthy economy through 1979, and even beyond.

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FEDERAL RESERVE SYSTEM TARGETS AND MACROECONOMIC MEASURES: SELECTED DATA SERIES

Prepared for the Committee on Banking,
Housing and Urban Affairs
United States Senate

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April 19, 1978

FEDERAL RESERVE SYSTEM TARGETS AND MACROECONOMIC MEASURES: SELECTED DATA SERIES

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FEDERAL RESERVE SYSTEM TARGETS AND MACROECONOMIC MEASURES (Cont.)

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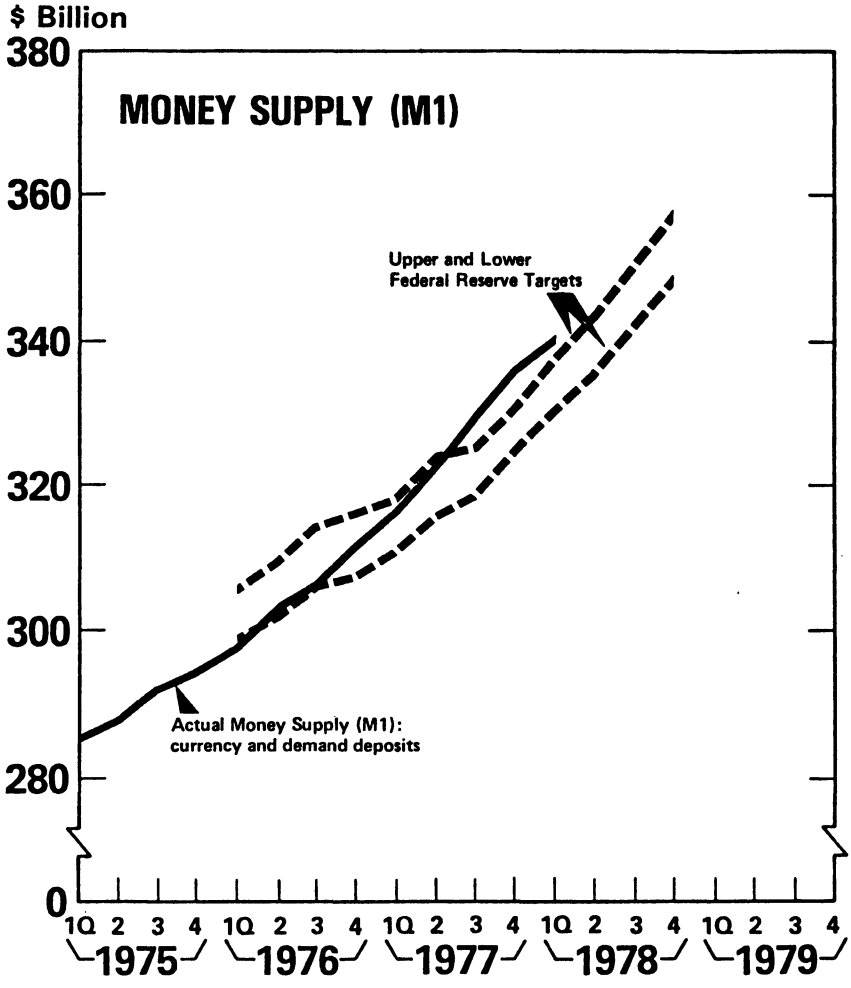
MONEY SUPPLY AND FEDERAL RESERVE TARGET RANGES (Quarterly Data)

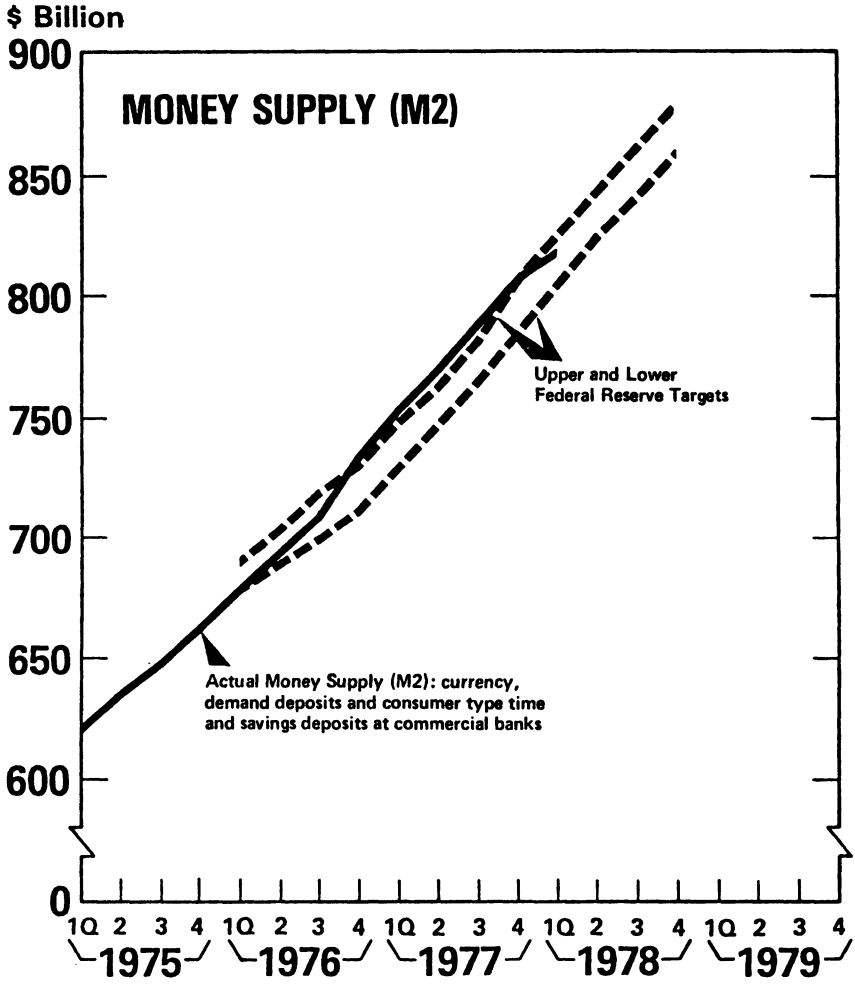


Note: The target range for 1st quarter 1976 was set for average M1 for March 1976. Actual M1 shown above is for the entire 1st quarter 1976 to provide consistency with other M1 observations.

Data Source: Quarterly observations and target levels calculated from seasonally adjusted money supply series of the Board of Governors of the Federal Reserve System as revised in March 1978.

Prepared by Congressional Research Service, Library of Congress.

MONEY SUPPLY AND FEDERAL RESERVE TARGET RANGES (Quarterly Data)



Note: The target range for 1st quarter 1976 was set for average M2 for March 1976. Actual M2 shown above is for the entire 1st quarter 1976 to provide consistency with other M2 observations.

Data Source: Quarterly observations and target levels calculated from seasonally adjusted money supply series of the Board of Governors of the Federal Reserve System as revised in March 1978.

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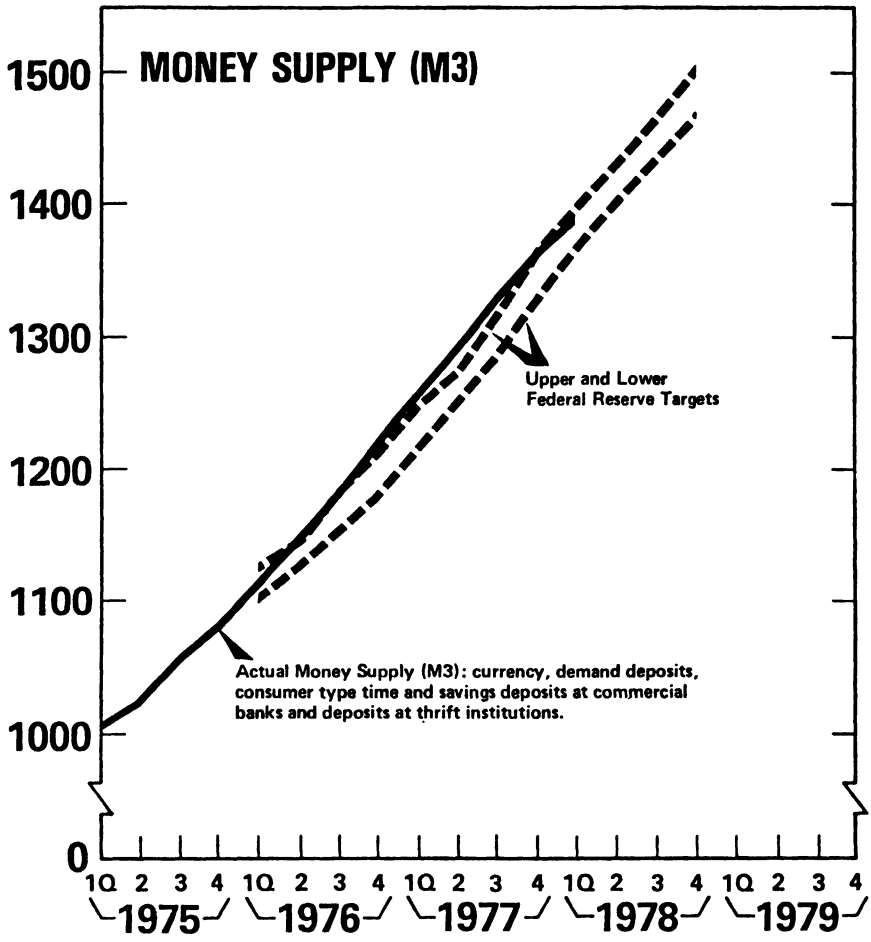
MONEY SUPPLY AND FEDERAL RESERVE TARGET RANGES (Quarterly Data)

$ Billion



Note: The target range for 1st quarter 1976 was set for average M3 for March 1976. Actual M3 shown above is for the entire 1st quarter 1976 to provide consistency with other M3 observations.

Data Source: Quarterly observations and target levels calculated from seasonally adjusted money supply series of the Board of Governors of the Federal Reserve System as revised in March 1978.

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

Period covered	M1		M2		M3	
	Target	Actual	Target	Actual	Target	Actual
1. March 1975 to March 1976	5.0 - 7.5	5.0	8.5 - 10.5	9.5	10.0 - 12.0	12.3
2. 1975:Q2 to 1976:Q2	5.0 - 7.5	5.2	8.5 - 10.5	9.5	10.0 - 12.0	12.0
3. 1975:Q3 to 1976:Q3	5.0 - 7.5	4.5	7.5 - 10.5	9.3	9.0 - 12.0	11.5
4. 1975:Q4 to 1976:Q4	4.5 - 7.5	5.7	7.5 - 10.5	10.9	9.0 - 12.0	12.8
5. 1976:Q1 to 1977:Q1	4.5 - 7.0	6.3	7.5 - 10.0	10.9	9.0 - 12.0	12.8
6. 1976:Q2 to 1977:Q2	4.5 - 7.0	6.6	7.5 - 9.5	10.7	9.0 - 11.0	12.4
7. 1976:Q3 to 1977:Q3	4.5 - 6.5	7.8	7.5 - 10.0	11.0	9.0 - 11.5	12.7
8. 1976:Q4 to 1977:Q4	4.5 - 6.5	7.8	7.0 - 10.0	9.3	8.5 - 11.5	11.7
9. 1977:Q1 to 1978:Q1	4.5 - 6.5	7.3	7.0 - 9.5	8.6	8.5 - 11.0	10.4
10. 1977:Q2 to 1978:Q2	4.0 - 6.5	NA	7.0 - 9.5	NA	8.5 - 11.0	NA
11. 1977:Q3 to 1978:Q3	4.0 - 6.5	NA	6.5 - 9.0	NA	8.0 - 10.5	NA
12. 1977:Q4 to 1978:Q4	4.0 - 6.5	NA	6.5 - 9.0	NA	7.5 - 10.0	NA

M1 = private demand deposits plus currency.
M2 = M1 plus bank time and savings deposits other than large negotiable CD's
M3 = M2 plus deposits at mutual savings banks, savings and loan associations and credit unions
NA = not applicable.

NOTE: Actual growth rate data are based on money supply series of the Board of Governors of the Federal Reserve System as revised in March 1978.

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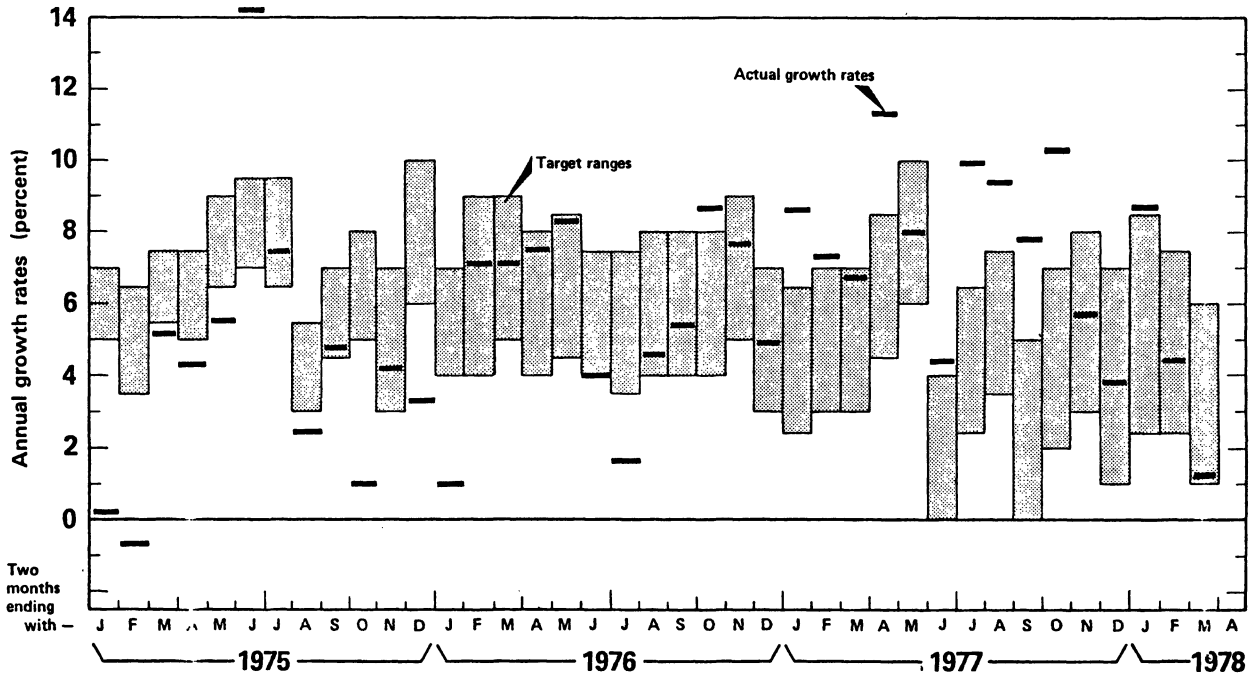
MONEY SUPPLY (M1) GROWTH RATES AND TWO MONTH FEDERAL OPEN MARKET COMMITTEE TARGET RANGES



SOURCE: Target ranges are from Federal Open Market Committee Records of Policy Actions. Actual growth rates are calculated from money supply series of the Board of Governors of the Federal Reserve System as of March 1978.

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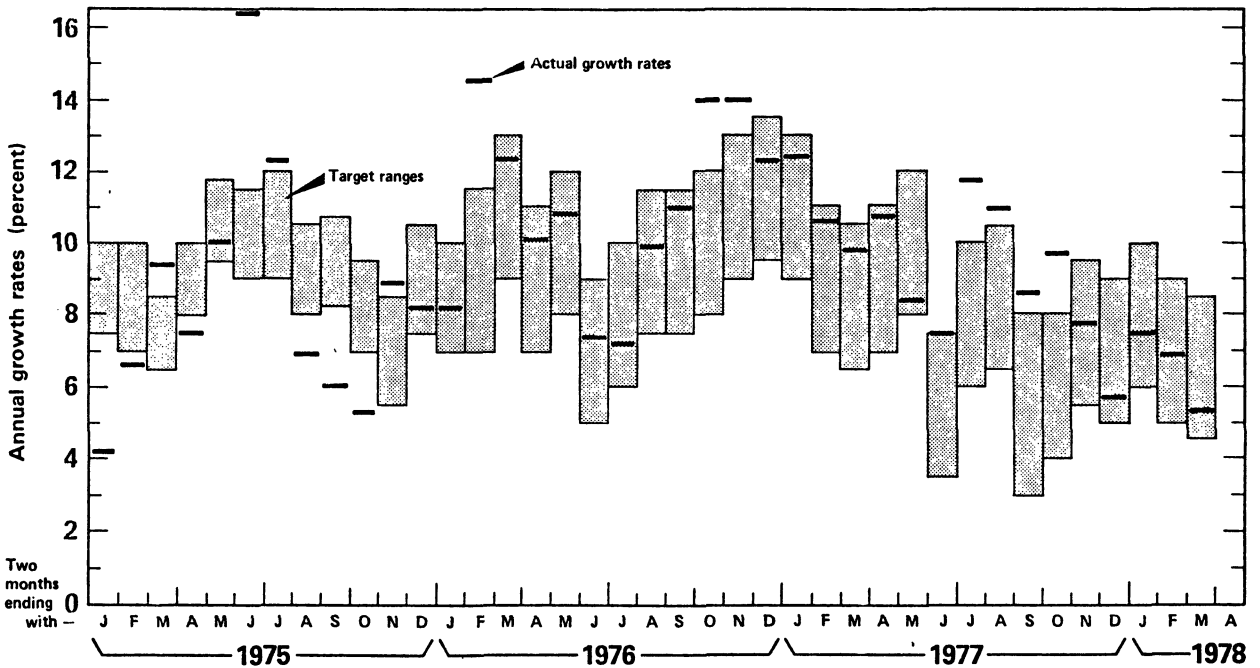
MONEY SUPPLY (M2) GROWTH RATES AND TWO MONTH FEDERAL OPEN MARKET COMMITTEE TARGET RANGES



SOURCE: Target ranges are from Federal Open Market Committee Records of Policy Actions. Actual growth rates are calculated from money supply series of the Board of Governors of the Federal Reserve System as of March 1978.

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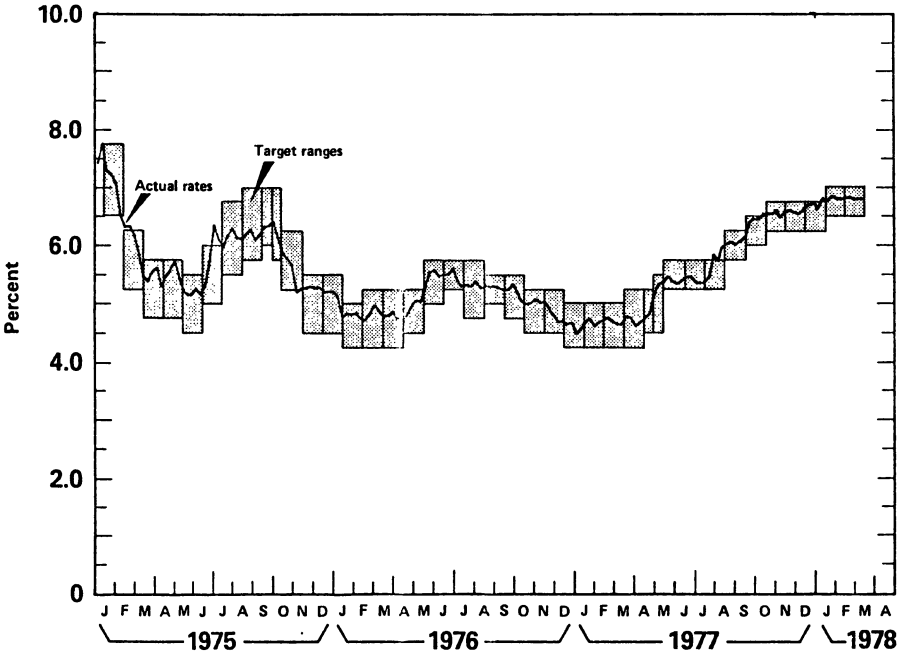
FEDERAL FUNDS RATES AND FEDERAL OPEN MARKET COMMITTEE TARGETS



SOURCE: Target ranges are from Federal Open Market Committee Records of Policy Actions. Weekly averages of federal funds rates are from the Board of Governors of the Federal Reserve System data series, accessed from data files of Data Resources, Inc.

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ECONOMIC FORECASTS:
FOR THE PERIOD FIRST QUARTER 1978
THROUGH FIRST QUARTER 1979

	Chase	DRI	Wharton	Federal Reserve
Real Growth (% change in constant $ GNP)	3.5	4.4	5.6	?
Inflation (% change in GNP Implicit Deflator)	6.3	6.1	6.3	?
Percent change in civilian labor force	1.8	1.8	2.3	?
Unemployment rate:				
average during entire period	6.0	6.1	6.1	?
first quarter 1979	5.8	6.0	5.8	?
Percent change in Federal Reserve industrial Production Index	5.9	6.2	6.7	?
Growth of money supply (M1) (percent)	6.9	5.4	6.2	?
Federal funds rate first quarter 1979	6.09	6.52	7.91	?

SOURCES: Chase Econometrics: Interim Forecast of April 3, 1978.
Data Resources (DRI): Control Forecast of March 23, 1978.
Wharton EFA: Quarterly Model Control Solution Update of April 4, 1978.

ECONOMIC FORECASTS:
UNDERLYING MONETARY POLICY ASSUMPTIONS

Chase: "Given the stability in M1 for February and thus far in March, the monetary aggregates will register a welcome slowdown in the first quarter. We then expect a gradual strengthening in money growth over the remainder of the year with M1 and M2 expanding at 6 1/2% and 9% rates in the remaining three quarters of 1978. Thrift institution deposits are also expected to revive later in the year, with increases projected at a 10% rate over this period."

--Chase Econometric Associates, Inc. Macroeconomic Forecasts, March 1975, p. 43.

DRI: "Monetary policy is tightened another notch in the late spring in response to rapid monetary growth, international currency difficulties, and accelerating inflation. The Fed eases policy somewhat during 1978:3 to 1979:2 as economic growth slows and unemployment remains far too high relative to Administration goals."

--Data Resources Review, April 1978, p. II.7.

Wharton: Assumptions include an increase of 5.9% in nonborrowed reserves from the first quarter of 1978 to the first quarter of 1979, and an increase in the rediscount rate from 6.5% to 7.5% between the second and third quarter of 1978.

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GROSS NATIONAL PRODUCT, IN CURRENT DOLLARS,
1972 DOLLARS AND PERCENT CHANGES

Period	GNP billions of current dollars 1/	% change GNP in current dollars 2/	GNP billions of 1972 dollars	% change GNP in 1972 dollars 2
1973	1,306.6	11.6	1,235.0	5.5
1974	1,412.9	8.1	1,217.8	-1.4
1975	1,528.8	8.2	1,202.1	-1.3
1976	1,706.5	11.6	1,274.7	6.0
1977	1,889.6	10.7	1,337.3	4.9
1976: I	1,651.2	13.2	1,256.0	8.8
II	1,691.9	10.2	1,271.5	5.1
III	1,727.3	8.6	1,283.7	3.9
IV	1,755.4	6.7	1,287.4	1.2
1977: I	1,810.8	13.2	1,311.0	7.5
II	1,869.9	13.7	1,330.7	6.2
III	1,915.9	10.2	1,347.4	5.1
IV	1,961.8	9.9	1,360.2	3.8
1978: Ip	1,992.9	6.5	1,358.3	-0.6

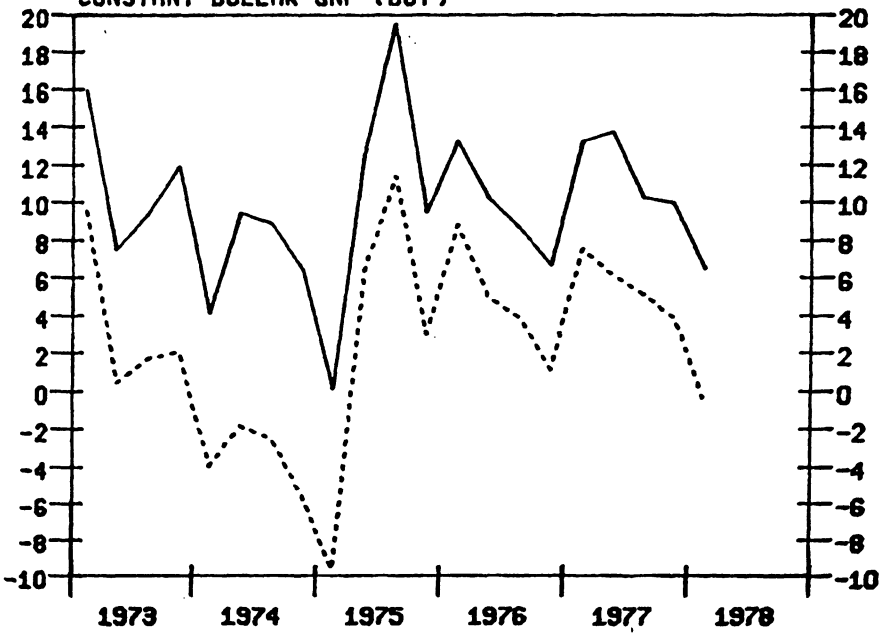
p = preliminary.

1/ Quarterly data at seasonally adjusted rates.

2/ Annual changes from previous year and quarterly changes from previous quarter, at seasonally adjusted annual rates.

SOURCE: Department of Commerce, Bureau of Economic Analysis.

PERCENT CHANGE IN GROSS NATIONAL PRODUCT (GNP).
QUARTERLY (SEASONALLY ADJUSTED ANNUAL RATES)
CURRENT DOLLAR GNP (LINE)
CONSTANT DOLLAR GNP (DOT)



Data source: Department of Commerce, Bureau of Economic Analysis.

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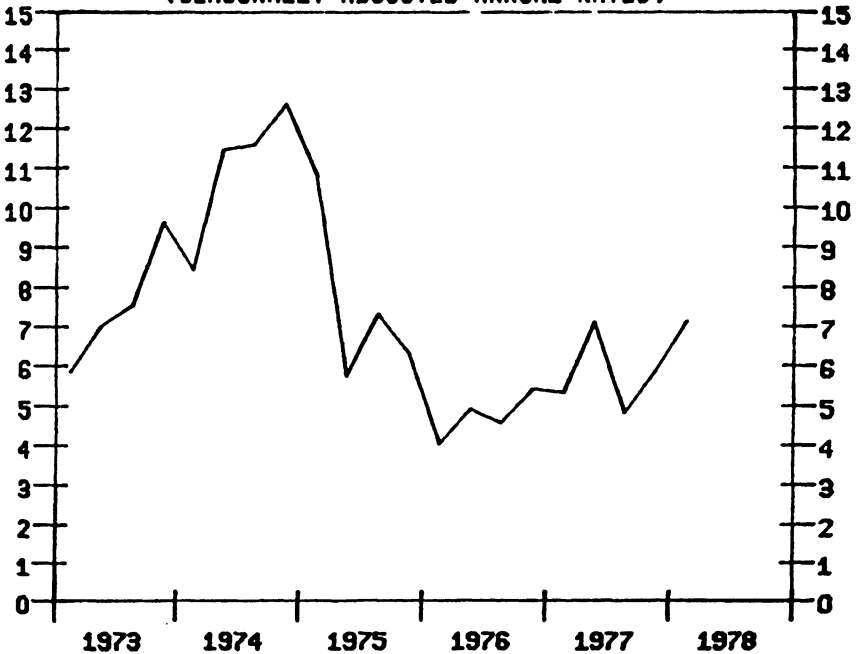
PERCENT CHANGES IN THE IMPLICIT PRICE DEFLATOR,
FOR GROSS NATIONAL PRODUCT, QUARTERLY
(SEASONALLY ADJUSTED ANNUAL RATES)



Data source: Department of Commerce, Bureau of Economic Analysis.

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SUMMARY OF PRICE CHANGES
[Percent change from previous period; quarterly data at seasonally adjusted annual rates]

Period	GNP implicit price deflator 1/	Consumer price index 2/	Wholesale price index 2/
1973	5.8	6.2	13.1
1974	9.7	11.0	18.9
1975	9.6	9.1	9.2
1976	5.3	5.8	4.6
1977	5.5	6.5	6.1
1976: I	4.1	5.2	1.1
II	4.9	4.9	5.4
III	4.6	5.7	4.5
IV	5.4	4.3	4.9
1977: I	5.3	8.4	9.0
II	7.1	8.8	9.3
III	4.8	5.3	.3
IV	5.8	4.3	5.8
1978: I p	7.1	NA	9.8

1/ Department of Commerce, Bureau of Economic Analysis.

2/ Department of Labor, Bureau of Labor Statistics.

3/ p = preliminary.

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CHANGES IN WHOLESALE PRICES

Period	Percent change from preceding period; seasonally adjusted [1]				Percent change from 3 months earlier; seasonally adjusted annual rates				Percent change from 6 months earlier; seasonally adjusted annual rates			
	All commodities	Farm products and processed foods and feeds	Industrial commodities	Finished goods	All commodities	Farm products and processed foods and feeds	Industrial commodities	Finished goods	All commodities	Farm products and processed foods and feeds	Industrial commodities	Finished goods
1969	4.8	7.5	3.9	4.8								
1970	2.2	−1.4	3.6	2.2								
1971	4.1	6.0	3.4	3.2								
1972	6.3	14.4	3.4	3.8								
1973	15.4	26.7	10.7	11.8								
1974	20.9	11.0	25.6	18.3								
1975	4.2	−.3	6.0	6.6								
1976	4.7	−1.1	6.4	3.3								
1977	5.9	3.0	6.7	6.6								
1977: Feb.	1.1	2.1	.8	1.0	9.3	17.9	7.0	10.6	7.4	7.4	7.4	7.9
Mar.	1.1	2.2	.7	.8	11.1	19.3	8.8	10.0	8.5	11.8	7.6	8.4
Apr.	1.0	2.2	.7	.7	13.6	29.5	9.4	10.5	10.1	19.0	7.7	9.2
May	.4	0	.5	.8	10.5	19.3	8.0	9.4	9.9	18.6	7.5	10.0
June	−.5	−3.0	.3	.1	4.0	−3.1	6.4	6.4	7.5	7.5	7.6	8.2
July	.1	−2.3	.6	.2	0	−19.2	5.9	4.3	6.6	2.3	7.7	7.3
Aug.	.1	−1.2	.5	.2	−1.2	−22.9	5.9	2.0	4.5	−4.1	6.9	5.6
Sept.	.3	−.5	.6	.3	1.9	−15.0	7.0	2.0	2.9	−9.2	6.7	4.7
Oct.	.6	.9	.5	.6	4.2	−3.4	6.3	4.7	2.1	−11.6	6.1	4.5
Nov.	.7	2.3	.3	.6	6.5	10.8	5.2	6.3	2.6	−7.6	5.5	4.1
Dec.	.4	.3	.5	.5	6.9	14.7	4.7	7.0	4.4	−1.3	5.8	4.9
1978: Jan.	.9	1.1	.7	.6	8.0	15.8	6.0	7.2	6.1	5.8	6.1	5.9
Feb.	1.0	2.5	.7	1.1	9.4	16.6	7.8	9.2	8.0	13.7	6.5	7.7

[1] Annual changes are from December to December (unadjusted). Source: Department of Labor, Bureau of Labor Statistics.

NOTE.—Data revised for August 1977.

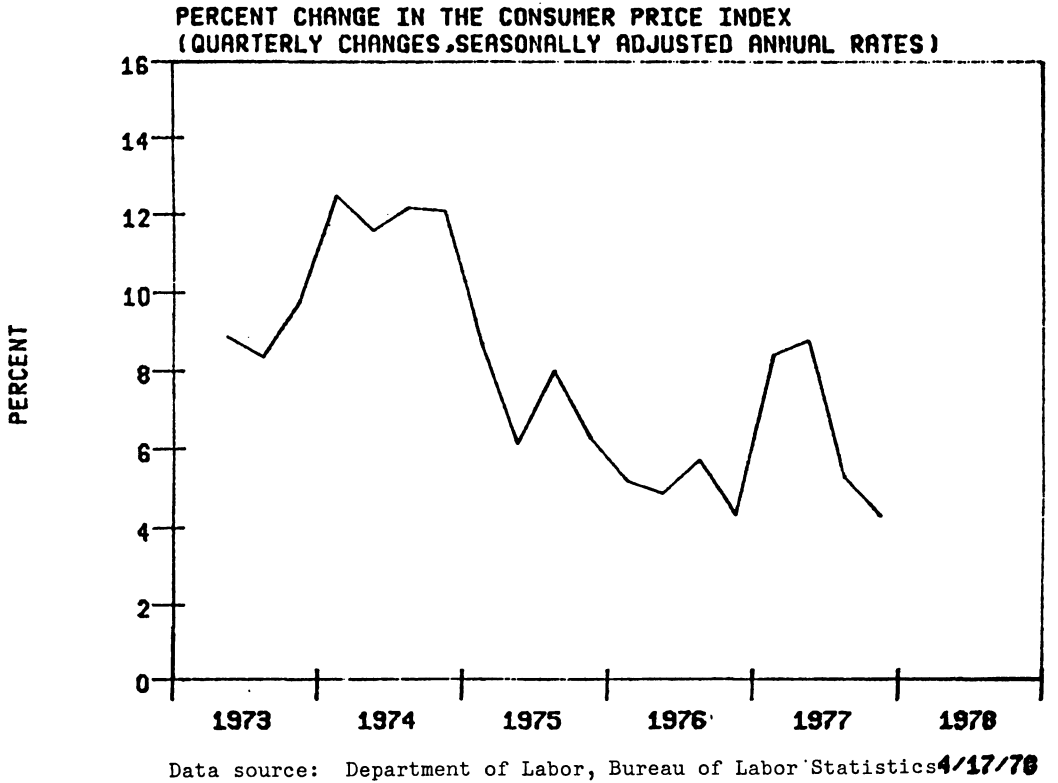
CHANGES IN CONSUMER PRICES

Period	Percent change from preceding period; seasonally adjusted [1]				Percent change from 3 months earlier; seasonally adjusted annual rates				Percent change from 6 months earlier; seasonally adjusted annual rates			
	All items	Food	Commodities less food	Services	All items	Food	Commodities less food	Services	All items	Food	Commodities less food	Services
1969	6.1	7.2	4.5	7.4								
1970	5.5	2.2	4.8	8.2								
1971	3.4	4.3	2.3	4.1								
1972	3.4	4.7	2.5	3.6								
1973	8.8	20.1	5.0	6.2								
1974	12.2	12.2	13.2	11.3								
1975	7.0	6.5	6.2	8.1								
1976	4.8	.6	5.1	7.3								
1977	6.8	8.0	4.9	7.9								
1977: Feb.	1.0	2.1	.6	.6	9.1	13.7	7.7	7.6	6.6	6.5	6.6	6.8
Mar.	.6	.6	.4	.8	10.0	15.3	7.4	9.8	7.1	7.7	6.5	7.4
Apr.	.8	1.5	.4	.7	10.2	18.6	6.1	9.0	8.0	10.6	6.5	8.0
May	.6	.6	.3	.8	8.4	11.6	4.8	9.9	8.7	12.6	6.2	8.7
June	.5	.6	.3	.7	7.8	11.5	4.2	9.4	8.9	13.4	5.8	9.6
July	.3	−.2	.2	.7	5.7	4.2	3.2	9.3	7.9	11.2	4.6	9.2
Aug.	.4	.4	.2	.6	5.0	3.6	2.7	8.3	6.6	7.5	3.7	9.1
Sept.	.4	.2	.3	.6	4.5	1.9	2.7	7.6	6.1	6.6	3.5	8.5
Oct.	.3	.2	.4	.4	4.5	3.1	3.4	6.3	5.1	3.7	3.3	7.8
Nov.	.4	.5	.5	.4	4.7	3.5	4.7	5.6	4.8	3.6	3.7	7.0
Dec.	.4	.4	.5	.4	4.9	4.2	5.4	4.9	4.7	3.0	4.0	6.3
1978: Jan.	.8	1.3	.7	.6	6.7	8.9	6.6	5.8	5.6	6.0	5.0	6.0
Feb.	.6	1.2	.2	.7	7.5	11.9	5.6	7.2	6.1	7.7	5.1	6.4

[1] Annual changes are from December to December (unadjusted). Source: Department of Labor, Bureau of Labor Statistics.

Note.—Beginning January 1978 data relate to all urban consumers. Earlier data relate to urban wage earners and clerical workers.

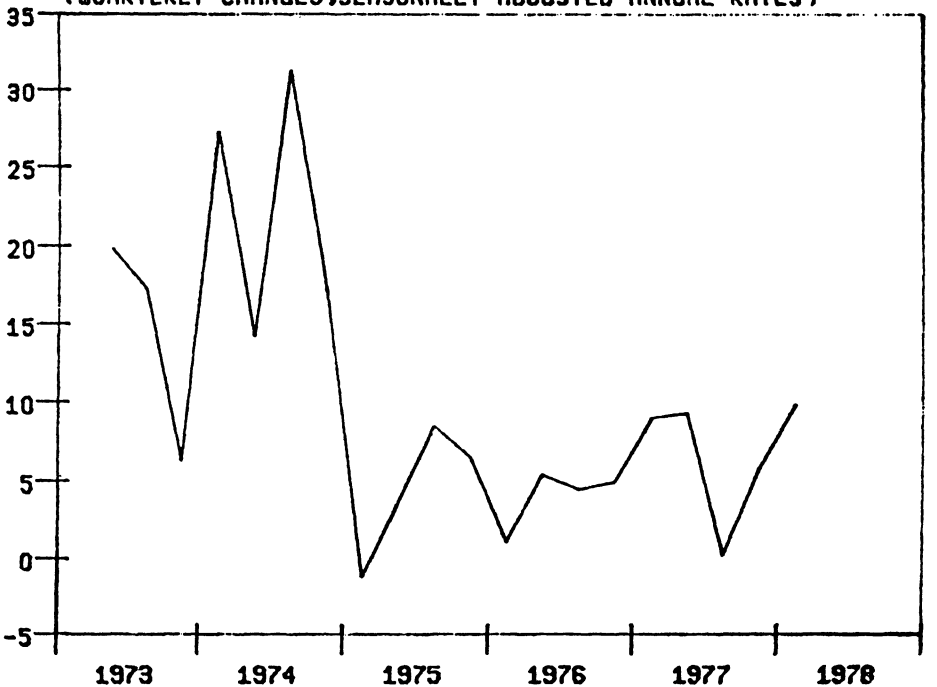
Reproduced from Economic Indicators, March 1978.



Data source: Department of Labor, Bureau of Labor Statistics 4/17/78

Prepared by Congressional Research Service, Library of Congress

PERCENT CHANGE IN THE WHOLESALE PRICE INDEX
(QUARTERLY CHANGES, SEASONALLY ADJUSTED ANNUAL RATES)



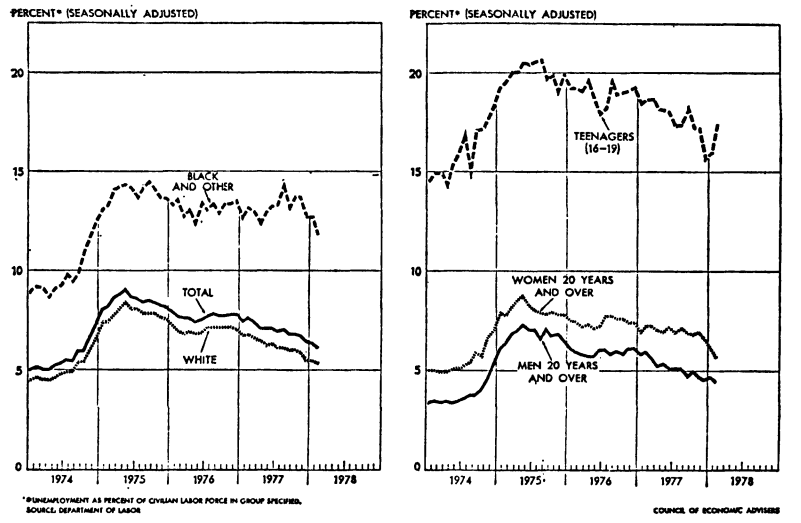
PERCENT

Data source: Department of Labor, Bureau of Labor Statistics 4/17/78

Prepared by Congressional Research Service, Library of Congress

SELECTED UNEMPLOYMENT RATES

The seasonally adjusted unemployment rate declined in February by 0.2 percentage point to 6.1 percent. Only the unemployment rate for teenagers increased.



[Monthly data seasonally adjusted]

Period	Unemployment rate (percent of civilian labor force in group)										Labor force time lost (percent) [1]
		By sex and age			By race		By selected groups				
	Total (all civilian workers)	Men 20 years and over	Women 20 years and over	Both sexes 16–19 years	White	Black and other	Experienced wage and salary workers	Household heads	Full-time workers	Part-time workers	
1973	4.9	3.2	4.8	14.5	4.3	8.9	4.5	2.9	4.3	7.9	5.2
1974	5.6	3.8	5.5	16.0	5.0	9.9	5.3	3.3	5.1	8.6	6.1
1975	8.5	6.7	8.0	19.9	7.8	13.9	8.2	5.8	8.1	10.3	9.1
1976	7.7	5.9	7.4	19.0	7.0	13.1	7.3	5.1	7.3	10.1	8.3
1977	7.0	5.2	7.0	17.7	6.2	13.1	6.6	4.5	6.5	9.8	7.6
1977: Feb	7.6	5.9	7.2	18.6	6.8	13.1	7.1	4.9	6.9	10.6	8.0
Mar	7.4	5.6	7.2	18.7	6.6	12.9	6.9	4.7	6.8	10.9	7.8
Apr	7.1	5.2	7.0	18.2	6.4	12.3	6.6	4.5	6.6	9.9	7.4
May	7.1	5.3	6.9	18.1	6.3	12.9	6.7	4.5	6.6	9.9	7.6
June	7.1	5.1	7.2	18.0	6.3	13.2	6.5	4.3	6.5	10.5	7.6
July	6.9	5.1	6.9	17.3	6.1	13.3	6.4	4.4	6.5	9.3	7.5
Aug	7.0	5.1	7.1	17.3	6.1	14.3	6.5	4.5	6.6	9.0	7.6
Sept	6.8	4.7	6.9	18.3	6.0	13.1	6.3	4.4	6.4	9.7	7.4
Oct	6.8	5.0	6.8	17.3	6.0	13.7	6.5	4.4	6.4	9.6	7.4
Nov	6.7	4.7	6.9	17.2	5.9	13.7	6.3	4.2	6.2	9.6	7.3
Dec	6.4	4.6	6.6	15.6	5.5	12.7	6.0	3.9	5.9	8.9	7.0
1978: Jan	6.3	4.7	6.1	16.0	5.5	12.7	5.9	3.8	5.8	8.9	6.8
Feb	6.1	4.5	5.7	17.4	5.3	11.8	5.7	3.6	5.7	8.6	6.6

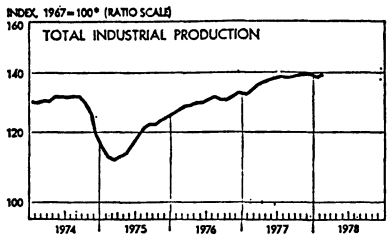
[1] Aggregate hours lost by the unemployed and persons on part-time for economic reasons as percent of potentially available labor force hours.

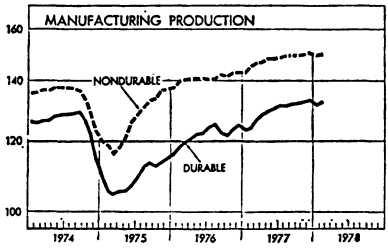
Source: Department of Labor, Bureau of Labor Statistics.

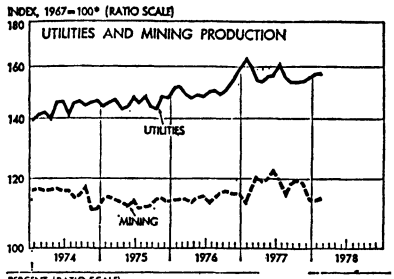
Reproduced from Economic Indicators, March 1978.

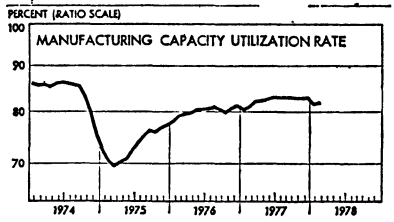
INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

Industrial production rose 0.5 percent in February following an 0.8 percent decline in January.









* SEASONALLY ADJUSTED
SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

COUNCIL OF ECONOMIC ADVISERS

[Seasonally adjusted]

Period	Total industrial production		Industry production indexes, 1967=100					Manufacturing capacity utilization rate, percent [1]			
			Manufacturing			Mining	Utilities	Federal Reserve series		Commerce series [2]	Wharton series [3]
	Index, 1967=100	Percent change from year earlier	Total	Durable	Nondurable			Total manufacturing	Materials		
1967 proportion	*100.00*		*87.95*	*51.98*	*35.97*	*6.36*	*5.69*				
1972	119.7	9.2	118.9	113.7	126.5	113.1	139.4	83.1	88.0	83	91.8
1973	129.8	8.4	129.8	127.1	133.8	114.7	145.4	87.5	92.4	86	97.1
1974	129.3	−.4	129.4	125.7	134.6	115.3	143.7	84.2	87.7	83	93.0
1975	117.8	−8.9	116.3	109.3	126.4	112.8	146.0	73.6	73.6	77	80.4
1976	129.8	10.2	129.5	121.7	140.9	114.2	151.0	80.2	80.4	81	87.5
1977	137.0	5.5	137.1	129.5	148.1	117.8	156.4	82.4	81.9	83	90.2
1977: Feb	133.2	4.4	132.6	124.0	145.3	116.3	160.3	80.9	80.2		
Mar	135.3	5.5	135.1	126.8	147.0	120.6	154.8	82.1	81.6	83	88.4
Apr	136.1	5.7	135.8	128.0	147.0	119.2	154.0	82.3	82.1		
May	137.0	5.6	137.1	129.3	148.5	119.5	156.7	82.8	82.7		
June	137.8	6.2	137.8	130.5	148.4	122.8	156.8	83.0	83.0	84	90.4
July	138.7	6.1	138.5	131.6	148.6	119.8	161.4	83.1	82.9		
Aug	138.1	5.2	138.6	131.3	149.4	115.4	155.7	82.9	82.0		
Sept	138.5	6.0	139.0	131.7	149.5	118.0	154.1	82.9	82.0	82	90.9
Oct	138.9	6.7	139.4	132.4	149.6	119.6	154.0	82.9	82.4		
Nov	139.3	5.9	139.9	132.7	150.1	118.8	154.2	82.9	82.3		
Dec	139.6	5.0	140.5	133.6	150.5	113.3	155.7	83.0	81.8	82	91.1
1978: Jan p	138.5	4.7	138.9	131.5	149.7	113.3	157.1	81.8	81.0		
Feb p	139.2	4.5	139.7	132.4	150.1	114.1	157.3	82.0	80.9		

[1] Output as percent of capacity.
[2] Annual data are averages of four monthly indexes.
[3] Quarterly data entered in last month of quarter. Annual data are averages of quarterly data.

Sources: Board of Governors of the Federal Reserve System, Department of Commerce (Bureau of Economic Analysis), and Wharton School of Finance.

Reproduced from Economic Indicators, March 1978.

CAPACITY UTILIZATION RATES FOR MATERIALS INDUSTRIES
(In Percent)

Year	Q1	Q2	Q3	Q4
		Materials, total		
1973	92.1	92.6	92.9	92.1
1974	90.5	89.6	89.1	81.7
1975	71.5	70.6	74.8	76.9
1976	79.0	80.6	81.2	80.3
1977	80.4	82.6	82.8	82.2
1978	81.4 1/			
		Durable goods materials		
1973	90.7	91.7	92.3	91.3
1974	88.5	87.4	87.7	79.9
1975	66.9	64.4	68.8	70.3
1976	73.5	76.2	78.4	76.5
1977	76.5	79.3	79.6	79.7
1978	79.3 1/			
		Basic metal materials		
1973	95.6	97.3	97.5	96.9
1974	94.8	93.9	92.0	86.0
1975	75.2	67.2	70.4	69.9
1976	72.8	77.4	81.7	74.4
1977	75.0	80.2	75.3	75.2
1978	na--			
		Nondurable goods materials		
1973	93.9	93.6	93.4	93.8
1974	94.0	93.1	91.6	81.5
1975	70.0	72.5	79.9	84.4
1976	85.6	85.9	84.8	84.4
1977	85.1	87.3	86.7	85.9
1978	85.9 1/			
		Textile, paper, and chemical materials		
1973	94.1	93.8	94.0	93.9
1974	93.7	93.3	92.1	81.2
1975	68.0	70.6	78.5	83.9
1976	85.1	85.0	83.7	83.2
1977	83.8	86.3	85.1	84.5
1978	85.0 1/			

CAPACITY UTILIZATION RATES FOR MATERIALS INDUSTRIES (Cont.)
(In Percent)

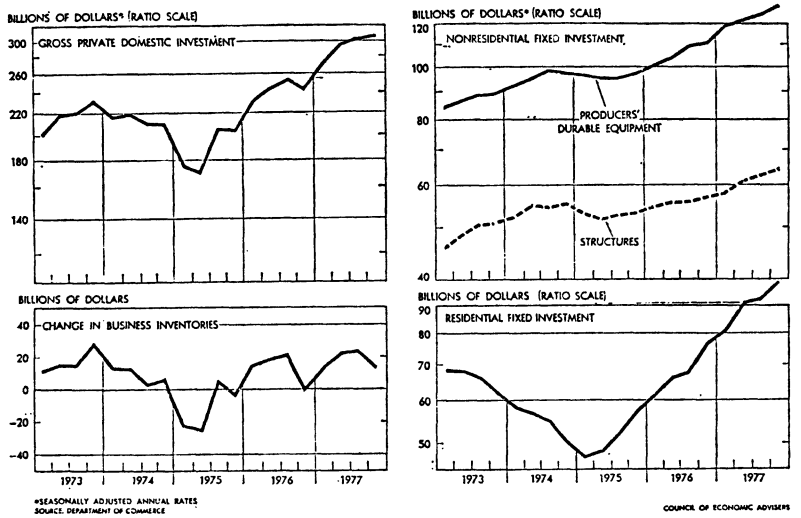
Year	Q1	Q2	Q3	Q4
		Textile materials		
1973	93.0	93.0	93.8	94.6
1974	93.6	90.4	85.4	70.1
1975	60.9	71.5	82.7	87.0
1976	84.3	83.1	82.4	79.7
1977	78.7	78.1	78.8	82.4
1978	NA			
		Paper materials		
1973	98.4	99.5	98.8	98.2
1974	98.0	98.4	97.0	89.9
1975	78.3	73.4	81.2	86.2
1976	89.1	90.9	89.2	88.1
1977	88.4	89.4	89.3	86.7
1978	NA			
		Chemical materials		
1973	93.2	92.4	92.5	92.4
1974	92.5	92.7	92.7	82.1
1975	67.2	69.4	76.5	82.3
1976	84.2	84.0	82.6	83.0
1977	84.0	87.9	85.7	84.5
1978	NA			
		Energy materials		
1973	93.8	93.4	94.1	92.0
1974	90.5	90.3	89.4	87.0
1975	86.8	85.1	84.3	84.8
1976	85.3	84.0	83.8	84.8
1977	84.5	84.6	85.9	83.7
1978	80.2 1/			

1/ Preliminary.

SOURCE: Board of Governors of the Federal Reserve System.

GROSS PRIVATE DOMESTIC INVESTMENT

Business fixed investment rose $6.0 billion (annual rate) in the fourth quarter as purchases of producers' durable equipment increased $4.1 billion and investment in structures rose $1.9 billion. Residential investment increased $7.2 billion. Inventory investment amounted to $13.5 billion, down $10.1 billion from the third quarter level.



[Billions of dollars; quarterly data at seasonally adjusted annual rates]

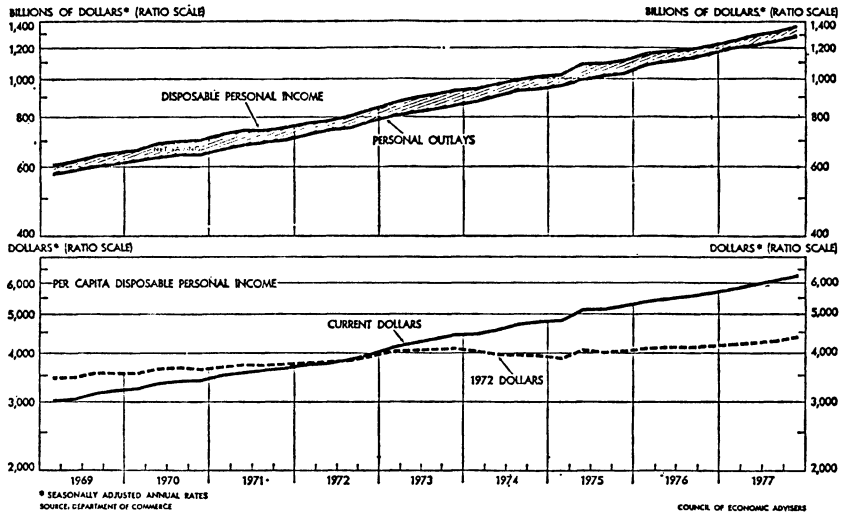
Period	Gross private domestic investment	Nonresidential fixed investment					Residential fixed investment				Change in business inventories	
		Total	Structures		Producers' durable equipment		Total	Nonfarm structures	Farm structures	Producers' durable equipment	Total	Nonfarm
			Total	Nonfarm	Total	Nonfarm						
1967	120.8	82.1	29.5	28.2	52.6	48.0	28.6	27.2	0.7	0.7	10.1	9.4
1968	131.5	89.3	31.6	30.4	57.7	53.4	34.5	33.1	.6	.8	7.7	7.6
1969	146.2	98.9	35.7	34.3	63.3	58.9	37.9	36.3	.7	.9	9.4	9.2
1970	140.8	100.5	37.7	36.1	62.8	58.1	36.6	35.1	.6	.9	3.8	3.7
1971	160.0	104.1	39.3	37.8	64.7	59.9	49.6	47.9	.7	1.0	6.4	5.1
1972	188.3	116.8	42.5	41.1	74.3	69.1	62.0	60.3	.7	1.1	9.4	8.8
1973	220.0	136.0	49.0	46.9	87.0	80.1	66.1	64.3	.6	1.2	17.9	14.7
1974	214.6	150.6	54.5	51.8	96.2	88.2	55.1	52.7	1.2	1.2	8.9	10.8
1975	189.1	149.1	52.9	50.4	96.3	87.1	51.5	49.5	.9	1.1	−11.5	−15.1
1976	243.3	161.9	55.8	53.4	106.1	95.9	68.0	65.7	1.0	1.3	13.3	14.9
1977	294.2	185.1	61.5	58.8	123.6	112.4	91.0	88.4	1.1	1.4	18.2	17.1
1976: I	231.3	155.4	54.7	52.1	100.8	90.5	61.4	58.9	1.2	1.2	14.5	15.9
II	244.4	159.8	55.8	53.4	104.0	93.8	66.3	64.1	1.0	1.2	18.3	20.4
III	254.3	164.9	56.0	53.6	109.0	98.4	67.8	65.7	.9	1.2	21.5	22.0
IV	243.4	167.6	57.0	54.4	110.6	100.7	76.7	74.3	1.1	1.3	−.9	1.4
1977: I	271.8	177.0	57.9	55.1	119.2	107.8	81.0	78.5	1.1	1.4	13.8	14.1
II	294.9	182.4	61.0	58.2	121.4	110.0	90.8	88.2	1.2	1.4	21.7	22.4
III	303.6	187.5	62.6	60.1	124.9	114.0	92.5	89.9	1.1	1.5	23.6	23.1
IV	306.7	193.5	64.5	61.8	129.0	117.8	99.7	97.1	1.0	1.6	13.5	9.0

Source: Department of Commerce, Bureau of Economic Analysis.

Reproduced from Economic Indicators, March 1978.

DISPOSITION OF PERSONAL INCOME

Real per capita disposable income rose again in the fourth quarter.



Period	Personal income	Less: Personal tax and nontax payments	Equals: Disposable personal income	Less: Personal outlays [1]	Equals: Personal saving	Per capita disposable personal income: Current dollars	Per capita disposable personal income: 1972 dollars	Per capita personal consumption expenditures: Current dollars	Per capita personal consumption expenditures: 1972 dollars	Percent change in real per capita disposable personal income	Saving as percent of disposable personal income	Population (thousands) [2]
	Billions of dollars					Dollars						
1969	745.8	115.4	630.4	595.3	35.1	3,111	3,515	2,860	3,234	1.5	5.6	202,677
1970	801.3	115.3	685.9	635.4	50.6	3,348	3,619	3,020	3,265	3.0	7.4	204,878
1971	859.1	116.3	742.8	685.5	57.3	3,588	3,714	3,227	3,342	2.6	7.7	207,053
1972	942.5	141.2	801.3	751.9	49.4	3,837	3,837	3,510	3,510	3.3	6.2	208,846
1973	1,052.4	150.8	901.7	831.3	70.3	4,255	4,062	3,849	3,648	5.9	7.8	210,410
1974	1,154.9	170.3	984.6	913.0	71.7	4,646	3,973	4,197	3,589	−2.2	7.3	211,945
1975	1,253.4	169.0	1,084.4	1,004.2	80.2	5,077	4,014	4,591	3,629	1.0	7.4	213,566
1976	1,382.7	196.9	1,185.8	1,119.9	65.9	5,511	4,137	5,084	3,817	3.1	5.6	215,191
1977	1,536.7	227.5	1,309.2	1,241.9	67.3	6,037	4,293	5,585	3,971	3.8	5.1	216,856
	Seasonally adjusted annual rates											
1976: I	1,338.1	184.8	1,153.3	1,080.9	72.4	5,374	4,107	4,921	3,761	4.5	6.3	214,608
II	1,366.7	192.6	1,174.1	1,103.8	70.3	5,462	4,130	5,018	3,794	2.3	6.0	214,948
III	1,393.9	200.6	1,193.3	1,128.5	64.8	5,540	4,135	5,117	3,820	.5	5.4	215,380
IV	1,432.2	209.5	1,222.6	1,166.3	56.3	5,665	4,177	5,278	3,891	4.1	4.6	215,827
1977: I	1,476.8	224.4	1,252.4	1,201.0	51.4	5,793	4,202	5,422	3,933	2.4	4.1	216,206
II	1,517.2	224.8	1,292.5	1,223.9	68.5	5,967	4,268	5,513	3,943	6.4	5.3	216,603
III	1,549.8	226.1	1,323.8	1,250.5	73.3	6,098	4,305	5,615	3,964	3.5	5.5	217,073
IV	1,603.0	234.7	1,368.3	1,292.2	76.1	6,290	4,394	5,790	4,044	8.5	5.6	217,541

[1] Includes personal consumption expenditures, interest paid by consumers to business, and personal transfer payments to foreigners (net).
[2] Includes Armed Forces abroad. Annual data are for July 1 through 1973 and are averages of quarterly data beginning 1974. Quarterly data are average for the period.

Source: Department of Commerce (Bureau of Economic Analysis and Bureau of the Census).

Reproduced from Economic Indicators, March 1978.

NEW CONSTRUCTION

Period	Total new construction expenditures	Private					Federal, State, and local	Construction contracts[2]	
		Total	Residential		Commercial and industrial	Other		Total value index (1967=100)	Commercial and industrial floor space (millions of square feet)
			Total[1]	New housing units					
	Billions of dollars								
1971	110.0	80.1	43.3	35.1	17.0	19.8	29.9	145.4	727
1972	124.1	93.9	54.3	44.9	18.1	21.5	30.2	165.3	854
1973	137.9	105.4	59.7	50.1	21.7	24.0	32.5	179.5	1,010
1974	138.5	100.2	50.4	40.6	23.8	25.9	38.3	169.7	840
1975	134.3	93.6	46.5	34.4	20.8	26.3	40.7	167.9	555
1976	147.5	109.5	60.5	47.3	19.9	29.0	38.0	199.4	592
1977 p	170.7	133.7	81.1	65.1	21.8	30.8	37.0	252.2	738
	Seasonally adjusted annual rates							*Seasonally adjusted*	*Seasonally adjusted annual rates*
1977: Jan	148.1	116.2	66.5	52.1	18.7	30.9	32.0	203	643
Feb	156.9	122.4	72.1	58.3	18.8	31.5	34.5	212	615
Mar	163.8	128.4	76.7	62.2	20.8	30.9	35.4	207	309
Apr	167.5	131.3	79.5	63.5	21.1	30.7	36.2	250	671
May	172.1	133.7	82.4	65.8	20.9	30.4	38.4	317	758
June	174.6	135.2	82.5	66.0	22.3	30.4	39.4	307	733
July	173.0	133.8	80.8	65.1	22.7	30.2	39.2	218	702
Aug	172.0	133.8	80.7	65.1	22.9	30.2	38.2	267	853
Sept	175.9	136.7	82.4	66.4	23.5	30.8	39.3	279	813
Oct	177.8	140.1	85.7	68.8	23.4	31.0	37.7	244	757
Nov	177.8	142.1	87.7	70.4	23.1	31.4	35.6	258	847
Dec	180.2	143.9	90.0	73.0	21.8	32.1	36.3	299	864
1978: Jan p	173.2	139.5	84.3	67.7	21.7	33.4	33.7	270	996

[1] Includes nonhousekeeping residential construction and additions and alterations, not shown separately.
[2] F. W. Dodge series. Relates to 50 States beginning 1969 for value index and beginning 1971 for floor space.

NOTE.—New construction expenditures data prior to 1973 not comparable with later data.

Sources: Department of Commerce (Bureau of the Census) and McGraw-Hill Information Systems Company, F. W. Dodge Division.

NEW PRIVATE HOUSING AND VACANCY RATES

[Thousands of units or homes, except as noted]

Period	New private housing units						New private homes		Vacancy rate for rental housing units (percent)[2]
	Units started, by type of structure				Units authorized	Units completed	Homes sold	Homes for sale at end of period[1]	
	Total	1 unit	2–4 units	5 or more units					
1970	1,433.6	812.9	84.8	535.9	1,351.5	1,418.4	485	220	5.3
1971	2,052.2	1,151.0	120.3	780.9	1,924.6	1,706.1	656	287	5.4
1972	2,356.6	1,309.2	141.3	906.2	2,218.9	2,003.5	718	409	5.6
1973	2,045.3	1,132.0	118.3	795.0	1,819.5	2,100.5	634	418	5.8
1974	1,337.7	888.1	68.1	381.6	1,074.4	1,728.5	519	346	6.2
1975	1,160.4	892.2	64.0	204.3	939.2	1,317.2	549	313	6.0
1976	1,537.5	1,102.4	85.9	289.2	1,296.2	1,377.2	646	354	5.6
1977 p	1,987.1	1,450.9	121.7	414.4	1,676.6	1,654.5	819	405	5.2
	Seasonally adjusted annual rates								
1977: Feb	1,751	1,362	116	273	1,526	1,610	826	355	
Mar	2,090	1,489	114	487	1,687	1,670	885	358	5.1
Apr	1,899	1,433	118	348	1,605	1,566	784	362	
May	1,982	1,469	120	393	1,615	1,557	810	364	
June	1,931	1,406	113	412	1,678	1,655	806	367	5.3
July	2,072	1,453	124	495	1,639	1,671	722	375	
Aug	2,038	1,454	119	465	1,772	1,677	818	389	
Sept	2,012	1,508	124	380	1,695	1,875	845	389	5.4
Oct	2,139	1,532	127	480	1,850	1,665	870	398	
Nov	2,096	1,544	134	418	1,893	1,769	818	402	
Dec p	2,203	1,574	153	476	1,811	1,630	847	405	5.1
1978: Jan p	1,547	1,155	100	292	1,496	1,721	762	407	
Feb p	1,580	1,091	86	403	1,622				
Mar p	2,074								

[1] Seasonally adjusted.
[2] Quarterly data entered in last month of quarter.

NOTE.—Data for units completed revised beginning 1972 and homes sold and for sale beginning 1973.
Source: Department of Commerce, Bureau of the Census.

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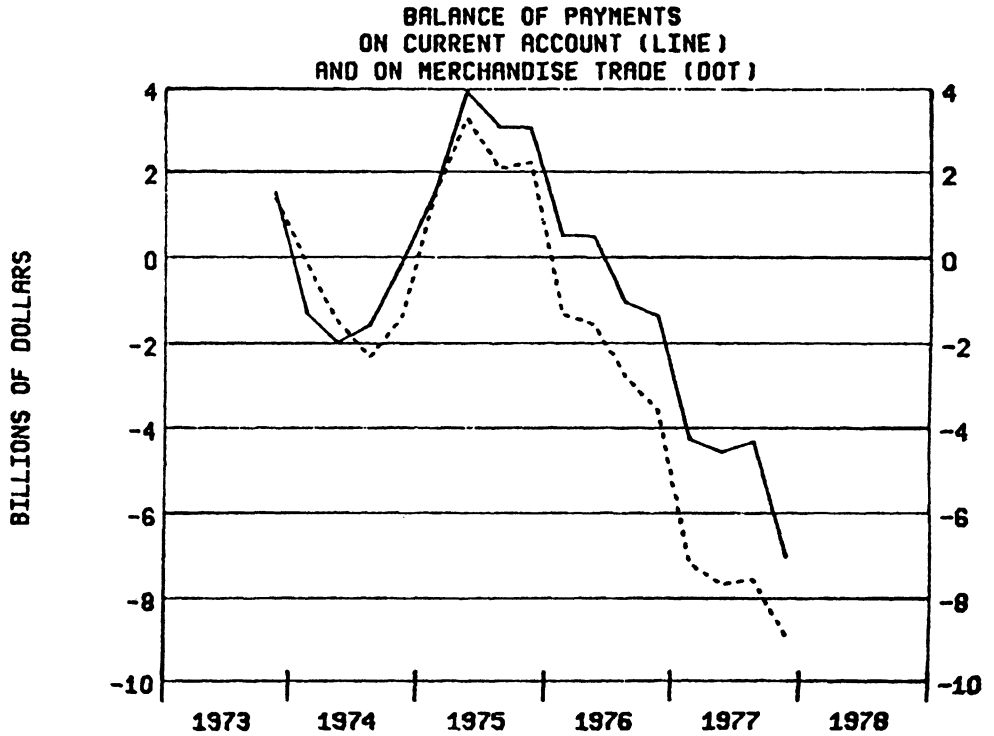

Data source: Department of Commerce, Bureau of Economic Analysis.

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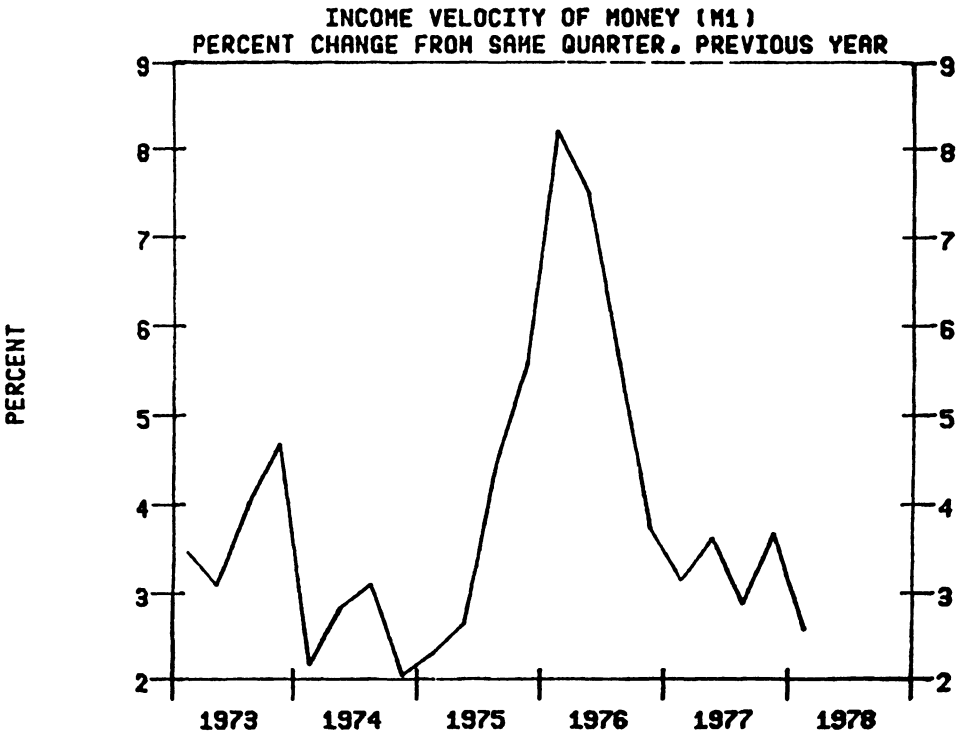

Data sources: Board of Governors of the Federal Reserve System and Department of Commerce, Bureau of Economic Analysis.

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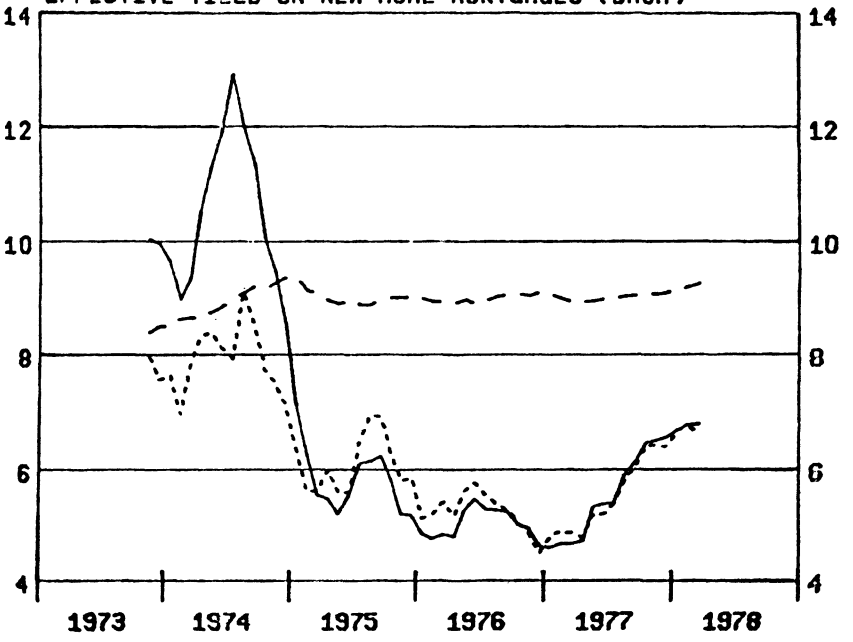
INTEREST RATES
FEDERAL FUNDS RATE (LINE)
AVERAGE YIELD ON 6 MONTH TREASURY BILLS (DOT)
EFFECTIVE YIELD ON NEW HOME MORTGAGES (DASH)



Data sources:, Board of Governors of the Federal Reserve System, Department of the Treasury and Federal Home Loan Bank Board.

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