

FEDERAL RESERVE SECOND MONETARY POLICY REPORT FOR 1979

HEARINGS
BEFORE THE
COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE
NINETY-SIXTH CONGRESS
FIRST SESSION
ON
OVERSIGHT ON MONETARY POLICY REPORT TO CONGRESS
PURSUANT TO PUBLIC LAW 95-523

JULY 23 AND 24, 1979

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Committee on Banking, Housing, and Urban Affairs



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FEDERAL RESERVE SECOND MONETARY POLICY REPORT FOR 1979

MONDAY, JULY 23, 1979

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

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

Present: Senators Proxmire and Sarbanes.

OPENING STATEMENT OF CHAIRMAN PROXMIRE

The CHAIRMAN. The committee will come to order.

Today we begin 2 days of hearings on the conduct of the monetary policy by the Federal Reserve. These hearings are being held pursuant to the requirements of the Humphrey-Hawkins Act which also requires that the Banking Committee submit its views and recommendations with regard to the Federal Reserve's announced policies to the Senate.

In order to aid the committee in understanding the monetary policies of the Federal Reserve, we have invited a panel of four well-known economists to give us their views on the current economic outlook and on monetary policy's role over the next year and a half. Our panel consists of Prof. Ben Friedman of Harvard University; Mr. Henry Kaufman, a partner and member of the executive committee of Salomon Brothers; Prof. Lawrence Klein of the University of Pennsylvania; and Prof. Allan Meltzer of Carnegie-Mellon University.

Our economy is faced with a very difficult set of economic conditions. The rate of inflation has accelerated to double digit levels over the first half of the year, and the outlook has been worsened by the recent increases in OPEC oil prices and the recent shortage of gasoline. We are embarking on the consideration of a mammoth energy program which will doubtless put additional pressure on prices in the months and years ahead. We have also experienced a very sharp decline of real output during the second quarter, with real GNP dropping at an annual rate of -3.3 percent.

Almost all economists are predicting a recession this year. The economy has definitely been slowed by oil shortages as evidenced by the recent drop in real GNP. However, not all signs confirm that we are in a recession. Unemployment actually declined last month to 5.6 percent, the lowest rate since 1974. Moreover, housing starts increased in June by 6 percent to 1,953,000 units which is a very high level. I would also note that the monetary aggregates have virtually exploded during the past 13 weeks which might be

expected to feed inflation and stem recession over the next 9 months, but maybe not. This is another indication that the outlook for the period ahead may be a little less certain than almost everyone thinks.

If there is one thing we should have learned about economic forecasts during the past several years is that they are not very accurate. It would be foolish for us to take precipitous action to offset a recession on the basis of recent economic forecasts. The Federal Reserve must act very carefully in managing monetary policy so as not to allow the recent rapid increases in the monetary aggregates to continue for very long or to allow the explosion in the business credit area to continue unchecked. Congress should not rush into any tax reductions or spending sprees. If inflation is to be stopped, we must continue to pursue policies that will ease inflationary pressures.

I would like to make one comment on growth in the monetary and credit aggregates. The target ranges that the Fed announced in February were for the entire calendar year 1979. For the entire first half of the year the Fed was successful in keeping money growth within the bounds they selected. With another 6 months left, they have considerable latitude in meeting their targets. They should, in my view, have narrower constraints on their money growth targets during the next 6 months. It is also important to note that the Fed has exceeded the target range adopted for growth in bank credit by a significant margin and, in my view, have not paid enough attention to that target variable.

On the other hand, M_1 and M_2 aggregates may, as Mr. Kaufman points out, no longer be the best indicators of monetary policy.

We are faced, gentlemen, with a situation that is dramatically different now than it has been for some time in the past. As we all know, the Chairman of the Federal Reserve will become the Secretary of the Treasury. We will have another member of the Board appear before this committee tomorrow. I'm concerned about the independence of the Federal Reserve Board and I would like you, after you finish your remarks when we get into the question period—I want to ask your views on this: How important the independence of the Federal Reserve is; whether in your view that independence is jeopardized by several developments: No. 1, the move of the present Chairman of the Fed to the Treasury Department; No. 2, the abbreviated service of members of the Fed and the turnover of membership and the obvious sensitivity of short-time membership and Presidential influence? Also, of course, and this is the most important part of it, certainly the persistent force and danger of inflation and the importance of the Fed as the key agency in fighting inflation, require that it be insulated against short-term political interests. The Fed must be able to take a long-term view and therefore a dispassionate and professional handling of monetary policy might be more desirable.

I'm also interested in whatever views you may have on whether the rapid turnover at the Fed might be reduced I suppose by higher salaries. It's always hard to persuade the public to accept that from anybody in public life, but I think if Members of Congress were not increasing our own salaries it might be a little easier to secure. I think we ought to think in terms as far reaching

and radical as possibly lifetime appointments for members of the Fed. It obviously helps the Supreme Court's independence and maybe it would help overcome this tremendous turnover tendency we have and any other suggestions you have.

I might point out that the present Fed membership has averaged about 3 years and is going to be less than that, of course, when the new Chairman is appointed. It's been about 3 years on the average for length of service for some time now. In view of the fact that we have a 14-year term, the purpose of that was to permit people to develop experience on the Board, but also above all to provide that they should be independent of any administration, that of course has been destroyed.

President Carter, with the Schultz appointment, has now appointed four members of the Federal Reserve Board. In January, when Governor Coldwell's term expires, he will appoint his fifth member. He has control of the Board now and without any reflections on the President, who I think is a fine man doing the best he can, whether any President should have that kind of power with respect to this independent Board is something that I think should concern all of us.

At any rate, we welcome you. I apologize for this lengthy initial statement, but I think it is an unusual kind of situation and I wanted to set the stage as well as I could.

[Briefing papers prepared for the committee by the Library of Congress Research Service follow:]

THE LIBRARY OF CONGRESS
Congressional Research Service

BRIEFING MATERIALS FOR MID-YEAR 1979 MONETARY POLICY OVERSIGHT

by
 F. Jean Wells
 Roger S. White
 Specialists in Money and Banking
 William Jackson
 Carol A. Leisenring
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Economics Division

This briefing document has been prepared to assist the Senate Committee on Banking, Housing, and Urban Affairs in monetary policy oversight conducted pursuant to P.L. 95-523. It includes selected indicators for the economic setting in which monetary policy operates as well as presenting indicators of the direction of monetary policy itself. Assistance in preparing this report was obtained from Laura A. Layman, Economic Analyst; Barry Molefsky, Analyst in Econometrics; and Frances C. Klapthor, Editorial Assistant.

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1979 ECONOMIC FORECASTS AND ADMINISTRATION GOALS ^{1/}

	January 1979 Administration Goal Forecast	July 1979 Administration Forecast	CBO Current Policy Forecast 2/	Current Chase Forecast	Current DRI Forecast	Current Wharton Forecast
<u>Munphrey-Hawkins</u>						
<u>Net Goals</u>						
	Level, fourth quarter 1979					
Employment (millions)	97.5	-	-	96.2	96.6	96.7
Unemployment rate (percent)	6.2	6.6	6.9	7.2	6.8	6.9
	Percent change, fourth quarter 1978 to fourth quarter 1979					
Consumer prices	7.5	10.6 ^{3/}	10.9	10.5	10.9	12.7
Real gross national product	2.2	-0.5	-1.0	-1.5	-1.3	-0.6
Real disposable income	2.8	-	-	-0.3	0.3	-0.5
Productivity						
total economy ^{4/}	0.4	-	-	-	-	-
private business	-	-	-	-1.2	-	-0.2
private nonfarm	-	-	-	-2.2	-1.4	-
<u>Monetary Policy</u>						
<u>Variables</u>						
Money supply (M1)	-	-	-	3.5	2.1	4.5
Money supply (M2)	-	-	-	6.4	4.7	6.9
	Level, fourth quarter 1979					
Federal funds rate (percent)	-	-	-	9.4	9.5	9.8
<u>91 Day Treasury Bill Rate (percent)</u>	<u>8.8</u> ^{5/}	<u>9.0</u> ^{5/}	-	8.76	8.56	8.91

1/ These forecasts are based on different systems, different models, and different policy assumptions; therefore, their comparability is limited.

2/ Mid-point of forecast range.

4/ Based on total real GNP per hour worked.

3/ Percent change, December over December. 5/ Average rate for new issues, 1979.

SOURCE: U.S. Council of Economic Advisers. Economic Report of the President. Washington, U.S. Govt. Print. Off., 1979, p. 109. Mid-Session Review of the 1980 Budget, Office of Management and Budget, July 12, 1979, p. 4. CBO Current Policy Forecast in statement by Alice M. Rivlin, Director, Congressional Budget Office, before the Committee on the Budget, United States Senate, July 12, 1979, p. 7. Chase Economic Associates, Inc., Standard Forecast of June 21, 1979. Data Resources Incorporated, Control Forecast of June 28, 1979. Wharton Economic Forecasting Associates, Inc., Control Forecast of June 28, 1979.

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1980 ECONOMIC FORECASTS AND ADMINISTRATION GOALS^{1/}

	January 1979 Administration Goal Forecast	July 1979 Administration Forecast	Current CBO Policy Forecast 2/	Current Chase Forecast	Current DRI Forecast	Current Wharton Forecast
<u>Humphrey-Hawkins Act Goals</u>						
	Level, fourth quarter 1980					
Employment (millions)	99.5	-	-	97.3	97.7	97.4
Unemployment rate (percent)	6.2	6.9	7.2	8.3	7.2	7.9
	Percent change, fourth quarter 1979 to fourth quarter 1980					
Consumer prices	6.4	8.3 ^{3/}	8.9	7.7	7.9	10.9
Real gross national product	3.2	2.0	2.9	1.8	3.8	1.7
Real disposable income	2.3	-	-	1.0	3.1	1.8
Productivity						
total economy 4/	1.1	-	-	-	-	-
private business	-	-	-	2.6	-	1.5
private nonfarm	-	-	-	1.6	2.4	-
<u>Monetary Policy Variables</u>						
Money supply (M1)	-	-	-	5.8	5.1	5.4
Money supply (M2)	-	-	-	9.0	7.2	9.0
	Level, fourth quarter 1980					
Federal funds rate (percent)	-	-	-	6.9	8.8	8.1
91 Day Treasury Bill Rate (percent)	7.6 ^{5/}	8.2 ^{5/}	-	6.40	8.22	7.75

1/ These forecasts are based on different systems, different models, and different policy assumptions; therefore, their comparability is limited.

2/ Mid-point of forecast range.

4/ Based on total real GNP per hour worked.

3/ Percent change, December over December.

5/ Average rate for new issues, 1980.

SOURCE: See preceding table.

CRS-2

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

Item	YEAR				
	Goal Forecasts		Goal Requirements		
	1979	1980	1981	1982	1983
	Level, fourth quarter				
Employment (millions)	97.5	99.5	102.6	105.5	108.3
Unemployment (percent)	6.2	6.2	5.4	4.6	4.0 ^{3/}
	Percent change, fourth quarter to fourth quarter				
Consumer prices	7.5	6.4	5.2	4.1	3.0 ^{3/}
Real gross national product	2.2	3.2	4.6	4.6	4.2
Real disposable income	2.8	2.3	4.4	4.4	4.0
Productivity ^{2/}	.4	1.1	1.8	2.0	2.0

^{1/} "The short-term goals for 1979 and 1980 represent a forecast of how the economy will respond over the next 2 years not only to the budgetary policies proposed by the President for fiscal 1979 and 1980 but to the anti-inflation program announced on October 24. The medium-term goals for 1981 to 1983 are not forecasts. They are projections of the economic performance that would be required to reach the 1983 unemployment and inflation goals specified in the act." 1979 Economic Report of the President, p. 108-109.

^{2/} Based on total real GNP per hour worked.

^{3/} The Humphrey-Hawkins Act puts the unemployment goal at 4% among individuals aged 16 and over in the civilian labor force by 1983 and an inflation rate of 3% as measured by the consumer price index, also by 1983.

Source: U.S. Council of Economic Advisers, Economic Report of the President, Washington, U.S. Govt. Print. Off., 1979, p. 109.

JULY 1979 SUMMARY OF ADMINISTRATION'S LONG-RANGE
 ECONOMIC GOALS AND ALTERNATIVE ECONOMIC ASSUMPTIONS^{1/}

Table 18.--LONG-RANGE ECONOMIC GOALS, 1981-1984
 (calendar years; dollar amounts in billions)

<u>Major Economic Indicators</u>	<u>Assumed for Budget Projections</u>			
	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Gross national product, (percent change, 4th quarter over 4th quarter):				
Current dollars.....	11.7	10.2	7.6	6.1
Constant (1972) dollars.....	5.3	5.5	4.4	3.0
GNP deflator (percent change, 4th quarter over 4th quarter)...	6.1	4.5	3.0	3.0
Consumer Price Index (percent change, December over December)...	6.0	4.5	3.0	3.0
Unemployment rate (percent, 4th quarter).....	6.0	4.8	4.0	4.0

Table 28.--ALTERNATIVE LONG-RANGE ECONOMIC ASSUMPTIONS, 1981-1984
 (calendar years; dollar amounts in billions)

<u>Major Economic Indicators</u>	<u>Assumed for Alternative Budget Projections</u>			
	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Gross national product, (percent change, 4th quarter over 4th quarter):				
Current dollars.....	11.4	10.3	9.8	9.3
Constant (1972) dollars.....	4.0	3.5	3.5	3.5
GNP deflator (percent change, 4th quarter over 4th quarter)...	7.1	6.6	6.1	5.6
Consumer Price Index (percent change, December over December)...	6.8	6.5	6.0	5.5
Unemployment rate (percent, 4th quarter).....	6.3	6.0	5.7	5.5

^{1/} As noted on pages 54 and 58 of the Mid-Session Review of the 1980 Budget:
 "The long-range economic assumptions differ in nature from the short-range economic forecast presented earlier. These assumptions are not forecasts of economic events, but projections that assume progress in moving toward lower unemployment rates and greater price stability.
 (Continued on page 5.)

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(Continued from page 4.)

"Two sets of longer-range economic assumptions, and budget projections corresponding to each, are shown. One set, discussed in this section, assumes the achievement of the medium-term goals specified in the Full-Employment and Balanced Growth Act of 1978 (the Humphrey-Hawkins Act). [Table 18]. These goals are highly ambitious and may be difficult to achieve. The other set of assumptions, discussed in a later section, are less ambitious."

"[Table 28] presents an alternative set of economic assumptions and a corresponding set of budget projections."

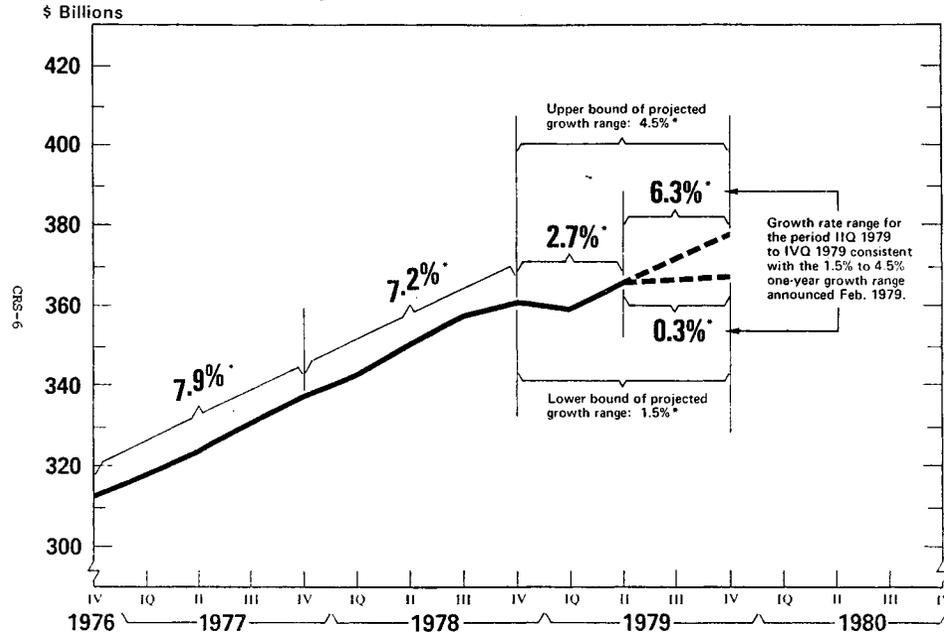
"Under the alternative assumptions presented here, the economy is assumed to grow in real terms by an average of 3.6% a year for the entire 1981-1984 period. The rate of unemployment corresponding to this growth projection is 5 1/2% at the end of calendar year 1984. The rate of inflation is assumed to drop by about half a percentage point a year after 1980, reaching 5 1/2% a year in 1984. These more conservative assumptions may be more appropriate for budget planning purposes than those of the preceding sections."

CSR-5

Source: Mid-Session Review of the 1980 Budget, Office of Management and Budget, July 12, 1979.
pp. 60, 72.

MONEY SUPPLY (M1)

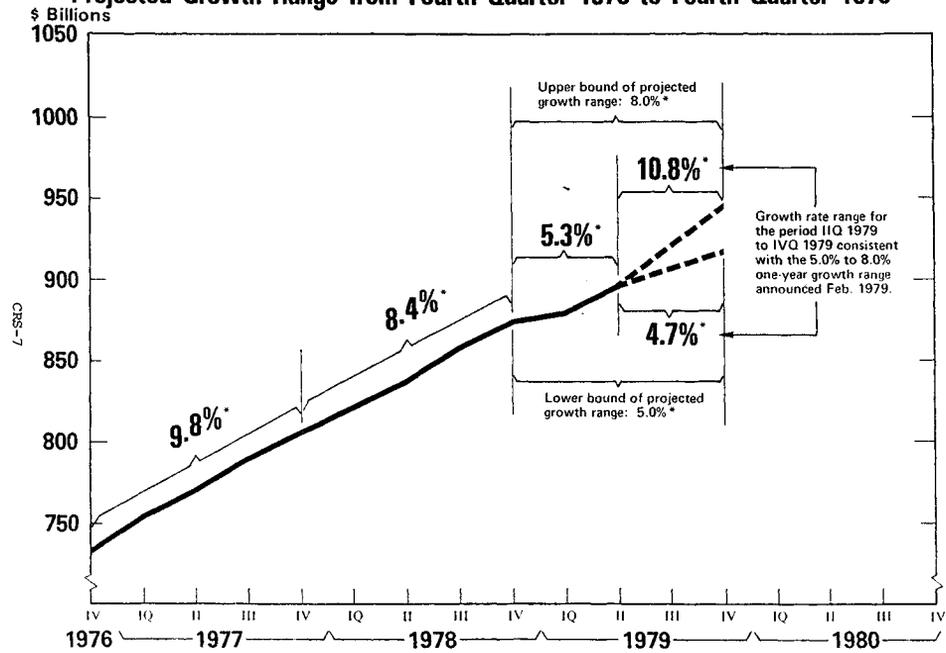
Actual Levels from Fourth Quarter 1976 and Federal Reserve Projected Growth Range from Fourth Quarter 1978 to Fourth Quarter 1979



* Growth rates are seasonally adjusted compound annual rates.
 Data Source: Quarterly observations and growth rates are calculated from seasonally adjusted data series of the Board of Governors of the Federal Reserve System as revised in May 1979.

MONEY SUPPLY (M2)

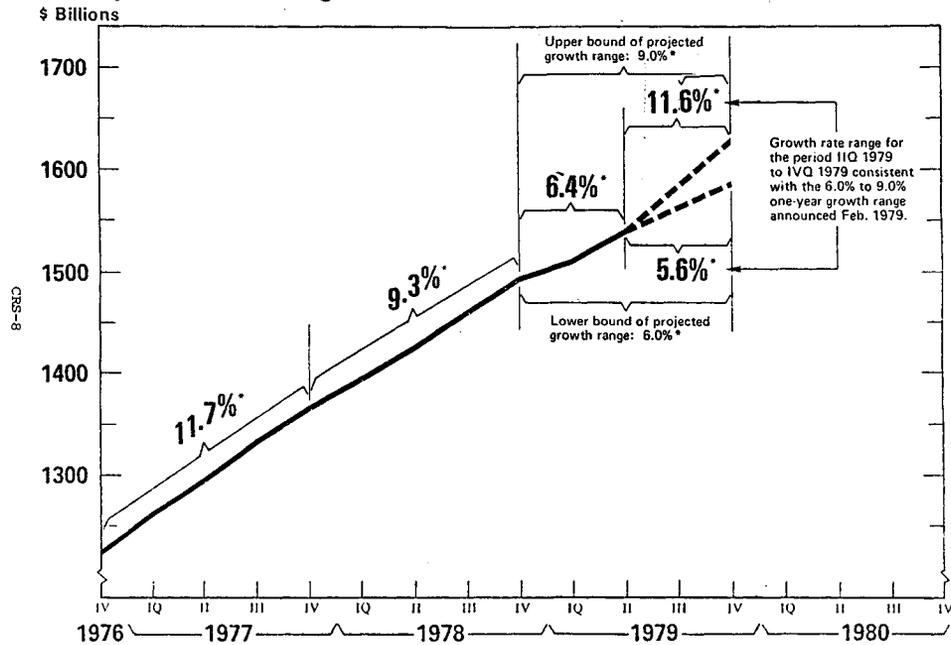
Actual Levels from Fourth Quarter 1976 and Federal Reserve
Projected Growth Range from Fourth Quarter 1978 to Fourth Quarter 1979



* Growth rates are seasonally adjusted compound annual rates.
Data Source: Quarterly observations and growth rates are calculated from seasonally adjusted data series of the Board of Governors of the Federal Reserve System as revised in May 1979.

MONEY SUPPLY (M3)

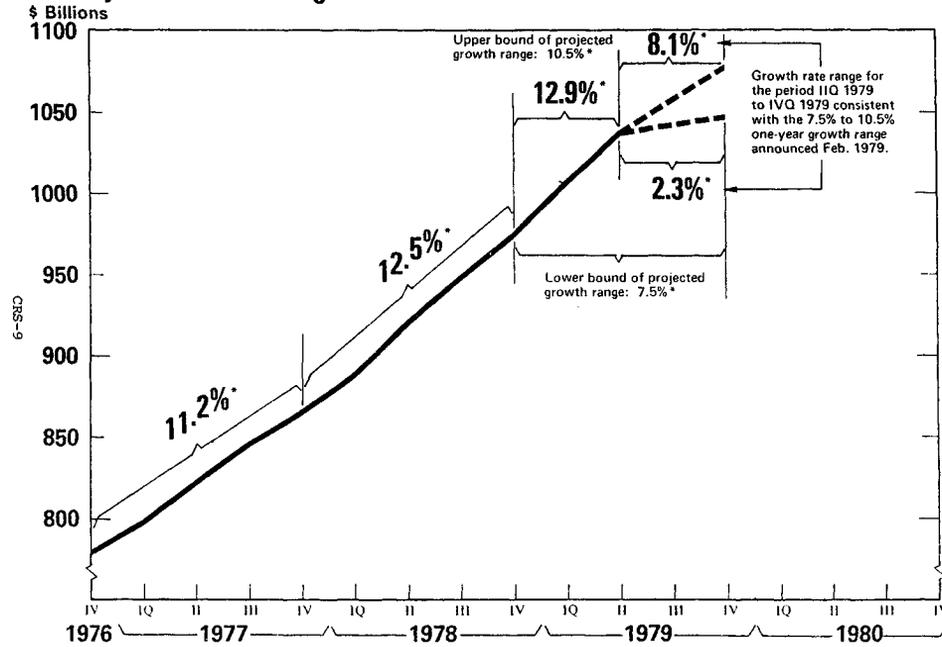
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Projected Growth Range from Fourth Quarter 1978 to Fourth Quarter 1979



* Growth rates are seasonally adjusted compound annual rates.
Data Source: Quarterly observations and growth rates are calculated from seasonally adjusted data series of the Board of Governors of the Federal Reserve System as revised in May 1979.

BANK CREDIT

Actual Levels from Fourth Quarter 1976 and Federal Reserve
Projected Growth Range from Fourth Quarter 1978 to Fourth Quarter 1979



*Growth rates are seasonally adjusted compound annual rates.

Data Source: Quarterly observations and growth rates are calculated from seasonally adjusted data series of the Board of Governors of the Federal Reserve System as revised in May 1979.

Money (M1)
 Growth Rates Between Quarters
 Fourth Quarter 1974 through Second Quarter 1979
 (Compound Annual Growth Rate, Seasonally Adjusted)

TO:	Money (M1)		FROM:																	
	(\$ billions)		1974:4	1975:1	1975:2	1975:3	1975:4	1976:1	1976:2	1976:3	1976:4	1977:1	1977:2	1977:3	1977:4	1978:1	1978:2	1978:3	1978:4	1979:1
1974:4	282.15																			
1975:1	282.899	2.0																		
1975:2	287.799	4.0	3.7																	
1975:3	285.452	3.1	3.7	7.5																
1975:4	290.199	4.2	3.4	5.2	3.1															
1976:1	282.599	4.2	3.2	5.3	3.2	7.7														
1976:2	282.297	4.2	3.2	5.4	4.7	7.3	2.5													
1976:3	290.433	4.8	3.2	5.2	4.6	5.2	3.4	4.2												
1976:4	312.132	5.2	3.2	3.2	5.2	3.8	3.7	7.7												
1977:1	317.999	5.4	3.7	3.2	3.1	3.5	3.5	7.8	7.0											
1977:2	323.299	5.7	5.1	5.1	5.2	3.4	3.7	3.8	7.2	7.0										
1977:3	323.899	6.0	6.4	6.4	6.3	3.7	7.1	7.2	3.9	3.1	3.3	3.3								
1977:4	330.451	6.1	6.2	6.2	6.4	3.3	7.2	7.3	7.2	7.4	3.9	3.2	7.5							
1978:1	342.999	6.1	6.2	6.2	6.2	3.2	7.1	7.2	7.7	7.7	7.7	7.7	7.8	7.2	6.9					
1978:2	357.281	6.4	6.7	6.8	6.7	7.1	7.4	7.5	3.0	3.0	3.1	3.2	3.0	3.2	3.2	3.5				
1978:3	357.287	6.3	6.2	6.2	6.3	7.2	7.3	7.0	3.0	3.0	3.1	3.2	3.0	3.2	3.2	3.4	3.1			
1978:4	361.999	6.4	6.2	6.7	6.2	7.2	7.2	7.3	7.5	7.5	7.3	7.2	7.2	7.2	7.2	7.2	3.2	4.2		
1979:1	354.199	5.2	6.1	6.1	6.3	6.2	6.4	6.2	3.5	3.4	3.3	3.1	3.2	3.2	4.3	3.2	1.9	3.1	2.7	
1979:2	365.287	5.9	6.2	6.2	6.1	3.3	3.3	3.7	3.2	3.4	3.2	3.2	3.2	3.2	3.4	4.4	3.2	2.7	7.8	

Source: Board of Governors of the Federal Reserve System. Accessed from data files of Data Resources, Inc.

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

<u>Fiscal year or period</u>	<u>Budget receipts</u>	<u>Budget outlays</u>	<u>Budget surplus or deficit</u>
1975	281.0	326.2	-45.2
1976	300.0	366.4	-66.4
Transition quarter	81.8	94.7	-13.0
1977	357.8	402.7	-45.0
1978	402.0	450.8	-48.8
1979(estimates)			
Third Concurrent Resolution, May 1979 ^{2/}	461.0	494.5	-33.5
Mid-session review, July 1979 ^{3/}	466.5	496.2	-29.7
1980(estimates)			
First Concurrent Resolution, May 1979 ^{4/}	509.0	532.0	-23.0
Mid-session review, July 1979 ^{3/}	513.8	542.4	-28.7
Cumulative totals first 8 months:			
Fiscal year 1978	247.5	297.2	-49.7
Fiscal year 1979	292.1	328.1	-36.0

1/ Unified budget basis.

2/ Third Concurrent Resolution on the Budget -- Fiscal Year 1979, May 24, 1979.

3/ Estimates from Mid-Session Review of the 1980 Budget, Office of Management and Budget, July 12, 1979.

4/ First Concurrent Resolution on the Budget -- Fiscal Year 1980, May 24, 1979.

Source: Economic Indicators, June 1979, and Mid-Session Review of the 1980 Budget, Office of Management and Budget, July 12, 1979.

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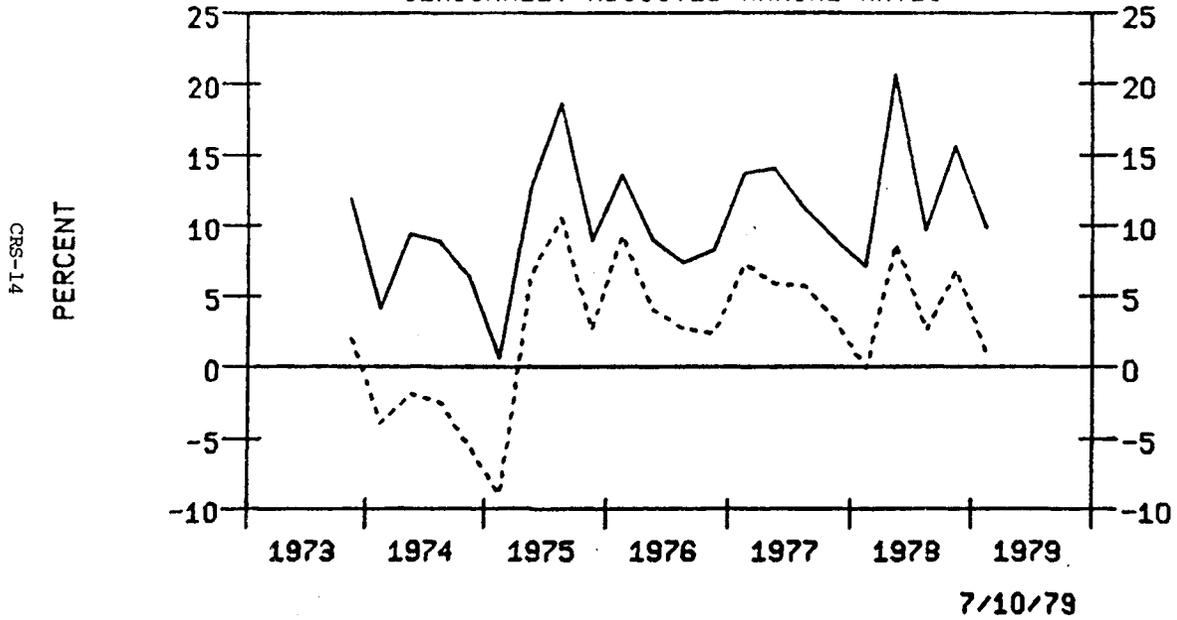
FEDERAL SECTOR EXPENDITURES AS A PERCENT OF GNP

Description	1948-50 average actual	1958-60 average actual	1968-70 average actual	1978-80 average estimate
Defense purchases	4.5	9.6	8.4	4.7
Nondefense purchases	2.3	1.7	2.4	2.6
Domestic transfer payments	3.6	4.1	5.4	8.7
Foreign transfer payments	1.5	.4	.2	.2
Grants-in-aid to State and local governments8	1.3	2.2	3.4
Net interest paid	1.6	1.3	1.3	1.8
Subsidies less current surplus of Government enterprises3	.5	.5	.4
Total expenditures	14.6	18.8	20.5	21.8

Source: Special Analyses, Budget of the United States Government,
Fiscal Year 1980. p. 51.

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GROSS NATIONAL PRODUCT
 QUARTERLY CHANGES OF CURRENT (LINE)
 AND CONSTANT (DOT) DOLLAR GNP
 SEASONALLY ADJUSTED ANNUAL RATES



SOURCE: DEPT. OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS
 PREPARED BY CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

SELECTED COMPONENTS OF GROSS NATIONAL PRODUCT
IN CURRENT AND CONSTANT DOLLARS

(Billions of current dollars; quarterly data at seasonally adjusted annual rates)

Period	Gross national product	Personal consumption expenditures	Gross private domestic investment	Exports and imports of goods and services			Government purchases of goods and services					Final sales
				Net exports	Exports	Imports	Total	Federal			State and local	
								Total	National defense	Non-defense		
1968	868.5	535.9	131.5	2.3	49.9	47.7	198.7	98.0	76.9	21.2	100.7	860.8
1969	935.5	579.7	146.2	1.8	54.7	52.0	207.9	97.5	76.3	21.2	110.4	926.2
1970	982.4	618.8	140.8	3.9	62.5	58.5	218.9	95.6	73.5	22.1	123.2	978.6
1971	1,063.4	668.2	160.0	1.6	65.6	64.0	233.7	96.2	70.2	26.0	137.5	1,057.1
1972	1,171.1	733.0	188.3	-3.3	72.7	75.9	253.1	102.1	73.5	28.6	151.0	1,101.7
1973	1,306.6	809.9	220.0	7.1	101.6	94.4	269.5	102.2	73.5	29.7	167.3	1,288.6
1974	1,412.9	889.6	214.6	6.0	137.9	131.9	302.7	111.1	77.0	34.1	191.5	1,404.0
1975	1,528.8	979.1	190.9	20.4	147.3	126.9	338.4	123.1	83.7	39.4	215.4	1,539.6
1976	1,700.1	1,090.2	243.0	7.4	163.2	155.7	350.5	129.9	86.8	43.1	229.6	1,689.9
1977	1,887.2	1,206.5	297.8	-11.1	175.5	186.6	394.0	145.1	94.3	50.8	248.9	1,871.6
1978	2,107.6	1,340.1	345.6	-12.0	204.8	216.8	433.9	153.8	99.5	54.3	280.2	2,091.6
1977: III	1,916.8	1,214.5	309.7	-7.0	180.8	187.8	399.5	146.8	94.4	52.4	252.7	1,894.9
IV	1,958.1	1,255.2	313.5	-23.2	172.1	195.2	412.5	152.2	97.1	55.1	260.3	1,945.0
1978: I	1,992.0	1,276.7	322.7	-24.1	181.7	205.8	416.7	151.5	97.9	53.6	285.2	1,975.3
II	2,087.5	1,322.9	345.4	-5.5	205.4	210.9	424.7	147.2	98.6	48.6	277.6	2,067.4
III	2,136.1	1,356.9	350.1	-40.7	210.1	220.8	439.8	154.0	99.6	54.5	285.8	2,121.5
IV	2,214.8	1,403.9	364.0	-7.6	221.9	229.5	454.5	162.5	102.1	60.4	292.0	2,201.3
1979: I	2,267.3	1,442.2	370.4	-3.7	235.0	238.7	458.4	164.5	103.9	60.6	293.9	2,252.0

(Billions of 1972 dollars; quarterly data at seasonally adjusted annual rates)

Period	Gross national product	Personal consumption expenditures	Gross private domestic investment			Exports of goods and services			Government purchases of goods and services			Final sales
			Non-residential fixed	Residential fixed	Change in business inventories	Net exports	Exports	Imports	Total	Federal	State and local	
1969	1,078.8	655.4	114.3	43.2	10.6	-1.3	62.2	63.5	256.7	121.8	134.9	1,068.2
1970	1,075.3	668.9	110.0	40.4	4.3	1.4	67.1	65.7	250.2	110.7	139.5	1,071.0
1971	1,107.5	691.9	108.0	52.2	6.6	-6	67.9	68.5	249.4	103.9	145.5	1,100.9
1972	1,171.1	733.0	116.8	62.0	9.4	-3.3	72.7	75.9	253.1	102.1	151.0	1,161.7
1973	1,235.0	767.7	131.0	59.7	16.5	7.6	87.4	79.9	252.5	96.6	155.9	1,218.5
1974	1,217.8	760.7	130.6	45.0	8.0	15.9	93.0	77.1	257.7	95.8	161.8	1,209.9
1975	1,202.3	774.6	113.6	38.8	-9.8	22.6	90.0	67.5	262.6	96.5	166.1	1,212.1
1976	1,271.0	819.4	118.9	47.8	6.7	15.4	95.9	80.5	262.8	96.6	166.2	1,264.4
1977	1,332.7	857.7	129.8	57.7	8.9	9.5	98.2	88.7	269.2	101.6	167.6	1,323.8
1978	1,385.7	891.7	140.2	59.8	10.6	8.4	107.0	98.6	275.0	100.3	174.7	1,373.2
1977: III	1,343.9	858.0	130.8	58.8	12.2	12.5	100.8	88.2	271.7	102.9	168.8	1,331.7
IV	1,354.5	876.6	132.5	60.3	7.5	3.1	96.0	92.9	274.5	103.6	170.9	1,347.1
1978: I	1,354.2	873.5	133.8	59.5	12.3	2.9	99.1	96.2	272.1	101.2	170.8	1,341.8
II	1,382.6	886.3	140.5	59.9	12.7	11.3	108.4	97.1	271.9	97.1	174.8	1,369.9
III	1,391.4	895.1	141.7	59.7	9.0	9.2	109.0	99.7	276.7	100.4	176.3	1,382.4
IV	1,414.7	911.8	144.9	60.3	8.2	10.2	111.7	101.5	279.4	102.5	176.9	1,406.5
1979: I	1,417.6	913.5	146.7	58.0	10.6	12.5	115.2	102.8	276.4	102.0	174.4	1,407.0

SOURCE: Economic Indicators, June 1979. pp. 1-2.

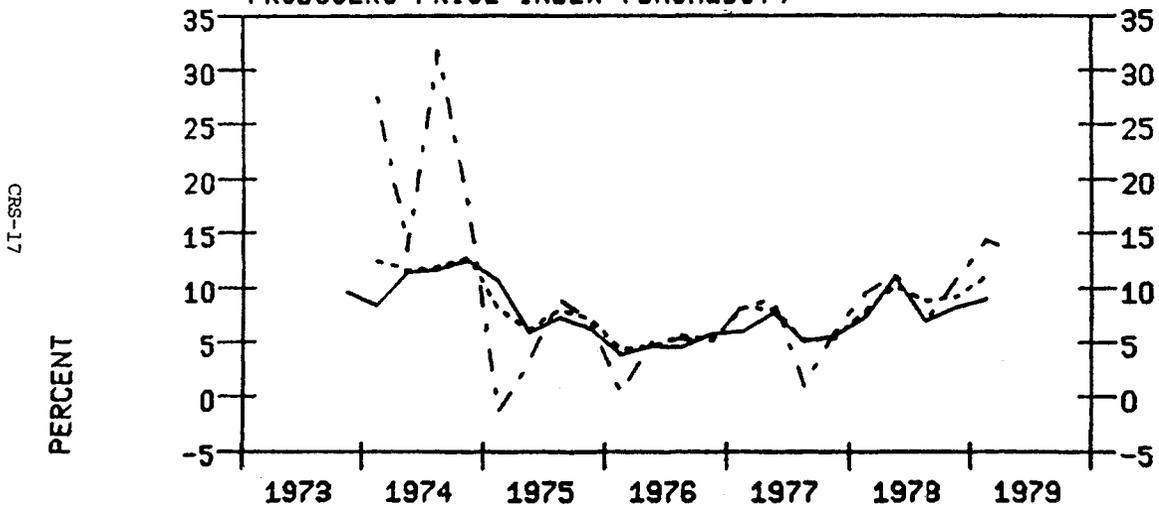
CHANGES IN GROSS NATIONAL PRODUCT ^{1/}
 [Percent Change: Seasonally Adjusted Annual Rates]

	In Current Dollars	In 1972 Dollars
1973	11.1	3.4
1974	7.2	-3.5
1975	10.0	2.4
1976	9.5	4.6
1977	11.9	5.5
1978	13.1	4.4
1978: I	7.1	-0.1
II	20.6	8.7
III	9.6	2.6
IV	15.6	6.9
1979: I	9.8	0.8

^{1/} Fourth quarter of prior year to fourth quarter of year indicated percentage change or quarter-to-quarter percentage change.

Source: Annual percentage changes computed from data accessed from the files of Data Resources, Inc.; quarterly changes at compound annual rates from Economic Indicators, June 1979. p. 3.

QUARTERLY PERCENTAGE CHANGES (SAAR),
 IMPLICIT PRICE DEFLATOR (LINE)
 CONSUMER PRICE INDEX (DOT)
 PRODUCERS PRICE INDEX (DASH&DOT)



SOURCES: SEPT. OF LABOR, BUREAU OF LABOR STATISTICS
 SEPT. OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS

PREPARED BY CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

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CHANGES IN SELECTED PRICE INDICES ^{1/}

	1973	1974	1975	1976	1977	1978	1979					
							Jan	Feb	Mar	Apr	May	June
Consumer Price Index	8.3	12.2	7.3	5.0	6.7	9.0	12.5	15.6	13.5	14.0	13.2	NA
Producer Price Index (finished goods)	11.6	18.7	7.1	2.6	6.8	8.8	16.5	14.3	10.3	11.5	4.6	6.4
GNP Implicit Price Deflator	7.5	11.0	7.5	4.7	6.1	8.3	--	8.9 ^{2/}	--	--	NA	--

^{1/} Fourth quarter to fourth quarter yearly increase or month-to-month increase at seasonally adjusted compound annual rates.

^{2/} Fourth quarter 1978 to first quarter 1979 increase at seasonally adjusted compound rate.

Sources: Computed from data accessed from the files of Data Resources, Inc.; Federal Reserve Bank of St. Louis, National Economic Trends, May 31, 1979. pp. 4, 14.

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1/
SELECTED EMPLOYMENT AND UNEMPLOYMENT DATA

	1973	1974	1975	1976	1977	1978
Total Civilian Employment (Millions)	84.4	85.9	84.8	87.5	90.5	94.4
Total Civilian Unemployment (Millions)	4.3	5.1	7.8	7.3	6.9	6.0
15 Weeks and Over	0.8	0.9	2.5	2.3	1.9	1.4
Unemployment Rates (Percent)						
Total Civilian	4.9	5.6	8.5	7.7	7.0	6.0
Men 20 and Over	3.2	3.8	6.7	5.9	5.2	4.2
Women 20 and Over	4.8	5.5	8.0	7.4	7.0	6.0
White	4.3	5.0	7.8	7.0	6.2	5.2
Black and Other	8.9	9.9	13.9	13.1	13.1	11.9
Household Heads	3.3	3.3	5.8	5.1	4.5	3.7

	1978						1979					
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Total Civilian Employment (Millions)	94.4	94.7	95.0	95.2	95.8	95.9	96.3	96.7	96.8	96.2	96.3	96.7
Total Civilian Unemployment (Millions)	6.2	5.9	6.0	5.8	5.9	6.0	5.9	5.9	5.9	5.9	5.9	5.8
15 Weeks & Over (Millions)	1.3	1.2	1.3	1.3	1.2	1.2	1.3	1.3	1.3	1.2	1.2	1.1
Unemployment Rates (Percent)												
Total Civilian	6.1	5.9	5.9	5.8	5.8	5.9	5.8	5.7	5.7	5.8	5.8	5.6
Men 20 and Over	4.1	4.1	4.1	4.0	3.9	4.1	4.0	4.0	4.0	4.0	3.9	3.9
Women 20 and Over	6.4	5.9	5.9	5.6	5.8	5.8	5.7	5.7	5.7	5.7	5.8	5.8
White	5.2	5.2	5.2	5.1	5.0	5.2	5.1	4.9	5.0	4.9	5.0	4.0
Black	12.3	11.5	11.3	11.3	11.7	11.5	11.2	11.9	11.2	11.8	11.6	11.3
Household Heads	3.8	3.7	3.6	3.5	3.4	3.5	3.4	3.5	3.4	3.6	3.4	3.5

1/ Data are seasonally adjusted, covering persons 16 and over.

Source: Economic Indicators, June 1979, pp. 11-12; U.S. Department of Labor, Bureau of Labor Statistics.

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SELECTED PERSONAL INCOME DATA

	1973	1974	1975	1976	1977	1978
Disposable personal income (Billions of dollars):						
in current dollars	901.7	984.6	1,086.7	1,184.4	1,303.0	1,451.8
in 1972 dollars	854.5	842.0	859.7	890.1	926.2	966.1
Personal saving as a percent of disposable personal income	7.8	7.3	7.7	5.7	5.1	5.3

	1978: I	1978: II	1978: III	1978: IV	1979: I
Disposable personal income (Billions of dollars): <u>1/</u>					
in current dollars	1,391.6	1,433.3	1,468.4	1,513.9	1,563.3
in 1972 dollars	952.1	960.3	968.7	983.2	940.1
Personal saving as a percent of disposable personal income <u>1/</u>	5.9	5.3	5.2	4.8	5.3

1/ Seasonally adjusted annual rates.

Source: Computed from data accessed from the files of Data Resources, Inc.; Economic Indicators, June 1979. p. 5.

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SELECTED PERSONAL INCOME DATA, PERCENTAGE CHANGES

	1973	1974	1975	1976	1977	1978	1978				1979	
							I	II	III	IV	I	
Disposable ^{1/} personal income:												
in current dollars	12.0	8.4	10.8	8.5	11.3	11.3	9.8	12.5	10.2	13.0	13.7	
in 1972 dollars	4.2	-3.1	4.4	3.3	5.4	3.5	1.1	3.5	3.5	6.1	2.8	

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^{1/} Fourth quarter to fourth quarter yearly increase or quarter-to-quarter increase at seasonally adjusted compound rates.

Source: Annual percentage changes computed from data accessed from the files of Data Resources, Inc; quarterly changes at compound annual rates from the Federal Reserve Bank of St. Louis, National Economic Trends, May 31, 1979, p. 4.

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CHANGES IN PRODUCTIVITY AND RELATED DATA ^{1/}
 [Percent Change: Quarterly Data at Seasonally Adjusted Annual Rate]

<u>Private Business Sector</u>			
	Output Per Hour	Compensation Per Hour	Unit Labor Costs
1965-1973 (average) ^{2/}	2.1	6.8	4.6
1973	1.9	8.2	6.2
1974	-3.0	9.1	12.5
1975	2.1	9.9	7.7
1976	3.5	8.7	5.0
1977	1.6	8.1	6.4
1978	.3	9.2	9.0
1978: I	-4.5	12.1	17.4
1978: II	1.2	8.1	6.8
1978: III	3.5	10.4	6.7
1978: IV	1.7	8.7	6.8
1979: I p	-4.6	11.1	16.4
 <u>Non-farm Business Sector</u>			
	Output Per Hour	Compensation Per Hour	Unit Labor Costs
1965-1973 (average) ^{2/}	1.8	6.6	4.7
1973	1.7	7.8	6.0
1974	-3.1	9.1	12.6
1975	1.9	9.9	7.8
1976	3.5	8.4	4.7
1977	1.3	8.1	6.7
1978	.5	9.3	8.8
1978: I	-3.1	12.2	15.7
1978: II	1.7	8.2	6.4
1978: III	2.3	9.6	7.1
1978: IV	1.9	9.1	7.0
1979: I p	-4.3	10.2	15.2

^{1/} Output per hour or labor productivity measures the volume of goods and services produced per hour. Compensation per hour includes wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Unit labor costs measure the labor compensation cost required to produce one unit of output and are derived by dividing compensation per hour by output per hour.

^{2/} Calculated from a least squares trend calculated from the logarithms of the numbers.

Sources: Economic Indicators, June 1979, p. 16; U.S. Department of Labor, Bureau of Statistics.

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INDUSTRIAL PRODUCTION AND CAPACITY UTILIZATION

[Seasonally adjusted]											
Period	Total industrial production		Industry production indexes, 1967=100					Manufacturing capacity utilization rate, percent ¹			
	Index, 1967=100	Percent change from year earlier	Manufacturing			Mining	Utilities	Federal Reserve series			
			Total	Durable	Non-durable			Total manufacturing	Materials	Commerce series ²	Whar-ton series ³
1967 proportion.....	100.00		87.96	61.98	56.97	6.36	6.69				
1972.....	119.7	9.2	118.9	113.7	126.5	113.1	139.4	83.1	88.0	83	87.8
1973.....	129.8	8.4	129.8	127.1	133.8	114.7	145.4	87.5	92.4	86	93.1
1974.....	129.3	-4	129.4	125.7	134.6	115.3	143.7	84.2	87.7	83	90.5
1975.....	117.8	-8.9	116.3	109.3	126.4	112.8	146.0	73.6	73.6	77	80.0
1976.....	129.8	10.2	129.5	121.7	140.9	114.2	151.0	80.2	80.4	81	86.1
1977.....	137.1	5.6	137.1	129.5	148.1	117.8	156.5	82.4	81.9	83	88.5
1978.....	145.2	5.8	145.7	139.3	154.8	124.2	161.0	84.2	84.9	84	91.8
1978: May.....	143.9	5.0	144.3	137.6	154.0	126.7	157.0	83.9	84.5		
June.....	144.9	5.2	145.5	139.0	154.9	128.0	158.6	84.3	85.1	84	91.5
July.....	146.1	5.3	146.7	141.1	155.0	127.1	159.9	84.7	85.7		
Aug.....	147.1	6.5	147.6	142.2	155.6	126.0	160.8	85.0	85.9		
Sept.....	147.8	6.7	148.7	142.8	157.1	124.1	162.3	85.3	86.3	83	93.0
Oct.....	148.7	7.1	149.5	144.0	157.4	127.6	162.4	85.5	87.1		
Nov.....	149.6	7.4	150.4	144.8	158.5	128.1	162.9	85.8	87.6		
Dec.....	150.9	8.0	151.8	146.4	159.6	127.6	164.3	86.3	88.1	84	94.0
1979: Jan.....	150.9	8.7	151.9	146.0	160.4	124.0	166.8	86.0	87.4		
Feb.....	151.2	8.6	152.2	146.2	160.7	121.8	169.0	85.9	87.1		
Mar.....	152.3	8.1	153.4	147.5	161.7	123.4	166.9	86.3	87.6	84	94.1
April.....	150.0	4.7	150.8	143.9	160.8	123.6	166.0	84.6	86.4		
May.....	151.8	5.5	153.0	147.0	161.9	124.0	166.6	85.5	86.8		
June.....	151.4	4.5	152.5	146.3	161.5	124.8	166.9	85.0	86.6		

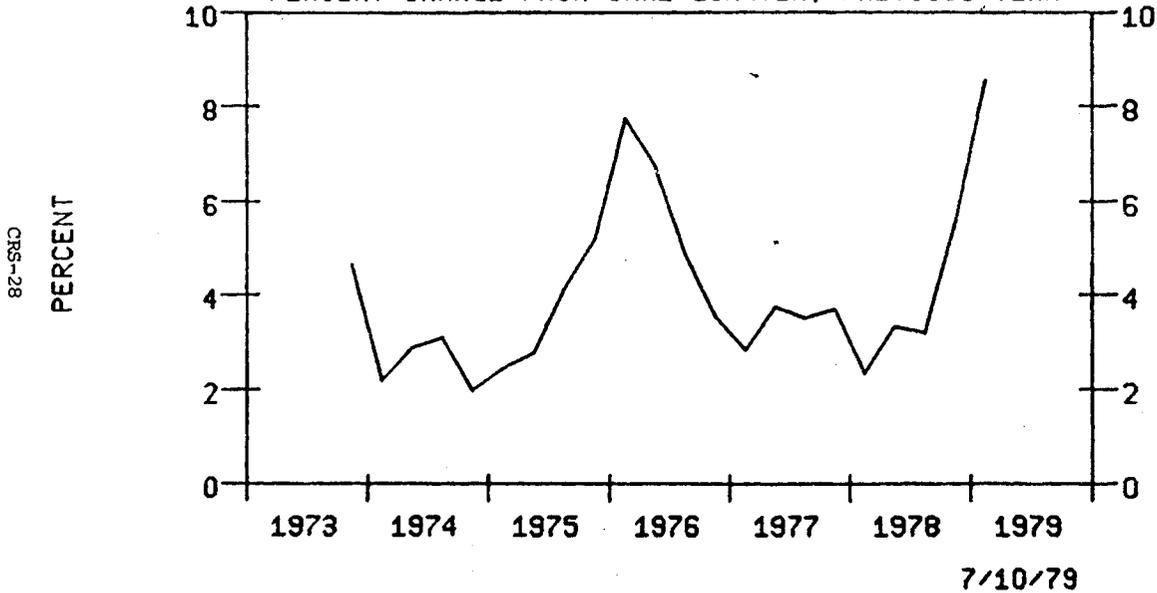
Source: Economic Indicators, June 1979. p. 17; Board of Governors of the Federal Reserve System.

CAPACITY UTILIZATION RATES FOR MATERIALS INDUSTRIES
(In Percent)

		Materials									
		Durable Goods			Nondurable Goods Materials					Energy	
		Basic Metal		Total	Textile, paper and chemical materials				Materials		
		Total	Materials	Total	Total	Textile	Paper	Chemicals			
1973:	Q1	92.1	90.6	95.6	93.9	94.1	92.8	98.4	93.2	93.8	
	Q2	92.5	91.6	97.2	93.6	93.7	92.7	99.5	92.4	93.4	
	Q3	92.9	92.3	97.5	93.4	93.9	93.4	98.8	92.5	94.1	
	Q4	92.1	91.4	96.8	93.7	93.7	93.9	98.2	92.4	92.0	
1974:	Q1	90.4	88.5	94.7	93.7	93.8	79.4	97.9	92.5	90.5	
	Q2	89.6	87.4	93.9	93.0	93.2	89.6	98.4	92.7	90.3	
	Q3	89.1	87.7	92.0	91.4	91.9	84.5	97.0	92.7	89.4	
	Q4	81.7	79.9	86.0	81.4	81.0	69.3	89.9	82.1	87.0	
1975:	Q1	71.5	66.9	75.2	69.9	67.8	60.1	78.3	67.2	86.8	
	Q2	70.7	64.6	67.0	72.4	70.3	70.5	73.5	69.4	85.2	
	Q3	74.9	69.0	70.1	79.8	78.2	81.5	81.2	76.5	84.4	
	Q4	77.1	70.6	69.4	84.3	83.8	86.2	86.4	82.3	85.2	
1976:	Q1	79.3	73.8	74.1	85.6	85.1	84.3	89.8	84.0	85.6	
	Q2	80.7	76.7	79.3	85.9	85.2	83.8	90.6	84.0	84.1	
	Q3	81.2	78.4	81.7	84.8	83.7	82.4	89.2	82.6	83.8	
	Q4	80.3	76.5	74.4	84.4	83.2	79.7	88.1	83.0	84.8	
1977:	Q1	80.4	76.5	75.0	85.1	83.8	78.7	88.4	84.0	84.5	
	Q2	82.6	79.4	80.2	87.2	86.3	78.1	89.5	87.7	84.8	
	Q3	82.3	79.2	75.3	86.3	85.1	78.8	89.3	85.7	85.0	
	Q4	82.2	79.7	75.2	85.9	84.5	82.4	86.7	84.5	83.7	
1978:	Q1	81.7	79.3	75.8	86.7	85.5	80.3	88.9	86.0	80.9	
	Q2	84.5	82.2	80.4	88.5	86.8	81.2	90.3	87.5	84.9	
	Q3	86.0	85.3	85.1	87.5	86.2	81.0	86.5	87.5	85.6	
	Q4	87.6	87.5	88.1	88.5	87.2	82.2	87.4	88.5	86.4	
1979:	Q1	87.3	87.0	84.5	88.8	87.6	80.8	87.0	89.6	85.9	
	Q2	86.5	85.9	NA	88.0	NA	NA	NA	NA	84.9	

Source: Board of Governors of the Federal Reserve System; data accessed from data files of Data Resources, Inc.

INCOME VELOCITY OF MONEY (M1)
PERCENT CHANGE FROM SAME QUARTER, PREVIOUS YEAR



SOURCES: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM
DEPT. OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS
PREPARED BY CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

MONETARY AND CREDIT AGGREGATES
(Seasonally adjusted compound annual rates)

	1975	1/ 1976	1/ 1977	1/ 1978	1978			1979		Federal Reserve targets: 4th quarter 1978 to 4th quarter 1979
					2/ II	2/ III	2/ IV	2/ I	2/ II	
Monetary aggregates:										
M1	4.6	5.8	7.9	7.2	9.5	8.1	4.2	-2.1	7.8	1.5 to 4.5
M2	8.4	10.9	9.8	8.4	8.7	10.1	7.8	1.8	8.9	5.0 to 8.0
M3	11.1	12.7	11.7	9.3	8.7	10.7	9.6	4.8	8.1	6.0 to 9.0
Deposits at non-bank thrift institutions	15.7	15.6	14.5	10.6	8.8	11.5	12.2	9.2	7.0	NA
Bank credit ^{4/}	4.1	8.1	11.2	12.5	15.9	12.3	11.5	13.8	12.0	7.5 to 10.5
Adjusted monetary base (St. Louis F.R. Bank)	7.6	8.4	8.8	9.6	8.3	9.7	10.0	5.9	6.5	NA

^{1/} From fourth quarter of previous year to fourth quarter of year indicated.

^{2/} From previous quarter.

^{3/} Federal Reserve projections as announced in Monetary Report to Congress Pursuant to the Full Employment and Balanced Growth Act of 1978, February 20, 1979.

^{4/} Total loans and investments at commercial banks; revised May, 1979.

Sources: Board of Governors of the Federal Reserve System and Federal Reserve Bank of St. Louis. Accessed from data files of Data Resources, Inc.

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

	1975	1976	1977	1978	1978				1979	
					I	II	III	IV	I ^P	II
(in billions of dollars; quarterly data seasonally adjusted)										
Exports	107.1	114.7	120.8	141.9	30.8	35.3	36.5	39.3	41.4	NA
Imports	98.0	124.0	151.7	176.0	42.7	43.2	44.5	45.7	47.4	NA
Trade balance	9.0	-9.4	-30.9	-34.2	-11.9	-7.9	-8.0	-6.4	-6.1	NA

Index of the weighted-average exchange value of the U.S. dollar	98.34	105.57	103.30	92.39	95.90	95.20	90.65	87.81	88.14	89.79

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

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

Sources: Exports, imports, and trade balance - Economic Indicators, June 1979.
 Trade-weighted exchange value of the U.S. Dollar - Board of Governors of the Federal Reserve System.

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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) ³	
	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					
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	2,003.9	718	409	5.6
1973.....	2,045.3	1,182.0	118.3	785.0	1,819.5	2,100.5	634	418	5.9
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	839.2	1,317.2	549	313	6.0
1976.....	1,537.5	1,162.4	85.9	289.2	1,296.2	1,377.2	646	353	5.6
1977.....	1,987.1	1,450.9	121.7	414.4	1,690.0	1,657.1	819	401	5.2
1978.....	2,020.3	1,433.3	125.0	462.0	1,800.5	1,867.5	816	413	5.0
Quarterly averages at seasonally adjusted annual rates									
1978: I	1,721.3	1,229.3	102.0	390.0	1,569.0	1,758.7	793.3	404	5.0
II	2,114.3	1,470.3	126.3	517.6	1,719.3	1,895.7	834.7	419	5.1
III	2,044.0	1,439.3	127.7	477.0	1,773.0	1,925.3	801.0	417	5.0
IV	2,078.3	1,492.3	134.7	451.3	1,817.0	1,885.3	835.0	413	5.0
1979: I ^D	1,615.3	1,119.3	105.3	390.7	1,496.0	1,888.7	751.7	424 ³	4.8
Apr ^D	1,735.0	1,273.0	113.0	349.0	1,517.0	1,997.0	732.0	426	NA
May ^D	1,827.0	1,195.0	126.0	506.0	1,591.0	NA	NA	NA	NA

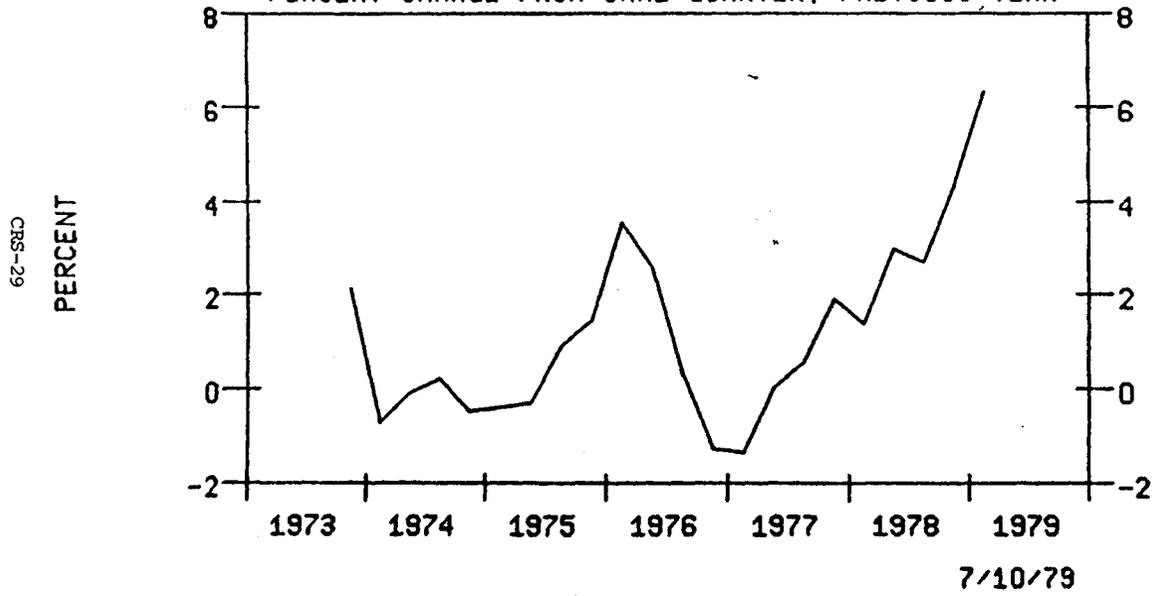
1 Seasonally adjusted.

2 Quarterly data are entered in the last month of the quarter.

3 New series beginning March, 1979.

Source: Economic Indicators, June 1979. p. 19; Department of Commerce, Bureau of the Census.

INCOME VELOCITY OF MONEY (M2)
PERCENT CHANGE FROM SAME QUARTER, PREVIOUS YEAR

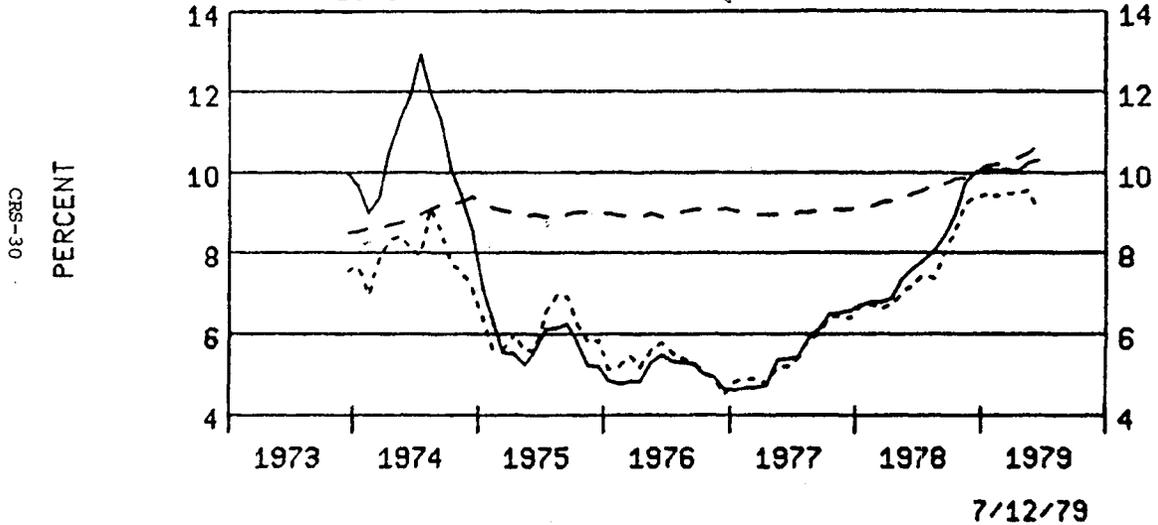


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SOURCES: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM
DEPT. OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS
PREPARED BY CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

INTEREST RATES
FEDERAL FUNDS RATE (LINE)
AVERAGE YIELD ON 6 MONTH TREASURY BILLS (DOT)
EFFECTIVE YIELD ON NEW HOME MORTGAGES (DASH)



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SOURCES: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM
DEPT. OF THE TREASURY AND THE FEDERAL HOME LOAN BANK BOARD
PREPARED BY CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

SELECTED INTEREST RATES, 1973-1979

	1973	1974	1975	1976	1977	1978	1st half 1979
3-mo. treasury bills (new issues)	7.03	7.87	5.82	4.99	5.26	7.22	9.37
10-yr. treasury securities (constant maturity)	6.84	7.56	7.99	7.61	7.42	8.41	9.11
Corporate Aaa bonds (Moody's)	7.44	8.57	8.83	8.43	8.02	8.73	9.34
Prime commercial paper, 4-6 mos	8.15	9.84	6.32	5.35	5.60	7.99	9.98
Prime rate charged by banks	8.02	10.80	7.86	6.84	6.82	9.06	11.75
Effective conventional mortgage rate, new homes, combined lenders	7.95	8.92	9.01	8.99	9.01	9.54	10.50
Federal Reserve discount rate (N.Y. F.R. Bank)	6.44	7.83	6.25	5.50	5.52	7.52	9.50
Federal funds rate	8.73	10.50	5.82	5.05	5.54	7.93	10.13

Sources: Board of Governors of the Federal Reserve System, Federal Home Loan Bank Board, and Moody's Investors Service. Accessed from data files of Data Resources, Inc.

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FUNDS RAISED IN U.S. CREDIT MARKETS

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

	1975	1976	1977	1978	1978 (II)	1978 (III)	1978 (IV)	1979 (I)
Total funds raised, by instrument:	219.8	301.7	399.4	490.8	474.4	483.6	518.5	472.4
Investment company shares	-.1	-1.0	-1.0	-1.1	-.9	-1.9	-1.2	-1.3
Other corporate equities	10.8	12.9	4.8	3.6	4.1	5.0	3.5	2.8
Debt instruments:	209.1	289.8	395.6	488.2	471.2	480.5	516.3	470.9
U.S. Government securities	98.2	88.1	84.3	95.2	95.8	96.3	83.7	70.6
State and local obligations	15.6	19.0	29.2	30.1	36.6	38.7	24.6	19.4
Corporate and foreign bonds	36.4	37.2	36.1	31.5	35.8	33.8	27.8	25.5
Mortgages	57.2	87.1	134.0	149.2	145.9	154.8	161.5	142.5
Consumer credit	9.4	23.6	35.0	49.9	56.4	48.5	52.8	49.8
Bank loans, n.e.c.	-13.9	6.4	32.2	53.0	32.1	56.7	59.5	35.2
Open market paper and repurchase agreements	-2.4	13.3	19.8	42.5	36.9	20.4	61.6	94.2
Other loans	8.7	15.3	25.1	36.9	31.7	31.3	44.8	33.7

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

The CHAIRMAN. Our first witness this morning will be Professor Friedman, go ahead, sir.

**STATEMENT OF PROF. BENJAMIN M. FRIEDMAN, DEPARTMENT
OF ECONOMICS, HARVARD UNIVERSITY**

Professor FRIEDMAN. Thank you, Mr. Chairman.

I feel very honored to be here and to have the opportunity to present my views before this committee. I have submitted a full statement and in the interest of time I will simply summarize the parts of my statement that I think are of particular relevance.

The CHAIRMAN. We appreciate that and the full statement will be printed in the record.

Professor FRIEDMAN. Thank you, sir.

In my statement I address four issues. The first two probably are not very controversial, and therefore I will skip over them very quickly.

First is the question of the outlook for the U.S. economy over the next 18 months. Having a view about the outlook is essential to what follows, but I think that my views here differ very little from what most other economists now believe. The business cycle is now headed into a downturn. Unfortunately, price inflation has prospects that are more inflationary rather than less, both in the near term and even over the longer term, making progress against price inflation will be a slow matter. This view is a precursor to what I will say next, but I do not think that that is very controversial.

Next, on the role of demand management policy, the key question that policy has to face at this juncture is whether or not to let the business cycle run its course. One view would be that we should shift policy now in order to combat the developing recession. I disagree with that and, instead I agree with what you said at the outset of these hearings, Mr. Chairman: namely, that at this point we should avoid precipitous movements toward either tax action or an easing of monetary policy. At least for the present we should let the business cycle run its course in the interest of returning our economy toward a path of price stability. If it appears that the recession is going to be more severe than now seems likely, then we can reconsider this choice; but I would urge that neither fiscal policy nor monetary policy be eased at this time.

The third issue that I take up in my statement—and I think this also speaks to one of the issues that you raised, Mr. Chairman—is the current stance of policy.

I believe that characterizing fiscal policy at this time is relatively straightforward. Fiscal policy is conservative in this country just now. The Federal deficit has shrunk from \$60 billion per annum to less than \$20 billion per annum in a year and a half, while the unemployment rate basically has remained unchanged. State and local governmental units continue to run about a \$30 billion per annum surplus, with no sign of abating. The current account of our balance of payments is likely to be deteriorating in the near future, and, a current account deficit is in many ways analogous to a Government surplus. Adding together the Federal, the State and local, and the current account, I conclude that fiscal policy is quite conservative at this time.

Characterizing monetary policy, however, is a different matter. There are some indicators which one could cite which would suggest that monetary policy is rather tight. For example, nominal interest rates are high. One can question, however, whether nominal interest rates at 10 percent for commercial paper, for example, are really very high when business inventories are inflating at 10 to 15 percent. Similarly, until the last several months, monetary growth as measured by M_1 and M_2 was extremely low. We have increasingly learned, however, that the monetary aggregates as measured do not have the close relationship to economic growth that once was claimed for them by some people. The monetary base has also grown somewhat slowly, although not nearly as slowly as has the money stock, so that it offers evidence suggesting that policy is more expansionary. Finally, I would cite exactly the indicator that you, Mr. Chairman, pointed to: namely, bank credit.

If I may refer to table 3 of my prepared remarks, I have set out here the recent growth rates of several aggregates, first for the 3 years 1976, 1977, and 1978, then broken down for the four quarters of 1978, and then also for the two quarters of 1979 thus far. The table presents data for a variety of measures of monetary policy measured from quantitative aggregates. The very slow growth of the money stock, either for M_1 or M_2 , shows up very clearly. The monetary base has not grown all that rapidly, but nevertheless more rapidly than money stock until recently. The aggregates that I would like to emphasize, however, are instead credit aggregates regardless of whether we look at bank credit, or the part of bank credit which is in the form of loans rather than investments, or even the part of bank loans that go primarily to commercial and industrial concerns, the credit side of the banking system's activity has been proceeding at an extremely rapid rate with no evidence yet of a slowing.

The CHAIRMAN. Commercial and industrial loans. Does that include commercial paper or not?

Professor FRIEDMAN. No, sir.

The CHAIRMAN. Then it's even greater?

Professor FRIEDMAN. Yes, sir. If we added to commercial and industrial loans the commercial paper issues by commercial and industrial concerns, we would get an even greater growth rate. The figure in the table represents just the loans extended by the banking system per se.

One can now ask the following question: What does it mean to have the banking system rapidly lending and extending credit, without having a comparable increase in the money stock, and without even having all that great an increase in the monetary base? I think that there are two fairly straightforward answers. One, which we have known for a long time, is that, because the monetary aggregates as defined do not include all bank liabilities—they typically exclude large CD's, for example, and they also exclude Eurodollar borrowings—it is entirely possible for the banking system to extend a great amount of credit without having to increase money at all. In fact, that is just what the banks have recently been doing. This possibility is well known, and it is a typical reason for not wanting to place exclusive reliance on the money stock in measuring monetary policy. Next, how about the

monetary base? The monetary base consists of currency plus bank reserves. An interesting development in the past year is that Euro-dollar borrowings, which are one liability that banks can use to finance bank credit expansion, now have zero—repeat, zero—reserve requirements. By using Eurodollar borrowings to finance credit expansion, therefore, a bank can not only expand credit without having to create money but, in addition, expand credit without even increasing its required reserves.

For these reasons, my judgment is that we must look not just at the liability side of the banking system's balance sheet but also at the asset side. The asset side tells us that there is no credit restraint from the U.S. banking system that we can find today. On the basis of this and other evidence which I mention in my statement, my conclusion is that, in contrast to fiscal policy which I believe is quite conservative now, I believe that monetary conservativeness is fully accommodating the growth of the economy.

What should be done? A primary conclusion that I would draw is that it is too early to ease monetary policy. Monetary policy is not particularly tight, and therefore it should not be eased. If it turns out some months from now that the recession looks as if it will develop to be more severe than we now anticipate, then we can seek some easing. At least on the basis of evidence to date, however, I believe that monetary policy should not be eased. On balance, the prospect for monetary policy the next year and into 1980, as contained in the report submitted by Chairman Miller to Congress last week, is about right.

I also want to make three brief remarks about that report before finishing.

First, while I applaud the action of the Federal Reserve in the past year or so in reducing the amount of attention it places on the monetary aggregates per se, I believe—as was implicit in your remarks, Mr. Chairman—that the Fed has not placed sufficient attention on the credit side of the banking system's activity. They have moved toward greater attention to activities and developments in the nonfinancial economy, but they have not yet shown any sign that they take the projection of the credit aggregate targets as seriously as the monetary aggregate targets. The evidence that you cited at the outset of this hearing is exactly what I have in mind.

Second, the Federal Reserve has announced a proposal for redefining the monetary aggregates. If that proposal is adopted, the case for placing more reliance on explicit credit targets will be all the greater. In brief, the reason is that the current M_2 measure is at least loosely connected to bank credit in a way that the proposed new definition for M_2 will not be. Especially if the Federal Reserve adopts the new proposed definitions, I then in particular urge greater explicit attention to bank credit.

Finally, on numerous occasions in the past, including before this committee, I have urged that the Federal Reserve disclose its forecast for the nonfinancial economy in addition to its forecast and targets for the monetary aggregates, and that the Federal Reserve relate its forecast for the nonfinancial economy to the objectives specified by the administration. I want to take this opportunity to

applaud the Federal Reserve for doing exactly that, for the first time, in the report submitted last week.

Mr. Chairman, thank you for the opportunity to present my views to the committee.

[Complete statement of Professor Friedman follows:]

July 23, 1979

TESTIMONY BEFORE THE UNITED STATES SENATE
COMMITTEE ON BANKING, HOUSING & URBAN AFFAIRS

Benjamin M. Friedman
Associate Professor of Economics
Harvard University

Mr. Chairman:

I am honored to have the opportunity to present my views to this Committee on the occasion of its review of the midyear monetary policy report submitted to Congress by the Federal Reserve Board pursuant to the Full Employment and Balanced Growth Act of 1978.

Economic policy in general, including monetary policy in particular, is especially important at this critical point for the American economy. Several strong and disparate forces have contributed to the current atmosphere of jeopardy to the economic well-being of the United States. Among these are an imminent business cycle peak, ongoing virulent inflation, and the recent sharp increase of prices by the international oil cartel. There is probably no way for U.S. economic policy to avoid at least some real losses to the American economy, since important aspects of the current economic threat to the United States are not readily subject to near-term solution. The increased transfer of wealth from Americans to foreign oil producers, for example, will continue until such time as energy policy either reduces American dependence on imported oil or somehow breaks the price-setting power of their cartel. Similarly, U.S. price inflation has now been accelerating for over a decade, and, while progress is possible, it would be optimistic to expect a sharp deceleration in the very short run. Nevertheless, at this critical juncture policy can exert an

important impact, for better or ill, on near-term developments in our economy. For this reason the attention of this Committee to both monetary policy and fiscal policy is rightly an object of high priority.

In my testimony this morning I will briefly address four successive questions: First, what are the most likely prospects for the U.S. economy during the next twelve to eighteen months? Second, in light of this economic outlook, what is the appropriate role for demand management policy, including both monetary and fiscal policy? Third, how can we characterize the respective current stances of monetary and fiscal policy? Fourth, what are appropriate guidelines for the conduct of monetary policy in particular during the coming critical months? In addressing this final question, I will also briefly refer to several specific issues, including the coordination of monetary and fiscal policy and the implications of the change in the definitions of the monetary aggregates recently proposed by the staff of the Federal Reserve Board.

1. The Economic Outlook in the Near-Term

To begin, I agree with the current consensus among both private and government economists that the expansion which the American economy has been experiencing since the spring of 1975 is about to end.

For several reasons, the expansion would have ended soon even without the recent negative "supply shocks" from the energy sphere. As the expansion entered its fifth year, a number of strains were already beginning to develop. The decline in the personal saving rate, which had propelled consumption spending more rapidly than growth in disposable income and therefore had provided a major impetus to economic growth, had finally halted as consumers came to face record high debt burdens associated with borrowing on both

consumer credit and home mortgages. Simultaneously, the increasing cost and reduced availability of mortgage market funds had already led to a downturn in new residential construction; at best, the homebuilding industry could have expected only flat prospects. In addition, since mid 1978 government purchases of goods and services have shown no increase at all after adjustment for inflation, at either the federal or the state and local level. Indeed, the sole area of apparent strength in the outlook for our economy's near-term growth was business investment in fixed plant and equipment, which had in fact begun its own recovery only some time after the overall expansion began in 1975.

In sum, about the best real performance that the U.S. economy could have achieved in the coming year, even in the absence of adverse energy developments, would have been an overall standstill. Perhaps more likely would have been a small dip in real business activity, so that the growth rate on average during the second half of 1979 and the first half of 1980 would have been about in the range of 0 to - 1% per annum.

The recent price increase by the OPEC cartel and the loss of some OPEC production, however, have now added at least two new dimensions to this picture. One is the now familiar drain on U.S. purchasing power, and hence reduction of U.S. spending, associated with the transfer of real income from households and businesses in the American economy to foreign nationals. A straightforward calculation based on oil imports of 8 million barrels per day and an effective price increase of \$7 per barrel indicates that the loss of purchasing power in the first year after the new oil price becomes fully effective will be approximately \$20 billion dollars, or about 1 per cent of the nation's gross national product. After allowing for further effects on spending — due to the fact that the loss of income and wealth to some people reduces their spending,

and that reduced spending in turn further erodes the income and wealth of other people, and so on — the effect of the oil price increase will probably reduce the U.S. gross national product approximately 2 per cent during the coming year. Combining this effect with a cyclical posture that already implied a 0 to -1½ real growth suggests a likely outcome for the coming twelve months of a decline of real gross national product of the order of 2 to 3 per cent.

A second, potential, effect associated with the recent oil situation stems not from the increase in the price of oil but rather from the reduction in the availability of certain oil products, especially gasoline. We have no firm basis for assessing the effects of sustained gasoline shortages, represented by long lines at filling stations or a scarcity of filling stations open on weekends, during a period of seasonal high activity for automobile-related consumption activities. It is therefore impossible to gauge with any precision how sharp a drop in major consumption components would occur if serious gasoline shortages were to continue through the summer and into the autumn — or, even if there were no shortages, if people nevertheless believed or even feared that there were. We have already seen a sharp drop in tourism in some parts of the country, and sales of automobiles are now down by far more than can be explained by the relatively small increase to date in the price of gasoline. In addition, just in the past month we have seen a sharp decline in homebuilding and home buying activity in specific areas requiring lengthy automobile commutes to logical work places.

A major downside risk associated with the near-term economic outlook, therefore, is the possibility that the public would sharply change its consuming habits as a result of real or suspected inability to purchase gasoline. For this reason, I believe that a 2 to 3 per cent decline in real gross national

product now probably represents the single best estimate of the near-term economic outlook, but also that, especially if gasoline shortages were to persist, an even more severe decline would then be more likely to occur.

I also agree with the pessimistic prognosis for continuing price inflation that private economists have been suggesting for some time, and that government economists have only recently begun to echo. A major reduction in inflation within the next twelve to eighteen months seems unlikely. Most quantitative estimates of the short-run sensitivity of inflation to economic activity suggest that even a fairly major recession would at its inception have only a minor slowing effect on price inflation. Moreover, we have not yet experienced even the initial impact on oil product prices associated with the OPEC cartel's price increase, or with the phased price deregulation program recently authorized by the President — not to speak of the much higher prices that would be associated with any kind of synthetic fuel program. As these higher fuel costs feed through the economy, they will only raise overall price levels yet further in the short run.

Even recently, the improved producer price statistics that we have enjoyed (see Table 1) have almost entirely represented a reversal in agricultural prices, which rose at extraordinarily rapid rates during the winter only to begin falling absolutely in April. Producer prices for finished goods other than food have on balance shown no deceleration in April and May, after the sharp acceleration earlier this year. The inflation of consumer prices, which also accelerated earlier this year, has also shown no abatement.

In sum, therefore, the American economy is headed into a pattern that may have been atypical some years ago but that is now distressingly familiar. Specifically, it is about to begin a cyclical downturn while price inflation

TABLE 1

RECENT TRENDS IN U.S. PRICE INFLATION

	Producer Prices				Consumer Prices			
	Total finished goods	Consumer foods	Other consumer goods	Capital equipment	All items	Food	Other commodities	Services
1976	3.3%	- 2.5%	4.9%	6.4%	4.8%	0.6%	5.1%	7.3%
1977	6.6	6.6	6.1	7.2	6.8	8.0	4.9	7.9
1978	9.1	11.9	8.3	8.0	9.0	11.8	7.7	9.3
1978:								
July-Dec	10.8	12.1	10.2	9.6	9.6	6.4	9.8	11.0
1979: Jan	15.6	21.6	14.4	12.0	10.8	16.8	10.8	6.0
Feb	12.0	18.0	10.8	10.8	14.4	19.2	12.0	13.2
March	12.0	14.4	13.2	7.2	12.0	13.2	13.2	10.8
April	10.8	- 3.6	16.8	13.2	13.2	12.0	15.6	10.8
May	4.8	-15.6	15.6	8.4	13.2	8.4	13.2	15.6

Notes: All percentages at annual rates seasonally adjusted.
Data from Department of Labor.

is still on the increase. Moreover, the prospects are that, at least during the early part of the cyclical downturn, there will be little fundamental improvement in inflation.

2. The Role for Demand Management Policy

How should economic policy approach this unfortunate combination of stagflation together with a perverse supply shock from the recent OPEC actions? To be sure, demand management policy is not the only government policy that is relevant both to economic activity and to price inflation, especially at the current time. The energy policy now under debate will be of crucial importance. In addition, policies that either provide or impede incentives to financial saving and physical capital formation, as well as to job training and other investment in a more productive labor force, are also of high priority. These policies, however, exert their effects on the economy primarily over a longer time perspective. For the immediate future, the course of the 1979-80 recession (if it comes to be labeled so) will depend more on demand management policies, including monetary and fiscal policy, than on longer-range initiatives in the form of capital formation incentives or energy policies.

One way to begin in assessing the role for demand management policy in the current circumstance is to compare the likely 2 to 3 per cent drop in real gross national product (without allowing for the highly uncertain gasoline shortage effects) with the magnitude of the six previous post-war recessions. As is clear from Table 2, a recession that lowered the nation's output by 2 to 3 per cent within the course of a year or so would be about comparable to the recessions that our economy experienced in 1953-54 and 1957-58. A recession of this magnitude would be more severe than the recessions of 1948-49, 1960 and

TABLE 2SIX POST-WAR U.S. RECESSIONS

<u>Peak Quarter</u>	<u>Trough Quarter</u>	<u>Decline in Real GNP</u>
1948: Q4	1949: Q2	1.4%
1953: Q2	1954: Q2	3.3
1957: Q3	1958: Q1	3.2
1960: Q1	1960: Q4	1.2
1969: Q3	1970: Q4	1.1
1973: Q4	1975: Q1	5.7

Note: Data from Department of Commerce.

1969-70; but it would be far milder than the extremely severe recession of 1973-75.

Should economic policy turn deliberately expansionary in order to prevent a recession of this magnitude? My judgment is that at this time it should not. The American economy has operated at what one can properly regard as "macro-economic full employment" for quite some time. There are now approximately 5 million people in the labor force without jobs, but both repeated experience and substantial quantitative economic research have shown that stimulating the overall economy is not likely to produce substantial benefits in the form of jobs for many of those who are now unemployed. Major further stimulus of the economy is more likely only to increase competition for the services of people who already have jobs, and therefore to spur inflation further. The best way to alleviate the serious plight of those currently unemployed is, instead, to pursue more specific targeted programs of training, placement and other assistance.

It is important to realize that it has taken approximately a decade and a half for the U.S. inflation rate to accelerate from 2% to 10%. A large part of the story of this secular acceleration must be associated with operating our economy, on average, too close to its capacity. That is not to assert that there have been frequent periods of widespread out-and-out shortages (there have not), nor is it to deny that specific external factors like the oil cartel and the explosion of food prices in 1974 have played a major role as well (they have). Nevertheless, on balance, the American economy has operated too close to the margin of full utilization of its factors of production, including both labor and capital, for the last decade and a half. Operating on average at a lower rate relative to potential production in the future, and specifically

beginning now with a business-cycle recession of moderate size and duration at this point, would probably be the best way to place our economy on the road toward price stability.

As a result, while monetary and fiscal policy should certainly not permit what now looks like an average recession to develop into a more severe setback, nor should they attempt to prevent the business cycle from running its course at the current time.

3. The Current Stance of Fiscal and Monetary Policies

How can we characterize monetary and fiscal policy at this time?

I believe that the current direction of fiscal policy is easier to discern than that of monetary policy. Whether by direction or not, U.S. fiscal policy is rapidly becoming contractionary. From the fourth quarter of 1977 to the first quarter of 1979, the Federal Government's deficit (on a national income accounts basis) declined from an annual rate of \$59 billion to an annual rate of only \$19 billion, while the unemployment rate remained essentially unchanged. Part of this reduction in the deficit has reflected the recently legislated Social Security tax increases, but even more has been due to the interaction of price inflation with the progressive personal income tax system. Indeed, this tax bracket effect is just what the "built-in stabilizers" are supposed to achieve in these circumstances; when accelerating inflation indicates the need to slow the economy's growth, taxes rise in relation to personal income and therefore retard spending. Regardless of the reason, however, it remains clear that the Federal Government's budget deficit has been shrinking for some time and is likely to remain small unless the recession becomes so severe as to reduce economic activity enough to offset the added revenue gain due to

inflation — or unless Congress switches to an expansionary policy and enacts a tax cut.

At the same time that the Federal Government's budget deficit has been declining, state and local governments in the aggregate have been continuing to run a large budget surplus. In the wake of Proposition 13, there was a small drop in the state and local government surplus from an annual rate of \$30 billion in the second quarter of 1978 to an annual rate of \$23 billion in the next quarter. By the first quarter of 1979, however, state and local governments collectively were again running a budget surplus of \$27 billion per annum. In addition, the likely increase in the U.S. net export deficit will further reinforce the declining Federal deficit, since the effect on economic activity due to a current account deficit is in many respects directly analogous to the effect due to a government surplus.

In view of all three of these elements — the sharply declining Federal Government deficit, the persistently large state and local government surplus, and the likely increasing U.S. current account deficit — the prospect is that the net depressant fiscal effect has already begun to grow and will become larger in the future. One can only characterize fiscal policy as conservative at this time.

By contrast, characterizing monetary policy is now much more difficult. The last year or so has been a time of extraordinary confusion among "Fed watchers," especially in light of the increasingly bizarre behavior of the monetary aggregates. Interest rates have risen, and the monetary aggregates have grown slowly, but these movements are not necessarily signs of monetary policy tightness except to old-fashioned Keynesians or strict monetarists, respectively. Nominal interest rates rose substantially during 1978 and early

1979 — in May and June they declined, but now they are rising again — but price inflation has also accelerated. A 10% commercial paper rate may exert little depressing effect on borrowing or economic activity when business inventories are inflating at 12 - 15%. Similarly, although the monetary aggregates were showing little or no growth during much of this past winter (see Table 3), students of banking and portfolio behavior have suggested that institutional changes like arrangements for repurchase agreements and federal funds transactions may well have severed, at least temporarily, any reliable relationship between income growth and the public's holding of money balances. Still another familiar indicator of monetary policy is the relation between nominal interest rates on short-term market investment instruments and the Regulation Q interest rate ceilings on deposits at thrift institutions. Under normal circumstances market interest rates at today's level would probably lead to extreme disintermediation, and consequent disappearance of mortgage credit. Because of the phenomenal success of the money market certificates introduced approximately a year ago, however, savings inflows in total have held up moderately well, and thrift institutions are continuing to advance funds for home mortgages. Yet another way of assessing monetary policy is to look backward from the money held by the public to the raw material from which that money is created — namely, the monetary base, which consists of currency plus bank reserves. The behavior of the money stock and the monetary base has hardly been identical during the past year (see again Table 3), and on the whole the monetary base has suggested an easier stance of monetary policy than has the money stock.

Finally, one further indicator of monetary policy is the growth of bank credit, and in particular bank lending. Because banks can finance their credit

TABLE 3

AGGREGATIVE MEASURES OF U.S. MONETARY POLICY

	<u>Narrow money stock (M1)</u>	<u>Broad money stock (M2)</u>	<u>Monetary base</u>	<u>Bank credit</u>	<u>Bank loans</u>	<u>Commercial and industrial loans</u>
12/75-12/76	6.2%	11.4%	6.7%	8.8%	8.5%	2.0%
12/76-12/77	7.9	9.3	8.3	11.0	14.5	12.3
12/77-12/78	6.6	8.2	9.0	12.3	15.9	14.6
12/77- 3/78	4.5	6.8	9.2	10.3	13.3	18.4
3/78- 6/78	11.4	9.4	9.3	19.2	21.2	17.6
6/78- 9/78	9.6	11.4	10.0	9.0	12.2	10.6
9/78-12/78	0.6	4.8	7.6	11.1	17.4	11.7
12/78- 3/79	- 2.4	1.7	4.3	15.1	16.6	23.7
3/79- 6/79	11.4	11.7	8.0	14.1	14.8	21.0

Notes: All percentages at annual rates seasonally adjusted.
Data from Federal Reserve Board.

extensions by issuing liabilities like certificates of deposit, which are not included in the money stock, they can create credit (at this stage of the business cycle mostly in loan form) without any corresponding increase in the money stock. Indeed, this is exactly the reason why exclusive reliance on money growth targets as a guide for monetary policy can be so misleading. Moreover, because the Federal Reserve Board has exempted Eurodollar borrowings from any reserve requirements at all, banks can create credit not only without increasing the money stock but without even requiring an increase in the monetary base, simply by financing their credit creation in the Eurodollar market. Since the elimination of Eurodollar reserve requirements last August, large U.S. banks have rapidly increased their Eurodollar borrowings. A part of these borrowings has gone to offset a paydown of domestic certificates of deposit, which the 2% additional reserve requirement imposed last November rendered especially unattractive, but banks have used the remainder primarily to finance expansion of their loan portfolios.

Table 3 summarizes various aggregative measures of U.S. monetary policy, including two measures of the money stock, the monetary base, total bank credit (loans and investments), total bank loans, and bank loans to commercial and industrial borrowers. While the behavior of the money stock has been extraordinarily erratic during the last year, and the monetary base somewhat less so, bank credit expansion has shown an accelerating rather than a decelerating trend. Moreover, bank loans to commercial and industrial borrowers have grown extremely rapidly thus far in 1979. It is difficult to believe that monetary policy is very tight when the trend of bank credit expansion has been consistently upward, and this conclusion is none the less valid for banks' having financed that credit expansion in large part by issuing

liabilities that neither count in the money stock nor bear reserve requirements.

4. Conclusions for the Current Conduct of Monetary Policy

What are the current policy implications of the tentative conclusion that monetary policy at this time is not particularly tight?

The primary implication, in my judgment, is that the Federal Reserve should resist the temptation to ease monetary policy, at least until such time as there is convincing evidence either of substantial credit restraint or of a cyclical downturn that threatens to become more severe than now seems likely. It is important in this regard not to be misled by focusing either on the current high nominal interest rates, which are not so high after allowing for price inflation, or on slow monetary growth, which has questionable implications for economic activity. I find it much more difficult to determine whether or not monetary policy should, instead, be tightened. On balance, therefore, I believe that the Federal Reserve has made about the right decision as reflected in the midyear report presented to Congress by Chairman Miller last week.

Nevertheless, I find disturbing the Federal Reserve's continued emphasis on the "money" side of the banking system's activity, to the near exclusion of attention to the "credit" side. The formulation and implementation of monetary policy must depend on a broad range of measures both of the performance of the nonfinancial economy and of the effect of monetary policy more specifically. In light of recent shifts in portfolio behavior, narrowly keying on one or two monetary aggregates would be especially unfortunate at this point. For this reason, I applaud the Federal Reserve's apparent close attention to developments in the nonfinancial economy, but I also urge increased attention to credit measures in addition to money measures.

The point of this recommendation is not that money measures contain no influence or information relevant to monetary policy, but rather that money measures and credit measures both bear such relevant influence and information. The relative importance of the two is an open question, which recent developments have rendered even less easily resolved than it may once have appeared. Economics provides no a priori reason to acknowledge the influence and information provided by the public's money holdings but not its credit liabilities. For a given short-term interest rate, or a given growth in the monetary base, the behavior of the banking system as well as of the non-bank public determines the growth of both money and credit, and does so jointly with the determination of nonfinancial economic activity. There is no justification for paying attention to the "money" side of this process while disregarding the "credit" side.

Moreover, the importance of paying explicit attention to bank credit will be all the greater if the Federal Reserve adopts the new definitions of the monetary aggregates proposed earlier this year by the Federal Reserve Board staff. In brief, the primary aim of the proposed new definitions is to eliminate some of the arbitrariness inherent in the current definitions by emphasizing, within the universe of liabilities of deposit-issuing institutions, the question "what kind of deposit?" instead of "what kind of institution?" The primary beneficiary of this change will be the middle measure, M2. Despite the attention it has received in recent years as the aggregate with the stablest "velocity" relation to income, the current M2 has never made sense as a summary measure of anyone's deposit-holding behavior. The proposed new M2, which will add to M1 savings deposits at both banks and thrift institutions, will avoid the anomaly of arbitrarily distinguishing large quantities of essentially

identical consumer-held deposits that are often accessed from similar looking buildings across the street from one another. Hence the new measure will provide an improved guide to the asset-holding behavior of the non-bank public including both individuals and businesses.

The price that the proposed new definitions will pay for this rationalization of the representation of the public's asset-holding behavior, however, will be a sharp loss of ability to represent the public's liability-issuing behavior. Fittingly enough, the main winner on the asset-holding side, M2, will also be the chief loser on the liability-issuing side.

An often troubling question is why the current M2, which is such a profoundly arbitrary measure of deposit-holding behavior, should exhibit such a close relationship to aggregate economic activity. One part of an explanation is that movements in the current M2, although they are measured from the liability side of the commercial banking system's balance sheet, in reality capture much of what is happening on the asset side. With the subtraction of some \$100 billion of currency and the addition of some \$100 billion of negotiable certificates (plus an adjustment for capital accounts less reserves, and some other liabilities), M2 is approximately equivalent to bank credit. Indeed, historically there has been a very high correlation between the respective growth rates of M2 and bank credit. It is my impression that this close relationship between the current M2 measure and bank credit is widely recognized though seldom explicitly discussed. Instead, M2 has served as a tacit neutral ground on which people with divergent views about how monetary policy works can hold a mutually understandable conversation and even concur on a mutually agreeable policy. Using M2 as the monetary growth target to guide monetary policy, or simply as a variable to relate to income, in effect captures much of

whatever influence or information is associated with bank credit in the complex process connecting financial and nonfinancial economic activity.

The proposed redefinition of M2, by excluding time deposits at commercial banks and including savings deposits at non-bank thrift institutions, will sever the relationship to bank credit. The historical correlation between bank credit and the proposed new M2 measure is only about half that between bank credit and the current M2. The new definition will therefore achieve an improved representation of "money" behavior at the expense of the representation of "credit" behavior. If the Federal Reserve adopts the proposed redefinitions, it will therefore be all the more important to rely explicitly on bank credit measures as well as the monetary aggregates in formulating and implementing monetary policy.

Finally, I want to note briefly one further feature of the report on monetary policy presented to Congress by the Federal Reserve Board last week. On numerous occasions in the past (most recently in testimony before the House Budget Committee last year), I have urged that the Federal Reserve contribute to the effective coordination of monetary and fiscal policies by reporting to Congress not only its monetary targets but also the set of outcomes for the nonfinancial economy that it believes to be consistent with those targets. I therefore applaud the action of the Board in, for the first time, doing exactly that in its midyear report.

Mr. Chairman, thank you for the opportunity to present my views to the Committee.

The CHAIRMAN. Thank you very much, Professor Friedman.
Mr. Kaufman.

**STATEMENT OF HENRY KAUFMAN, PARTNER AND MEMBER OF
THE EXECUTIVE COMMITTEE, SALOMON BROS., NEW YORK**

Mr. KAUFMAN. Mr. Chairman, I appreciate being here again to present my views. I, too, am going to present a truncated version of my detailed remarks in order to save some time for discussion.

The CHAIRMAN. Your statement will be printed in full in the record.

Mr. KAUFMAN. Thank you.

I do believe that we are in an economic and in a financial no-man's land which has very few historical parallels and that there are very few tried and true tested prescriptions for trying to get out.

[Complete statement follows:]

Statement by

Henry Kaufman

Partner and Member of the Executive Committee

Salomon Brothers, New York City

My name is Henry Kaufman. I am a general partner and member of the Executive Committee of Salomon Brothers, an investment banking firm headquartered in New York City. I also serve as the Firm's chief economist and head of its Research Department. Thank you for inviting me to appear before this Committee to present my views on the economic and financial situation. This is an especially difficult time for all of us. National policy requires both penetrating insights and a resolute decisiveness because, today, we are in an economic and financial no man's land which has few, if any, historical parallels. And, perhaps worse, it is a no man's land with no tried and tested rescue plans for escape.

The economy is tottering, but it is far from clear that a classic recession is underway. What we have today is a "mix" of cyclical and noncyclical constraints on the economy. Inflation has stepped up again to double digit levels and shows no sign of abating. Prices are also rising faster than income, squeezing consumption. And capacity constraints are also limiting consumption. Energy problems have complicated matters by inducing yet another supply constraint which is restricting economic activity and contributing to higher inflation. In addition, the international financial situation is again uneasy and formidable challenges face the dollar in the foreign exchange markets in the months ahead. But not all is bad. Housing activity, although having slowed, continues to be relatively strong for this phase of the cycle. And business spending, which was late in expanding, has also remained strong. It is not yet faltering either from the slowing in consumption or the energy shortage. With gas lines shortening and the availability of oil increasing once more, if only temporarily, the economy can

fluctuate a while longer in this zone of economic ambivalence which has neither the full attributes of renewed expansion nor those of the traditional contraction.

But, a business contraction with classic characteristics will develop as inflation persists. With inflation accelerating in the months ahead, consumers will be immobilized far beyond the energy shock. Operating costs will be imbedded into the financial decisions of business. The enormity and gravity of the inflationary problem today should be given primacy in policy formulation. No sustainable economic recovery can be launched without a successful frontal attack against the nemesis of inflation. Cyclical relief from inflation, because of a slowing of economic activity, won't do. It will be recognized by all as only a rearguard holding action. I ask you to consider these formidable five dimensions of inflation today:

The first dimension: it should not be surprising to know that inflationary expectations are by many indicators more deeply entrenched in the United States today than at any other time since the Second World War. Almost every cyclical low and high in the inflation rate has been above the preceding cyclical troughs and peaks. The secular rise in U.S. inflation is now perceived not only by the trained economist but also by the public in general. This dismal trend has led many Americans to conclude that only temporary relief can be expected from governmental policies.

The second dimension: the sustained rise of U.S. inflation, combined with the extraordinary skepticism about effective anti-inflation measures, has compelled Americans to fend for themselves. Savings as a percent of disposable income are shockingly

low. Acquisitions of tangible inflation hedges are increasing. Gold, land, houses and so forth -- they all contribute to undermining the savings and investment processes that have made the U.S. the envy of the rest of the free world.

The third dimension: the tenacity of inflation has been far greater in the recent business swings from boom to contraction than in the earlier postwar cycles. In the business cycles of the '50s and early '60s, the inflation rate fell quickly when the economy turned from expansion to contraction. Inflation as measured by the GNP deflator rose at an annual rate of 3.4% during the final four quarters of the economic recovery that ended in the summer of 1957 and then slowed to 0.9% during the subsequent recession. Inflation averaged 1.7% in the last year of the expansion that ended in April, 1960, and slowed to 0.6% in the recession. During the last year of business growth and subsequent recession in the 1969-70 and 1973-74 periods, the pattern changed. It averaged 5.3% at the close of the boom in 1969 and 5.1% in the recession. In the final year of the economic expansion in 1973, inflation, averaging 7.5%, was below the 11% rate that prevailed during the 1974 recession.

The fourth dimension: while official projections call for an abatement of inflation next year, the recent cyclical experiences cannot be dismissed. Apart from the higher energy costs, there is no policy currently in place that would hold wage cost increases below the 8% to 9% range. Labor bargaining will be firm because inflation has eroded purchasing power while rapid and large increases in unemployment, which could temper wage demands, are unlikely.

The fifth dimension: inflation is insidious and goes far beyond the higher cost of energy. Its origin and driving force should not be blamed on only this one sector. From December, 1977, to December, 1978, the consumer price index increased by 9%, and after excluding the food and energy components it rose by 8.5%. During the first five months of 1979, the overall index rose at an annual rate of 13% and again excluding food and energy by 10%.

Unless inflation can be checked and then pushed down, a meaningful economic recovery is beyond reach for financial reasons alone. The combination of high inflation and economic weakness does not permit key sectors in the economy to rehabilitate themselves financially. On the contrary, the immediate prospects point to a significant financial deterioration, both for domestic credit markets and the dollar abroad. As consumer income growth slows, consumer debt will surely become more burdensome. Indeed, the consumers' desire to maintain recently achieved spending patterns, together with reasonably good access to new funds, will sustain new borrowings at high levels for a while longer.

Equally important are the rising credit needs of business corporations in the stagflating period ahead of us. Already, the balance sheets of corporations are now top-heavy with short-term debt. The ratio of total bond debt to bank loans and commercial paper is below the postwar low reached in 1974. From hereon, internal cash generation will level off and then decline under the three pressures of a slowing sales volume, rising costs, and the usual adjustment delays by business to changing conditions. All three pressures will be more acute because of the persistence of inflation. As a result, external funds required to finance working

capital and capital outlays will rise while the funding of liabilities, a key prerequisite for launching another economic expansion, will be difficult.

What this means is that the typical large external needs of business will be competing in the credit markets with consumer and housing-related demands which are exceptionally large for this stage of the business cycle. In order for business liabilities to be funded and for large deliveries of mortgages to be absorbed by institutional investors in the presence of high inflation, long-term interest rates will push higher even if short-term interest rates hold steady or ease somewhat. Long-term interest rates will retreat from peak levels only when financial rehabilitation becomes the overriding priority of the private sector. This, in turn, can only be accomplished through a significant reduction in inflation.

In periods of high inflation, it is not correct to assume that interest rates should reach their peak when economic activity peaks and then recede quickly with the unfolding of a business recession. This correlation was true in the early postwar years, but not in the cyclical swings from boom to recession in 1969-70 and 1973-74. In these more recent periods, interest rates, especially long-term interest rates, continued to rise well into the recession. The key factor in this counter-cyclical behavior of interest rates was an inflation that remained virulent in these recent recessions while it had slowed quickly in earlier recessions.

The continuance of a high rate of inflation will also add to the problems of the dollar in the foreign exchange markets. Unless inflation recedes quickly during the recession, how can monetary policy ease without compromising our international objective of

maintaining a stable dollar? The situation is already complicated by a series of troublesome developments. Our balance of trade is not likely to improve much, remaining in substantial deficit of perhaps around \$25-30 billion in 1979 and \$20-25 billion next year, since our oil import bill will jump from \$42 billion in 1978 to \$58 billion this year and up again to an estimated \$70 billion in 1980. Other major nations, recognizing the danger of inflation to them in an energy-tight world and the fact that the payment of oil is through U.S. dollars, are moving vigorously to hold their own inflation rates in check. They are tightening monetary policy. As a result, interest rate differentials between the U.S. and such countries as Japan, Germany and Britain have narrowed sharply since late last year. Recent history has shown that a strong currency is a valuable asset when oil prices rise.

Had fiscal and monetary policies performed better, the U.S. economy and financial markets would not now be at this critical and difficult juncture. Fiscal policy has stimulated too much and for too long. It ignited a consumer spending boom and thwarted the building of a financial base conducive to business capital formation. Federal spending increased annually by 12% during the economic expansion that began in 1975. This was far greater than the growth of expenditures in previous periods of recovery. When the inflation rate rose to 7.7% in 1978, Federal expenditures (including off-budget outlays) were still allowed to increase by 12.5%, a rate exceeded only 6 times in the past twenty-five years. The Federal budget deficit was equal to 22.6% of Gross National Product in the third year of this latest economic

expansion, compared with a range of 18 1/2% to 20% in earlier comparable periods.

"Crowding out" became a much maligned concept when fiscal expansion was practiced a few years ago. Then, it was pointed out frequently that the large borrowings by the Federal Government were not detrimental because they were occurring when private demands were slack. The latter was not true. During much of 1974-75 private credit demands remained relatively high but only belatedly did the private sector recoup liquidity. Moreover, when the private sector increased again its credit demands for expansion purposes in 1976, the cash requirements of the Federal Government continued to be large.

The shortcomings of monetary policy have been of a different sort. The Fed eased credit belatedly in 1974-75 and drew some criticism for its lack of responsiveness. The Fed, however, was faced with high inflation and an explosive budget deficit, a mix of problems and policies that may confront it again in the not too distant future. When monetary relaxation was initiated, it was massive and the Fed interpreted its responsibility through the formulation of statistical benchmarks -- the growth of the money supply, a monetary aggregate whose statistical and fundamental groundings have become increasingly undermined by structural changes. Only recently has the Fed admitted that there is a problem with the money supply concept although it still serves, together with the Federal funds rate, as the principal target of Fed policy. I believe that money supply, as currently defined, has serious flaws if used as the official target of policy simply because of the deterioration in the linkage between money and the economy.

Unfortunately, the Federal Reserve did not perceive that these changes were so significant as to incorporate them into its policy approach. The result has been excessive inflation which manifested itself in the financial markets through a record-shattering growth of debt in the United States in the past few years. Outstanding credit market debt for all non-financial sectors rose at an annual rate of 12% from early 1975 to the end of the first quarter of 1979. This increase exceeded the high rate of debt growth in the 1971-73 business recovery and was nearly twice as large as those in earlier business expansions.

The failure to slow the high debt formation is due in part to the narrow focus on a slippery money supply approach and accommodation of an interest rate policy that actually has encouraged borrowing. I have illustrated the nature of this promotion of borrowing in Table 1. It shows the annual inflation rate (consumer price index), the Federal funds rate, and the yield on long utility bonds rated AA, starting with 1960. The table reveals clearly several relationships. From 1960 through 1973, both the Fed funds rate and the yield on bonds were consistently above the inflation rate by 170 basis points for funds and 296 basis points for bonds. Starting in 1974, however, the inflation rate has exceeded the Federal funds rate (the interest rate target of the Fed) most of the time while the bond yield has exceeded the inflation rate only by a small margin and certainly not as consistently as in the earlier period. Even if 1974 is excluded from this analysis because of the erratic and stringent credit development in that year, the relationship of the inflation rate to interest rates shows an extraordinary liberality in monetary policy and inducement to debt creation.

In reviewing the events since 1974, several other policy aspects stand out that are instructive. The fiscal and monetary authorities thought mistakenly that they had considerable leeway in policy formulation. They overlooked the intransigent inflation and the blooming energy problem and responded as though traditional policies dealing with a recession-recovery period were warranted. After embarking on this course, there was also no meaningful mid-course correction to remove the policy stimulants. The critical correction period was somewhere in 1976 and 1977. Both fiscal and monetary policies, in addition to their earlier errors, were reacting to rather than anticipating events. The size of the Federal budget deficit was slowed through inflation taxation and not through initiatives. Monetary policy actions were equally belated. Last year, when inflation escalated and the dollar was under acute pressure, the Fed raised the discount rate only after crisis conditions. National policy missed its timing. When timing is missed, whether by Government or by the private sector, a penalty cannot be avoided.

What should we do now when the economy is sliding into recession, when inflation is roaring along, and when the availability of energy is highly uncertain? As an overall approach, I strongly urge policies of gradualism not be adopted in resolving our economic and financial difficulties. While this approach is highly seductive, it has no performance record. It will have no credibility with Americans because it has been preached too often but it has not successfully performed. For some time, official advocates have stressed gradualism as a solution to inflation but instead of slowing step by step, inflation has been accelerating.

if policies of gradualism are approved in combatting today's problems, then what the U.S. will also be getting is above average rates of inflation for some time, subnormal economic growth, low productivity gains, and continued problems in eliminating our balance of payments deficits. In the financial markets, compromising policies, which require a 5 to 7-year time span to reduce inflation, will result in a financial structure that we may not be able to bring into balance. For example, if policies could be so designed as to diminish inflation from 10-11% at present to 5-6% in 5 year's time when real growth annually would be around 2%, several adverse consequences would ensue. Credit market debt, which at the end of the past year totalled \$3.3 trillion compared with \$1.3 trillion in 1970, would reach about \$5.5 trillion. As a result, many more economic participants would have a vested interest in perpetuating inflation. Financial leverage would be excessive in all sectors making it more difficult to encourage new equity investments. This would lead to even more mergers and consolidations which would increase the concentration of economic power. In the end, another failure of gradualism would benefit no one and hurt all.

With this in mind, I can only offer a few proposals. The Government should launch policies that will encourage large capital commitments for energy development, for research and technology improvements and for other programs that would foster higher productivity. I say this for two reasons. One, we must react to our regrettable role as an energy hostage. Otherwise, we abrogate our position as a world leader and limit our national destiny. Second, large capital investment outlays are the only course open to us to effect a new economic expansion that is meaningful and productive.

By sometime next year, the current cyclical increase in capital spending will come to an end in reaction to the slower sales volume, high business costs and large dependence on external financing by business. A massive revival in consumer spending is unlikely. While it is true that this happened the last time around, let us recall the extraordinary fiscal stimulation that was required and let us note that the consumer is today heavily in debt, which was not the case in 1974-75. Now, the consumer's financial position can only be repaired gradually and sustained for a long period if capital outlays are more in the forefront of economic revival than they have been before. Consequently, tax reductions are in order. They should be weighted in favor of stimulating a stronger industrial and technological base. Investment tax credits, accelerated depreciation and lower profit and payroll taxes would also cushion the near term cost squeeze, thereby alleviating some of the inflation pressure that forces corporations to throttle down sharply capital outlay programs. These tax measures should be supplemented with incentives to save and invest and with inducements to support new ventures. In addition, the tax structure should also be designed to have the management of large firms experience more directly the risks and rewards of entrepreneurship which is lacking in many management arrangements today.

Regarding monetary policy, I continue to believe that the Fed should abandon its slippery money supply approach and in its stead adopt new long-term and interim targets. The long-term target should be the "Debt Proxy" which is the sum of credit market instruments, deposits and currency held by private domestic nonfinancial investors. These holdings include U.S. Governments and Federal

agencies, state and local issues, corporate and foreign bonds, open market paper, demand deposits, currency, time and savings deposits and large CDs. Preliminary data for the debt proxy are available quarterly and therefore are timely for a long-term target.

The interim target should be either liquid assets or M7. Liquid assets include currency and demand and time deposits held by the domestic nonfinancial sectors at commercial banks and at nonbank financial institutions. M7 differs only slightly from liquid assets. It includes all of the same instruments as liquid assets but it differs in that it includes holdings of all deposits by nonbank financial companies and foreigners. Data for liquid assets and M7 are available monthly and would serve as a reasonable bridge to the long-term target.

The relationships between nominal gross national product and the debt proxy, liquid assets, and M7 are remarkably good.

First, outstanding levels come close to nominal gross national product as illustrated by the data for the fourth quarter of 1978. In contrast, money stock (M1) outstanding totalled only \$361 billion.

	<u>\$ Billions</u>
Liquid Assets	1,754
M7	1,753
Debt Proxy	2,223
GNP	2,215

Second, over a long period, the statistical fit has been very close. Nominal GNP and the debt proxy are virtually indistinguishable from each other over the past 25 years. The relationship between GNP and M7 was very close until the mid 1960s when GNP started to increase more rapidly than M7.

Third, the percentage changes in nominal gross national product are in close alignment with those for the debt proxy and liquid assets and/or M7. As shown in Table 2 which covers the five-year intervals between 1953 and 1978, the differences between the percentage changes in GNP and the debt proxy were 0.1%, 0.2%, 0.7%, and 0.4%, respectively. During the same period, however, the differences between GNP and M1 were 3.0%, 3.0%, 2.5% and 4%.

I should also like to urge you to speed the process of reforming the international financial structure. While the dollar is still the key reserve currency and, therefore, an essential currency, it has diminished in value unlike other essentials such as oil. Unfortunately, we have never used the essentiality of the dollar in bargaining with either oil producers or with other key industrial nations. Without the American credit markets as a source of funds either here or abroad in the Eurodollar market and without the dollar as a payment vehicle, the rapidly escalating price of oil since 1973 could not have been validated.

In the current situation, the dollar is virtually in a no win position. As we continue to finance the huge oil purchases and other transactions abroad, the supply of dollars internationally will continue to burgeon, providing a bigger target for exchange pressures to develop as long as the supply of other currencies increases only moderately. Unless our inflation rate is reduced quickly, the attack on the dollar will intensify in the months ahead. As noted earlier, other key countries fully understand the beneficial value of having a strong currency when oil prices are rising. Without freeing the dollar from some of its international responsibilities, we run the risk of partially immobilizing

monetary policy during the recession and relying too heavily on fiscal stimulation to pull us out. In this connection, the need is for other key industrial nations to substantially enlarge their role in international finance. This can be facilitated with their cooperation or by U.S. action alone.

In conclusion, it is dismaying for me to have to tell you that the way out of the economic and financial no man's land which we are now in is not easy and not clear. Our deeply imbedded inflation and the new energy constraints are dimensions that cannot be dealt with through typical anti-recession measures. Even a classical period of transition from boom to recession to recovery, it must be remembered, has periods of pain and consternation.

The struggle for survival in an economic and financial no man's land can take a variety of forms. Old relief battalions such as classical anti-cyclical remedies may be thrown into the fray to provide a temporary lifting of the siege. Perhaps, the urgency and unusual nature of the struggle today will be recognized and inspire us to attack vigorously the forces that threaten to imprison us all. However, there are already too many hostages. Monetary policy has become a hostage of an elusive money supply target. The dollar is a hostage of oil and the foreign exchange markets. Both will continue to immobilize the responsiveness of Federal Reserve policy when it should be free. Unfortunately, once again, this leaves fiscal policy with the main responsibilities of leading the charge with an arsenal of perhaps misdirected firing power. The charge out of today's economic and financial no man's land must be well orchestrated and powerful. We cannot risk a long siege as some official policymakers now advocate.

Salomon BrothersTABLE 1INFLATION AND INTEREST RATES, 1960-79
(%)

<u>Years</u>	<u>Consumer Prices</u>	<u>Federal Funds</u>	<u>New Long AA Util. Bds.</u>	<u>Fed Funds Less Inflation Rate</u>	<u>Bond Yield Less Inflation Rate</u>
1960	1.6	3.22	4.73	1.62	3.13
1961	1.0	1.96	4.52	0.96	3.52
1962	1.1	2.68	4.36	1.58	3.26
1963	1.2	3.18	4.33	1.98	3.13
1964	1.3	3.50	4.46	2.20	3.16
1965	1.7	4.07	4.57	2.37	2.87
1966	2.9	5.11	5.45	2.21	2.55
1967	2.9	4.22	5.87	1.32	2.97
1968	4.2	5.66	6.61	1.46	2.41
1969	5.4	8.21	7.75	2.81	2.35
1970	5.9	7.18	8.83	1.28	2.93
1971	4.3	4.66	7.74	0.36	3.44
1972	3.3	4.43	7.45	1.13	4.15
1973	6.2	8.73	7.74	2.53	1.54
1974	11.0	10.50	9.27	-0.50	-1.73
1975	9.1	5.82	9.51	-3.28	0.41
1976	5.8	5.05	8.69	-0.75	2.89
1977	6.5	5.54	8.28	-0.96	1.78
1978	7.7	7.93	9.06	0.23	1.36
1979 1H	12.4	10.12	9.78	-2.28	-2.62

TABLE 2ANNUAL PERCENTAGE CHANGES IN GNP AND VARIOUS MEASURES OF MONEY AND CREDIT

<u>Years</u>	<u>GNP</u>	<u>Debt Proxy</u>	<u>Liquid Assets</u>	<u>M1</u>	<u>M2</u>
1953-59	4.99%	5.07%	4.97%	1.99%	3.50%
1960-69	6.76	6.60	6.87	3.72	5.73
1970-73	8.75	9.45	9.78	6.30	8.98
1974-78	10.04	10.40	10.30	6.06	9.06
1974	8.1	10.0	10.4	5.5	8.5
1975	8.2	8.7	7.9	4.4	7.7
1976	11.2	10.5	10.7	5.3	9.9
1977	11.0	11.0	11.0	7.3	10.6
1978	11.7	11.8	11.5	7.8	8.6

DIFFERENCES IN ANNUAL PERCENTAGE CHANGES BETWEEN GNP AND VARIOUS MONEY AND CREDIT MEASURES

<u>Years</u>	<u>Debt Proxy</u>	<u>Liquid Assets</u>	<u>M1</u>	<u>M2</u>
1953-59	0.1	0.0	3.0	1.5
1960-69	0.2	0.1	3.0	1.0
1970-73	0.7	1.0	2.5	0.2
1974-78	0.4	0.3	4.0	1.0
1974	1.9	2.3	2.6	0.4
1975	0.5	0.3	3.8	0.5
1976	0.7	0.5	5.9	1.3
1977	0.0	0.0	3.7	0.4
1978	0.1	0.2	3.9	3.1

The CHAIRMAN. Thank you very much, Mr. Kaufman.
Professor Klein.

**STATEMENT OF PROF. LAWRENCE KLEIN, DEPARTMENT OF
ECONOMICS, UNIVERSITY OF PENNSYLVANIA**

Professor KLEIN. I think the statement given by Chairman Miller on July 17 is an excellent perception of the present state of the economy and I think that it's very difficult, at least for me, to take issue with the main points that he's making, but I want to emphasize some issues that probably are not going to be emphasized as much by the other witnesses this morning which I think are important to understanding the situation. They deal with food prices, the agricultural—

The CHAIRMAN. Let me just interrupt to say, Professor Klein, that as I said to the two other witnesses, your statement will be printed in full in the record.

Professor KLEIN. Yes. They deal with food prices, the agricultural situation, energy prices, and some aspects of the international economy. I think that we are, of course, discussing monetary policy and the role of money in the economy, yet it was remarked that there must be a full appreciation of what's going on in the rest of the economy in order to take up monetary policy appropriately, and there isn't any doubt that three of the outstanding components of the CPI that are giving us trouble in the inflationary situation recently have been interest costs, food costs, and fuel costs. I think we have definite restrictions as far as monetary policy and interest costs are concerned, but there is reason to hope that food prices will look better next year. The indications are that the big runup in livestock prices is just about over. Grain markets have been in a flurry of speculative increase in the last month or so, but the American harvest looks very promising for this year and more than enough to overcome what seems to be a shortfall in some parts of the outside world.

Therefore, one could expect to see basic grain prices coming to some kind of plateau, meaning \$4 wheat and \$3 corn and cattle prices on the downside, and although one would have hoped for a 7- or 8-percent inflation rate in food in the CPI next year, at least we ought to be able to get below the double digit range, to around 9 percent.

Now as far as energy is concerned, there isn't terribly much to hope for in the short term. There we can look only for more inflation and, indeed, the strategy of the energy supplying nations appears to be, with one or two exceptions, to conserve output, restrict output, and I think that means we are in for a sequence of energy price increases and not the sort of step-like jumps that we have had since 1973. The diagram in Chairman Miller's presentation is a series of straight lines, showing steps in the curve, and even a receding of oil prices in the 1978 period. That's unlikely to happen in this new situation.

The previous speakers have mentioned deterioration of the American external accounts. I think that that is not quite a correct perception of the situation. In fact, we did achieve current account balance in the first quarter of this year, which was a very remarkable achievement considering how bad it was last year. It is true

that we face increasing energy costs as far as trade is concerned, but as the American economy goes into a recession our import bill will tend to go down for nonenergy imports. The invisibles have been very strong and a good part of the strength in the invisibles have been multinational oil company earnings. As oil prices go up we get some kind of return flow in the invisible sector of the payments accounts.

I would say that there is a good chance that for 1979, as a whole, we will be almost in current account balance, although it won't necessarily be as good as it was in the first quarter.

There is a danger, however, in the international economy and, that is, that while this year we are getting a mixed business cycle experience with some countries picking up while America slows down, all indications now point to 1980 as a very difficult year in which the rate of growth of many of our partner countries will slow down again. The danger is one of a synchronized growth recession—not a synchronized real recession in the world markets, but a synchronized recession in rates of growth. That is something we should take into account.

Now as I make projections into 1980, my signals are that if we don't do anything by way of policy intervention, 1980 is going to look terrible, with very strongly rising unemployment in a very poor economy. Consequently, in most of the projections we have been making in recent months we have been anticipating fiscal stimulus. I think that there are very few options as far as monetary policy is concerned next year, also in view of the international position and the situation of the dollar, particularly in view of the interest rate increase that we have seen in United Kingdom, Japan, Germany, Canada, and other countries.

Therefore, it will have to be from fiscal policy that any kind of help for the recession will come. The most important aspect of fiscal stimulus in 1980 is to change the nature of the stimulus away from the kind that we have been accustomed to in the last few years I think this would probably emphasize some of the points Henry Kaufman made, that the disaster for our economy has been low or declining rate of productivity growth, a low rate of capital formation in the sense of not having a full recovery from the last recession. This leads me to believe that any kind of fiscal relief for next year ought to twist the proportions significantly and have a much greater business tax relief and have it very strongly targeted to capital formation, either in depreciation rules tax offsets for investment, or tax credits, and only moderate personal tax relief.

The second aspect is that, to the extent possible, any fiscal relief ought to aim at measures that are counterinflationary or anti-inflationary. By that, I mean that indirect tax relief is better than direct tax relief. We have batted around at various times the possibility of reducing sales taxes—indirect taxes of various sorts. It's complicated because the States having control over such taxes but I think a formula could be worked out.

My reason for emphasizing indirect tax relief is that those numbers feed directly into the CPI. To the extent to which we can cut the indirect taxes, compared with direct taxes, we get a direct reduction in the CPI. In a similar vein, any kind of tax relief on payroll taxes would be advantageous in fighting inflation because

it would reduce the cost base on which most pricing formulas are computed.

I think that we could do a great deal in having a constructive fiscal policy, one that would be of an anti-inflationary, counterinflationary, variety. An interesting point to me is that these hearings are part of what was written into the Humphrey-Hawkins bill. My interpretation of that bill is that it starts out by saying that macropolicy or aggregative policies of the conventional sort don't really give us the full answer and certainly don't provide a way of reaching the targets, the very ambitious targets, of that bill by the early 1980's. Consequently, what I'm suggesting here are directions in policy that are very badly needed for next year, and the years after, that are structural rather than simply macropolicies. In addition to the things I have already mentioned, such as the tilting of the mix in any kind of tax cut in 1980 or 1981 or emphasizing indirect taxes or payroll taxes, I would say that policy ought to be directed toward such things as minimum wage legislation rolling it back, holding it back, establishing a youth differential, or whatever—in order to attack the structural aspects of the unemployment problem. I think that would be fully in the spirit of the Humphrey-Hawkins legislation as it finally emerged.

The other kinds of policies of a structural sort that I think are called for next year deal with energy as an all-important issue for this economy. In that respect, any encouragement on the supply side is very important, support of R. & D., support of new forms of energy delivery, and even to some extent, substituting public expenditures in that area as a substitute for tax relief is very good.

Finally, I think we should follow Henry Kaufman's suggestion for not being gradual, but to provide in another way. That is really to have a jolt, a very sudden jolt on energy prices. I think that we're not going to make a significant dent in energy consumption for the kind of conservation that's needed unless we swallow one piece of inflationary upward thrust in prices, that we haven't been willing to swallow yet. That is, immediately to go to much higher prices for final end products in the energy field. Thank you.

[Complete statement follows:]

THE STATE OF THE ECONOMY
AND DIRECTIONS FOR ECONOMIC POLICY

Testimony of L. R. Klein
before the Senate Banking Committee, July 23, 1979

The statement of G. William Miller, July 17, 1979, correctly perceives the ills of the present time and asks for an appropriate policy response. I find it difficult to take issue with his well-reasoned presentation, but want mainly to emphasize certain points, approaching them from an external point of view, and to try to lend added weight to some recommendations. I also want to introduce a few structural policy considerations not specifically addressed in his statement.

The State of the Economy: To say that the United States economy is in a recession is to make a forecast, because the recessionary phase will probably be dated from last March (or possibly a month or two sooner), and will need some more months to run its course before it becomes "official" or is terminated.

The Wharton Forecast projects a shallow recession consisting of a drop of only about 2.0 percent in real output from peak to trough, with a protracted recovery, that does not rise above trend values in 1980 or 1981 and is accompanied by a steadily rising rate of unemployment, exceeding 8.0%. Inflation is expected to remain in double figures until mid 1980, and then recede only gradually.

There should be a decline in capacity utilization for more than one year, continuing poor productivity growth, a widening

domestic deficit, a weak curve of profits, falling interest rates, and some moderation in wage rate growth.

More slowly rising food prices and some reduced interest cost, will be offset by rising energy prices. Also, food price relief is already being limited by tendencies for grain and soybean prices to rise again, undoubtedly in response to increased foreign needs, as well as speculation. Nevertheless, the price picture should show some improvement, although very slowly.

There are significant downside risks for a more severe recession than we, at Wharton, have already depicted. These risks are:

- a major auto strike after contract renewal time has passed without a renewal;
- OPEC resolve to increase oil prices again in the near future.

At the same time, some parts of the economy look strong, enough so that a minority of students of business cycles believe that there is still a chance to avoid recession. The areas of strength are:

- business fixed investment;
- housing starts - the June figure was up from May's total. It is falling, but more hesitantly than in the past recession of 1973-75;
- foreign trade - net exports should get back to near balance before turning negative again.

some government spending is counter-cyclical and
some is make-up work from last winter's severe
storms;

U.S. farm output should be strong, regardless of
harvest conditions elsewhere;

inventories are not overly large, as most distributors
and fabricators planned for this recession well
in advance.

The economy was not so mixed in 1973-75 with a number of strong sectors, together with the weak ones. In addition, there was an amplification factor caused by world wide synchronization on that occasion. In the present situation, most industrial countries are out of synchronization with the United States in 1979. It is another story for 1980. Wharton projections for the world economy point to a synchronized slowdown in growth, not of recession proportions, but quite significant.

Some Policy Options: Turning first to conventional macro policies, what policies are called for to improve the economic situation at this time? Monetary policy was used in 1974-75, very restrictively, to fight the inflation brought about by the OPEC price rises and related external pressures, but this policy did not serve us well at that time and is not likely to do so now. Could monetary policy be much less restrictive than it now is in order to dampen the recession?

In my opinion, there are severe limitations on the use of monetary policy now. It might be made slightly easier, but in

confrontation with restrictive policies and rising interest rates in some of our main partner countries, it is not appropriate for the United States to go against the tide. That would induce short term capital to move abroad and weaken the dollar again. Our high underlying rate of inflation and world competition keep us from relying very heavily on monetary policy now. That policy should be one of steadiness at this time.

On the fiscal side, there could be expenditure increases and tax reduction. A main argument against expenditure increases is that they are slow in being approved and cumbersome in counter-cyclical applications. Major energy expenditures for R & D, pilot plants for delivery alternatives to oil, and direct outlays for scientific-engineering research on energy applications would be preferable to overall tax reduction, but this policy would probably not be able to bring improved conditions for some few years, perhaps 3 to 5 years. There is a great deal of merit in energy related expenditures and these avenues should be thoroughly investigated, but this kind of policy cannot be relied upon alone.

A more straight forward fiscal approach would be to have another tax cut, effective from January 1, 1980. This kind of measure would compensate for the burden of inflation from our progressive tax structures and the series of statutory social security increases. These latter increases will be more serious in 1981 than in 1980; nevertheless, compensation is needed as early as 1980. Reductions or roll backs in social security taxes have the added merit that they lower the cost base on which business pricing

decisions are made and may be particularly effective in restraining inflation.

Reductions in indirect taxes are particularly desirable because they enter directly into the pricing system, not only the official indexes, but also business costs that are presumed to be the bases for pricing decisions. The difficult aspect of working through indirect taxes is that they are so diverse. The great bulk of these are administered through the individual states. It would be possible to develop an equitable formula, state by state, but would be complicated and require a great deal of cooperation.

Our history of fiscal stimuli has generally been one of working through the federal income tax system at both the personal and corporate level. Recent tax reductions have aimed at evenhandedness or even bias towards personal tax, rather than business tax reduction. There is much to be said in favor of biasing a reduction in 1980 significantly in favor of the business side because tax cuts here can be structured to encourage additional capital formation, a much needed process for the recovery of productivity growth. New business investment now may bring about productivity gains in 3 to 5 years, but not immediately. It would be wrong, however, to keep postponing needed action in this sector in order to focus on short term gains. It is more fundamental to a joint attack on inflation and recession to raise productivity, even if it is time consuming, than to concentrate on measures that have an immediate impact. Personal tax cuts can be defended on

grounds of equity to the consumer but do little for the over-riding problem of inflation.

Business tax cuts should not be general; i.e., simple reductions in overall rates; they should be tailored to the stimulation of capital formation. This can be done through concessions in the tax treatment of capital cost recovery (depreciation), or fixed investment credits. The two can be combined in various mixtures.

A tax reduction of some \$20 billion, two-thirds of which are associated directly with business investment and the remainder with social security roll-backs, would do much to lessen inflationary pressures, as well as stimulate the economy in a period of recession from which recovery is expected to be moderate.

One of the significant advances in the legislation known as the Humphrey-Hawkins Bill is the recognition that macro policies alone will be inadequate for dealing with present problems of stagflation and in reaching the ambitious targets of that Bill on schedule. There must be a structural approach to economic policy formation that takes full account of the technological, demographic, and institutional changes that have been going on in this economy. Overall tax cuts, expenditure increases, and control of monetary aggregates are seriously inadequate in the present environment.

The wage-price guidelines and the monitoring of the regulatory mechanism are admirable structural policies that have been working on the inflation problem. They should be kept in place but are

not adequate to the whole task. Other structural policies are needed to deal with

productivity slowdown,
age-race inequities in the unemployment situation,
changing nature of the money stock,
shortfall in petroleum for energy,
deterioration of the environment.

I have already indicated how fiscal policy may be used to try to enhance productivity growth and have argued for an unchanging monetary policy in view of international constraints. But to deal with these other structural issues, we need particular economic policies.

Restraint, or roll-back of minimum wage levels, particularly if differentiated for youths, would help reduce the serious rates of unemployment at the bottom end of the age scale. Additional differentiation by labor market area would serve to refine the structure of this policy. Structural changes in minimum wage legislation is anti-inflationary and also supportive of total employment levels. This kind of policy is even more effective if coupled with training grants, particularly in private sector employment. In this way, additional productivity gains may be realized, but again it is not a policy with an immediate pay-off in inflation restraint but one that is fundamental for the medium term.

The energy program announced by the President is a structural policy. In the quest for the increased supply of energy alternatives to displace oil imports, it goes far, but lacks resolve on the side

of conservation. At the present time, it seems that there are few alternatives to opening up the market to rationing by price. In the short run, this would be inflationary, but there could be strong secondary effects of dollar support that would, in fact, be anti-inflationary. It is unnatural, however, to have a two-tier system of prices throughout the world in which the U.S. price for end products is significantly lower than that of most other oil importing industrial nations. On a temporary basis, differentials in two-tier systems can be maintained without much difficulty, but that is unnatural for the longer run.

Measures to support the dollar through maintenance of a steady monetary policy and resolve in the matter of energy pricing are not the totality of what might be done to improve our external accounts. Export promotion deserves high priority. Encouragement and support of policies that would orient our production efforts more towards exporting are structural policies that would eventually improve our current account balance, especially in the face of mounting costs of energy imports.

Economic policy should be balanced and steady. What I am recommending in this statement is a whole series of combined macro and structural policies to give better tone to the economy on both the demand and supply sides, in both the short and medium term.

The CHAIRMAN. Thank you, Professor Klein.
Professor Meltzer.

**STATEMENT OF PROF. ALLAN MELTZER, GRADUATE SCHOOL
OF INDUSTRIAL ADMINISTRATION, CARNEGIE-MELLON, UNI-
VERSITY**

Professor MELTZER. Thank you, Mr. Chairman. It's a pleasure to appear before you and I welcome the opportunity to present my views.

[Complete statement follows:]

Economic Policy After the 1979 Oil Shock

Statement of Allan H. Meltzer

Allan H. Meltzer
Maurice Falk Professor of Economics and Social Science
Carnegie-Mellon University

If the President and the press accurately reflect current opinion, we are about to make another in the long series of mistakes in economic policy that have produced high inflation, slow growth and low investment. The press interprets every statistic as support for its view that we are in a recession. The President, and the Congressional Budget Office, agree that we are on the verge of recession. The public guessing game has now shifted from whether and when the recession will strike to how long and how deep the recession will be.

It is a mistake to describe our current or near-term future position as a recession. The consequences of the mistake will be serious and long-lasting if the prognosis of recession is followed by expansive policies to rid the economy of the symptoms of recession. Such policies are not required and are, I believe, counterproductive.

There are some desirable changes in policy that should be taken to reduce the burden of the recent oil shock and to speed the adjustment of employment and real income to the shock. The principal policy change that I recommend in response is a reduction in the real value of government spending and a reduction in tax rates for households and business. Other desirable policy changes include an end to oil price controls and federal oil allocation schemes, a gradual, pre-announced series of reductions in the growth rate of money, and an end to the disruptive controls on interest rates on savings, time and demand deposits. These latter policies were desirable before the 1979 oil shock and remain desirable after the shock. The reduction in the real value of government spending and tax rates

may have been desirable before the oil shock also. If so, the case for reductions in taxes and spending has been strengthened. To understand why, we must distinguish between recession and the oil shock.

Oil Shocks Are Not Recessions

A large permanent increase in the price of oil, or any other imported commodity, permanently reduces the real incomes of residents in the oil importing countries and increases the real incomes of residents of the oil exporting countries. The consumers of oil are forced to transfer a portion of their real incomes to the producers and, if the oil price increase is permanent, there is no way that the transfer of income can be avoided or recovered. It is the inability either to avoid or to recover the loss in real income that distinguishes the oil shock from a recession.

In a recession, real income declines. Sooner or later the economy recovers and real income returns to the level it would have reached if the recession had not occurred. The speed with which the economy recovers from recession depends on the policies that the government pursues and on the incentives it permits. The level of real income to which we return after the recession can be regarded as independent of the policies in a particular recession, even though the level of real income will be affected by the repeated use of policies that crowd out private capital or change incentives to work or to invest. We can, in short, think of the economy as growing at a trend rate of growth of real income, like line A in Figure 1. The recession causes the economy to deviate from the trend line, as shown by the broken line. During the recovery, real income rises until the economy again reaches the long-run trend line.

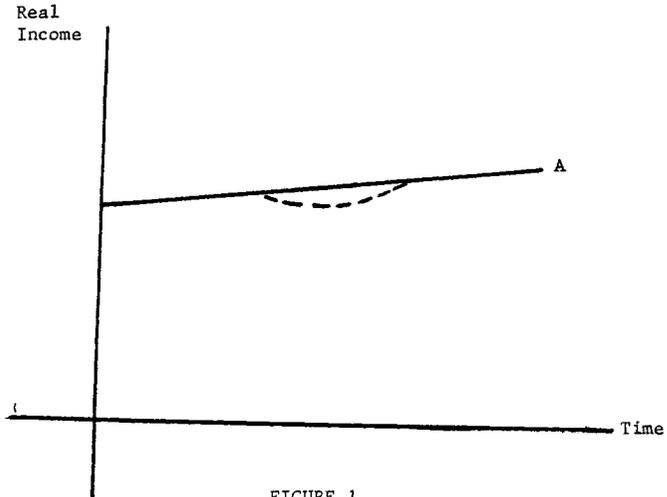


FIGURE 1
A Recession

Suppose that the Federal Reserve increase the growth rate of money during the recession and that the higher growth rate speeds the recovery. The degree to which higher money growth speeds the recovery will depend on a number of factors including the effect on anticipations and the extent to which the timing and magnitude of the change in money growth is unanticipated. Increased money growth will be followed, sooner or later, by a permanently higher rate of inflation if the rate of growth of money remains permanently at the higher level. Or, if the increase in money growth is temporary, there will be a bulge in the rate of inflation, perhaps followed by a renewed recession as the effects of variable money

growth, and other stop-go policies, work their way through the economy. We are now familiar with this sequence. We have suffered the effects of stop-go policies for fifteen years and can readily observe their lasting effects -- the higher average rate of inflation after each cycle and the reduced growth of long-term investment.

Supply shocks, like the 1974 and 1979 increase in oil prices, reduce domestic income permanently. Once adjustment to the shocks is complete, real income rises again along its new growth path. In Figure 2, the trend growth path before the oil shock is again marked A; the trend growth path after the shock is marked B. The transfer of real income from U.S. citizens to oil producers is measured by the distance between A and B when

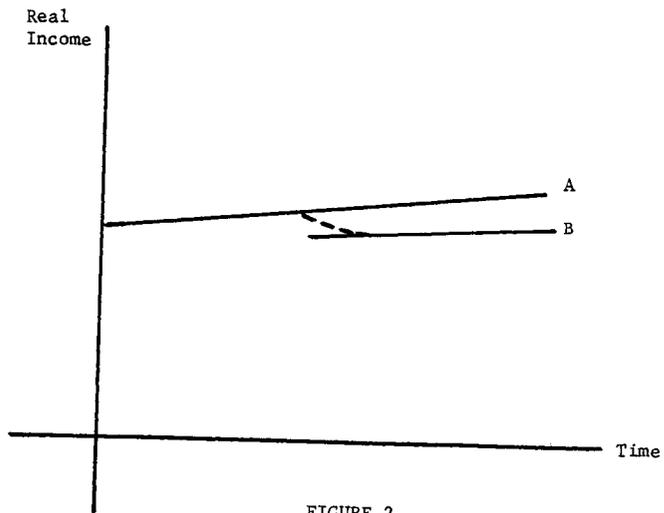


FIGURE 2
A Supply Shock

the shock occurs. As long as the cartel keeps the real price of oil at its present level, we must export more of our real output to pay for our imports of oil. The additional payment of present or future exports is a measure of the real cost to us of the cartel.

The dotted line in Figure 2 shows one hypothetical adjustment. Real income does not move from A to B in a day or a month. Adjustment takes time because there is substantial uncertainty about the future. Will the cartel maintain the current real price by increasing the future market price of oil at the world rate of inflation? Or, will the oil shock be followed by slower growth of incomes, an excess supply of oil and a reduction in the real price of oil as in 1975-77? Will the U.S. government continue price controls and the loss of allocative efficiency caused by misguided energy policy? Or, will the latest increase in oil prices be followed by more rational energy policies than those we have followed? Answers to these, and many other questions, are neither obvious nor readily available. Uncertainty about the future delays adjustment. During the delay unemployment increases and prices accelerate. Inappropriate monetary and fiscal policies can increase the burden by inducing a recession. In 1974, a sudden shift in monetary policy from excessive expansion to contraction increased the burden of adjustment by pushing the economy below B.

The reduction in real income, and the rise in unemployment during the adjustment from A to B has many similarities to a recession. The key difference is that the economy does not return to the trend growth marked A.

Suppose that the Federal Reserve, believing we are in a recession, responds to increased unemployment by increasing the growth rate of money. The higher growth rate, if unanticipated, may stimulate some additional employment.

Ultimately the effect of higher money growth will be a higher rate of domestic inflation, a further decline in the value of the dollar, a further increase in the prices of the goods and services we import, including the market price of oil.

Money does not create oil, and monetary policy cannot replace the real income we pay the oil cartel. Monetary policy can add to the current uncertainty by mixing the effects of higher money growth with the effects of higher prices for energy. This is a disservice to all of us.

The basic fact is this: We are poorer as a result of the oil shock, and we must adjust to our reduced affluence. Full employment can only be restored at a lower level of real income. Monetary policy can raise or lower the cost of adjusting to the lower level of real income, but it cannot prevent the adjustment.

Appropriate Monetary Policy

The Federal Reserve should announce, and carry out, a medium-term policy to reduce the rate of inflation. Gradual, sustained, pre-announced reductions in the growth rate of money is the policy recommended by the Shadow Open Market Committee for several years and by the unanimous vote of the House Committee on Banking, Currency and Urban Affairs earlier this year. That policy remains appropriate.

Until recently, it was possible to sustain a different view. Inflation could be viewed as a means of reducing the real cost of oil to everyone. The reason is that the price of oil is stated in dollars, and after the 1974 increase of 300%, oil prices rose less than the prices of other commodities. The real price of oil, the price of oil relative to all consumer

prices, declined by 10 to 15% between 1974 and early 1979. The rise in oil prices on July 1 increased the real price of oil above the 1974 level. We now know that we cannot inflate our way out of the problem.

Many observers believe that it is impossible to end inflation. Others believe that the costs of ending inflation are too high. I believe these views are mistaken and that a proper reading of our recent past does not support these pessimistic views.

The average rate of increase in consumer prices for the six months ending September 1973, before the first increase in oil prices, was 9.4%. The six month average reached a peak of 12.2% in September 1974. Thereafter, the rate of inflation fell, and little more than a year later, the average rate of inflation was 4.5% or less -- below the levels achieved in the late 1960's. The economy recovered during this period of declining inflation. Unemployment fell from a peak rate of 9% to 7.5%; interest rates on long- and short-term securities fell, and the economy began to throw off the heritage of a decade of rising inflation.

The benefits of the policy of slower money growth were abandoned in 1976, and the mistaken policies continued in 1977 and 1978. Within a few months of the change, the average rate of price increase rose, and we entered another period of rising interest rates, rising rates of inflation and depreciating currency which is too fresh in our memories to recount.

I urge the committee to adopt a resolution expressing the sense of Congress that gradual, sustained reductions in money growth are to be achieved by the Federal Reserve until the rate of money growth returns to the non-inflationary path of the early 1960's. This resolution, if it

is to be effective, must be accompanied by action that removes interest rate ceilings and other impediments to monetary policy.

A resolution directing the Federal Reserve to produce gradual, sustained reductions in money growth is not a policy of inaction. It is an announcement to the world that at least one part of government has the vision to look beyond current problems. The resolution would make clear that the Congress wants the Federal Reserve to give up the myopic concern with problems that it cannot solve to concentrate on the problem of inflation which will not be solved until the Federal Reserve develops a medium-term strategy and adopts procedures capable of achieving its targets.

Appropriate Fiscal Policy

The income we transfer to the oil producers cannot be restored by changing taxes and government spending -- by fiscal policy -- anymore than by monetary policy. But fiscal policy can be used to shift the burden from one sector of the economy to another. If tax rates and government spending are unchanged, the loss of real income will fall on private spending for consumption and investment. The decline in consumption is a measure of the loss borne by consumers now; the decline in investment is a measure of the loss that falls on future income and consumption.

There is no reason to believe that all of the loss of affluence should be taken from private spending and none from government spending. To share the burden between the public and private spending, we must cut the real value of government spending and tax collections. The reduction in the real value of government spending assures that we have not used the

unforeseen loss of real income, resulting from the cartel's action, to increase the relative size of the public sector.

Cutting taxes, without reducing government spending, does not distribute the burden between the private and public sectors. A tax cut, unaccompanied by a reduction in spending, changes current tax rates relative to future tax rates. The main effect of a tax cut is to redistribute the loss of real income between consumption and investment.

The decline in income cannot be avoided, but the decline does not have to be followed by a decline in the future growth of income. Two decisions of Congress that affect the growth rate are the decision to share the loss of real income between the private and public sectors by reducing government spending and the decision to shift the burden of taxes between consumption and investment.

The rise in oil prices falls most heavily on those individuals, industries and countries that depend most on oil. Countries and industries that produce with more oil using capital and less labor lose relative to those that use less capital and more labor. This is one reason that we have seen, in the years since the 1974 oil shock, relatively faster growth of investment and output in countries like Malaysia, Korea, Brazil and Taiwan and relatively slower growth of investment and real output in the industrialized countries. The recent oil shock will have similar effects unless offset by a reduction in taxes on capital. A reduction in taxes on capital stimulates investment by raising the after-tax return to capital but places more of the burden of adjustment to the oil shock on current consumption.

The decision about how the loss of real income is to be shared should not be left to chance. If the current or prospective decline in real income is mistakenly regarded as a recession and tax cuts are used to stimulate current spending, more of the loss will be shifted to capital, to future consumption and to our children. I do not recommend that course.

Conclusion

The 1979 oil shock presents a problem, albeit a much smaller problem for us and for the world than the 1973-74 oil shock. We have shown that energy policy and economic policy can make a small problem large and can make a problem into a crisis. We misinterpreted the effects of the 1974 shock and seem determined to repeat, or compound, our error.

Events that have already occurred assure that we will experience a decline in real income. Government policies -- fiscal and monetary -- will determine how the loss is borne. Monetary policy will decide whether we move toward higher or lower inflation. Fiscal policy will determine how the loss is distributed between private and public sectors and between consumption and investment. If we misinterpret our current circumstances as a recession, and regard the loss of real income as a gap to be filled, we will assure that investment will remain low. With that error repeated, we will continue to grow slowly and will experience higher inflation and very little increase in income in the early eighties.

The CHAIRMAN. Well thank you, Professor Meltzer, and I want to thank all you gentlemen for excellent statements.

Let's get first to the question of the independence of the Federal Reserve. You weren't asked to address yourselves to that question. That's a little beside the point, but I think it's overwhelming and important and we need advice from thoughtful and able economists as you all are.

There's been a general division of opinion in the Congress and perhaps to some extent in the country about how important the independence of the Federal Reserve really is. As you know, for a long time there was a feeling the Fed ought to be less independent and more cooperative in its policies, that it ought to work more closely with the President. People have argued, for example, in most other countries the central bank is pretty much a part of the Government and there isn't the kind of separation, independence, and distinction we have in this country. Others argue that the independence of the Federal Reserve has been established for some time, that it's been very important, that it's succeeded to some extent—it's been erratic, but to some extent, in giving a degree of insulation from short-term political pressures from the President. And now we're faced with a situation where, as I pointed out, the average term of service of members of the Fed as I calculate it, at least next January when Governor Caldwell's term expires and in view of the new appointments, will average less than 2 years. It's supposed to be a 14-year term. The average ought to be 7 years. Obviously the concepts of those who formulated the Federal Reserve Act back in 1913 certainly aren't being met in that people have long terms of service.

So let's start off with Mr. Kaufman and give me your views first on how important the independence of the Federal Reserve is.

Mr. KAUFMAN. Well, Senator, I'm one who believes that a quasi-autonomous central bank is very important to the United States. It does allow people to operate in a reasonably nonpolitical environment. They are not subject to some of the immediate pressures that others are. There is a greater need in central banking to address intermediate issues. I believe the Fed ought to be nonpolitical.

Therefore, the length of time served, the way people are appointed, is highly important.

Nevertheless, in our history a President does have an influence on the central bank. The term of office of the individual governors is so structured that if a President serves for two terms, 8 years, he does have the opportunity to influence the composition of the Board over a period of time and perhaps there's nothing wrong with that.

I think the dilemma is what you just point out, and that is, there are people that are coming on the Board that do not serve a full term. I believe that is probably due to several reasons.

First, the length of term that is provided, 14 years, is extraordinarily long for any individual to make that kind of commitment. We are asking people to become members of the Board perhaps in midstream of life when an important career is being carved out. This career may be ended because by the time the individual has served 14 years most of his working life is over.

Second, it would seem to me, as you indicated before, we are asking people to make a substantial sacrifice, financial sacrifice. People who serve on the Federal Reserve Board probably have not only a distinctive role to play, an extraordinary role, a very powerful role, perhaps one of the most important financial roles in the United States. Therefore, there should be at least some financial compensation far beyond anything that we have today. After all, you're asking them to preside over the commercial banking system and the financial system of the United States. The current compensation I believe is not in keeping with attracting the very individuals that perhaps ought to serve on the Board.

Now finally, I don't want to belabor the point, there is an aspect to the current monetary situation that is quite unique. The President has appointed a new Secretary of the Treasury, which is his right, but this is the first time that a Secretary of the Treasury has been appointed who had previously been Chairman of the Federal Reserve Board. In that sense, that is extraordinary and I think it's unprecedented.

Perhaps this hasn't come up before because of personalities, but perhaps it hasn't come up before because of some very fundamental considerations. After all, official American policy, financial policy, is promulgated by the Treasury of the United States and by the Federal Reserve Board. The Treasury is the direct political arm of the administration, while the Federal Reserve is intended to be quasi-autonomous, and the Fed is expected really to withstand immediate political pressures. Perhaps this has some folklore attached to it and perhaps some of it is real, but in the future I think we may ask "Will the Chairman of the Federal Reserve, having the opportunity now to serve as the Secretary of the Treasury, become somewhat more politicized in his particular actions as Chairman of the Federal Reserve Board?"

Now, to some extent, in the current situation this perhaps can be alleviated, depending on who the President will appoint to the position of the chairmanship of the Federal Reserve Board. Presumably, in order to indicate that the quasi-autonomous position of the Federal Reserve is maintained, that new Chairman will have to be an individual who is somewhat independent in views, forthright, and doesn't have direct political ties.

The CHAIRMAN. Thank you very much for a very helpful response.

Professor Friedman.

Professor FRIEDMAN. Yes, Mr. Chairman. I can be brief because in the first instance I agree with what Henry Kaufman said. I believe that there are advantages to having a quasi-independent Federal Reserve and that those advantages are as you and he both outlined. I support that proposition.

I find curious that when people talk about the independence of the Federal Reserve, it is rarely specified independent of what? The usual presumption of such discussions is that the Federal Reserve may be too dependent on the Executive—that is, that it is apparently the Executive which has the greatest potential control over the Federal Reserve.

The CHAIRMAN. Well, there's also a constitutional element here. As you know, the money power is a congressional power. It's not an

Executive power. It's very distinctly constitutional. We delegate that power to a considerable extent to the Federal Reserve Board and that constitutional separation of the money power from the Executive is one that's persisted throughout our history. Paul Douglas used to say—he told William McChesney Martin, "I want you to write on your mirror when you shave so you see it every morning 'I am a creature of the Congress.'" That isn't exactly a prescription for the independence of the Federal Reserve Board, but it's the independence of the Executive which by and large has been pushed by Members of the Congress, but the arguments—the statement by Mr. Kaufman was a very reasonable statement and I think the implication there is that there's an independence of both, as he says, a quasi-autonomous—

Professor FRIEDMAN. Yes, sir, the Constitution's giving the money power to the Congress is exactly what I had in mind, Both in the Constitution and in the Federal Reserve Act, it is made very clear that the Federal Reserve is not supposed to be independent. It is supposed to report to Congress. That is why I find it curious that the discussion of this matter always concerns whether the Federal Reserve is sufficiently independent of the Executive. The Executive has a great deal of power over the Federal Reserve from the appointments process, and people forget that in reality it should be the Congress, not the Executive, that is directly supervising the Federal Reserve.

The CHAIRMAN. From a practical standpoint, I can say this as one who's served on this committee now for almost 22 years, ever since I came to the Senate, it is extremely difficult—extremely difficult, in spite of Professor Meltzer's advice to us, really to have any influence on the Federal Reserve.

In the first place, you've got 15 members of this committee who have differing views. It's a bipartisan committee and consequently it's very hard to focus—you can see this morning that we ought to have 15 Senators here and we have 1. It's very hard to focus the attention of the committee on this issue. Monetary policy is complicated, difficult, sometimes doesn't seem to be very closely related to immediate problems. So it's very hard to get any concerted action by the committee on the Federal Reserve and much harder to get concerted action by the Senate and getting the Senate and the House together is even more difficult.

So the Federal Reserve is really independent if it's independent of the Executive because when you have 535 masters it's almost like being a Senator from New York where you have 17 million superiors, all your constituents, so you don't have any really. Well, you have some accountability, but you have an enormous amount of independence when you're an elected official from a State and that kind of independence I think the Federal Reserve has because they are counteracting views here in the Congress and, as I say, there's an overwhelming amount of, if not indifference, of just feeling that it's a little too complicated to get involved in.

Professor FRIEDMAN. Let me just add a few remarks to focus on the question that you raised about the length of terms.

There are two reasons why we should not be very surprised that the actual length of time served in these positions is less than the formal length of term. One has to do with Henry Kaufman's point

about the kind of people who are typically asked to come to the Federal Reserve and the stage of their personal careers at which they are usually asked. The second is the question of whether there is a genuine role for seven Governors of the Federal Reserve. If we think about the various responsibilities that the Federal Reserve bears, it is not clear that we need a Board of seven people to carry them out. Rather than trying to find a way of selecting seven people who will stay for 14 years apiece, with responsibility shared among the seven, perhaps a different approach would be to shrink the number of Governors from seven to some lower number. If there were a smaller number, perhaps there would be a greater incentive for any one person to stay the 14 years, and there would also be fewer such people to try to find.

Finally, to my mind the most important things that the Federal Reserve does are not done by the Board but by the Open Market Committee, which has been for years a 12-person committee. The committee's turnover has to do not just with the Board members but also with the presidents of the regional Federal Reserve banks. An issue that is important to assess is whether the presence on the Open Market Committee of the presidents of the regional Federal Reserve banks enhances or detracts from the independence of the Federal Reserve. On balance, my belief is that the presence of the presidents of the banks enhances the independence of the Federal Reserve.

The CHAIRMAN. They have a greater degree of independence, the five outside members who serve. More than the Presidential appointees.

Professor FRIEDMAN. I agree; and to the extent that is true, perhaps another way of bolstering the independence of the Federal Reserve would be to reassess the appropriate balance between Board members and regional Federal Reserve bank presidents in making up the Open Market Committee. It is now a 12-person committee consisting of 7 Governors and 5 Federal Reserve bank presidents, but there is no particular reason why that composition could not be restructured.

The CHAIRMAN. Professor Meltzer.

Professor MELTZER. I have two sets of comments on your question:

First, when Congress originally set up the Board, the Secretary of the Treasury and the Comptroller of the Currency were on the Board. They remained on the Board until 1933.

At the time the Federal Reserve was regarded as an independent agency. It was believed useful to have the Secretary of the Treasury fully participate in the meetings, and he often did. I'm not sure that the issue is essentially a question of whether the Federal Reserve—

The CHAIRMAN. That's quite a different situation than having the Chairman of the Federal Reserve Board made the Secretary of the Treasury which, as Mr. Kaufman properly pointed out, is unique, because the Chairman is not necessarily a dominant figure, but a very powerful figure on the Board.

That precedent is somewhat disturbing.

Professor MELTZER. Yes, I would agree it is different. I would point out, however, that the active involvement of the Chairman of the Federal Reserve in Government policy is not a new thing.

For example, whereas Mr. Martin may have been somewhat aloof from the administration. His predecessor, Chairman Eccles, was anything but aloof. He was involved in White House activities, and took a major part in the legislative program at various times during the Roosevelt administration.

I think that the Federal Reserve does not have a history of street independence from the administration.

In my opinion, the crucial part of independence is not the administrative question about who reports to whom, although that may be important for some purposes. Independence has many dimensions. One of the critical dimensions of independence involves the freedom of the Federal Reserve not to finance the Government's deficit. Can the Federal Reserve proceed in a way that doesn't finance the Government deficit?

The most critical questions about Federal Reserve policy in relation to the administration, have to be the questions of how much money the Federal produces and the rates of interest and inflation we get at a result of their policies.

If the Federal Reserve pursues a narrow, short-term interest strategy, as it has done for a very long period of time, it ends up financing the deficit. Financing deficits by preventing money apart—or independent of the administrative arrangements.

So I think a very important step in assuring the Federal Reserve its independence would be to give them—in fact, require them to announce to you the monetary policy that they intend to pursue over a period of much more than a week or a month or 3 weeks.

If the Congress would get them to announce medium-term goals, and would then hold their feet to the fire, and see that they achieved them, I believe the Federal Reserve would not only have more independence, it would have a stiffer backbone about financing the Government's deficit.

The CHAIRMAN. I can't resist from asking two questions:

When they give us a range that is as broad as a barn door, how significant, really, are those?

Professor MELTZER. Those numbers are not significant. Their procedure of using a shifting base, of announcing very broad ranges for several series does not restrict them. If they make the range broad enough, they will always be inside the range. It's really surprising that the credit range isn't wide enough to incorporate the recent explosion of—

The CHAIRMAN. Well, the second question is how do we hold their feet to the fire? What do we do?

Professor MELTZER. You get them to produce meaningful numbers about longer term targets, and you try to get—and you instruct the Chairman to achieve these targets. Congress, I think, can do better.

The CHAIRMAN. How do we instruct them?

Professor MELTZER. You instruct them legislatively.

The CHAIRMAN. Pass a resolution?

Professor MELTZER. That says that whatever target you think is appropriate in an environment in which there are no interest rate

controls so we don't get confusions or meaningless numbers reported as money, but get correct reporting of the numbers of what is going on under these various rubrics. The Congress should announce what it wants the Federal Reserve to do, and should enact legislation requiring it.

The CHAIRMAN. Do you think Congress has the competence to do that?

Professor MELTZER. I believe the Congress is the only agency which has the competence to do it.

The CHAIRMAN. The competence, c-o-m-p-e-t. Do we know enough about it? Do we really know enough about it? Can you get 535 Members of Congress to agree on anything except they want interest rates lower?

Professor MELTZER. We have to get them to understand, as I think many of them now begin to understand, that the only way to get interest rates lower is to pursue a policy which gradually persistently reduces monetary growth.

The CHAIRMAN. Well—

Professor MELTZER. We could attain money growth at something close to the average growth of rate of output. There's nothing else that's going to bring lower interest rates for us. And the record over the past 10 years is extraordinarily clear on that.

Look at the interest rates that one observes in Switzerland and Germany. Compare them to the interest rates that we observe in the United States. It was not always thus.

The CHAIRMAN. But, you see, unfortunately, we have a short horizon in the Congress. Members of the House are elected every 2 years, and as the year goes on, you get closer and closer to that election period.

Professor MELTZER. Right.

The CHAIRMAN. Members of the Senate are elected, as you know, a third of them, every 2 years. So that it's very hard to persuade Congress to focus on the long-term picture. And the one element that people can understand most clearly, that hits them directly, is the level of interest rates, and there's always overwhelming sentiment to get it as low as you can.

So that for Congress to pass a resolution that would achieve lower interest rates over a period of, say, 10 years, is absolutely right, we should do that. But whether or not we could persuade the Congress to adopt a policy that might have a more restrained monetary policy for the time, therefore higher interest rates, perhaps, over the period of the next 9 months or a year or so, in order to meet inflation and lower interest rates in the long run, that's the problem.

Professor MELTZER. If I may respond to that, Mr. Chairman, I appreciate the problems that the Congress faces, and I think it is in many ways appropriate that the Congress is responsive to the demands of its constituents that produce these pressures for intervention and for monetary expansion and so on.

But I don't believe they will get an administrative arrangement under circumstances which is going to change the basic broad nature of the policies. I don't think that anyone is going to find in the record whether the chairman, for example, or the members of the committee, remained 8 to 10 years, or whether they remain on

average 3 years, that the record of monetary policy very much depends on that.

What it depends upon is the short-term pressure to monetize the debt, and that pressure comes from the fact that the Fed seeks to control interest rates, the Congress is concerned about interest rates. The administration gets concerned about interest rates, and that means that when there is a big deficit, the Fed ends up monetizing a sizable portion of it, and we get a large rate of increase in the money stock.

I want to go on and add one other brief comment on your question. At the moment, of course, monetary policy is not independent, not very independent. Policy to a considerable extent is being made in Frankfurt and not in Washington. The Federal Reserve is, properly or improperly, worried about the effects of a capital outflow following any effort that it would take to lower interest rates. Therefore it seems under pressure to raise interest rates, because the Germans have decided to raise interest rates. We are faced with the problem of a fixed exchange rate system, and some of the problems that arise under it.

That also limits the independence of the Federal Reserve, and what I am trying to say is I believe those two definitions of independence, how much it monetizes the deficit and what it does about the international aspects of monetary policy, are far more important about the outcomes than whether we have short-term members or long-term members.

The CHAIRMAN. Professor Klein.

Professor KLEIN. This last exchange indicates that the term "independence" has different meanings. Surely everybody is restricted to do the right thing for running the economy. We are not speaking about independence in that sense.

We are speaking about independence in the sense of being able to make decisions freely, not whether you're sensible and take account of what's going on in the world when you make your decisions; but whether or not you are free to make the decisions.

Now, in my opinion, the President and the executive branch need a harmonious monetary team, together with the rest of the Cabinet, and I think it is appropriate that the President had power to appoint members of the Board and appoint the Chairman, but that's about as far as the infringement on independence should go, and once people are appointed, then they ought to be freely independent to carry out the decision process as they like.

I think that is the present situation, and I would interpret the switch of the Chairman to become Secretary of the Treasury as purely a personal matter. He may be the man for the job. That's a matter between two individuals, and I would hate to see legislation written that would limit the freedom of choice of occupation of individuals.

If the Chairman wants to become Secretary of the Treasury, then that's no infringement on freedom or independence. And it is important that monetary policy be harmonious, and for that reason we've limited the term of the Chairman to 4 years. Not quite synchronous with the Presidential term, but nearly so.

That, I think, is appropriate. So I see nothing in the present situation to restrict the independence of the decisionmaking and thinking of the Federal Reserve.

But let me comment on one other point that Mr. Meltzer made about trying to get independence by restricting the range for the monetary aggregates. I would regard that as highly unscientific.

The monetary aggregates are what we would call noisy magnitudes. We can't measure them accurately; we sometimes see them revised by \$5 to \$10 billion at the stroke of a pen; they aren't what we said they were, but they're something else because of the way of counting and then enumerating that total.

It would be highly unscientific, against all that we know, which is, of course, too little in economics, to narrow the range beyond our ability to compute target values in certain intervals.

If we can't even measure it with precision, and if it's a product of the economic process, we can't control it with precision. It would be just as bad to narrow those ranges by law as it is to make a constitutional amendment on the balanced budget. You cannot legislate the endogenous economic process. That is a matter of the outcome of the workings of the economic system, and it cannot be fixed by law.

The CHAIRMAN. Mr. Kaufman, in your statement you reject gradualism. That's almost like rejecting mother, apple pie, and baseball. As you know, everybody is for gradualism just like everybody is against inflation or deflation. So I think it's refreshing to have you make the kind of statement you make, and indicate that you think, as you say, it has a poor performance record. It certainly has.

But you also call for a tax cut to stimulate capital investment and savings.

Now, last spring, I followed the Kaufman prescription by introducing an amendment to the budget resolution to cut spending by \$28 billion, and bring spending down to the level of revenues, balance the budget in the year beginning the next October 1. I got 23 votes for it. Five out of six Democrats voted against me; two out of three Republicans voted against me.

So it didn't seem to be a very realistic process.

We face, as you know, a colossal amount of spending in the energy area. We have a commitment by the President which is strongly supported by most Members of Congress to increase military spending substantially. We have uncontrollable spending in many domestic programs, so there doesn't seem to be any practical way that you could have a departure from gradualism, at least a departure which would balance the budget sharply and cut taxes.

What's your answer?

Mr. KAUFMAN. Well, sir, there are several reasons why I am proposing tax reductions for capital spending. I did not propose, as you know, increases in Federal expenditures. The last time around, we had tax reductions, meaning 1974, 1975, 1976 period, tax reductions and substantial increases in Federal expenditures. And the tax reductions were heavily oriented toward encouraging consumption.

The CHAIRMAN. Say that again.

Mr. KAUFMAN. The tax reductions were heavily oriented toward increasing consumption.

Now we cannot afford that kind of a policy the next time around. Already the consumer is heavily indebted, and the impact we are going to have on him to bring him out of that indebtedness will be short lived, if we encourage it through tax reductions and consumer-oriented Federal expenditures.

As we are going on here over the next 4, 5, or 6 years, the need is to increase our productivity. The need is to have a kind of a new strength in the American economy, and to have a strength that will sustain the consumer. And that strength will have to come from the capital investment side.

Now I'm not proposing massive tax reductions, I think they ought to begin some time in the early part of next year, of moderate proportions, oriented toward capital investments.

The CHAIRMAN. Can you give us figures? There's been a proposal for a \$30 billion tax cut for 1980.

Mr. KAUFMAN. No; I would not go that high. I would cut that in half, Senator.

Second, I think it's also important to recognize that you have sitting on top of you a terrible international constraint, and that is the fact that the dollar plays this key role and the tendency will be there to rely overly on massive tax reductions oriented toward the consumer, and freeing monetary policy.

I would say to you I'm not in favor of that. I would urge you to consider ways to free monetary policy as we go into 1980. I think that will be very difficult to do. It will be very difficult to do because foreign interest rates will be high, our inflation rate may come down only gradually, and we will be a hostage of international interest rates and the oil situation, therefore.

I think we cannot do what we did, for example, in 1971. In 1971 we pursued monetary policy for domestic reasons, lowered the 3-month Treasury bill rate in January of that year to 3 percent, in August we abandoned the gold backing for the dollar, and we freed ourselves.

Now we can't abandon the gold backing; we did already. But this time around our liabilities internationally are very high. We really have to find a way that will induce foreigners to play a bigger role in international finance. And this foreigners are reluctant to do because they realize as their currency proliferates internationally, they cannot have a stronger currency.

So I think it is a combined policy that you have to approach, moderate tax inducements oriented toward the capital side, and working very hard to induce foreigners to open their capital markets, whether it is Japan, United Kingdom, and Germany.

That would be part of the way out.

My fear is, if I may again express this, that official policies of gradualism really is an acquiescence to a persistence of the high rate of inflation. And if you look at this just from a financial viewpoint, in 5 to 7 years from now, we will have built a financial system that is heavily leveraged, that will have more participants that have a vested interest in maintaining inflation and accelerating the rate of inflation, than participants who will argue very heartily to throttle it down.

Professor MELTZER. Senator, may I respond as a proponent of gradualism, briefly?

The CHAIRMAN. Go right ahead.

Professor MELTZER. I will not take the liberty of responding to Mr. Klein, because that's an academic debate. But I would like to say that if you look at the charts on the right wall, you'll find very little evidence of gradualism in any of those numbers. And if we had charts of fiscal policy, you would not see any sign of gradualism in fiscal policy.

To say that gradualism has been tried and failed seems to me to be something of an overstatement. Gradualism has been talked about a great deal, but the rhetoric has not been matched by any kind of action.

Where gradualism has been tried, it has succeeded. Those are countries—Switzerland and Germany would be the countries that I would point to.

The CHAIRMAN. Yes, sir.

Mr. KAUFMAN. Let me respond to this. If we could put into place an effective policy of gradualism. I think we would all be in favor of it. But as you already point out, Senator, to establish this by an act of Congress is very difficult to do.

Second, if we look at financial innovation and financial technology, it has run rings around what we call the money supply concept.

As we have defined M_1 and M_2 to include currency demand deposits and time deposits, the private sector really does not look any more at the classical definition of money.

Credit is money. An unused line of credit for which a corporation pays a legal standby fee, and has a contractual arrangement, in the eyes of that corporation that is perceived as money, even though it is usage of credit.

The ability to issue commercial paper in vast amounts is perceived as access to money, even though it is use of credit.

The ability of an individual to take a credit card and exercise it, that individual perceives it as the use of money, even though it is the use of credit.

So we come down to what is it we want to define as a growth path for the establishment of a monetary target? I believe we can't do it any more through classically defined money. We have to find a way to cut into limiting the growth of credit, and this is what the central bank does not yet want to do, because then it becomes a very hard choice, because the growth of credit can be throttled down.

You can set a target for a credit market not growing any more in 1 year than 7 or 8 percent and bringing it down, but the central bank doesn't want that onerous and difficult task, because you can set ranges here which you can stay within.

The CHAIRMAN. So if we took all the instruments, as you suggest, with M_2 , as the measure, No. 1, that would give us a notion of just how monetary policy was operating. It would be much more realistic. Is that right?

Mr. KAUFMAN. That is right. I think most Americans would also understand it better. If you speak to Americans in terms of money, it has become really a concept for a trained economist.

If you speak to Americans in terms of the growth of debt, mortgage debt, corporate debt, consumer debt, it is an understandable concept. And the totality is understandable.

Money supply is not something that is readily understood by Americans.

The CHAIRMAN. Does the Fed have the tools to control that massive debt?

Mr. KAUFMAN. I believe it does. Now there may be some who say that's very difficult, in terms of a debt proxy, and then trying to control M_7 . And we may have to, from time to time, cut into the credit-generating process, for example, as was suggested, to put pressure on limiting the growth of bank credit. That's easily done, because bank credit is a large chunk of total debt growth each year.

This year total debt will grow perhaps by \$400 billion net, and of that \$400 billion, bank credit is probably going to be at least \$130 billion.

So you have a substantial portion just sitting in the commercial banking system.

Now, of course, some will say then other intermediaries will play a bigger role. Not that quickly. It takes time for other intermediaries to assume a bigger role.

In some ways I believe the role of the central bank has to be always to build an improved mousetrap. There is no permanence to any particular technique, but there is a need to innovate with techniques, and this is where the central bank has been lacking.

The CHAIRMAN. Professor Friedman, on Friday the Federal Reserve raised the discount from $9\frac{1}{2}$ to 10 percent to help stabilize the value of the dollar in international exchange markets. The discount rate is still below the Federal funds rate, which is the key short-term rate set by the open market DISC.

Some observers have questioned the wisdom of this increase, because they forecast a recession. Others say it should not have any lasting effect on the economy, and is a useful signal in respect to the dollar.

Was the increase necessary, and what effect will it have domestically?

Professor FRIEDMAN. Mr. Chairman, I believe the discount rate in itself is not a very important tool of monetary policy. The amount of the banking system's activity that is financed at the discount window is typically small, and—

The CHAIRMAN. Isn't it a signal that is of some value?

Professor FRIEDMAN. Yes, sir. I was about to go on to say that I think that the discount rate has same importance as a signal, and that it is essential to distinguish between the use of the discount rate as a device in and of itself and as a signaling device. I believe that the actual effects associated with the discount rate per se are really very minor. Moreover, since the discount rate has recently been below the Federal funds rate, that even further erodes the importance of an increase. The more important rate is the funds rate, so that, if the discount rate had been pushed above the

Federal funds rate, that move could have been perceived as a signal that monetary policy was about to tighten further, and that an increase in the Federal funds rate would be coming in the near term. The current increase was not that kind of signal. Rather, it was an adjustment of the discount rate to catch up with the market reality of a 10¼ to 10½ percent Federal funds rate.

Hence we are left with the fact that the Federal Reserve gave a minor signal by increasing the discount rate in the direction of the funds rate. To that extent, I would say that this was a positive development. In light of the argument that I offered before, I do not believe that monetary policy has been particularly tight, and I would not want to see that monetary policy eased at the current time. Continuing to leave the discount rate below the Federal funds rate may have led some market participants, and perhaps especially participants in foreign exchange markets, to expect that the Federal Reserve was about to ease policy soon. To the extent that this action had some signaling value, I therefore believe that the signal went in the right direction. It is important, though, not to place too much emphasis on the discount rate itself. An interesting result which an academic researcher showed several years ago is that, despite all the discussion of signaling by the discount rate, there is in fact an astonishingly small amount of new information contained in discount rate movements. It is possible to explain something like 99 percent of all of the monthly variations in the discount rate simply by relating it to the last 2 months' movements of the Federal funds rate.

The CHAIRMAN. Do you think the discount rate should be set above the Federal funds rate?

Professor FRIEDMAN. No, sir. If I were running the discount mechanism, I think that a discount rate that simply tracked the open market rate on Federal funds would be about the right way to do it. I see no reason to subsidize banks' borrowing at the discount window by having a discount rate below the Federal funds rate; but once the two rates are in alinement so that banks have no incentive to go to the discount window rather than to borrow in the Federal funds market, then there is just the margin of banks that do come in to the discount window for one reason or another. Typically that margin will be very small, and I see no reason to exert a penalty on it.

The CHAIRMAN. Professor Klein, Chairman Miller has told the Congress frequently that fiscal policy must remain tight, and that if a recession develops, we ought to use monetary policy to provide some stimulus for growth.

Given the current outlook, including inflation, energy, and the value of the dollar, do you agree that the mix of fiscal and monetary policies favored by Chairman Miller, and that it's realistic and practical to try to do that?

Professor KLEIN. Well, I think that the only generalization one could make is that it's faster to manipulate monetary policy than fiscal policy. You know the fiscal policy process, and you know how long it takes to achieve national action on tax, expenditure, and budgetary changes. There's a certain degree of inflexibility.

Nevertheless——

The CHAIRMAN. It's always a great temptation, come the election, to cut the taxes.

Professor KLEIN. Yes, but we find that when it goes——

The CHAIRMAN. It's hard to find an election year when we didn't cut taxes, especially when we——

Professor KLEIN. That's right, but do we get what we want? There's a lot of horsetrading in the process, and we may not get what we actually set out to get in the end.

However, in the present circumstances, I would say that monetary policy is severely restricted. It is much better to let monetary policy——

The CHAIRMAN. You say monetary policy is severely restricted?

Professor KLEIN. Restricted.

And it's an——

The CHAIRMAN. You say that in view of what's happened over the past 13 weeks or so?

Professor KLEIN. It's been restricted ever since the American current account got into terrible trouble, and the dollar got into terrible trouble.

The CHAIRMAN. I beg your pardon. I misunderstood you. I think just the last two letters of your word. You said restricted, not restrictive.

Professor KLEIN. That's right.

The CHAIRMAN. OK.

Professor KLEIN. Yes, yes. That's exactly——

The CHAIRMAN. OK.

Professor KLEIN. It's constrained by the international situation, the position of the dollar, and our trade accounts. At the present time, we simply ought to maintain a very steady monetary policy or to give some signal as occurred last week—not because the economic situation necessarily warranted it, but because the political deterioration and the political uncertainty required some kind of voice of intervention.

Given that kind of exception, I would say let us keep monetary policy very steady at the present time, and concentrate on fiscal policy and structural policies. Export policy would be very important. Many other kinds of policies would be very important in getting the economy turned around.

The CHAIRMAN. Keep it very steady in what way? A steady increase, making—continuing to make credit available?

Professor KLEIN. Well, I would side very much with Henry Kaufman's views, that M_7 or a higher subscripted M is the thing that we ought to be looking at and——

The CHAIRMAN. Well, Mr. Kaufman's view, as I understand it, is that we ought to have a more—a bolder policy on that.

Professor KLEIN. He had two views. One is——

The CHAIRMAN. Keep biting down on credit availability if we can do anything about inflation.

Professor KLEIN. We ought to look at M_7 , or we ought to look at total credit. I think that's a sensible view.

The other aspect is should it be more restrictive——

The CHAIRMAN. He didn't just want to look at it, he wanted to be done.

Professor KLEIN. Well, I said keep it steady.

The CHAIRMAN. That's what I understood him to say.

Professor KLEIN. No, no, I'm simply saying that M_7 growth should remain steady at the present time. At the present time—

The CHAIRMAN. Well, the present time, as was pointed out, I don't know by whom, perhaps by Professor Friedman or Professor Meltzer, at the present time they argue that there's no real restriction on credit. Anybody who wants to borrow money to buy a house or to buy—buoy his business, buy a car, it's available. And in the past, it has not been available, for instance, in 1967, and various other periods that we've had a credit crunch where if you wanted to borrow money on a mortgage, you couldn't get it.

Professor KLEIN. I'm not asking for a credit crunch now. I don't think—

The CHAIRMAN. You're saying it should be—we should follow a policy of continuing to provide whatever credit people wanted, but at a somewhat higher price?

Professor KLEIN. At a price, yes. And at the price—

The CHAIRMAN. Is that your view, Mr. Kaufman?

Mr. KAUFMAN. Pardon me?

The CHAIRMAN. Is that your view?

Mr. KAUFMAN. I don't believe that should be the approach. I believe that total credit growth should be, first of all, not only monitored more closely, but definite targets should be established for the growth of debt in the United States, and those targets should be considerably below the growth of debt that we have had in the last 4 or 5 years in the United States.

I've also pointed out here that—

The CHAIRMAN. What kind of instruments should be used to limit that debt availability?

Mr. KAUFMAN. Well, the ultimate way to limit the availability of debt, there are two techniques:

One is through the interest rate mechanism. So far in this economic expansion, the interest rate mechanism has encouraged the growth of debt because interest rates have been significantly below the inflation rate, particularly when you relate the inflation rate to the Federal funds rate, which is controlled at the central bank, and which is the target in terms of interest rates of the central bank.

The other technique related to this is to cut into specific sectors of the credit market, such as was suggested here, into the commercial banking system, and sharply limit the expansion of bank credit, which in turn will throttle down total debt creation.

You do that by raising the reserve requirements. For example, following a more aggressive policy at the discount window, sending out a letter of moral suasion to the commercial banking system, to slow down their excessive credit creation in the banking system itself.

I don't believe this is a time where we ought to advertise readily the availability of consumer credit on very liberal credit terms.

There are times for that, but that's not the present.

The CHAIRMAN. More economists are now saying we will not only have a recession in 1979, but a recession has already begun. I'm a skeptic when it comes to economic forecasts, as I indicated in my opening remarks.

I also think that the recent economic signals are mixed, although they do seem on a whole to be indicating slowdown.

But my question is this: Are we in a recession? If not, do you expect us to be in one before the fall? And how long will the economy experience negative or low growth with rising unemployment?

I'll start with Professor Klein.

Professor KLEIN. Yes, I believe we are in a recession now, and when the economic historians make the dates, it will probably be March of 1979, as the last peak point, and that's the problem about a recession. The peak point was the last time you had a positive growth.

The CHAIRMAN. Last time what?

Professor KLEIN. Positive growth, some time in the quarterly range. We're now seeing the first of the negatives. It is not an infallible prediction, in any sense. That is, the third quarter could surprise us. But we have some very difficult things to come through.

We still haven't finished the bargaining calendar this year. If there is any doubt about a recession, and if there is a UAW strike, then that insures a recession, as it often has in the past. In 1970, and in every period of significant auto strike, we had very perverse or adverse movements of total production.

Although we make it up later, there's a very big impact at the time. We are still not through with our rounds of energy price increases, both foreign and domestic. There are other kinds of uncertainties.

So far, I'd say the harvest looks good this year, but we could have surprises. I would say that we've in any event had a very slow economy, we are very vulnerable to any kind of disturbance.

It seems highly improbable that we can get through this period without a recession, but my own projection would be that in early 1980, first or second quarter, we should begin to see some small positive movement in total production.

The CHAIRMAN. Professor Meltzer.

Professor MELTZER. I believe it's a mistake to describe what we have as a standard recession. A recession is a broad based decline in aggregate spending which spreads through the economy.

What we have is a loss of real income, coupled with some special factors due to strikes in March and April of the truckers and an anticipated strike of the UAW in September. This can give us two quarters of negative real growth. But it's a mistake to call that a recession, because it has not been broad based, and does not result from a change in demand.

As you correctly point out, it's very limited in its effect. The loss of income in June is related to the uncertainty about the allocation of oil and to the fact that people were afraid to use up the gasoline they had accumulated to go to work. They did not drive to the shopping centers.

I do not call that a recession. I believe it's a mistake to think about it for policy purposes as a recession. That's quite apart from the problem of whether unemployment is going to increase or whether real income is going to decline.

Both of those events will occur. But I think it's very important to understand that we cannot do anything to prevent decline in real income. That's the result, principally, of what the oil cartel has done to us.

The effects of a strike, of course, will produce some ripples in the economy. But those are things which are quickly made up in the subsequent quarters, as they have been in the past.

The principal event that we face is the loss of real income resulting from the transfer of a large part or a significant part of our real income—not a large part, a significant part of our real income—to the OPEC cartel. And there's nothing that monetary policy or fiscal policy can do to restore that. And it would be a mistake to think about it as a recession to be dealt with by anti-recessionary policies.

The CHAIRMAN. Professor Friedman.

Professor FRIEDMAN. Mr. Chairman, I believe that we are in a recession, and that it began some time this spring. In my judgment, we would have had an economic growth rate this year in the neighborhood of zero to minus 1 percent, after inflation, even without the oil problem. I think that the oil problem has taken another 2 percent off of that, so that we now must look for a real growth of about minus 2 to minus 3 percent, after adjustment for inflation.

Now certainly it is true, as Allan Meltzer emphasizes, that a major part of that story of having a minus 2 to minus 3 percent growth rate this year is the oil shock; but I believe that it is not correct to say that there is no essential weakness elsewhere in the economy. My reading is that, even in the absence of the oil shock, there would have been no strength in the economy except in the business fixed investment sector. Consumption is off, housing is off, Government purchases have for a year been flat in real terms. Hence my judgment is we are indeed in a recession, but one in which the oil shock is an important aspect.

You asked also about the length of the recession. I think it is easier to assess the severity than the length. Again my guess is that we will experience about a 3-percent drop in the gross national product. That drop could be distributed over about a year, but it may take a shorter period of time, and conceivably it may be longer. If the reported growth rate of real gross national product for the second quarter persists—that is, something in excess of a 3-percent per annum decline—then we would have perhaps no more than three quarters of negative growth, so that very early in 1980 the economy would be recovering. Alternatively, if the growth rate is a soft negative, or even flat for a while, then I think that the recession will last longer in that it will take a longer period of time to lose the same amount of the GNP.

Finally, you asked about the pattern of the unemployment rate. I believe that unemployment will continue to rise after real GNP has begun its recovery. If, optimistically, we would expect the first quarter of 1980 to mark the rebounding of real GNP, it might be well into the summer or fall of 1980 before the unemployment rate stops rising. If the recession lasts longer, then we could easily see unemployment on the increase throughout 1980.

The CHAIRMAN. Mr. Kaufman.

Mr. KAUFMAN. Senator, I believe we are not in a typical economic contraction. We are, as I said in my testimony, in a zone of economic ambivalence, which has been heavily influenced by the oil shock.

At the present time for this stage of the economic cycle, housing is relatively strong. The latest figures were a million nine, and permits were up during the month of June. Business spending, which always lags, is still quite good.

We do have very good availability of credit at the present time, which did not prevail in those previous comparable periods.

However, having said that, it would seem to me that if there is an auto strike in the fall, this period which we have entered into now, will probably be classified a recession.

My dilemma is that as I view 1980 and beyond, I find it very difficult to envision what will bring us dramatically out of this zone of economic ambivalence with the consumer heavily indebted at the present time. With some time next year business spending having topped out and slowing quite significantly, with monetary policy being hamstrung, as we go into next year, by international events, it would seem to me that the lack of productivity in the system, which will not go away very quickly, all of which would suggest to me that the next economic recovery, when it does come, will be very gradual.

The CHAIRMAN. Gentlemen, would you look at the charts over here on the right. I'd like to ask you a question on that, because we are going to have Dr. Wallach in tomorrow for the Fed, and he's going to give us an accounting of what they have done in the past few months and what they expect to do.

As you know, the Fed now sets its monetary and aggregate targets for a full calendar year. One-half of the current year is past, and the Fed has managed to keep the average growth rates for the aggregates within the ranges they set last February.

They now have considerable latitude over the last half of the year.

My question is this: Should they attempt to have money growth near the top, in the middle, or near the bottom of the ranges for the last half of the year? Or should it even go below the ranges? Should they change the ranges?

I'll start with Professor Friedman.

Professor FRIEDMAN. Mr. Chairman, I find your question somewhat difficult to address because I do not believe that the rate of growth of money per se should be the central focus of monetary policy. In my statement I emphasized bank credit, because that is the part most easily affected by the Federal Reserve, but I am very sympathetic to the notion that broader credit measures should be used as well.

If credit extensions in the economy are continuing at their current pace, then, even if the rate of growth of the monetary aggregates falls below the bottom of those ranges, because the banks are financing that credit out of liabilities not counted in the money stock, I still would not suggest that policy is too restrictive. Similarly, if credit should abate, but because of changes in interest rate differentials the banks suddenly shift to financing a great deal of the credit out of liabilities that are in the money stock, so that

while credit is abating the monetary aggregates rise above those ranges, I would not on that account say that policy is too expansive. I believe that, by and large, the ranges set for money growth are about right; but more important than whether they hit the top or the bottom of the individual money ranges is to look across to the other side of the balance sheet and pick up the credit side of activity—

The CHAIRMAN. We have bank credit as one of the categories on that chart.

Professor FRIEDMAN. Yes, sir. There I think that the evidence is quite clear. Credit has been expanding far outside the range of anything indicated here. Instead of 2 to 8 percent, the credit numbers are more in the range of 15.

The CHAIRMAN. They're already over the top of their range. They're over 12.

Professor FRIEDMAN. Yes, sir. I believe that the thing to do is to get the credit expansion down within the range. I believe that, if I were to choose a number for credit expansion, I would probably choose something closer to the 8 than to the 2; but the choice of whether credit growth should be a little above the middle of the range or a little below the middle of the range for credit is less important than getting from the 15, where it now is, down into the approximate 2-to-8 range.

The CHAIRMAN. Mr. Kaufman.

Mr. KAUFMAN. Senator, my own biases would favor focusing, if I had the pick of these four charts, the two that are on the left, M_3 and bank credit.

M_3 , of course, comprises roughly \$1.6 trillion of credit, and the bank credit comprises about \$1 trillion. And it's therefore a larger magnitude generally than you have either at M_1 or M_2 .

I would propose that the bank credit target certainly be lowered significantly from the growth rate that we've seen in 1977 and 1978, and thus far as we go into 1979.

I would say bank credit expansion should be set somewhere in the 7-percent range, and I would lower the range for M_3 .

In any event, I would have to conclude that on the bank credit side, one other item has not yet occurred, and that is that loans are increasing and for most banks security holdings are still increasing.

Currently, there is no sign of tight money. Commercial banks can add to their loans, all types of loans, and at the same time are increasing their security holdings of U.S. Governments and of tax-exempts.

In that sense, the measure of monetary tightness or credit creation control has not yet been achieved.

The CHAIRMAN. Professor Meltzer.

Professor MELTZER. I would like to say that unlike my colleagues—or some of them—I believe the growth rate of money is important, and that it should be controlled. Unfortunately, no one can be very certain what it means at the present time, but that's not because of any inherent difficulties with money or any problems about innovation that are peculiar.

The problems we face arise because we have regulation Q, the nonpayment of interest on demand time and savings deposits, and

the nonpayment of interest on required reserves. That causes all of these anomalies like zero-based reserve requirements.

The CHAIRMAN. Well, that's very true, but then why isn't Mr. Kaufman right when he argues that under those circumstances, look at something broader like bank credit or—

Professor MELTZER. As soon as you set out to control bank credit—I'm sorry, I didn't meant to cut you off.

The CHAIRMAN. Bank credit or M_7 .

Professor MELTZER. As soon as you set out to control M_7 , there will be an argument about which elements of credit ought to be included. As soon as you begin to control some types of bank credit, I think you'll recognize that, just as banks have been able to find zero-based reserve requirements for time deposits, they are going to find, new credit arrangements. The opportunity to keep balances in London, denominated in pounds, is one example. Perhaps there will be an exchange guarantee. The credit won't show up in the figures when you take the accounting figures, but the credit will be available during the day for people who want to use dollars.

In the current exchange rate regime, you have many different opportunities to keep your balances in different monetary units—

The CHAIRMAN. Well, in 1974, 1969, and 1967, they weren't able to find a—

Professor MELTZER. The interest rates were not as high as they now are, and the opportunities to innovate had not become as important. I believe with a zero reserve—the zero payment of interest and reserve requirements on demand deposits and the low rates on time and savings deposits, it becomes very attractive, both to the lender and the borrower, to innovate.

The CHAIRMAN. Then you're saying the Federal Reserve is pretty impotent and helpless?

Professor MELTZER. The only thing the Federal Reserve can control now is the monetary base, and that is by no means an ideal number. I believe it gives us the best representation of what is going on in the financial market. It is not perfect, because as I believe many people would point out, it is possible to hold deposits without having to hold required reserves, or to hold what are akin to deposits without holding required reserves. Therefore there is some shift in the demand for base money, which means that the growth rates of the monetary base which were reported by the Federal Reserve Bank of St. Louis somewhat understate what is actually going on.

But I would like to see our control focused on the monetary base for two reasons:

One is that it is something which the Federal Reserve can, and indeed must, control. It is the amount the Federal Reserve puts into its portfolio. Ninety percent of the base is just acquisition of Government securities by the Federal Reserve, and consequently there is nothing that they can do except control it.

Every action they take that's meaningful is going to affect that rate of growth of the base. Therefore, they should control the base.

And the arguments which say that it just represents reserves, and reserves are changing, I think miss the point.

One side of the coin is what the Federal Reserve adds to its portfolio, and the rate at which it adds to its portfolio, how fast its portfolio of Government securities grows, that's the principal determinant of what the Federal Reserve does to the monetary base and to the financial system.

So that's the thing which I think they should control. I reluctantly come to that conclusion, because I think in a better monetary system in which there was payment of interest on demand on time and savings deposits, and there was payment of interest on bank required reserves, we would be able to control the money stock, and that would be a better thing to control.

However, at the moment, we can only control the base, and we do that imperfectly. The Shadow Committee in March recommended that the base grow at a rate of approximately 8 percent in the year from last September to this September. Although the growth rate moves around quite a bit, it has been growing at approximately the rate we recommended.

I would now like to see the rate of growth of the base come down from 8 percent to 7 percent, and then to 6 percent in the next 2 years. That, I believe, is the policy which will gradually bring us to the goals that we all agree are goals to pursue.

At the moment, the annual rate of growth of the base has gone—pardon me, the short-term rate of growth of the base has gone very much above its long-term rate. If it were to continue at the current quarterly rate, we would, I believe, face the same kind of situation this year that we faced in October—in late October of last year; namely, another outflow of capital from the United States because the Europeans are raising their interest rates, and we are reluctant to raise ours. We have maintained very high rates of growth in the base for a sustained period. These rates will pull us above the annual rate of 8 percent, if they continue very much longer.

I would like to see us go back to 8 percent and announce a policy of cutting the growth rate of the base in September from 8 to 7, and ultimately to 6.

The CHAIRMAN. Professor Klein.

Professor KLEIN. Well, as far as M_1 , M_2 and M_3 are concerned, there's a certain cosmetic aspect, very much like the moves of last week given as a signal to the international currency markets, that everything isn't going to pot in this city.

I would say that growth at the median point of those ranges or below would be in order for these cosmetic reasons.

As far as bank credit is concerned, there my position would be a steady policy on the part of the Federal Reserve.

The CHAIRMAN. I'd like to ask very quickly—I realize the hour is getting late and you gentlemen have been extremely patient—let me start with Professor Klein and go right down the panel, and perhaps you can answer it rather quickly on this.

The Congress, the administration, involved in a process of discussion and consultation on adding inflation measures that we might take, we've had a number of meetings with Fred Kahn and with others, some of whom aren't here any more in the administration, on anti-inflation policy, and I'd like your own views on how effective these can be.

Let me just give you three, and you tell me which of these three you think might be useful:

First, wage and price guidelines.

Second, regulatory reform.

Third, tax reductions to decrease inflation and spur productivity and capital formation, including TIP, the wage insurance program by providing a refund if workers stay within the guideline.

Professor KLEIN. There is some indication in many quarters that the guidelines are doing some good. Surely they've been broken, surely they will have to be revised toward realism, but I think there is a great sense in the business community among certain trade unions and some external independent observers that we would have had more serious wage increases this year than we have had as a consequence of the guidelines.

Guidelines are doing some good, but obviously they are a weak approach to the problem.

The principal contribution of this administration toward fighting inflation has been to attach an inflation monitoring component to the regulatory system. I think it has been beneficial. We have one anomaly in the sense that deregulation in energy means higher prices, but most of the other forms of deregulation, or monitoring over regulatory systems, have been in the direction of holding down prices. I think that that is an important contribution of this administration, and that they should go much further in that direction.

I would add, though, that when it comes to giving up tariff concessions to special interest groups, when it comes to acreage set-asides, when it comes to sugar prices and so on, the record on fighting inflation isn't good.

So what it really means is that we need to be able to say no more often to special interest groups, if you really mean business about inflation.

Now as far as tax reductions, to stimulate capital formation and productivity are concerned, I think that that really is the best route. I don't think that we will see an impact on the inflation rate until the early part of the 1980's, but I do think it would show up in significant measure well before 1985. I think that that is the most fundamental thing that can be done in this country at the present time to fight inflation, to get capital formation and productivity in better line and in better historical perspective.

Now, as for TIP's, I think it has a lot of merit, but not on a half-hearted basis. Either one goes all out for a guideline with teeth and a TIP's program, or not at all.

I think that to introduce it on a piecemeal basis as was attempted last year with a real wage insurance, or to tie it to some tax concessions this year, would not be desirable. There have been suggestions that business taxes for depreciation accounting be liberalized, if the corporations stick to the guidelines. I think that's a bad approach. I think that it's a piecemeal approach, a fragmentary approach. It is very difficult to define who gets and who doesn't get the carrot or the stick.

I would say that if you work at a really well-rounded TIP's program integrated into the system, then that's fine; otherwise I would be against introducing it on a piecemeal basis.

The CHAIRMAN. Professor Meltzer.

Professor MELTZER. The wage and price guidelines have their effect, only if at all on visible wage and prices, and in my opinion have very little effect on the economy, other than through their effect on strikes.

Wage and price guidelines produce strikes, and I would hazard a guess they will be a principal factor in the General Motors strike.

The CHAIRMAN. What effect do they have on strikes?

Professor MELTZER. They increase the number of strikes.

All price and wage controls, I believe, have the effect of increasing strikes. Certainly these—

The CHAIRMAN. You think they have no effect on the strike settlement in holding wages down?

Professor MELTZER. I believe it takes a strike, at best, to convince people even in the visible area to convince people that the wage and price guidelines are going to apply to them. I think the General Motors negotiation is an example, where you have the chairman of General Motors, a very avid proponent of wage and price guidelines, writing to all of his suppliers and telling them they should adhere to the guidelines. The head of the union indicates that he doesn't believe wage and price guidelines apply to his union. That's a situation that is likely to produce a strike. I believe that one would have to guess that it will produce a strike.

The CHAIRMAN. It's a tactic in making sure that the strike is aimed at Ford instead of General Motors. [Laughter.]

Professor MELTZER. Well, I won't hazard a guess about that, but I will stand on my prediction that there will be a strike. And I believe that most observers agree to that, and I believe that the guidelines—it's a clear case in which the guidelines encourage a strike.

In the case of regulatory reform, I certainly think regulatory reform is desirable, but not principally for its anti-inflationary effect. It's desirable because it encourages efficiency. One of the reforms that I would most like would be the removal of Regulation Q, and I know that's a view which you share with me. But I certainly think that that would be—

The CHAIRMAN. I have introduced a bill to do that.

Professor MELTZER. Yes, I know.

The CHAIRMAN. Much too gradual, but it would do it.

Professor MELTZER. But at least it would remove the ceilings, so that we would be free of them at some point. I agree that it takes too long, but it is better to do it in 10 years, if that's required, than not to do it at all.

It would, of course, be still better to remove them more quickly.

As far as tax reductions and TIP plans are concerned, I believe that they are an expensive way that accomplishes very little. It's very difficult to design a TIP plan which would be effective and workable. One reason is, that in an inflationary environment, to take one example in the case of wages, where wages are rising, you have to design a TIP which recognizes that the wage base would have been higher. A worker who gets a 7-percent wage increase is not in the same position as a worker who got a 7-percent tax reduction, because when the next time bargaining comes, the wage

base will be higher in one case, and not in the other. Somehow the TIP plan must take account of that.

I think that's a very difficult thing to do. It is difficult also to make the TIP plan consistent with efficiency. I believe that's two reasons why TIP plans—but not the only reason why TIP plans will not work, but I don't believe that anyone has come up with a workable TIP plan that gets around these objections and many other objections.

But I won't take a lot of your time to go into those objections.

In the case of stimulating capital formation and productivity, I certainly think that that's something that we ought to do. But let's try to put it in perspective.

Suppose we have 8 to 9 percent growth in money, and we are able by stimulating capital investment and productivity to raise the real growth of output from say an average of 2 percent to an average of 3 percent.

Well, the most we are going to expect from that is a slight reduction of 1 percentage point in the long-term rate of inflation.

We are not going to accomplish a great deal as far as the anti-inflationary aspects of that program are concerned. Growth and productivity should not be sold principally as an anti-inflation device. They should be sold as a means for raising real incomes—our own and our children's real incomes—and repairing some of the damage that has been done by the slow recovery in the rate of investment during this expansion.

As an anti-inflationary device, it's laudable like regulatory reform. But its main benefit will not come from the way in which it has been sold.

The CHAIRMAN. Professor Friedman.

Professor Friedman. Mr. Chairman, among the various methods of fighting inflation that you suggested, I think that some seem very worth pursuing, and some do not.

I will take them in the order in which you suggested. First, I am not persuaded that there is evidence that wage and price guidelines, or even wage and price controls, have had or would have any lasting improving effects on the inflation process. I am sensitive to what Professor Klein said, that one of the good things that wage and price guidelines have done is to focus Government's attention more on the cost of meeting some of the regulatory actions that it takes. I would question, however, whether it is necessary to interfere, or at least appear to interfere, so much in private wage and price setting actions simply in order to get the Government regulatory agencies to be aware of the inflationary effect of their own actions. Hence on wage and price guidelines I would adopt a negative view.

Second, regulatory reform: If by this we mean not only actions of the regulatory agencies but also such items as Davis-Bacon, minimum wage, agricultural price supports, steel trigger pricing and other tariff actions, I would echo what Professor Klein and Professor Meltzer have already said. I believe that a great deal of our inflation has come, and continues to come, from built-in price-rising actions in these forms. The more of them we can get rid of, the better.

The third area you mentioned was tax incentives to capital formation for the purpose of raising productivity. I believe that that is an important objective in its own right, and I also believe that it is important from the perspective of increasing or reducing our inflation problem. I think that getting our productivity growth up is more relevant to reducing inflation than Professor Meltzer suggested. It is not limited to the effect of a 1-percent increase in productivity lowering the inflation rate by 1 percent, if the rate of money growth is held constant. We have to ask what are the political and social forces in the country that have led us to have a very rapid rate of growth of the monetary and credit aggregates in recent years. My perception is that, in large part, the rapid rate of growth of money and credit in recent years, which has contributed so much to the rapid rate of price inflation, has emerged as a result of repeated efforts by the Federal Reserve to offset what has otherwise been a deteriorating trend in the growth of real income of Americans.

Some of that deterioration in Americans' real income has come about through things like the action of the OPEC cartel which transfers incomes from us to them; but part of it also has to do with the deterioration of our productivity performance, which means that there is less real income to spread around, regardless of who gets it. If we can get our productivity growth back on an upward trend, then some of the political pressures that have led to excess money and credit creation, and therefore have led to increased acceleration of price inflation, may abate.

Finally, on the TIP plan, I am somewhat skeptical of TIP; and, if I thought there were any very powerful shortrun measures available by which we could get inflation down, I would therefore be reluctant to embark on a TIP program. Nevertheless, inflation is a severe enough problem, and new approaches are warranted to such an extent, that it is probably worth trying a TIP proposal to see whether we can get some advantage out of it. Having put it that way, though, I think that there is a strong case to be made for distinguishing between the two kinds of TIP proposals that have been offered. The proposal offered by Henry Wallich and Sidney Weintraub offers TIP in the form of additional taxes put onto businesses which do not comply, whereas the proposal offered by Arthur Okun is in the form of tax reductions given to businesses which do comply.

If we embark on TIP as an experimental device, we want to be sure to adopt it in a form in which we will be able to get rid of it in a few years if it proves not to be productive. I think it would be almost impossible to get rid of it if we adopted it in the Okun form of giving tax benefits to companies that comply, rather than the other way around. I would therefore urge that, if we embark on a TIP, it should come in the tax penalty form rather than the tax benefit form, because otherwise we would never get rid of it. Since we would be embarking on it only as an experiment, we would have to be able to get rid of it if it proved not to be productive.

The CHAIRMAN. Mr. Kaufman.

Mr. KAUFMAN. To be very brief, Senator, I believe that the wage and price guidelines have had very marginal impact in terms of holding down the rate of inflation.

However, I think they ought to be recognized as to the value that they do have, and this is that it is an exhortation device. It keeps the problem of inflation certainly in the headlines, and to the extent which prices and wages are going up above a benchmark that is set by the Government, the public has to be aware of it, it's more knowledgeable about it, and eventually presumably will bring greater pressure on elected officials to persist in the fight against inflation.

That is a very marginal value, but it is of some value.

I do support regulatory reform, because in the final analysis, regulatory reform should improve productivity in the United States.

Third, I believe tax reductions, as I said earlier, should be legislated on the side of capital investment, as a way of improving productivity.

I had been an advocate or supported the TIP plans. It ought to be tried. We haven't tried it. They're very cumbersome, there are many problems involved in it, but I would agree with Professor Friedman, it ought to be adopted on a trial basis, and in some ways I would lean in favor of the Wallich proposal, rather than the OPEC proposal.

The CHAIRMAN. I just have one more question, and this one is for Mr. Kaufman.

Mr. Kaufman, the dollar is the key international currency, and therefore it must bear the brunt of instability in the international exchange market.

How important is it that the dollar be the key currency? What effect would there be on the economy if the dollar were not the key currency, and instead we relied, say, on special drawing rights or some other currency?

Mr. KAUFMAN. I don't think that we have the ongoing right to have the dollar as the key currency. You play a key currency role because your economy—

The CHAIRMAN. You say we don't have the right, but what about the duty? Do we have the duty under the present circumstances?

Mr. KAUFMAN. We don't have the duty, either. It would seem to me over the past decade or so, a variety of countries have grown much more than the United States, their economic strength is better, their financial strength has improved, the world has been rehabilitated significantly in the postwar period and consequently that should be reflected in the international monetary structure.

We have held onto the role of the dollar as a key reserve currency for a variety of reasons, but I think it is detrimental to the American economy and to the American financial system to persist with that role.

We have not encouraged Japan, Germany, even the United Kingdom, to open up its credit markets, with the same disciplines and the same forces that prevail in the United States.

It would seem to me that as we go over into the next year or so, we will again have burgeoning demands on the dollar to finance oil transactions in the world financial markets. That will increase the supply of dollars.

No. 2, it would also seem to me that as the supplies of dollars increase, and our inflation problem is not rectified very quickly, this will be a terrible restraint on monetary policy.

No. 3, it would be far better in bargaining with foreign countries and with oil-producing nations to make them aware of the critical and crucial role of the dollar and the essentiality of the dollar.

We have never brought that power to bear. We have never told oil-producing nations without the dollar as a transaction mechanism, as a store value, the entire transfer of wealth would have been difficult to achieve.

We have never held our associates, meaning Japan, France, Germany, the United Kingdom, we have never told them that they should play a larger role in this, and if they would have been asked to play a larger role and induced to play a larger role, they would have cooperated with us much earlier in a coordinated policy to slow oil consumption, which was not the case in 1974 or 1975.

In 1973, 1974, when the oil price quadrupled, we did not bring home to bear, either on the industrial nations, or the oil-producing nations, that it could not have been accomplished without the dollar. We never traded on the strength of the dollar.

I think we ought to begin to do that. Now we can do that, as I said in my statement, in two ways:

One, through the cooperation of the leading industrial nations and tell them to open up their credit markets, ease the burden on the dollar; or we may at some point in time have to restrict access to the dollar as a financing vehicle by foreigners.

The CHAIRMAN. Thank you very much, Mr. Kaufman.

Thank you, gentlemen, for a most helpful and thoughtful, and I think just a brilliant exposition of your views. This has been an outstanding panel. You've made a fine record, and we are certainly in your debt.

Thank you very much.

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

[Whereupon, at 12:37 p.m., the hearing was adjourned, to reconvene at 10 a.m., Tuesday, July 24, 1979.]

FEDERAL RESERVE SECOND MONETARY POLICY REPORT FOR 1979

TUESDAY, JULY 24, 1979

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

The committee met at 9:55 a.m. in room 5302, Dirksen Senate Office Building, Senator William Proxmire (chairman of the committee) presiding.

Present: Senators Proxmire and Riegle.

STATEMENT OF CHAIRMAN PROXMIRE

The CHAIRMAN. We're a little early, but I understand Governor Wallich has an appointment he would like to keep so we'll start a little earlier than usual and I'm going to ask Governor Wallich to come forward.

The committee is meeting today to consider the conduct of monetary policy by the Federal Reserve pursuant to the requirements of the Humphrey-Hawkins Act. We are also required to issue a report containing our views and recommendations to the policy plans and objectives announced by the Fed.

Our witness today is Governor Wallich of the Federal Reserve. We all know the Chairman of the Federal Reserve has been nominated by the President to be Secretary of the Treasury and we thought it more appropriate to have another Governor come before us under the circumstances.

Governor Wallich, our economy faces a series of difficult problems. We have an energy crisis which is going to put great pressure on the Federal Reserve and our capital markets in coming years with an enormous commitment of funds that the President has called for, which I'm sure the Congress will provide in great measure at least. We have a deep-rooted inflation problem that will not go away quickly. We have a recession at the same time that some people think we are already in, perhaps the majority do, and it's only a difference of opinion as to how long it's likely to be and how deep it's likely to be. At the same time, we have a very serious problem with the dollar and our international responsibilities because of the dollar.

Now Federal Reserve policy seems to be trapped between the economic outlook for slower growth and the rising unemployment on the one hand, and continuing inflation and the exchange value of the dollar on the other. As you may know, we had four distinguished economists who testified before the committee yesterday and gave a little advance advice to the Fed on what they thought you should be doing over the next several months.

Professor Klein, however, said at one point that monetary policy was being made in Bonn, Germany, and Henry Kaufman said the dollar is a hostage of the foreign exchange markets. The Federal Reserve has kept within its monetary aggregate target ranges over the first half of the year. That wasn't very hard because the ranges were so wide that it would be hard to see how you could have exceeded them in either direction, and the Fed indicated earlier they wanted to follow a conservative policy with respect to the availability of the money supply.

The availability of bank credit seems to have grown very rapidly and is an indication of an ease of monetary policy that many argue is inflationary. Over the next 6 months the Fed has a great deal of flexibility with the monetary aggregates. Also, if the Fed is to be successful in meeting the bank credit target, it would mean putting a lid on credit expansion. We have some of those factors spelled out, as you may have noticed, on the charts at the side of the room. I'm looking forward to your testimony, Governor Wallich, and you may proceed as you wish.

Do you have a specific time when you feel you would have to leave if you're going to keep your appointment?

Mr. WALLICH. That's very kind of you, Mr. Chairman, but I have postponed my trip so I will get there hopefully 2 hours before the meeting begins and I have plenty of time now.

The CHAIRMAN. Fine.

STATEMENT OF HENRY C. WALLICH, GOVERNOR, FEDERAL RESERVE BOARD

Mr. WALLICH. If it is agreeable to you, I will summarize the report. If this becomes too lengthy in terms of enumerating data I hope you will tell me so, Mr. Chairman.

The CHAIRMAN. All right. We'll have your statement printed in full in the record. Go right ahead.

[Complete statement follows:]



Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., July 17, 1979

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

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

Sincerely,
G. William Miller, *Chairman*

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INTRODUCTION

The Problem Posed by Accelerated Inflation

The performance of the economy this year has been distinctly unsatisfactory. Starting from a base of rapid inflation and the lagged effects of the 1977-78 dollar depreciation, a series of unexpected events this year has disrupted economic activity and intensified inflationary pressures. These events have included labor disputes, severe weather, and adverse agricultural supply conditions, but the most disturbing development, in terms of its implications for future economic performance, has been an enormous increase in the price of imported oil. The adjustment to this oil price shock poses major problems for governmental policy and represents a serious setback to progress toward the longer-range goals enunciated by the Full Employment and Balanced Growth Act.

Increased energy costs have greatly aggravated our inflation problem. In February, when the Board submitted its first report to the Congress under the Humphrey-Hawkins Act, it was anticipated that oil prices would rise moderately this year, entailing some small upward pressure on the general level of prices. However, the developments since then--including the effects of the Iranian revolution and the latest OPEC decisions--are generating major increases in the prices of imported oil and, consequently, in the prices of other energy sources as well.

The inflationary effects of the energy price increases could, in principle, be offset if other prices on average declined or at least rose less than they otherwise would have. There will be some tendency

in this direction as the diversion of a larger share of spendable income to energy results in a reduction in demand for other goods and services. In recent years, however, nominal wages and prices have not generally exhibited much flexibility in a downward direction; rather, relative price adjustments typically have occurred in the context of an overall rise in the average level of prices as economic units attempted to avoid losses of real income.

It also must be recognized that the rise in the relative price of imported oil involves a transfer of real income and wealth from the U.S. public to foreign oil producers. This loss will, in turn, have at least temporarily depressing effects on domestic economic activity as the demand by foreign countries for U.S. exports expands only with a lag.

Thus, over the next year or two, it appears that exogenous forces will be causing both intensified inflationary pressures and downward adjustments in the demand for goods and services. Clearly, the problems confronting monetary policy, and macroeconomic policy generally, have been made much more difficult. If monetary policy encourages a more rapid expansion of money and credit in an attempt to strengthen aggregate demand, it risks building even greater inflation into the economic system through the aggravation of the price-wage-price spiral. On the other hand, if no account is taken of added upward price pressures in the formulation of policy, the risks are increased of deepening or lengthening the transitional downward adjustments in real economic activity that now appear in train.

The Federal Reserve remains firmly resolved to direct its policies toward a reduction in the rate of inflation. But in the current circumstances, a combination of added inflationary pressures, a slowing of economic activity, and a probable increase in unemployment may delay progress toward price stability. This problem highlights the need to solve some of the major structural defects in our economy. It is important that we begin to break down the barriers, both private and governmental, that inhibit innovation and competition and thereby contribute to the inflationary bias of the economy. We must ensure that our system of taxation does not discourage the saving and capital investment necessary to reverse the deterioration of productivity performance observed in recent years.

And it is absolutely essential that this nation develop an energy program that reduces its reliance on foreign sources of energy.

CHAPTER 1

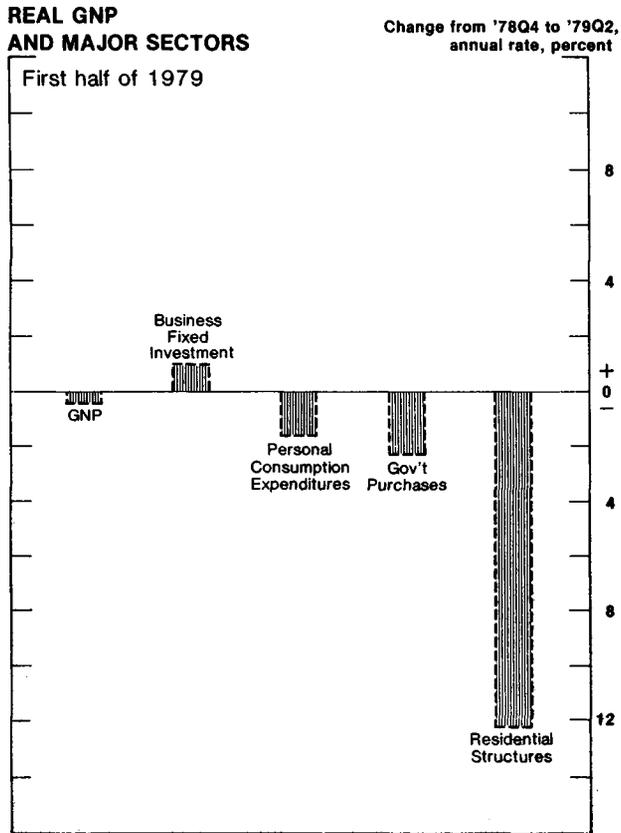
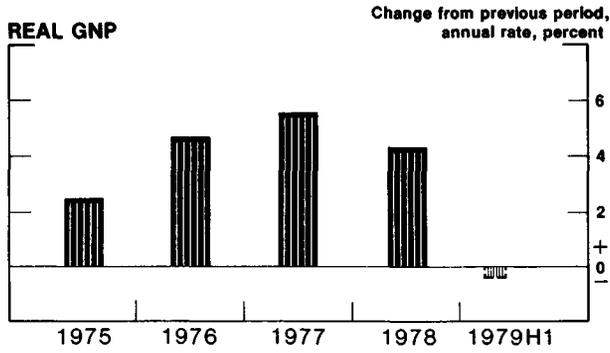
"a review and analysis of recent developments
affecting economic trends in the nation"

Section 108(a) Full Employment and
Balanced Growth Act of 1978

SECTION 1. ECONOMIC ACTIVITY DURING THE FIRST HALF OF 1979

Official Commerce Department data for the second quarter of this year have yet to become available, but it appears likely that they will indicate that real gross national product declined somewhat after advancing only marginally in the first quarter. The sluggishness of overall economic activity thus far in 1979 stands in marked contrast to the 4-1/4 percent gain in real GNP registered in 1978. Although the events of the first half do not in themselves compel a conclusion that the economy has entered a recession, the pause in growth does represent a significant interruption of the relatively long cyclical upswing that began early in 1975.

The sluggishness of economic activity since the beginning of the year is partly a consequence of the rising inflationary pressures of 1978 but is also traceable in considerable measure to special exogenous factors--as distinguished from such problems as widespread inventory overhangs or other fundamental imbalances or distortions, which have characterized the terminal stages of previous cyclical expansions. During January and February, production in many parts of the country was disrupted by unusually inclement weather; the construction industries were especially hard hit, but other sectors also were affected. In the early spring, labor contract disputes in the trucking, airline, and rubber industries interfered with activity in many areas of the economy. However, a more pervasive--and less transitory--influence on the course of the economy this year has been the sharp rise in energy and food prices. The resultant acceleration of inflation has had a serious impact on real disposable personal income and has had a broadly adverse effect on consumer spending attitudes.

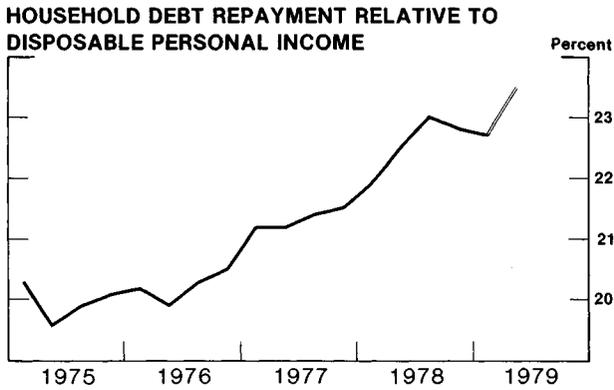
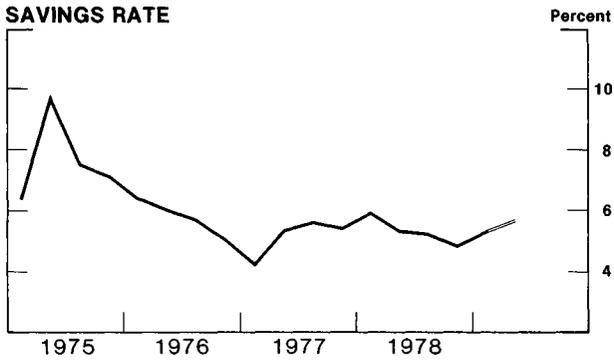
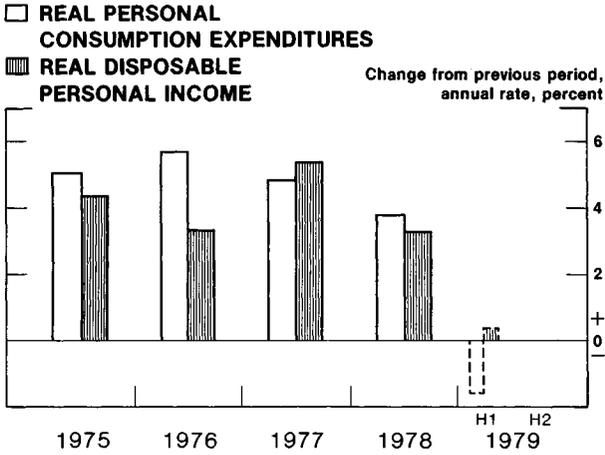


Data for the first half of 1979 are partially estimated.

Personal Consumption Expenditures

Personal consumption expenditures account for almost two-thirds of GNP, and their weakness during the past two quarters has been an important element in the flatness of overall economic activity. Some softness in consumer demand was not unexpected following the surge in spending during the final months of 1978. However, retail sales in real terms exhibited a clear downward trend through the first six months of this year, with the June level sharply depressed by a drop in auto sales. Rising gasoline prices and uncertainty about gas supplies initially had a mixed impact on auto sales: sales of large, fuel-inefficient cars plunged, while sales of smaller domestic and foreign cars recorded an offsetting increase. Most recently, however, the weakness in auto sales has broadened; this may in part reflect supply constraints as domestic makers shift facilities to the manufacture of small cars, but there appears to have been a general falloff in demand during June.

The weakness in consumer spending has extended beyond the market for motor vehicles, and it appears symptomatic of broader pressures on household finances. The personal savings rate reached historically low levels last year, so that a further rise in the spending propensities of households seemed unlikely. Moreover, the record indebtedness and debt repayment burdens of the household sector suggested that consumers might manifest, on the whole, a more cautious spending behavior. These influences have been substantially reinforced this year by the effects of accelerated inflation on the real disposable income of households. The budgets of many families have been squeezed by the upsurge in the prices of food, fuel, and other basic necessities. This has increased their uneasiness about their personal financial positions and contributed to a noticeable deterioration in consumer sentiment, as measured by most surveys.



Data for the first half of 1979 are partially estimated.

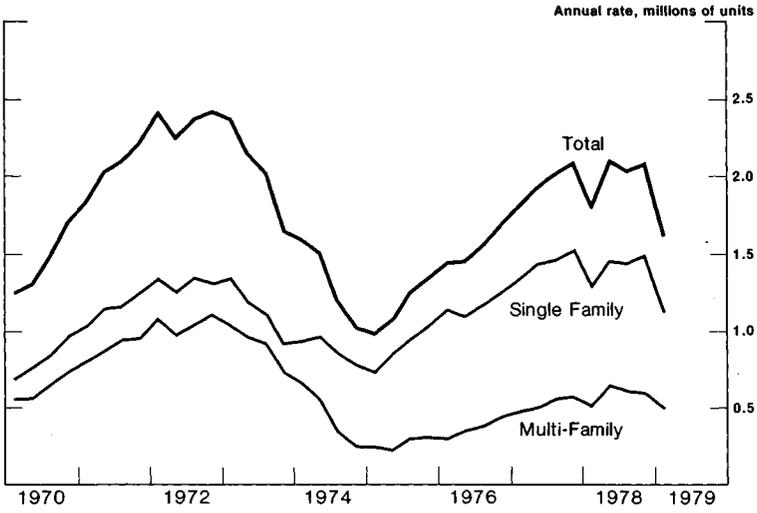
Residential Construction

As noted above, adverse weather depressed building activity during the opening months of 1979. Private housing starts, which had consistently run at an annual rate of just over 2 million units since a similar weather-related disruption the previous winter, fell to a 1-1/2 million rate in January and February. However, as construction picked up again in subsequent months, the rate of housing starts remained below the 1978 pace, averaging about 1-3/4 million units in the March-May period. Thus, there has been a moderate, but significant, downturn in residential building since the end of 1978.

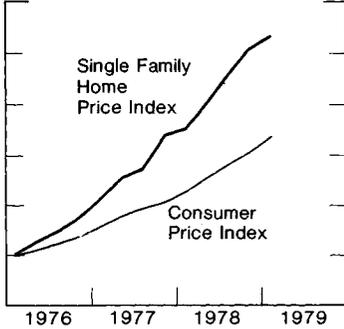
Several fundamental economic and demographic factors have continued to bolster the demand for housing--especially single-family dwellings and condominium apartments. One of these is the widespread view, based in large part on the actual experience of the past several years, that houses are a good hedge against inflation and therefore an attractive investment apart from the shelter services they provide. Another is the movement of a large portion of our population into the age group in which the rate of initial home purchases historically has been relatively high.

Nonetheless, other underlying supply and demand influences have acted to constrain the construction of new housing units. The rise in interest rates and the general tightening of credit markets over the past year have been particularly important factors. Homebuilders have found that lenders are charging substantially higher rates for land development and construction credit, and that they are showing greater selectivity in the projects they will finance. At the same time, potential builders and homebuyers have been affected by increasingly stringent terms on mortgage loans and, in some localities, by shortages of mortgage credit

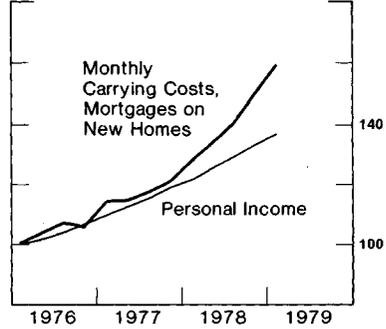
PRIVATE HOUSING STARTS



NEW HOME PRICES AND CPI



MONTHLY CARRYING COSTS AND PERSONAL INCOME



caused by usury ceilings. The combination of inflated house prices and record mortgage rates implies costs of homeownership that bulk large relative to the current incomes of many families. This fact has deterred some potential homebuyers and caused lending institutions to reject some credit applications. It also has given impetus to the development and use of graduated payment mortgages, which are designed to alleviate the cash-flow problems encountered in the early years of the traditional level payment loan in an inflationary environment; however, these instruments have not thus far attained an important role in the mortgage market.

In recent months, localized shortages of gasoline and generally uncertain prospects about future fuel prices and supplies likely have been another factor deterring home purchase and prompting a reassessment of building plans. Still, unit sales of new and existing single-family houses have declined only moderately this year from the record pace of 1978. Stocks of unsold single-family units, while perhaps less comfortable than a few months ago when demand was stronger, do not appear to be a significant depressant on new building activity. Nor, in major contrast to the last--and severe--housing cycle, is there a substantial overhang of multifamily rental and condominium units for rent or sale.

Business Investment

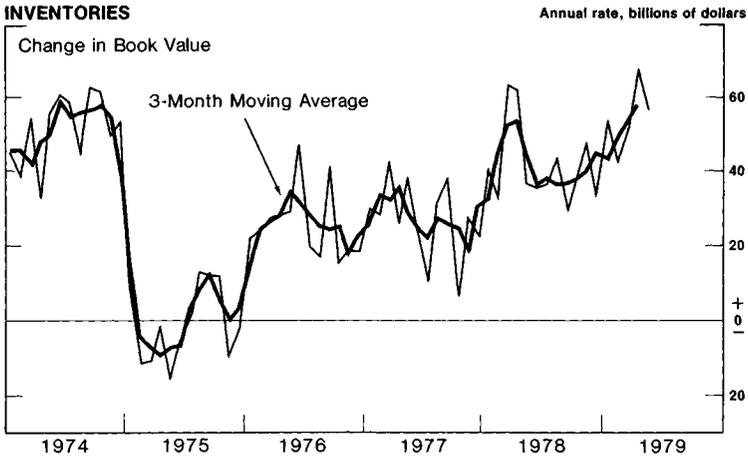
Business firms have continued to pursue generally cautious spending policies, but their investment in inventories and fixed capital nevertheless appears to have expanded significantly in real terms during the first half. Despite this further advance in business spending, there is little evidence to date of the development of broad imbalances between stocks or productive capacity and final sales that might seriously impede the resumption of economic expansion.

The surge in final sales in the last quarter of 1978 drew down stocks in many lines to the point where it seemed quite likely that some rebound in inventory investment would occur in ensuing months. However, the book value of business inventories increased very rapidly in the early part of 1979, causing some concern that the unexpected strength of demand at year-end and the acceleration of inflation might have prompted a speculative hoarding of commodities--perhaps reminiscent of 1973-74. These concerns abated as it became clear that the accumulation of inventories was relatively well balanced across sectors and across levels of processing and that much of the acceleration in the rise of book values reflected nothing more than the replacement of merchandise bought earlier at lower prices with stocks acquired at current, inflated prices. GNP accounts data for the first quarter in fact indicate that, while there was an appreciable pickup in real inventory investment, the rate of accumulation remained moderate.

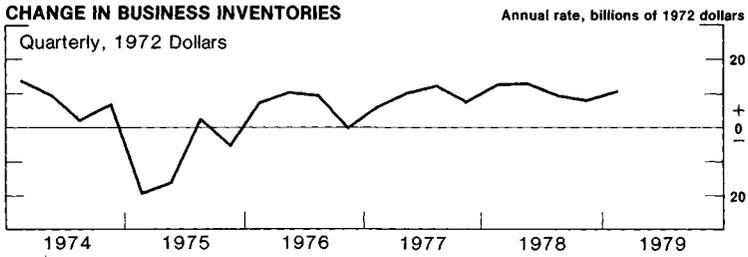
Inventory data for the second quarter are fragmentary. Book-value figures showed exceptionally high rates of accumulation in April--especially at manufacturing concerns--but this evidently was attributable in part to delays in shipments caused by the labor dispute in the trucking industry. Inventory growth, again on a book-value basis, slowed in May; however, it appears likely that real inventory investment for the second quarter as a whole was considerably above the pace of the first quarter.

Nevertheless, inventories appear generally to have remained in reasonably comfortable alignment with sales. There are, of course, exceptions, the most notable being in the motor vehicle sector. With the drop in demand for large cars this spring, dealers' stocks became very sizable in relation to the current pace of sales. Stocks of smaller

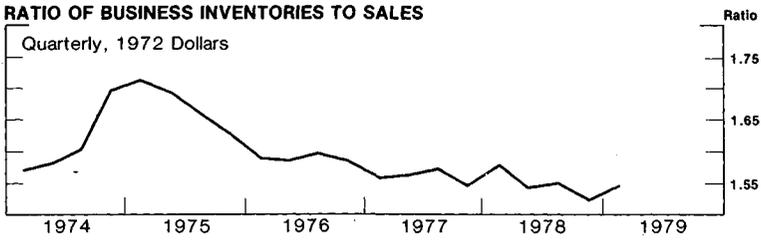
MANUFACTURING AND TRADE INVENTORIES



CHANGE IN BUSINESS INVENTORIES



RATIO OF BUSINESS INVENTORIES TO SALES

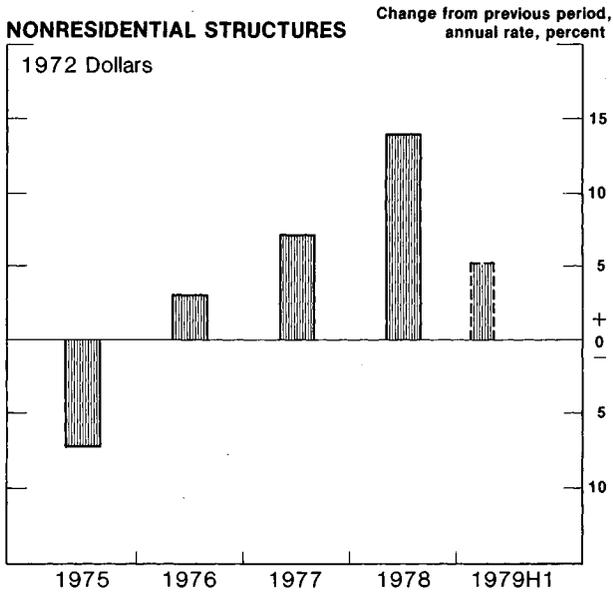
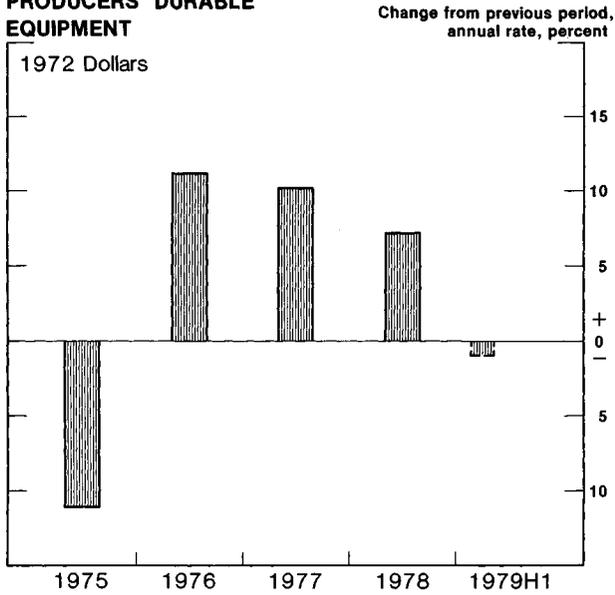


cars, in contrast, have been very lean in recent months, and customers desiring particular models and features sometimes have encountered long delivery lags. On balance, the aggregate ratio of real business inventories to real sales in the first quarter was well in line with recent norms, but there probably was some deterioration in the picture during the second quarter.

Business spending for new plant and equipment rose strongly during the first quarter, providing substantial impetus to overall economic activity; however, available evidence suggests that some decline occurred during the second quarter. The first quarter surge reflected a sharp rise in equipment purchases. Outlays for transportation equipment--especially airplanes and automobiles--accounted for a good deal of the strength. During the spring, outlays for equipment apparently retraced their earlier advance, owing in part to delays in shipments caused by the labor disputes in trucking. In contrast, spending on nonresidential structures lagged in the first quarter, as the adverse weather conditions interfered with building activity, but then snapped back smartly in the spring.

An important factor bolstering demands for fixed capital has been the higher rates of industrial capacity utilization that have prevailed since the latter part of 1978. Slower growth of industrial production has resulted in a slight decline in utilization rates, but the rates have remained at levels that have been associated in the past with periods of strong investment demand. Despite deep cutbacks in auto production, capacity utilization in manufacturing last month averaged about 85 percent--only three percentage points below the peak of 1973 and a fairly high level historically. Capacity utilization rates in the materials producing

**REAL BUSINESS FIXED INVESTMENT
PRODUCERS' DURABLE
EQUIPMENT**



Data for the first half of 1979 are partially estimated.

industries are not, on average, as close to the 1973 peaks. However, that period was marked by extraordinary pressures on production facilities caused by a worldwide boom in demand for basic commodities, and by normal standards operating rates currently are quite high in some materials sectors.

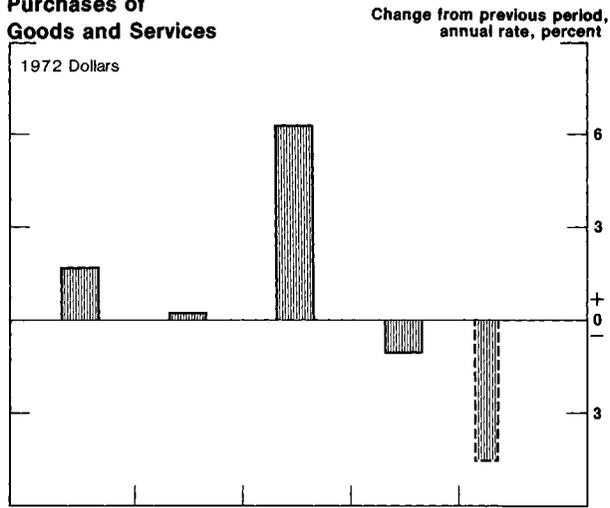
Government Spending

Budgetary policy at both the federal and state and local levels of government has continued to be characterized by restraint in spending. Indeed, government outlays for goods and services declined in real terms during the first half of 1979.

Federal purchases had fallen slightly, after adjustment for inflation, during 1978, and declines were recorded in each of the first two quarters of this year. Total federal expenditures--including transfer payments as well as outlays for goods and services--have been running just a bit higher in nominal terms than had been anticipated in the administration's budget plans. However, the impact of inflation on incomes has resulted in considerably stronger tax receipts than were projected, so that the budget deficit has been substantially smaller than expected.

At the state and local level, weather-related curtailments of construction reduced spending in the first quarter. However, the subsequent rebound in building activity was sluggish and may be indicative of a tendency to defer further capital expenditures following a surge last year. Moreover, states and localities also have been limiting spending by holding down employment: the number of workers on their payrolls in June was about the same as one year earlier.

**Federal Government
Purchases of
Goods and Services**



**State and Local Government
Purchases of
Goods and Services**



Data for the first half of 1979 are partially estimated.

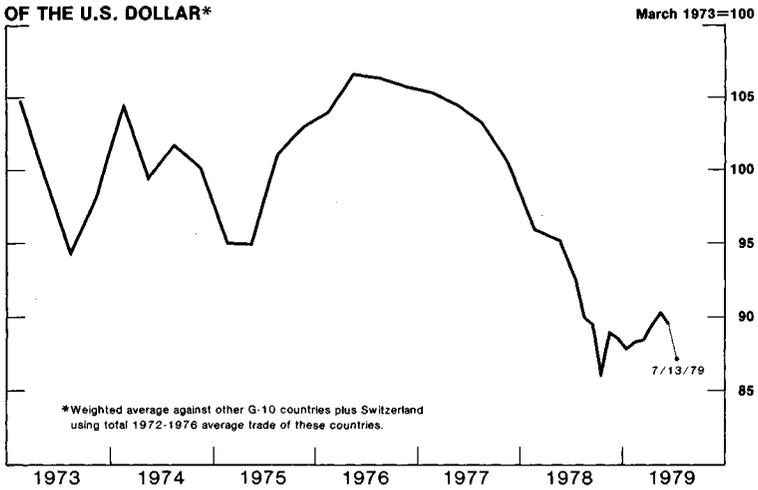
The growth of the economy after 1975, combined with tax rate increases enacted earlier, had led to the development of sizable surpluses in the budgets of many states. This pattern was reversed in the past year. Numerous tax cuts were passed in 1978, and as a result personal tax receipts were 5 percent lower in the first quarter of this year than in same period last year--even though the tax base had increased 16 percent. With nominal expenditures therefore rising relative to receipts, the operating surplus of state and local governments fell to \$3.8 billion, at an annual rate, in the first quarter; it appears that the operating budgets may have moved into slight deficit in the second quarter.

International Trade

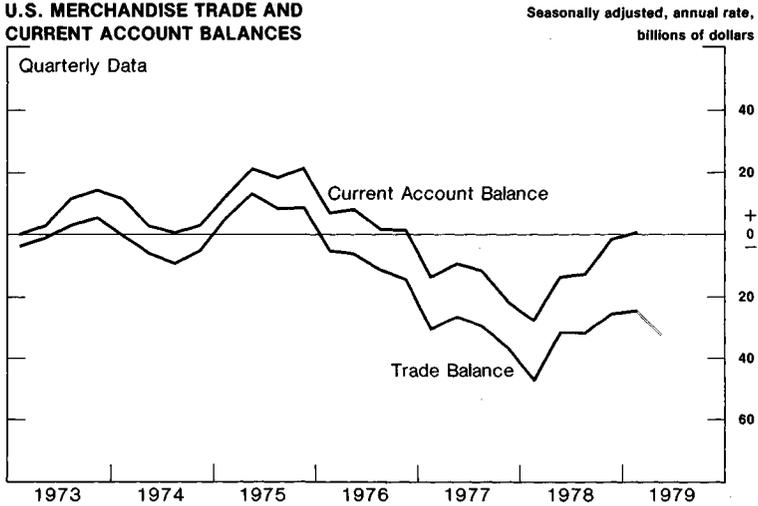
The large decline in the exchange value of the dollar in 1977 and 1978 has enhanced foreign demands for U.S. exports. This, along with a relative strengthening of economic expansion abroad, has brought about a distinct trend of improvement in the U.S. trade position. The nation's merchandise trade deficit--although quite variable from month to month--has been considerably smaller this year than on average during 1978. Moreover, the current-account balance edged into modest surplus in the first quarter for the first time since 1976 as receipts from overseas investments remained strong.

Total exports advanced further in real terms during the first quarter despite a falloff in shipments of agricultural products. The impact of the 1977-78 dollar depreciation was also evident in continued relatively slow growth of non-oil imports. On the other hand, the volume of oil imports averaged about 9.3 million barrels per day (MMB/d) during

**WEIGHTED AVERAGE EXCHANGE VALUE
OF THE U.S. DOLLAR***



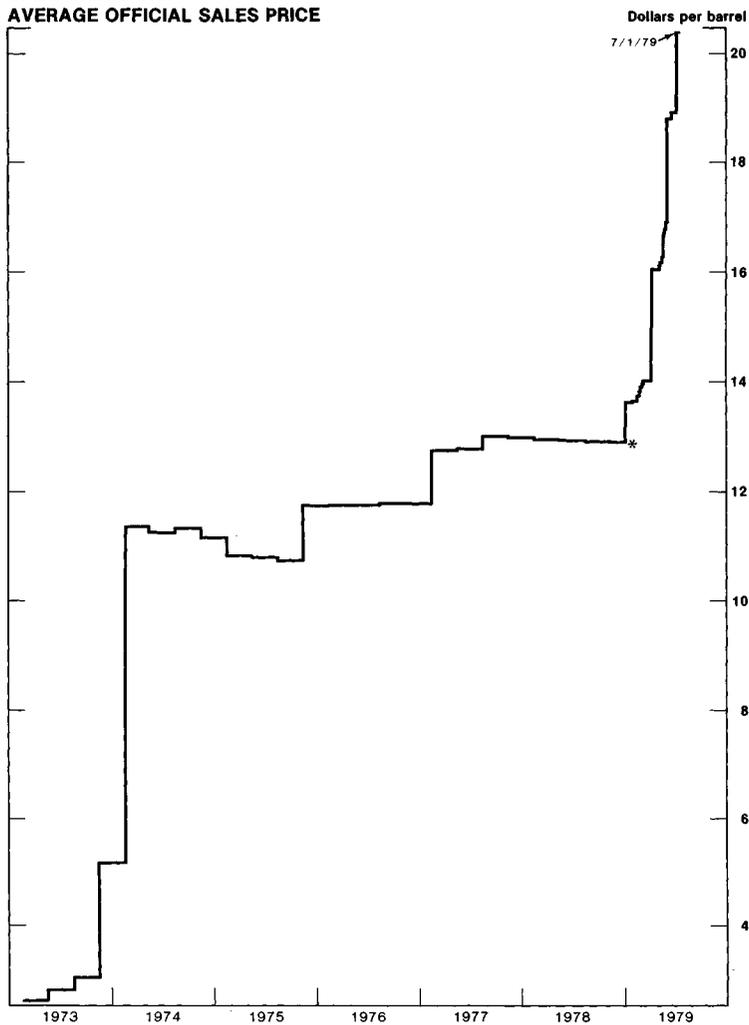
**U.S. MERCHANDISE TRADE AND
CURRENT ACCOUNT BALANCES**



the first three months of the year as compared to an average of 8.7 MMB/d during 1978. In April and May the trade deficit widened as exports remained at about their first-quarter level while the value of both oil and non-oil imports advanced. A fall in the quantity of oil imported to 8.7 MMB/d in April and May was more than offset by price changes that began to reflect the OPEC price increases and surcharges. The unit value of imported oil in May was 22 percent above its level in the fourth quarter of 1978.

The improvement in the U.S. trade and current accounts this year has helped to bolster the private demand for dollars in foreign exchange markets. The dollar rose almost 5 percent, on a trade-weighted average against other major currencies, during the first five months of 1979--even while the United States and other governments unwound the heavy official intervention of late last year. Over the past month, however, the dollar has come under downward pressure; despite official support, it has lost much of the earlier gain. A relative firming of money market conditions abroad has been a factor in this recent weakness, but is not likely in itself a full explanation. Foreign exchange market participants seem to have been questioning whether the United States will be able to deal successfully with its inflation problem, particularly in light of the recent oil price jolt.

**OPEC CRUDE OIL:
AVERAGE OFFICIAL SALES PRICE**



Note: Average price includes surcharges.
*Data are quarterly through 1978 and daily for selected dates thereafter.

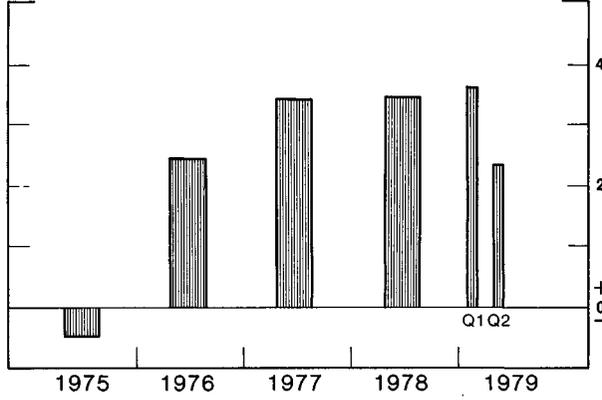
SECTION 2. EMPLOYMENT AND UNEMPLOYMENT

Almost four years of exceptionally rapid growth in employment had, by the end of 1978, given rise to considerable tautness in labor markets. Although businesses reportedly were encountering increasing difficulty in finding workers with the desired experience and skills at prevailing wage rates, the overall unemployment rate, at just under 6 percent, was well above past cyclical lows. This seeming paradox reflects in part longer-run changes in the composition of the labor force and in the output mix of the economy; in addition, the increased availability of unemployment compensation and other income maintenance programs may have altered the incentives to seek or accept employment.

Despite a leveling off in production during the first quarter of the year, monthly increases in payroll employment averaged 330,000--well above the 280,000 per month average gain during 1978. Gains in the manufacturing industry were quite large, and the average factory workweek remained at a high 40-3/4 hours. Some easing in labor demands has become perceptible since March, however, with employment gains averaging only one-third of their first quarter pace. Manufacturers have been reducing employment levels by about 35,000 per month--with the auto industry accounting for the bulk of the decline--and the average workweek has dropped to about 40 hours due to a cutback in overtime. Outside of manufacturing, hiring has continued in recent months, albeit at a reduced pace. Still, the unemployment rate has changed little since year-end, and such indicators as the average duration of unemployment and labor turnover rates have remained at levels typical of fairly tight labor markets.

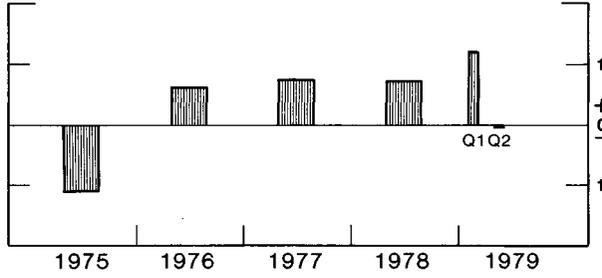
NONFARM PAYROLL EMPLOYMENT

Change from previous period, annual rate, millions



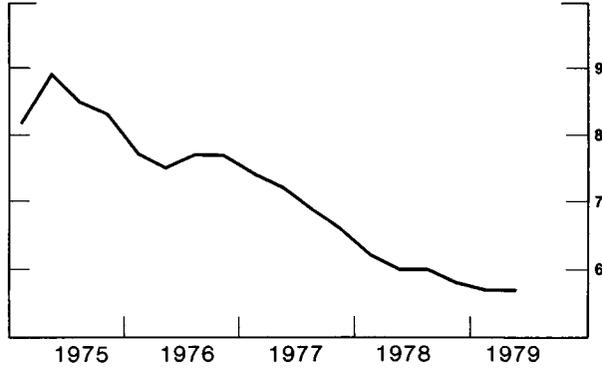
MANUFACTURING EMPLOYMENT

Change from previous period, annual rate, millions



UNEMPLOYMENT RATE

Percent



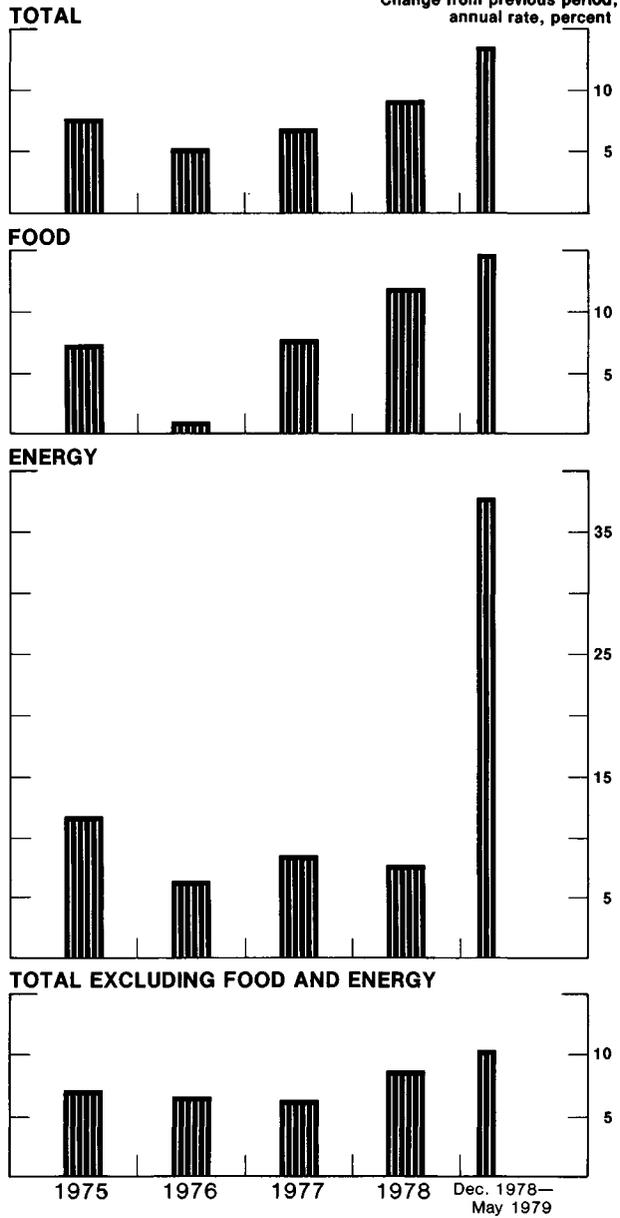
SECTION 3: WAGES, PRODUCTIVITY, AND PRICES

The pace of inflation has accelerated markedly this year. The Consumer Price Index rose at an annual rate of 13-1/2 percent through May compared with the 9 percent increase over the course of 1978. There has been a comparable stepup in the advance of prices at the producer level. Although the relatively high level of resource utilization has been a factor sustaining the momentum of inflation, supply developments specific to the food and energy sectors have accounted for much of the acceleration this year in inflation.

Food prices played a substantial role in the increase in inflation that occurred last year, and agricultural supply developments have continued to be unfavorable. In particular, beef production has remained on a down-trend, leading to sharp increases in meat prices. In addition, to rising farm prices, the rapid increase in costs of nonfarm inputs involved in processing and marketing has contributed to the acceleration of food price inflation. The further rise of the federal minimum wage, for example, was an important ingredient in the faster increase of prices for restaurant meals in the first half.

Energy prices have risen dramatically this year. Enormous increases in the prices charged by the OPEC cartel, occurring against a backdrop of significant worldwide pressures of demand on available supply, contributed to a 37 percent annual rate of increase in the energy component of the Consumer Price Index during the first five months of 1979. The rise in petroleum fuel and feedstock prices has in addition intensified cost pressures across a broad range of U.S. industries.

CONSUMER PRICES

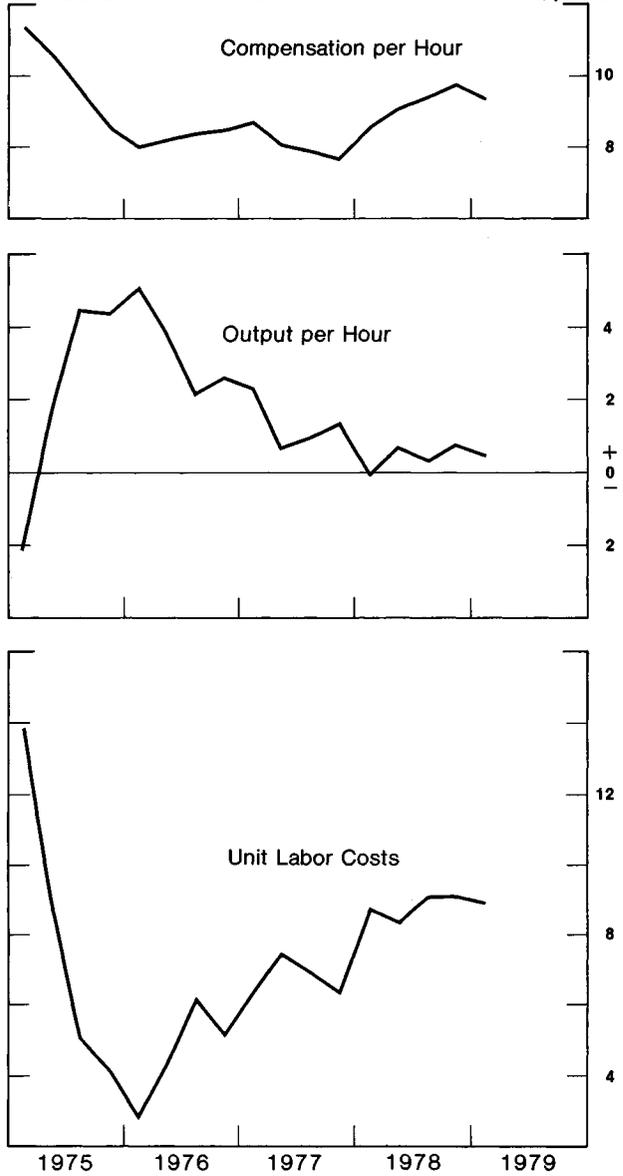


The acceleration in the rise of other prices has been less striking than that for food and energy, but it has been appreciable. Exclusive of food and energy items, the Consumer Price Index rose at an annual rate of 10 percent through May, 1-1/2 percentage points faster than the average pace throughout 1978. Pressures placed on prices of final products by rising materials costs have played some role in the broad pickup in inflation. Prices of nonferrous metals and of other actively traded nonfood commodities rose sharply early in the year when the year-end strength of the economy apparently led to some upward revision in expectations of future production levels and fears of consequent commodity shortages. In subsequent months, however, prices of many basic nonenergy commodities weakened as the slackening of economic activity became evident.

In addition to materials prices, labor costs have been a source of pressure on prices this year. The rise in wage rates generally does not appear to have accelerated, and surveys conducted by the Council on Wage and Price Stability indicate broad compliance with its wage standard, especially among large firms. However, total labor costs were boosted by enlarged employer contributions for social security and unemployment insurance, and compensation per hour (including private fringe benefits) in the nonfarm business sector rose at a 10-1/4 percent annual rate in the first quarter of the year. Meanwhile, output per hour dropped markedly in the first quarter, so that the unit labor costs of nonfarm businesses increased at an annual rate of more than 15 percent. Labor productivity apparently declined again in the second quarter, and while

UNIT COST INDICATORS
Nonfarm Business Sector

Change from year earlier,
 annual rate, percent



the rise in unit labor costs likely was not quite so rapid as in the first three months of the year, it probably was fast enough to raise the first-half advance to a rate exceeded only in 1974.

SECTION 4: FINANCIAL DEVELOPMENTS

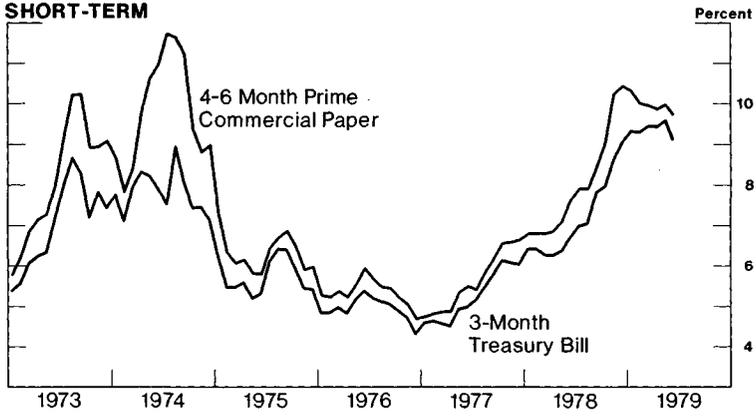
Growth of the monetary aggregates was considerably slower during the first half of 1979 than in 1978. At midyear, all of the major monetary measures--M-1, M-2, and M-3--were within the expected ranges of expansion reported by the Federal Reserve to the Congress in February. Commercial bank credit at midyear stood slightly above the path implied by its projected growth range, but the pace of overall credit expansion in the economy had moderated appreciably. Although businesses stepped up their borrowing somewhat during the first half of the year, there were more than offsetting declines in borrowing by other nonfinancial sectors.

Interest Rates

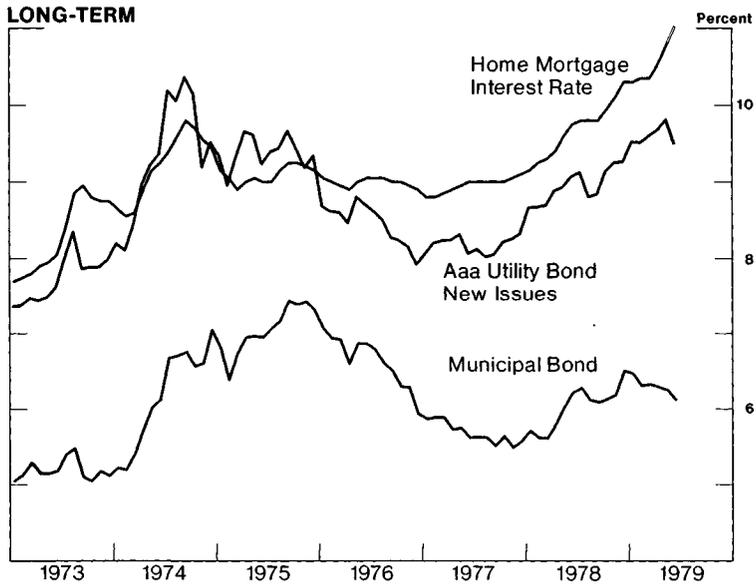
The general level of interest rates on market securities has changed relatively little since the beginning of the year after rising markedly during 1978. The federal funds rate--established in trading of immediately available funds on an overnight basis--remained around 10 percent until late April when it edged upward about one-quarter percentage point as the Federal Reserve moved to restrict bank reserve availability somewhat further in light of a surge in the monetary aggregates. Despite the small increase in the federal funds rate, other short-term market rates generally have declined somewhat on balance since December. This apparently is primarily a reflection of changing expectations about future interest rate movements as economic activity gave evidence of weakening.

In long-term securities markets, bond yields reached new cyclical highs during the first half, but retraced much of their advance in the latter

INTEREST RATES
SHORT-TERM



LONG-TERM



part of the spring as many investors became convinced that the peak in money market rates had been reached. Mortgage interest rates have continued to rise, however, reaching record levels and prompting liberalization of usury ceilings in many states in order to sustain lending activity.

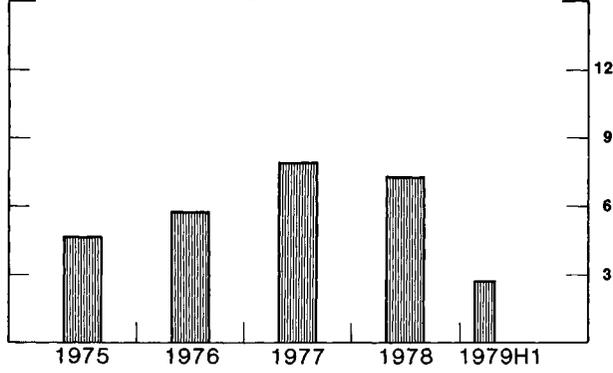
Monetary Aggregates

After expanding rapidly earlier in 1978, M-1--demand deposits and currency--leveled off in the fourth quarter and continued virtually flat through the first quarter of this year. Growth in this monetary aggregate resumed in the spring, but the rise over the first half of 1979 was at only a 2.7 percent annual rate--considerably slower than the 7.9 percent and 7.2 percent increases registered in 1977 and 1978, respectively. With nominal GNP increasing at about a 9 percent rate thus far this year, the very moderate expansion of M-1 represents a substantial shortfall from what might have been expected on the basis of historical relations among money, GNP, and interest rates.

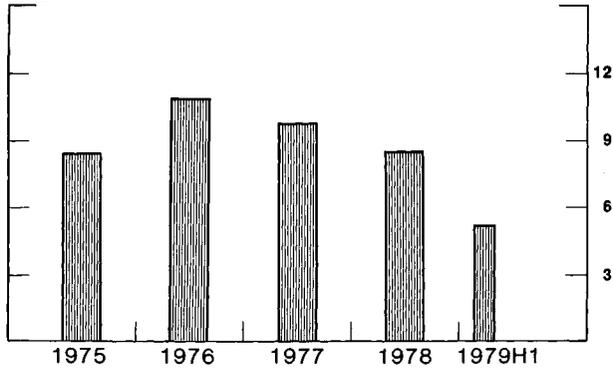
As was noted in the Board's February report to the Congress, some weakness in the public's demand for M-1 was anticipated because of the introduction last November of automatic transfer services (ATS) nationwide and of NOW accounts in New York State. The Board staff had projected that transfers from demand deposits to savings accounts associated with these innovations might reduce M-1 growth by roughly 3 percentage points over the year ending in the fourth quarter of 1979. The impact of such transfers on M-1 growth was about that much early in the year, but it apparently has dropped off in recent months. Over the past two quarters it appears that the impact of ATS and NOWs on M-1 growth has been about 2-1/4 percent, at an annual rate.

MONEY SUPPLY GROWTH

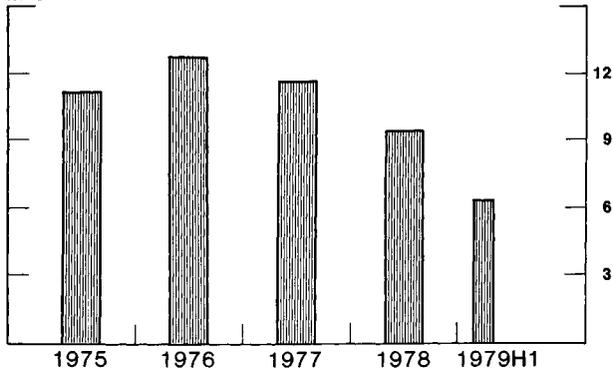
M-1 Change from previous period, annual rate, percent



M-2



M-3



Even after taking account of ATS/NOW effects, the demand for M-1 was unusually weak in the past half year, especially in the first quarter. It appears that, again as suggested in the February report, the high level of interest rates reached in late 1978 prompted greater than normal efforts to economize on non-interest-earning cash balances. Individuals evidently have shifted demand balances into a variety of interest-bearing assets, including small denomination time deposits, Treasury securities, and shares in money market mutual funds. The growth of the money market funds this year has been quite striking: over the past six months, the total assets of these funds rose from less than \$11 billion to almost \$26 billion. While these funds are an imperfect substitute for checking accounts for transactional purposes, they have provided many individuals with a high-yielding liquid asset that may be purchased in small denominations.

The relatively high level of interest rates this year has also had an appreciable impact on the interest-bearing component of M-2--that is, commercial bank time and savings deposits other than large CDs. Deposits subject to fixed interest rate ceilings have been weak since last fall. Inflows to six-month money market certificates (MMCs) provided an offset to this weakness in the fall and winter. With a change in regulations in mid-March that eliminated the one-quarter percentage point differential between MMC ceilings at thrift institutions and commercial banks when the six-month Treasury bill rate exceeds 9 percent, MMC growth at banks accelerated and provided the impetus for a pickup in the expansion of the time and savings deposit component of M-2. Over the first half as a whole, this component expanded at a 7 percent annual rate

and brought M-2 growth to a 5.2 percent rate, substantially below the 8.4 percent average rate of 1978.

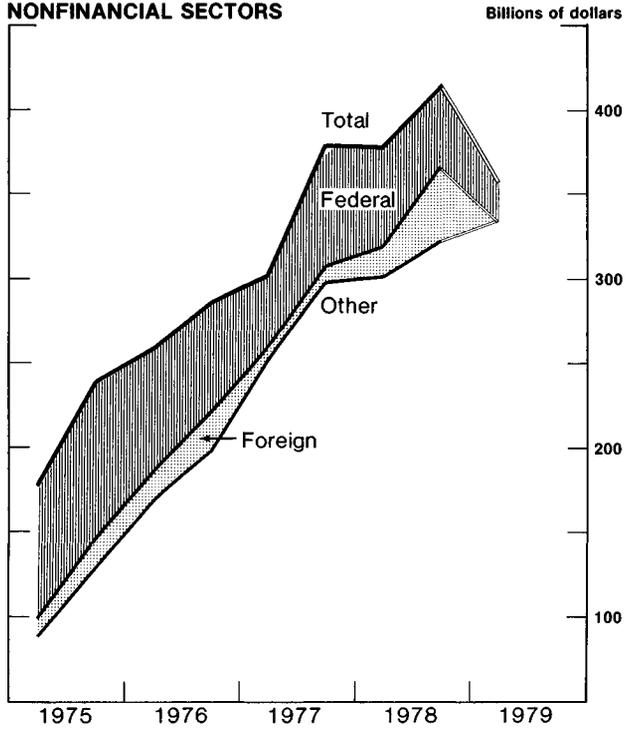
Growth of M-3 also has moderated in recent quarters, averaging 6-1/4 percent, at an annual rate, during the first half. This deceleration was partly a reflection of the slower growth of the narrower monetary aggregates, but reduced deposit inflows at nonbank thrift institutions also played a role. The slowing in thrift deposit growth was especially noticeable after mid-March when a share of the MMC market was lost to commercial banks, but inflows in the second quarter still exceeded the very low rates of past periods when high market interest rates caused serious disintermediation. Savings and loan associations made increased use of large-denomination time deposits, which are not subject to regulatory rate ceilings, to offset some of the weakness in other accounts.

Credit Flows

Net funds raised in credit markets by nonfinancial sectors of the economy during the first half totaled about \$355 billion, at an annual rate, according to preliminary estimates. This is well below the \$393 billion figure for 1978 and reflects the combined impacts of monetary restraint and a number of other factors.

One of these other factors was the diminished size of the federal budget deficit. With a very large year-end 1978 cash balance further reducing the Treasury's needs for new money during the first half, federal government borrowing fell off sharply from the 1978 pace. In contrast with the pattern in late 1978, when they effectively financed the Treasury's deficit with the proceeds of dollar-support operations, foreign central banks sold a large volume of Treasury securities in the first

**FUNDS RAISED BY
NONFINANCIAL SECTORS**



Source: Federal Reserve Flow-of-Funds Accounts.
Data for the first half of 1979 are partially estimated.

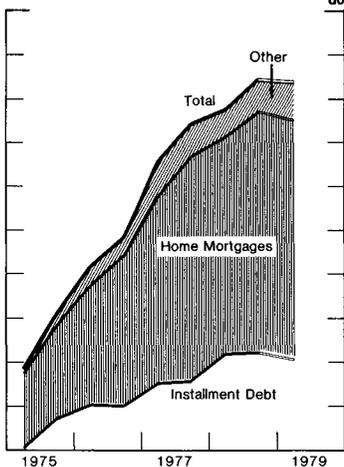
half. A part of the sizable private capital inflow to the United States during the first half was channeled through the Eurodollar market to the U.S. banking system, which acquired a substantial volume of Treasury securities. Households were important buyers of Treasury securities, as they responded to the enlarged gap between rates on such instruments and those available on deposits subject to regulatory ceilings.

State and local governments have borrowed at a reduced pace in 1979. This decline reflects the absence of advance refundings since last August when more restrictive regulations were promulgated by Internal Revenue Service. Tax-exempt bond issuance for new capital in first half was maintained at about the 1978 level, owing largely to a sharp increase in sales of revenue bonds for mortgage financing purposes; the pace of such housing-related financing slowed markedly in the second quarter, however, as a consequence of congressional proposals to curtail the use of tax-exempt bonds to fund low rate single-family mortgages. Casualty insurance companies and commercial banks have absorbed the bulk of tax-exempt bonds sold this year.

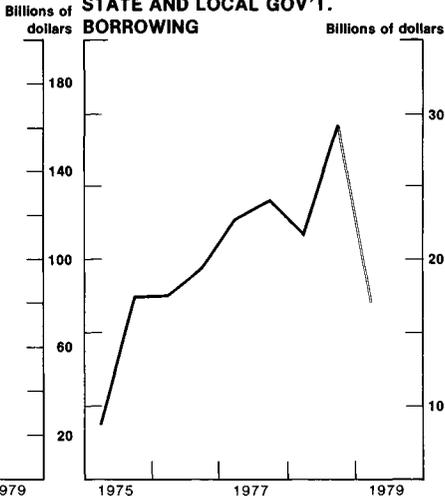
Household borrowing in the consumer installment and mortgage credit markets has leveled off this year. Although interest rates on consumer loans have risen during the past year, the moderation in growth of installment debt appears to be primarily a consequence of other factors tending to reduce consumer spending. The flattening in mortgage flows, on the other hand, does appear more directly a consequence of rising interest rates and the tightening of mortgage credit supplies.

On the demand side, households have deferred home purchase or scaled down expenditure or borrowing plans in light of the higher cost of mortgage credit. On the supply side, even where usury ceilings have

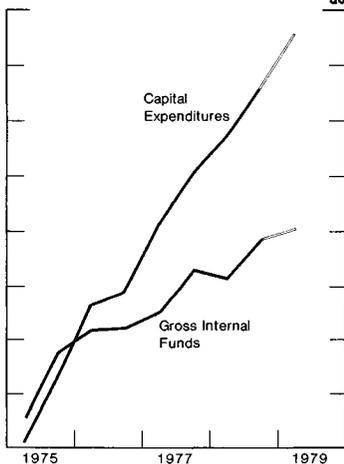
HOUSEHOLD BORROWING



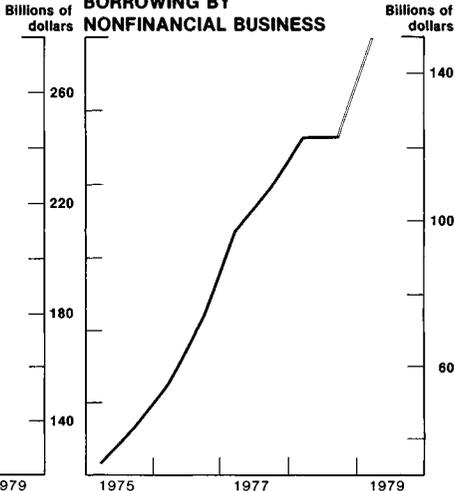
STATE AND LOCAL GOV'T. BORROWING



NONFINANCIAL BUSINESS



BORROWING BY NONFINANCIAL BUSINESS



Source: Federal Reserve Flow-of-Funds Accounts.
Data for the first half of 1979 are partially estimated.

not been a constraint, depository institutions have pursued more cautious loan commitment policies because of concerns about current or prospective liquidity pressures. Thrift institutions have reduced their mortgage lending considerably this year as their deposit flows have diminished; although the aggregate liquidity ratio of savings and loan associations has remained well above the regulatory requirement, that liquidity cushion has shrunk somewhat and the associations have borrowed heavily from Federal Home Loan Banks and other sources. Commercial banks, too, have expanded their residential mortgage portfolios at a slower pace this year, but there have been partial offsets to reduced depository institution lending in the form of credit flows from state and local governments, life insurance companies, and federally sponsored agencies.

In the nonfinancial business sector, the growth of outlays for inventories and fixed capital has outstripped that of internally generated funds, and firms have increased their borrowing substantially. An increased share of the credit flow to businesses has been accounted for by commercial banks, as many bigger firms have preferred--at current interest rates--short- or intermediate-term bank loans to long-term bond issues with lengthy call protection. Commercial mortgage flows have remained large, however, in reflection of the strength in nonresidential construction activity. Life insurance companies have provided a large portion of these mortgage loans and, with pension funds, absorbed the bulk of a reduced volume of bond issues. Commercial paper issuance was an increased source of short-term credit for businesses in the first half, and finance company business loans continued to grow rapidly, with much of the credit being extended to automobile dealers to finance inventories.

Foreigners, who had borrowed in U.S. credit markets when the dollar was weak in 1978, apparently did not expand their debt during the first half of 1979. This change was a significant element in the overall decline in funds raised by nonfinancial sectors.

Financial sectors increased their borrowing in credit markets during the first half. Government-sponsored credit agencies stepped up security issuance to finance assistance to the residential mortgage market. Commercial banking firms and finance companies sold substantial volumes of commercial paper and of bonds, including a number of floating rate issues that offered investors a hedge against future interest rate fluctuations. Savings and loan associations, after receiving approval from the Federal Home Loan Bank Board, issued commercial paper for the first time; toward midyear there were also a number of mortgage-backed bond issues by S&Ls.

CHAPTER 2

"the objectives and plans of the Board of Governors and the Federal Open Market Committee with respect to the ranges of growth or diminution of the monetary and credit aggregates for the calendar year during which the report is transmitted, taking account of past and prospective developments in employment, unemployment, production, investment, real income, productivity, international trade and payments, and prices"

Section 108(a) Full Employment and
Balanced Growth Act of 1978

SECTION 1. OUTLOOK FOR MONETARY GROWTH

In February the Federal Reserve reported to the Congress on the growth in the monetary aggregates that it expected would occur during the current calendar year. Expressed as ranges, and measured from the fourth quarter of 1978 to the fourth quarter of 1979, the increases indicated were: for M-1, 1-1/2 to 4-1/2 percent; for M-2, 5 to 8 percent; for M-3, 6 to 9 percent. The range for M-1 reflected an expectation that shifts of funds from demand deposits to newly authorized ATS and NOW accounts would reduce M-1 growth by about 3 percentage points. In addition, bank credit was projected to expand by between 7-1/2 and 10-1/2 percent.

At its most recent meeting, the Federal Open Market Committee reassessed the ranges for monetary expansion in 1979 and formulated preliminary monetary ranges for 1980. With respect to 1979, the Committee decided that it was appropriate to retain the previously established ranges for the aggregates. In reaching this decision, particular attention was focused on the uncertainties surrounding the behavior of M-1. As was noted in the preceding chapter, the estimated impact of ATS and NOW accounts on M-1 expansion has been somewhat smaller to date than had been expected when the range was initially adopted. However, the future extent of shifts to these accounts cannot be predicted with precision, especially in light of the April court decision barring ATS and certain other payments services as of January 1, 1980. Thus, while the Committee retained its original range for M-1, it expected growth to vary in relation to the range to the extent that the actual ATS/NOW impact deviates from the 3 percentage point figure projected earlier.

Even greater uncertainties faced the Committee in its consideration of monetary growth ranges for 1980. Apart from the question of possible judicial or legislative action that might affect the menu of transactions accounts available to the public, the economic circumstances and financial requirements of a period extending 18 months into the future obviously cannot be foreseen with much confidence. The Committee tentatively decided that the ranges for 1980 should be the same as those for 1979, with the understanding that adjustments might be necessary in response to legal or legislative developments affecting M-1 and, more generally, in light of emerging economic conditions. In any event, it was recognized that the current re-examination of the definitions of the monetary aggregates, which is being undertaken in light of the major institutional changes that have occurred in the payments system, might in the near future lead to a new and improved set of money stock measures.

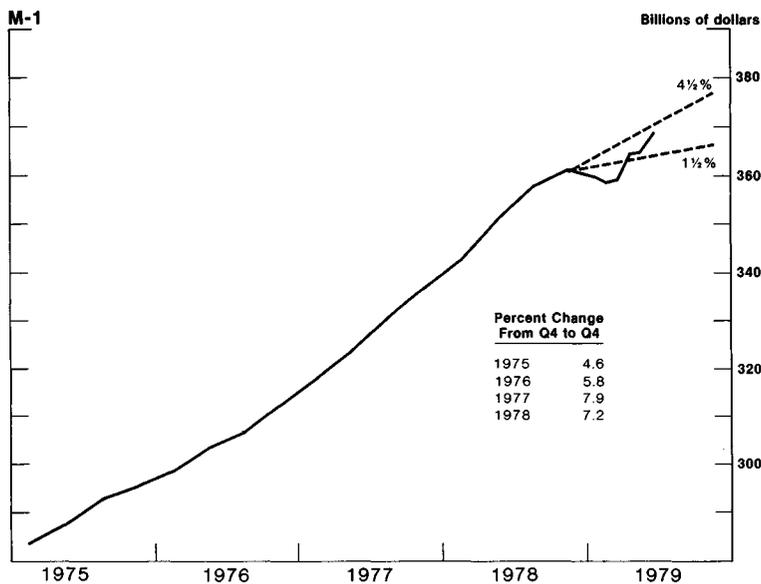
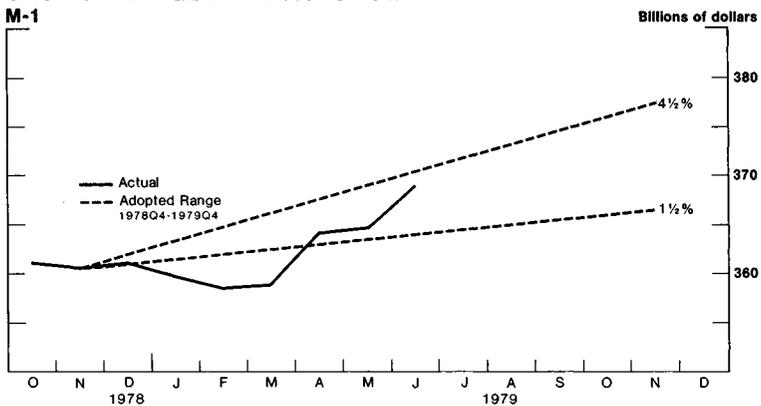
The ranges for the broader monetary aggregates, M-2 and M-3, allow for continued moderate growth of the interest-bearing components of those aggregates. In past periods of high market interest rates, inflows of deposits subject to regulatory interest rate ceilings weakened markedly. Investors "disintermediated," shifting their funds from banks and thrift institutions into higher yielding market securities. In the past year, however, inflows to such accounts--though smaller than in 1975-77--have been fairly well maintained. The six-month money market certificate, with a rate linked to Treasury bill yields, has permitted the depository institutions to compete successfully for savings against money market mutual funds and other instruments.

The growth ranges for the broader monetary aggregates imply that the depository institutions will experience adequate inflows of

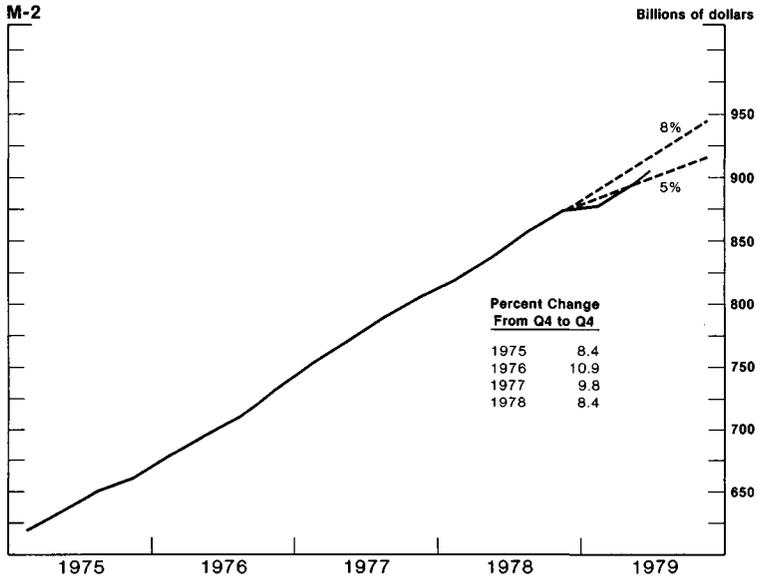
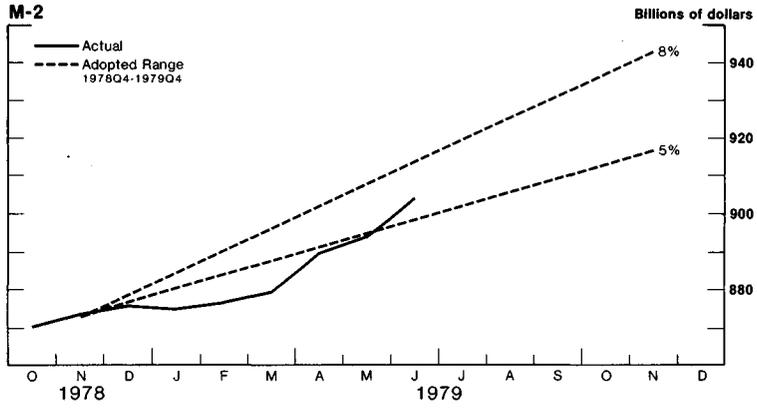
lendable funds over the remainder of 1979 and in 1980. The projections for bank credit reflect an expectation that loan demands at commercial banks will begin to moderate in the months ahead. Business loan demands, in particular, should diminish, with the corporate financing gap likely narrowing and firms probably desiring to fund short-term debts in longer-term credit markets.

The monetary ranges established by the FOMC are consistent with a policy of gradual reduction in rates of increase of the monetary aggregates in order to curb inflation. As shown in the charts on the following pages, growth in the aggregates slowed in 1978, and a further deceleration should occur this year. A further deceleration in M-1 is likely to develop even in the absence of any shifting of funds from demand deposits to ATS savings and NOW accounts. The ranges tentatively adopted for 1980 would permit continued slowing in monetary expansion. However, there is considerable variability over time in the behavior of the monetary aggregates, owing in part to financial innovations and to changes in the public's asset preferences. Since satisfactory economic performance remains the basic objective of the Federal Reserve, monetary policy, from time to time, may have to permit growth rates in the aggregates that temporarily interrupt the downward trend.

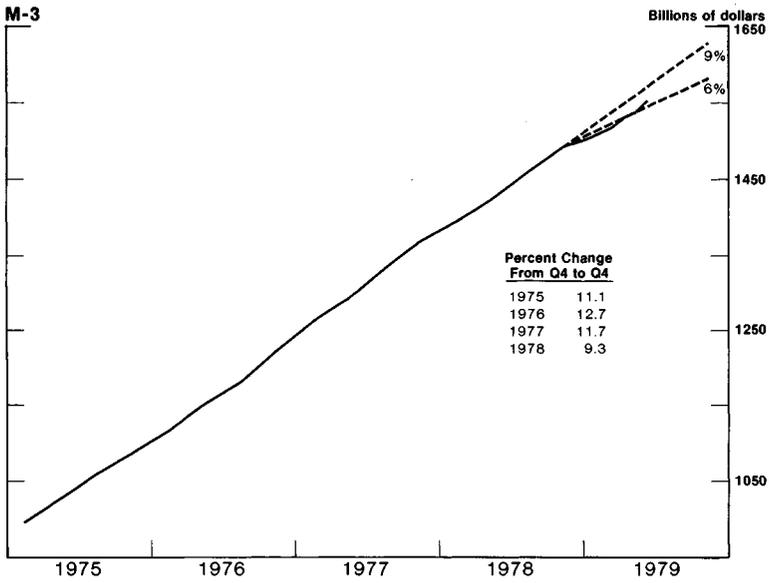
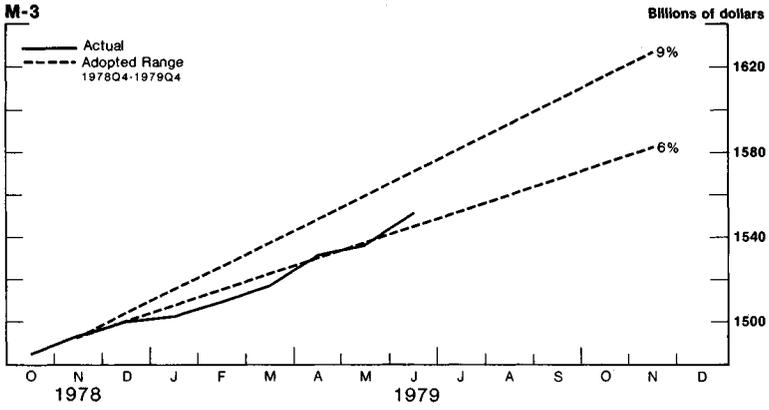
GROWTH RANGES AND ACTUAL M-1



GROWTH RANGES AND ACTUAL M-2



GROWTH RANGES AND ACTUAL M-3



SECTION 2. OUTLOOK FOR THE ECONOMY

As noted in the introduction, the economy faces a difficult adjustment to this year's oil price increases, which are aggravating inflationary pressures and intensifying forces likely to depress aggregate demand. It now appears that economic activity may well decline somewhat over the next few quarters, before turning upward in 1980.

In the near term, real disposable income is likely to show no more than modest gains, and consumers probably will spend cautiously. Business spending may decline in real terms, reflecting the correction of inventory imbalances--particularly in the auto industry--and a mild retrenchment in fixed investment occasioned by the sluggishness of consumer demand. Housing construction activity can be expected to decline somewhat further this year in response to the recent tightening of credit conditions and to the weakness in income flows. Export demand should, however, tend to support activity.

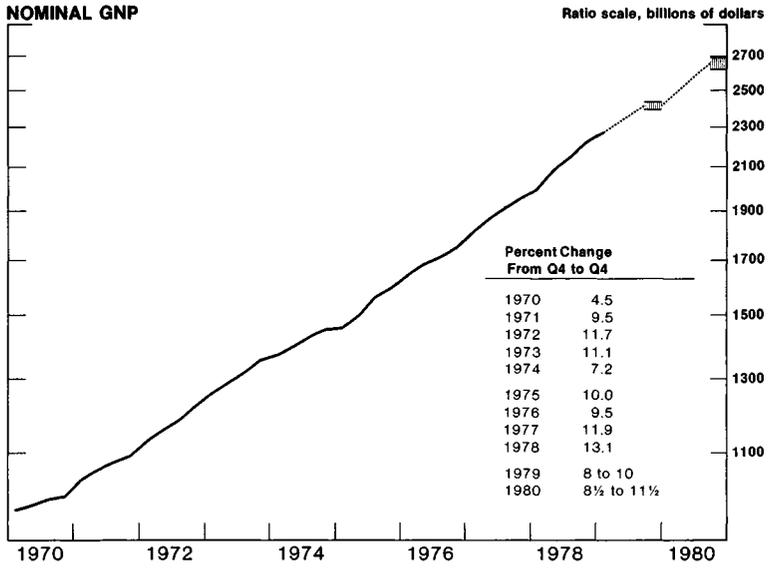
During this period, industrial production and employment are likely to edge downward. The resulting easing of demands on productive resources should help to contain inflation. Pressures on credit markets may abate and lay the groundwork for an upturn in homebuilding during 1980.

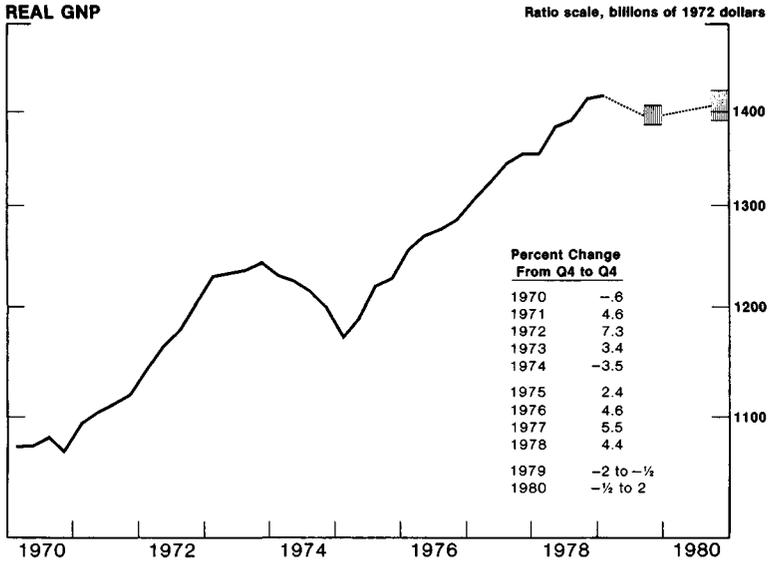
Moderate growth in real GNP should resume next year as the initial effects of the oil shock abate and consumers begin to expand their spending. The completion of the inventory correction should lead to a resumption in the growth of orders and production. Employment growth would pick up in this environment, but it seems probable

that the pace of hiring will not be strong enough to cut into unemployment. Inflation should edge lower, though progress may be quite gradual owing to the strong upward momentum of unit labor costs, the continuing relatively tight supplies of some agricultural commodities, and the further adjustment of the system to higher energy costs.

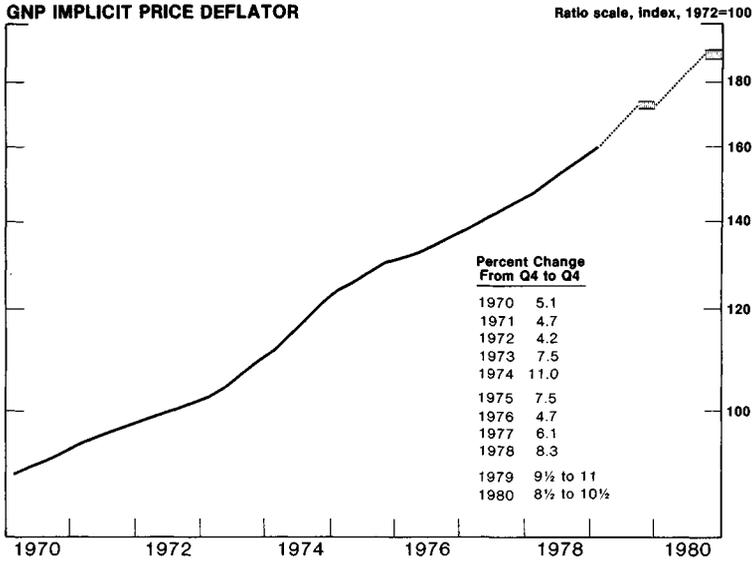
The economic outlook currently is obscured by exceptional uncertainties, and the range of possible outcomes appears quite wide. However, in order to improve understanding of the monetary objectives, an economic projection representing the consensus of the Board members at this time has been summarized in the table below and in a series of charts on the next several pages.

	<u>Actual</u>	<u>Projections</u>	
	1978	1979	1980
Change from fourth quarter to fourth quarter, percent			
Nominal GNP	13.1	.8 to 10	8-1/2 to 11-1/2
Real GNP	4.4	-2 to -1/2	-1/2 to 2
Implicit price deflator	8.3	9-1/2 to 11	8-1/2 to 10-1/2
Average level in fourth quarter, percent			
Unemployment rate	5.8	6-1/4 to 7	6-3/4 to 8-1/4

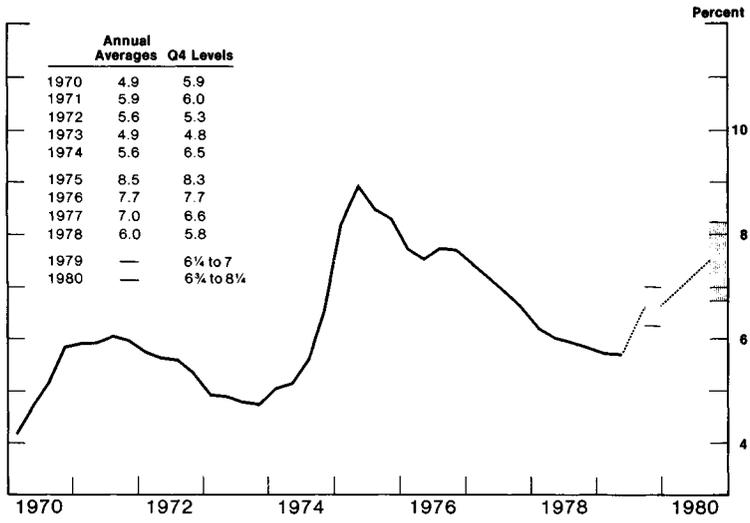




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UNEMPLOYMENT RATE



CHAPTER 3

"the relationship of the [Federal Reserve's] objectives
and plans to the short-term goals set forth in the most
recent Economic Report of the President"

Section 108(a) Full Employment and
Balanced Growth Act of 1978

SECTION 1: THE ADMINISTRATION'S SHORT-TERM GOALS

The administration has recently announced its forecast^{1/} of key economic variables in association with the midyear budget update. This forecast, which assumes no major new fiscal initiatives, contains some significant changes from the figures contained in the January Economic Report of the President. In particular, real economic growth through 1980 has been reduced and inflation has been raised.

The Administration's Forecast

	<u>1979</u>	<u>1980</u>
Change from fourth quarter to fourth quarter, percent		
Nominal GNP	9.2	10.3
Real GNP	-0.5	2.0
Implicit price deflator	9.8	8.1
Average level in fourth quarter, percent		
Unemployment rate	6.6	6.9

^{1/} The January Economic Report equated the 1979-1980 forecast with short-run goals.

SECTION 2. THE ADMINISTRATION'S GOALS AND THE FEDERAL RESERVE'S PLANS FOR
MONETARY GROWTH

The monetary ranges set by the Federal Reserve should be adequate to finance the amount of spending in current dollars projected by the administration. However, the administration's forecast does seem to envision a somewhat more favorable combination of real output and inflation than that suggested by the Board's consensus projection. The actual price-output mix will be determined primarily by supply conditions and by other structural or behavioral characteristics of the economy. These relationships are not known with certainty, of course, and thus many different price-output combinations must be viewed as possible for given rates of monetary growth.

Monetary growth rates are much more closely related in the short run to nominal GNP than they are to the division of nominal GNP between output and prices. The tradeoff between output and price might be improved, however, through the use of other policy tools. Governmental action to eliminate regulatory or market impediments to price competition could be helpful in tempering inflationary pressures. So, too, could a continuing program of voluntary wage-price guidelines, which may help in restraining the anticipatory actions that have made the wage-price spiral so intractable. The nation's ability to avoid an escalation of inflation over the next year or so--without serious recession--will depend in considerable degree on whether a means is found to overcome the tendency for workers and businesses to seek higher wages and prices in an effort to offset the effects of the income transfer associated with the rise in oil prices. Over the longer run, the ability of the nation to achieve sustained growth of real income will depend importantly on whether it can solve its energy problem.

The CHAIRMAN. So you expect in the short run interest rates to rise, but you would hope that if these other elements develop appropriately with greater fiscal restraint and so forth that interest rates may begin to moderate some time later on?

Mr. WALLICH. Without being quite that specific, yes, Senator.

The CHAIRMAN. That's not very specific.

Mr. WALLICH. I think in the short run there are stronger sustaining factors for interest rates in general than in the longer run. With respect to long-term rates, I would expect that if we succeed in reducing the inflation, long-term interest rates will respond favorably. But if we do not lower inflation, there is nothing good ahead for rates.

The CHAIRMAN. Thank you very much, Governor Wallich.

Governor Wallich, as we all know, the Chairman of the Federal Reserve, Chairman Miller, has been appointed Secretary of the Treasury. Is Chairman Miller still at the Federal Reserve Board? Is he still operating out of there?

Mr. WALLICH. I saw him there yesterday.

The CHAIRMAN. Is he presiding? Is he chairing meetings?

Mr. WALLICH. The last meeting we had was chaired by the oldest surviving member—the most senior member—myself. We have not had a meeting since then so I really cannot tell you what the situation is.

The CHAIRMAN. Is he active in any policies of the Board now?

Mr. WALLICH. I really do not know. I did not, other than in passing him briefly, have much of a chance to talk to him. The only conversation I had with him was on an unrelated matter, and so I just do not know what the status is.

The CHAIRMAN. Do you know if there's expected to be any Federal Reserve function for Chairman Miller from this time on?

Mr. WALLICH. You mean activity?

The CHAIRMAN. Any activity of any kind? Will he take part in the Board meetings? Will he advise members of the Board in any way?

Mr. WALLICH. To my knowledge, this has not been decided upon or even examined.

The CHAIRMAN. Well, I would hope that decision is made. My own view, which is strictly just this one Senator, is that if you're going to have independence of the Federal Reserve Board, the Secretary of the Treasury designate should have nothing to say about it. After all, he's under a discipline, and the discipline is now much clearer than it's ever been before, of this administration of the President of the United States. The Fed is supposed to be an independent agency and it would be peculiarly losing that independence if the Secretary of the Treasury designate has a voice in the operations of the Federal Reserve Board in any way, shape or manner it would seem to me. What's your reaction to that?

Mr. WALLICH. If I may say so, Mr. Chairman, I have great confidence in Bill Miller to handle this situation properly; if he were to continue to preside over our meetings for a short while, he would do this in an absolutely proper spirit.

The CHAIRMAN. Well, I'm sure he would do it in a proper spirit, but there's not only appearance it seems to me; there's a breach of any notion of—some people don't think the independence is very

important. Other people think it's critical. But we all know that the Treasury has a major voice, in fact Secretary Blumenthal as you know was designated by the President as his principal economic spokesman and to have the Treasury in any way, shape or form be able to have an influence on the Federal Reserve Board seems to me to be violative of what many people in this country and the financial community think is very important.

Let me ask you——

Mr. WALLICH. May I just say I very much appreciate your stressing this element of the Federal Reserve's independence, Mr. Chairman.

The CHAIRMAN. Well, it's an independence of the executive. It's not independent of the Congress.

As you know, I feel very strongly that the Fed is a creature of the Congress and the money power is given to the Congress by the Constitution, and that it's a power that we have a responsibility to keep independent of the executive.

In the event that Mr. Miller does, as I would expect him to do, recognizes the importance as the Secretary of the Treasury designate to take him out of any influence over the Board, who will be in charge? Who will be running the Board?

Mr. WALLICH. We are all assigned to committees. Board meetings are chaired by the senior member on the Board—that is I at the present time—until Vice Chairman Schultz is sworn in.

The CHAIRMAN. When Vice Chairman Schultz is sworn in, he would be chairing the meetings?

Mr. WALLICH. I expect so.

The CHAIRMAN. As you say, you're the senior member of the Board now. You have been there 5½ years. As we know, the Board members are supposed to have 14-year terms and 3 years ago I made a talk on the floor of the Senate and Chairman Burns later said he agreed with me that the Federal Reserve Board was getting to be known as the "rookies" because there were so many new members and their terms of service are so short.

You're the senior member. The average term of service is a little more than 2 years, which seems to contradict what the Congress intended when we passed an act providing for a 14-year term. Why has the turnover of the Board been so great in recent years?

Mr. WALLICH. Without being able to look into the minds of my former colleagues, all of whom I respect and admire, I think there are often financial problems: people have children of college age, which does pose a serious problem.

The CHAIRMAN. So it's in part at least a financial problem. If we were able to provide more adequate salaries for members of the Board more in keeping with obviously what they can earn on the outside, you might get a great degree of stability. Is that true?

Mr. WALLICH. I would think so.

The CHAIRMAN. It seems to me that that turnover affects the independence of the Fed. A person who's been recently appointed by the President of the United States and isn't expected to stay very long is less likely it seems to me to be independent than one who is more likely to go the full term or go most of the full term. Would that be your view, too?

Mr. WALLICH. At least there would be a bias in that direction. I think the individuals, by virtue of character, can overcome that, but it is different from what the Congress intended when it set up these 14-year terms. I fully agree with that.

The CHAIRMAN. Well, any thoughts that you may have on what we can do, in addition to the salary which I think is a very legitimate suggestion—anything else that we can do to increase the stability of the Board and the term of service, I'd be very grateful to you for suggesting to us so we can do whatever we can do on a legislative basis to encourage it.

Mr. WALLICH. If I may communicate with you on that I would be very pleased to do that, Mr. Chairman.

[The following letter was received for the record:]

BOARD OF GOVERNORS,
FEDERAL RESERVE SYSTEM,
Washington, D.C., August 3, 1979.

Hon. WILLIAM PROXMIRE,
U.S. Senate,
Washington, D.C.

DEAR BILL: I am writing in response to your question, at the hearing on July 24, concerning turnover on the Federal Reserve Board.

Here are some of the facts. Of the last eight members who left the Board, all resigned before the end of their term, except Steve Gardner, who passed away, and George Mitchell, who served out his term at the age of 71, while Arthur Burns resigned when the chairmanship changed.

The other departures were:

<i>Name</i>	<i>Years served</i>	<i>Years uncompleted</i>
Jeffrey Bucher	3 years 7 months	10 years
John Sheehan	3 years 5 months	6 years 6 months
Andrew Brimmer	8 years 5 months	5 years 5 months
Robert Holland	2 years 11 months	1 year 8 months
Philip Jackson	3 years 4 months	3 years 2 months

The data indicate that, except for the three instances related to death, age, and the chairmanship, all recent departures from the Board reflect a voluntary decision not to stay on to the completion of the term.

My information on the reasons for these departures is of a casual sort, but it is grounded in long and always very friendly contact with the individuals involved. My colleagues, like most people, probably rarely have taken an important step for only a single reason. But so far as I am able to judge, the financial factor has played a role in all of the resignations in the table. This factor probably has taken different forms. In some cases there was a clear difficulty of making ends meet, especially with college-age children. In others, there may have been an opportunity to make a good deal of additional money even though there was no pressing need for it.

No doubt there have been also nonfinancial factors of various sorts. One may have been a feeling that the public and the press, if not the Congress, view the Federal Reserve as a one-man operation and give other Board and FOMC members little recognition. Another may be the increasing volume of detailed consumer regulatory work unrelated to the monetary and banking sphere in which most Board Members feel at home.

Under all these circumstances, it is perhaps not surprising that not many people want to serve out 14 years. If you were to ask for suggestions, I would say that, aside from such financial improvements as the government might be able to make, a reduction in the consumer regulation workload and more frequent appearance of Board Members at hearings might help.

I hope that these purely personal views may be of some use to you, and I very much appreciate your giving me a chance to put them before you.

Sincerely yours,

HENRY C. WALLICH.

The CHAIRMAN. Very good.

Now the Board and the Open Market Committee decided to maintain the same monetary and credit aggregates for 1979 and to establish similar targets for 1980; is that correct?

Mr. WALLICH. Yes.

The CHAIRMAN. I'd like to get your interpretation of what that means for the remainder of 1979. The growth range for M_2 is 5 to 8 percent from the fourth quarter of 1978 to the fourth quarter of 1979. That's a 3-percent point range which I have said is too wide. In the fourth quarter of 1978 to the second quarter of 1979, actual growth was at 5.3 percent and in the range specified, but nearer the lower end. Now according to what staff calculations are, the Fed can be within its target range for M_2 and over the next two quarters M_2 falls between 4.7 and 10.8 percent, a 6-percent spread. Do you agree with those calculations?

Mr. WALLICH. I am sorry, I cannot do those calculations quite that quickly in my head. We have ranges with a 3-percent spread. It is also true that before we went to these ranges we had a somewhat narrower spread. We have since encountered new uncertainties, especially with the ATS, so that it does not seem unreasonable to look for a little more leeway.

The CHAIRMAN. A little more leeway is one thing, but a spread of six points—from 4.7 percent, which would be in M_2 quite constraining, very constraining, to 10.8 percent which would be very expansive, doesn't seem to provide any discipline at all. What kind of discipline are we really providing? Aren't we just saying whatever occurs to you go right ahead and do?

Mr. WALLICH. The range of these aggregates indicates that it is quite possible to go outside.

The CHAIRMAN. What's the likelihood of that?

Mr. WALLICH. We have been outside them earlier this year and we have come back inside of them, so the range is not meaningless. I would say that within the range there is room to maneuver. That is, given developments that are now uncertain, one could end up high or low in the range. For instance, if the ATS were to come in differently than what seems likely, one could make such an adjustment within the ranges.

The CHAIRMAN. Would your preference be to have M_2 growth during the next 2 months closer to 10.8 percent or 4.7?

Mr. WALLICH. I would like to have it somewhat close to the middle. If it has to differ from the middle, I would rather have it below than above.

The CHAIRMAN. So you'd prefer to see it around 7 or so, 7.2 or something like that? Maybe one thing we could do is simply take the middle and judge you on the basis of how close you are to the middle rather than a range which seems to me to be almost absurd it's so broad. Section 2(a) of the Federal Reserve Act as amended by the Humphrey-Hawkins Act requires the Fed to report its plans and objectives with regard to growth rate ranges for the monetary and credit aggregates. It doesn't specify what those aggregates are to be. That's left to the Board and the Open Market Committee. You now have four target variables, M_1 , M_2 , M_3 and bank credit. What is the relative importance to each of those variables to the Board and FOMC? How much attention is focused on M_1 versus M_3 , for example?

Mr. WALLICH. This is a matter of considerable debate not only among central bankers but among academics. It is less complicated when there are no great changes such as may result from ATS and such as I think result to some extent from the workings of the repurchase agreements and from the Euromarket and from the money market funds. But this stricture applies to M2 and M4 to some extent also; The aggregates are all impacted by the development of these money substitutes, and one does not know whether one should add them to the money supply and account for them that way, or whether one just says, "here are money substitutes that allow us to do our business with less money than before." All the aggregates need to be watched carefully. This leads me to be somewhat more skeptical of aggregates in general, not just any one aggregate, and I would look at this time both at bank credit and at real interest rates as possible guides to policy, in addition to the aggregates.

As for the discussion by the FOMC, there have been discussions of how much weight might be given to M_2 relative to M_1 . Normally, we give equal weight to the two, which really means giving more weight to M_1 because M_1 is included in M_2 . If one were to give more weight to M_2 , one would then really be equalizing the weights of the two. Now the difficulty I have with M_2 is that it does not seem to be causally related to economic activity. Goods and products are a consequence of economic activity, not a cause, whereas transactions balances—that is M_1 currency demand deposits—can be conceived of as a causal factor. More money comes into existence and exerts pressure for expenditures, lower interest rates That is why, conceptually, I prefer M_1 , but I must confess that right now I am treating it with greater caution. I believe that is true of the other FOMC members, too.

The CHAIRMAN. Well, the difficulty, of course, is that M_1 , as you say, the transaction accounts make M_1 much more difficult to measure. People can keep their liquid funds really in an interest bearing account and not in the demand deposit and therefore it escapes M_1 . Furthermore, M_1 is so much smaller than bank credit, for instance. It's only about one-third of bank credit. M_1 is about \$1 billion and bank credits are over a trillion. It would seem to me that bank credit would be a better measure of money. We got a very strong indication of that from Henry Kaufman yesterday when he testified.

In my judgment, he's a brilliant economist and he's been right very often and his view was that bank credit would be a better basis under present circumstances than M_1 .

Now yesterday both Henry Kaufman and Ben Friedman indicated their strong preference for broader credit aggregates and more weight to be assigned to credit. Harry Klein agreed with that. Allan Meltzer, as you might expect, didn't.

Has the Federal Open Market Committee given consideration to the use of a debt proxy, an M_7 , as Mr. Kaufman defines them? Those are his preferences as an alternative to bank credit or credit aggregate targets.

Mr. WALLICH. At one point in the past we had a variable known as the bank credit proxy; it was not bank credit itself, but aimed at representing bank credit. It turned out not to be a useful number

and we dropped it. But, personally, I find myself looking more at credit than I did in the past because I believe that the expansion of bank credit, in particular, business credit, has had something to do with the way inflation has been accelerating. However, one has to bear in mind that bank credit is just a relatively small fraction of the total amount of credit. There are any number of ways in which borrowing can shift from the banking system to nonbank sources—to commercial paper, finance company lending, or to the bond market, or even abroad. So that credit becomes a very, very loose—

The CHAIRMAN. Wouldn't the debt proxy take care of that?

Mr. WALLICH. It depends on what you make it a proxy for. It might be possible to assemble a batch of nonbank credit items—commercial paper, finance company lending—and treat those in combination with bank credit and get something helpful out of it.

The CHAIRMAN. Now total liquid assets is another—I think it would be very helpful, Dr. Wallich, if you could direct the staff of the Federal Reserve to come forward and, of course with your supervision, and give us a view, an up-to-date view, on what—I don't mean here at the meeting here, but I mean if they could provide for us over the next couple weeks an up-to-date opinion of how we should evaluate the various credit aggregates.

Mr. WALLICH. Yes.

The CHAIRMAN. I think they have undergone a dynamic change in the last year or so and we are lagging in our understanding and information about them and therefore in our assessment of monetary policy, and if the staff and you could provide us with that, I think it would help our understanding greatly.

Mr. WALLICH. We will be very glad to do that, Mr. Chairman.
[The following information was received for the record:]

August 21, 1979

Federal Reserve Staff Analysis of the
Credit Measures as Targets of Monetary Policy

It has been suggested that the Federal Reserve should replace the monetary aggregates as interim targets of monetary policy with broader measures of credit or debt creation. This argument has received impetus from the somewhat erratic behavior of M-1 and M-2 relative to movements in income and interest rates in late 1978 and early 1979, and from related concerns about defining and interpreting movements in the monetary aggregates in an environment in which the structure of financial assets and liabilities in the economy is changing rapidly. It has been argued that these changes may have reduced the closeness of the relation between GNP and current measures of the money stock, and that a closer relationship might exist between GNP and various credit measures.

The alternative credit measures that have been proposed as targets range from bank credit, which is a relatively small portion of total credit outstanding, to very broad measures that would include the total volume of outstanding credit extended to nonfinancial sectors. One such broad measure is the "debt proxy" advocated by Henry Kaufman. This measure comprises all credit market instruments, deposits and currency held by the private domestic nonfinancial sectors, including deposits at banks and thrift institutions, corporate and foreign bonds, open market paper, and securities issued by the U.S. Government and agencies, and by State and local governments. As an intermediate target, Kaufman suggests using either a flow-of-funds measure of total liquid assets or M-7 which is closely related to liquid assets but includes also deposit holdings of nonbank financial companies and foreigners.

The choice among monetary and credit variables for targeting purposes is in part an empirical question. It is generally recognized that the

fundamental criterion in choosing a target variable is whether the variable can be satisfactorily manipulated to achieve macro-economic goals with respect to inflation, employment, and real economic growth. On one side, this implies the need for a strong and predictable relationship between the target variable and aggregate demand. On the other side, it requires that the Federal Reserve be able to control or influence the target variable and, through changes in the target, to effect changes in aggregate demand.

A key question, therefore, is whether the relationship between credit measures and GNP appears stronger and more stable than the relationship between money measures and GNP. Evidence on this issue is far from conclusive. It should be emphasized that this question cannot be answered simply by looking at the magnitudes of financial variables relative to the level of GNP or by comparing the longer-run trends in velocity (that is, the ratio of GNP to a particular credit or monetary variable) of alternative measures. Thus, for example, it is not relevant that the total value of claims composing the debt proxy has tended to approximate the dollar value of GNP, while the money stock is about one-sixth the size. In addition, the apparent long-run stability in the ratio of GNP to the debt proxy does not ensure a close correlation between short-run or cyclical changes in this variable and changes in GNP. Stated differently, a variable such as M-1, whose velocity shows a strong upward trend over time, may still be a useful target if short-run or cyclical changes in its growth rate generate systematic changes in aggregate demand. A recent study suggests that the cyclical variations in the velocity of M-1 and velocity of the debt proxy have been quite similar (see chart) although their longer-run trends are much different.

A frequently used method for examining the relation of money and credit aggregates to GNP is regression analysis. A number of studies in the 1970s have compared the correlations that result when current growth rates in nominal GNP are regressed on current and lagged growth rates of alternative financial variables. The results of these studies vary, depending, among other things, on which credit measures are used, on the particular time periods covered, and on whether other factors such as strikes and fiscal policy are taken into account.

Despite these differences, some general conclusions--which are illustrated by the estimates in the attached table--have emerged from such analyses. It appears, for example, that broad credit measures, such as the debt proxy and M-7, bear roughly the same degree of correlation with changes in GNP as do the monetary aggregates when viewed over a long period. Some studies have shown the aggregates to be slightly better, while others have marginally favored credit measures. A few studies have included both monetary and credit variables in the same equations and generally found that once monetary measures are taken into account, very little increase in explanatory power is gained by the addition of credit variables. In recent studies, the narrower measure of bank credit has not performed nearly as well as monetary measures for the period since 1970.

The figures in the table suggest that a noticeable deterioration in the relationship between GNP and the monetary aggregate measures has occurred in recent years. Although a similar deterioration has occurred in the relationship between GNP and the various credit measures, it appears somewhat less severe for M-7 and the debt proxy compared to the money

variables.^{1/} Considerably more analysis is needed to determine the nature of this general deterioration and whether or not it reflects a temporary phenomenon. For example, unusual weakness in M-1 and M-2 in late 1978 and early this year contributed to the reduced correlation coefficients in the 1970s. But recently it appears that M-1 and M-2 have returned to a more normal relationship with interest rates and income which may reverse some of the observed deterioration.

Clearly, interpretation of regression results of this type are fraught with difficulties. In particular, a high degree of correlation does not imply causality. For a financial variable to be a useful target, it is important that changes in the variable lead to changes in GNP and not the reverse. A strong argument against the debt proxy has been made on the basis that changes in income, through its effects on savings, induce changes in the financial assets that comprise the debt proxy. Hence, much of the observed correlation between GNP and the debt proxy may be due to this income-saving relationship. A further problem with these regression analyses is that the correlation coefficients for M-1 and M-2 will be biased downward if these aggregates have been used as target variables to offset other sources of change in GNP--for example, if, when GNP was weakening, the Federal Reserve fostered more rapid growth of money in order to strengthen GNP in the period ahead.

^{1/} As shown in the table the debt proxy has a higher R^2 for the period of the 1970s than for the 1960s after adjusting for strike and fiscal variables. However, this result does not hold up if the regression is confined to the years since 1972. The sensitivity of these results to the time period of analysis underlines the need for cautious interpretation.

Even if the empirical evidence did indicate a strong relationship between GNP and credit variables, the credit aggregates still would be useful as targets only if the Federal Reserve could influence their movements. For a number of reasons, controlling broad credit measures is likely to present more problems than controlling the monetary aggregates. The fundamental means by which the Federal Reserve implements its policy is through its open market sales and purchases of securities. The linkages between Federal Reserve operations and broad credit measures involving all sectors of the economy are much more complex and probably less predictable than the linkages between such operations and the monetary aggregates. In particular the Federal Reserve may seek, through open market operations, to influence the Federal funds rate and hence other market interest rates and thereby alter the public's demand for the particular financial aggregates that it wants to control. The success of this approach hinges upon the stability and predictability of the public's demand for the asset at different levels of income and interest rates. Historically, the demand for money has demonstrated a strong relationship with income and interest rates, although this relationship has occasionally been less stable than would be desired--particularly since the mid-1970s. In contrast, attempts to estimate the public's demand for credit have not revealed a significant correlation between interest rates and income on one side and broad credit measures on the other.

The timeliness of data availability for target measures must also be taken into consideration. The "debt proxy" and other credit measures that are derived from the Federal Reserve's flow-of-funds accounts are estimated only on a quarterly basis and typically are not available--even on a preliminary basis--until several weeks after the end of the period. Thus,

these variables would provide little or no information in the interim with which to assess how well the Fed was meeting its target objectives. The current period correlation between the debt proxy and GNP has led some to suggest that this variable is a coincident indicator of GNP. However, the debt proxy data are not available any sooner than those for GNP, so one would do just as well to look at movements in GNP to gauge the long-run impacts of policy. Monthly data are available on a more timely basis for M-7 and the liquid asset measures proposed by Henry Kaufman, so that presumably these measures could be used as interim targets. The reliability of preliminary estimates of these measures is questionable, however, as evidenced by the substantial revisions that frequently occur in subsequent months.

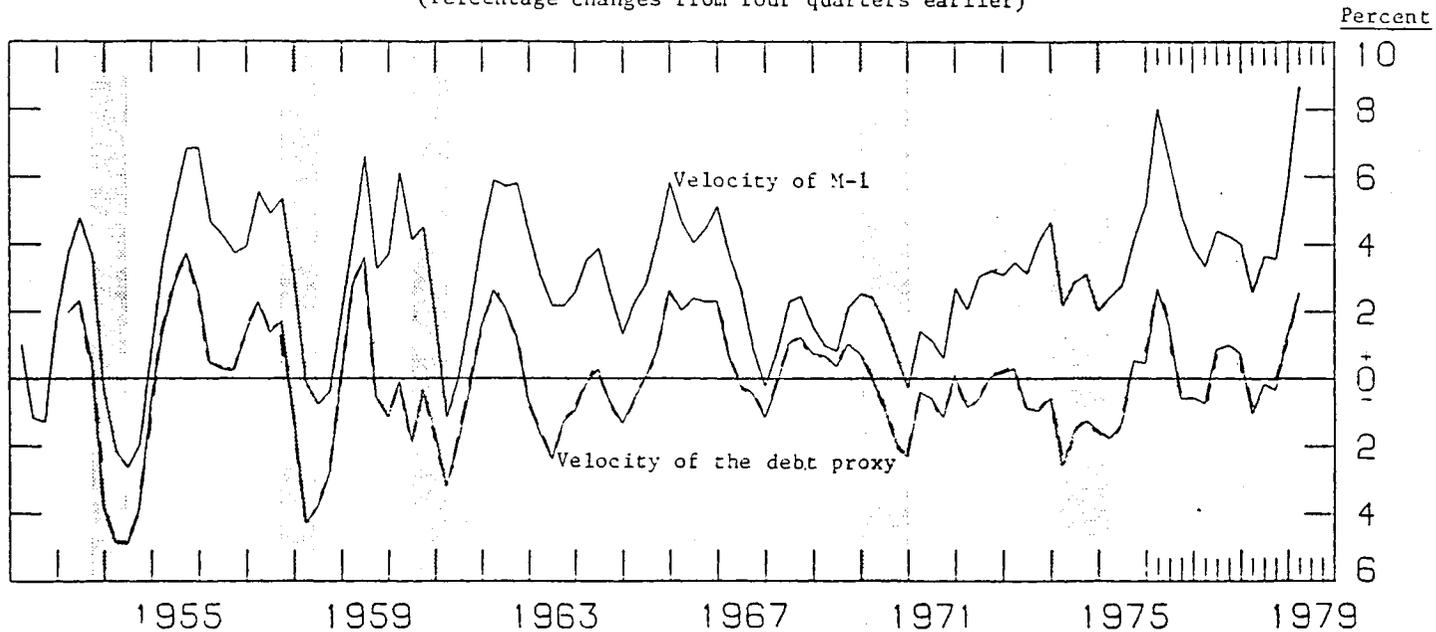
Taking into account these various considerations, a compelling case cannot be made for replacing the monetary aggregates with one or more broad credit measures. It is important, however that policy makers monitor credit flow developments along with the money stock measures--and indeed, this has been the practice of the Federal Reserve. In addition to measures of credit volume, the behavior of interest rates and other terms of credit availability are watched closely as indicators of developments in financial markets and the economy.

Regressions of GNP Growth Rate on Current and Lagged Growth Rates
of Various Monetary and Credit Aggregates

Variable	Full Period	Early Period	Late Period
	1960-IV through 1979-I R ²	1960-IV through 1970-II R ²	1970-II through 1979-I R ²
Current and four lagged growth rates in financial measures only			
M-1	.28	.30	.06
M-2	.29	.38	.01
M-3	.28	.36	.03
M-7	.29	.32	.11
Debt proxy	.27	.30	.05
Bank credit	.12	.42	-.06
Including strike and fiscal variables			
M-1	.44	.38	.25
M-2	.41	.40	.19
M-3	.40	.34	.23
M-7	.42	.33	.29
Debt proxy	.42	.29	.35
Bank credit	.32	.47	.15

Regressions relate percentage changes at annual rates in seasonally adjusted quarterly values of gross national product to current and lagged values of percentage changes at annual rates in seasonally adjusted quarterly values of the various financial measures.

Velocity Growth Rates: M-1 and the Debt Proxy
(Percentage changes from four quarters earlier)



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Shaded areas represent periods of recession, as defined by the National Bureau of Economic Research.
Latest plot is 1979:Q1.

SOURCE: "Broad Credit Measures as Targets for Monetary Policy", Federal Reserve Bank of New York, Quarterly Review, Summer 1979.

The CHAIRMAN. Senator Riegle.

Senator RIEGLE. Thank you, Mr. Chairman.

First, I want to commend the Federal Reserve for what I consider to be a frank and forthcoming midyear report. It's the first time we have received projected target ranges for growth of the monetary aggregates past the current calendar year, and it's also the first time that we have received an explicit forecast of economic activity, and I want to congratulate the Fed on its new candor and openness and I welcome this and I think it's an important step forward in securing integrated and coordinated economic planning and policy making.

I want to ask you some questions shortly about your forecasts. But first—I don't know what the chairman may have said before I arrived, but as one member of this committee, I find myself very uneasy about the sudden movement of the Chairman of the Fed away from that post into the Treasury position and creating what has to be a discontinuity at the Federal Reserve. It's unclear who might be named or when or how long it will take to get somebody else in that position, but I think with our economic situation the way it is today, that kind of change at that level of policymaking raises great doubts as to whether or not we can steer a course of economic strategy that the country needs.

I suppose time will tell how this will work out, but I, for one, find it very unsettling in terms of where we seem to be right now. I think the international reactions bear that out, that a lot of people around the world also have great concern about exactly how we intend to orchestrate national economic strategy. Who are the players and the pieces? And the Fed is part of that question. Hopefully, one of these days, we will have a clearer sense of what the team looks like and who's in charge.

Presumably, we will have a new chairman designated for the Fed.

But in the meantime I have a considerable concern about where we are.

Let me ask you this: for years the Joint Economic Committee has advised that monetary policy ought not to be used to achieve international objectives and even though the Federal Reserve report is silent on the subject, I have the impression that Federal Reserve policy is very much geared to preventing the dollar from weakening internationally. This morning's newspapers report heavy intervention in support of the dollar. It certainly would be hard to defend a rise in the rediscount rate following all the sluggishness in the second quarter if the motivation were not to prevent capital outflows.

I'm wondering then if I'm correct in assuming that the Federal Reserve has rejected the JEC's advice and is now gearing monetary policy to international concerns rather than domestic needs. Let me just ask you to respond to that point first.

Mr. WALLICH. The rise of the discount rate was tied, as you know, both to the dollar and to the behavior of the aggregates. Even in domestic terms there was clear justification for monetary restraint, and in terms of the behavior of inflation there is continued need for monetary restraint.

On the international side, this country is no longer what it used to be 20 years ago when the foreign sector was about 3 percent of GNP. Today it is going up close to 10 percent and the oil shock tells us how heavily dependent we have become on the international sector. It is no longer possible to conduct any policy of this government in complete disregard of the international situation. It is still true that we are dealing with the dog and the tail, but the tail has grown very considerably. Our domestic needs must have a priority, but the international situation affects the domestic in important ways. Where does this inflation come from? One percent last year came from the decline of the dollar. We will probably get another 1 percent from the lagged effects of that move. That is the strength of these impacts. Meanwhile, the movement of the dollar, of course, impacts abroad on economic activity and therefore on demand for U.S. exports and on chances for improving our current account; again we are potentially adversely affected. So the movement of the dollar hits us both inflation-wise and economic activity-wise and we cannot ignore it.

Senator RIEGLE. Well, my concern is this: we've got a lot of other things we have to deal with at the same time. We've got a very ambitious proposed energy program. The more businessmen I talk to, the more I hear about capital scarcity and the difficulty of moving aggressively in capital investment and trying to do something about improving productivity. Yet interest rates keep going up and it seems to me that as long as we keep as much of our attention as we seem to be on the foreign factors that we are going to be caught in a situation where even with a recession developing and gathering momentum, we may not be in a position to respond to it very quickly if the view is we've got to continue to be tough on monetary policy because of international attacks on the dollar. How do we reconcile these things?

Mr. WALLICH. If we have learned anything in the area of monetary policy and international economics, it is that the U.S. interest is best served by a strong dollar—that we need a strong dollar. That was less apparent some years ago, but it is very apparent now, and our policies have to reflect that. I think that will help us in all our other pursuits: it will reduce our rate of inflation; it will strengthen our economy generally. I think we need to accept that we cannot ignore the external value of our currency.

Senator RIEGLE. Let me just say this, I come from Michigan, which is a particular kind of industrial State with which you're familiar. I have been out there on several trips recently and Michigan really has the smell of recession all over it, and it's not just the automobile industry. We have made fiscal cutbacks to show fiscal restraint. We have cut into a lot of the domestic programs and CETA jobs program. And the Chrysler Corp. is in very severe financial difficulty. And as I watch this recession gathering momentum, and the obvious disarray in the Carter administration, that to just hold to the view that supporting a strong dollar and therefore keeping interest rates high is not looking at enough of the picture at one time. That makes me very uneasy. I would like to hear your views about how to prevent the recession from worsening, and I'd also like to know what to do about Chrysler. I think it's about the tenth largest manufacturing company in the world.

About 500,000 workers, both direct and indirect, are affected. If Chrysler were to go into a default any time soon, how would you view that as a Fed policymaker? How, if at all, would that affect your judgment about the whole question of interest rate policy and trying to shore up the dollar?

Mr. WALLICH. Let me begin with your question about the recession outlook. It does seem likely that we are going to have several quarters of declining real income of a mild sort and that we will resume speed at a modest rate sometime in 1980. This recession, by itself, should not be of a sort that could do major damage to a large company if it were well run and were a sound company. Naturally, one would be very concerned about something that might happen to such a company, but monetary policy, I think, cannot be oriented exclusively to that. Credit is amply available. Bank credit has never been anywhere near a crunch in this movement, in contrast to some earlier episodes of cyclical peaking.

Senator RIEGLE. That's very interesting. When you say bank credit is available, do you mean to the large business borrowers; is that who you're referring to?

Mr. WALLICH. It is very generally available. There have been some quantitative restraints in some areas for housing credit, but even that industry has been a great deal better off than it has been on past occasions because the flows of funds into the thrift institutions have moved through new channels and broader channels, through new instruments like the money market certificates. Moreover, sources of mortgage credit have broadened through the development of such instruments as GNMA passthrough securities and Federal Home Loan Mortgage Corporation participation certificates. These have all helped to keep the flow of housing credit at high levels even during the present difficult period.

Senator RIEGLE. Well, it's interesting to hear you say that. That's not what I'm hearing from people that I'm talking with. When I talk to the savings and loan people today they are distressed because the money is flowing out. If you get home mortgage money today, it's at 11 percent which is the going rate around here. With the downpayment percentage higher most people have been priced out of the market and I'm afraid that from what I'm hearing here and what I'm seeing in the way of policy response that we are probably going to aggravate the recession with monetary policy.

I realize we're in a tough fix in the world and that's been a long time in coming, but I'm not sure that the way to deal with that is simply the strong use of monetary policy. We have tried that before. We have an ample record that shows that that can be a very costly way to go.

So I would hope that policy could be reconsidered before we find ourselves on the downside of this rollercoaster again and by the time we start making some adjustments the damage is done. One thing you should take a very careful look at are the fiscal programs that exist right now. The programs of a countercyclical sort have really been whittled away substantially so we don't have the same things in place to cushion shocks as we had a few years ago. If one made the same assumptions that you get the same resiliency effects out of certain fiscal programs that were countercyclical, it would be a bad mistake. Those programs would now have to be

reenacted and I'm not sure that the Budget Committee, on which I serve, is ready to do that yet, and I think you folks may have to make some monetary adjustments and not be late in doing it.

The CHAIRMAN. Let me follow up what Senator Riegle has been saying but in a precisely opposite direction. You mentioned that you looked at real interest as an indicator of monetary policy; real interest being, of course, the rate of interest minus the rate of inflation; and you pointed out that the real interest rates over the last few months have been negative. In other words, interest rates are lower than the rate of inflation and therefore anybody lending money is going to get back less than he loaned if he gets the going interest rate.

Would that mean that the Federal Reserve policy has been too expansive?

Mr. WALLICH. One cannot be sure on the basis of what I think is a temporary upsurge in the CPI. The real interest rate has to be viewed in the light of an expected future inflation and I believe that people think of the future rate of inflation as being much lower than what we have suffered in the last half year. But, nevertheless, the situation is that people are being paid to borrow. They buy a house and the price of the house goes up at a rate that is higher—typically, not always—than the rate of interest. In addition, they can take this off their tax. The real interest rate after tax is heavily negative.

The CHAIRMAN. I notice in your forecast on page 54 of your statement the implicit price deflator is 9.8 percent this year. That would mean if you had an interest rate of 11 percent the real interest rate for mortgages would be less than 2 percent. It would be 1.2 percent, right? So it's not negative. It's positive there, but it would still be an extraordinarily low rate based on past experience.

Mr. WALLICH. That would be before tax.

The CHAIRMAN. After tax it probably would be negative.

Mr. WALLICH. Yes.

The CHAIRMAN. During yesterday's hearings Professor Friedman, Henry Kaufman, and Professor Klein each told the committee recession is either upon us or on the way and yet each also recommended with that in mind that monetary policy not ease at this time. Friedman and Kaufman thought more restraint on Federal expansion was needed. Klein thought a steady policy was needed because of the problem of the value of the U.S. dollar internationally.

I've got two questions on that. First, is the majority of the Board or a majority of the Open Market Committee inclined to have the Federal Reserve ease its current policy in the near future without verification of a true cyclical downturn?

Mr. WALLICH. You can only judge by present and past behavior. During the long period when the aggregates were flat—the last quarter of 1978 and the first of this year—you might have thought that, in terms of an effort to keep monetary growth constant, a reduction of interest rates would have been called for. But it seemed to us, all things considered, that was not appropriate, and interest rates were not reduced.

Right now, as you saw, the discount rate was raised by half a percent. You also observed that the Federal funds rate went up.

Those are the indications of how the Board and the FOMC, of which the Board is a part, think.

The CHAIRMAN. Do you personally think—I'm not sure on the basis of your analysis here—that we are in a recession or about to be in a recession?

Mr. WALLICH. It seems likely to me. It takes a strict National Bureau analysis. Generally a recession means two consecutive quarters of falling real GNP, and even then the experts may find something to quibble about.

The CHAIRMAN. Yesterday these very distinguished economists said it may be technically, but it's not really a recession because of the level of unemployment and other elements.

Mr. WALLICH. One might end up viewing the historical record that way. As of now, I would say that quite likely we will have two or more quarters of declining real income, quite possibly caused by these exogenous factors such as the OPEC price increase, and that when the economy starts on the way up again, sometime early next year, we will see that there were several quarters of declining real income and call it a recession.

The CHAIRMAN. What set of domestic economic conditions do you think we have to have in order to permit the Fed to follow policies that would reduce interest rates without a seriously adverse effect on the dollar?

Mr. WALLICH. I think the dollar is mainly governed by fundamentals. Interest rates play a role. If the rate of inflation came down, that would be, I think, the most favorable development. In the area of energy, enactment of a strong program—and, if the President were willing to change his mind, decontrol—I think would be powerful supporting factors.

The CHAIRMAN. Now last week the West Germans, as you know, raised their discount rate. The Japanese raised their discount rate. We raised our rate. Yet we seem to have a difference of opinion between central banks as to the appropriate role in increases in the discount rate. The foreign central banks raise their rate to fight inflation at home. The Fed seems to raise their rate in order to protect the dollar abroad.

How far will the Federal Reserve be willing to continue this policy of raising domestic interest rates to protect the dollar?

Mr. WALLICH. There is a difference, I think, in the role of the discount mechanism between the United States, on one side, and Germany and Japan on the other. In the latter two countries, the banks get a large part of their reserves through rediscounting private paper, which I suppose is in some part a reflection of the way they view the role of the private sector. We get most of our reserves for the banks through open market purchases of Government securities. That makes the discount rate in Germany and Japan more directly connected to the domestic situation. If most of the reserves come via a rediscounting at a price that is the discount rate, the importance of that rate for inflation is probably somewhat more direct.

The CHAIRMAN. Now Chairman Miller told the Congress that fiscal policy should remain tight. Of course, he's now going to be as Secretary of the Treasury in a position to enforce that notion; and

that if the situation permits, that monetary policy should be eased rather than fiscal policy.

Given the current outlook, including inflation, energy, the value of the dollar, and the very serious budget constraints that Senator Riegle and I are especially sensitive to at the present time, do you agree that the mix of fiscal and monetary policy favored by Chairman Miller should be followed?

Mr. WALLICH. The mix of policies is a very important issue. It is certainly true that in the past the fact that we have had a relatively easy budget and not so easy money has worked against investment. From here on out, it seems to me the first consideration ought to be that we avoid fine tuning and not try to turn the dials of the money supply in the hopes of catching a not-very-prolonged recession. The lag is 6, 9, or 12 months, and we may very well find the first effects of any action now, either fiscal or monetary, occurring by the time the economy has already turned around.

Second, I would say that if anybody contemplates monetary policy by asking what is easing and what is tightening, easing, in my opinion, should never be defined in a situation of inflation as an acceleration of the monetary aggregates. That would just mean that a year or two down the road inflation would accelerate. What an easing may mean is that with monetary aggregates whose rate of growth is maintained as per our specifications and a slowing of the economy—especially if there is a decline in the Federal deficit—interest rates would go down reflecting the reduced demands on the capital markets.

The CHAIRMAN. Now we have a number of people who advocate a tax reduction. Even the expert witnesses yesterday who favored a tight fiscal policy somehow were able to square that with a recommended tax reduction. Henry Kaufman recommended a \$15 billion tax cut and others recommended a tax cut of some substantial proportion.

The Republicans in the Senate are circulating a letter trying to get a \$30 billion tax reduction. They are going to make it an issue apparently in the coming campaign. And, in general, people say if we have a tax cut it ought to be a tax cut aimed at combating inflation by stimulating investment, by stimulating savings, and by encouraging compliance with the wage-price guidelines or TIP or something of the kind you and Arthur Oakum have advocated. Do we need the stimulus of a tax cut and, if not, is there a body of evidence that suggests that targeted cuts will elicit the desired behavior of capital formation savings as anti-inflation?

Mr. WALLICH. As of now, and speaking for myself, I see no need for a tax cut. I see inflation as our main concern. I think the effect of a tax cut might well come too late in a relatively mild recession.

The CHAIRMAN. It would come a lot quicker than a spending increase.

Mr. WALLICH. Well, we know even with tax cuts there may be lags before people begin to raise their expenditures. In any event, if there were to be a tax cut, I would hope that it would be directed toward correcting the distortions of inflation on corporate taxes and corporate accounting. We are collecting far more taxes from corporations than we intended because of the spurious profits that are generated under inflation through inventory gains, which are

not real gains, and underdepreciation, which is no gain at all. And if we had money to spare, I think that depreciation practices should be corrected through investment tax credits or accelerated depreciation; this is how we should invest those tax resources.

The CHAIRMAN. My time is just about up. Before I yield to Senator Riegle, let me ask you about whether or not you're still pressing for—you're famous for many things, Dr. Wallich. One of them is that you're one of the advocates, as I said, along with Dr. Okum, of a program to try to encourage holding down prices and holding down wages through taxes, TIP. Do you feel this is the time for that kind of action?

Mr. WALLICH. Yes, I do. I have learned through TIP that new ideas do have to be pushed, and somebody has to do it so I continue to try. I have a new version of this which, if you will permit, I can tell you about very briefly. It involves a wage guideline and a two-stage process of wage-setting. In the first stage, a moderate wage is set in accordance with the guideline. The risk to labor here is that prices may rise and profits may rise more than anticipated. If this occurs, there is a second stage in which the increased profits that have come from the limitations on wage increases are distributed between labor and business. This could be done at the microlevel, firm by firm. This has certain advantages. It also has some difficulties. It could be done at the macrolevel by putting an excess profits tax on that part of the profits that comes from rising prices in the face of constrained wages and then using the proceeds from that excess profits tax to reduce income taxes in the lower brackets. That would give labor some protection against the risks of accepting a guideline.

The CHAIRMAN. Very interesting. If you'd like to give us further details on that, we'd be happy to have them. It sounds very interesting.

[Governor Wallich subsequently furnished the following information for the record:]



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

HENRY C. WALLICH
MEMBER OF THE BOARD

August 3, 1979

The Honorable William Proxmire
Chairman
Committee on Banking, Housing
and Urban Affairs
United States Senate
Washington, D.C. 20510

Dear Chairman Proxmire:

During my July 24 testimony before the Senate Banking Committee on the conduct of monetary policy, you made reference to my proposal for a tax-oriented incomes policy (TIP).

As indicated, I have recently modified my proposal and am happy to enclose a copy of the new version for your review.

Inasmuch as Senator Riegle also expressed an interest in this subject, I am also sending him a copy of the revised proposal.

Thank you for your interest in this matter.

Best wishes.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Henry C. Wallich".

Henry C. Wallich

Enclosure

August 2, 1979

"A New Version of TIP"

by

Henry C. Wallich

This note describes very summarily a new approach to the tax-oriented incomes policy (TIP) which has been discussed in various forms and which recently found expression in the administration's proposal for real-wage insurance.

The most serious obstacle to acceptability of TIP, in the light of recent experience, seems to be labor's concern that their acceptance of a wage guideline might lead to excessive profits on the part of business. In the light of historical experience, this concern may seem unnecessary. Prices have tended to follow wages closely except when events like bad crops or oil price increases have broken the relationship. Ordinarily, fixed mark-up pricing ties prices to wages, with profit margins constant. Nevertheless, labor's concern needs to be met.

My new version of TIP proposes to do this by means of a two-stage approach to wage setting. In the first stage, wages increases are to be restrained by a guideline. In the second stage, if, contrary to expectations, profits have increased abnormally following wage restraint, there is a secondary wage increase that, in economic terms, amounts to a form of profit sharing. This could be accomplished either at the micro level, by renegotiation of individual wage contracts, or at the macro level, through an excess profits tax.

If the scheme is carried out at the micro level, a guideline would have to be set for a "normal" increase in profits. Firms that had profit increases in excess of the guideline would renegotiate wages

so as to share the "excess" with their employees according to some formula. If that formula were set during the initial wage negotiation, it would save negotiating effort later and perhaps create incentives for greater productivity. Some nationwide formula for the sharing of the excess is also conceivable. The share of profit being distributed to the employees would, of course, have to be tax deductible to the company.

The advantage of this micro approach is that it adapts itself easily to individual company circumstances. A disadvantage is that some companies may have no above normal profits while others do. The employees of both types of companies, on the other hand, would be affected equally by rising living costs. Thus protection against rising living costs would be unequal.

A macro approach would proceed by levying an "excess profits tax" on above-normal profits. The proceeds of the tax would be used to reduce income taxes in the lower brackets, or alternatively to compensate the employees of the tax-paying companies in proportion to their wage shortfall with respect to profits. This latter alternative would require a complex evaluation of the amount of shortfall.

The excess profits tax could be structured in two ways. It could take the form of a tax on only the abnormally high part of profits. This would require a very high tax rate in order to yield revenues that would compensate for any meaningful reduction in individual tax rates. The familiar adverse consequences of high excess profits taxes would ensue. A definition of "abnormally high" profits would be required.

Alternatively, the corporate tax rate could be raised for all corporations, whether they had abnormal profits or not. The increase

would be aimed at keeping constant the share of corporate profits in GNP, or bringing that share closer to some benchmark. This would involve a rise in the corporate rate of only a few points, without major disincentive consequences. It would, on the other hand, increase the tax burden even on companies whose profits had remained unchanged or had declined. A benchmark for the appropriate share of corporate profits in GNP would be required. The easier way of applying the proceeds of such a broad-based tax to the compensation of wage earners would be through a reduction in lower income tax brackets, rather than on the basis of individual wage experience.

The foregoing alternative versions of TIP have some similarity with the principle of real wage insurance that has been before the Congress. They differ, broadly, in avoiding its budgetary burden, by limiting the compensation paid to employees to a share in abnormal profits or the proceeds of a tax thereon. The amount of compensation, consequently, is likely to be less. Moreover, particularly where compensation is given through tax reduction, it is bound to be much more loosely related to the magnitude of any wage shortfall.

The proposals also differ from the present system of guidelines in being limited to a guideline on wages. The curb on profits comes from the second-stage wage negotiation or the tax on abnormal profits. The proposals resemble present wage guideline principles and the guaranteed real wage idea in recognizing that, in order to break into the wage-price spiral, somebody has to move first, but that there will be no loss to the first mover, unless this move were followed by a redistribution of income toward profits. It is in the nature of things that the first mover must

be labor and wages, because they constitute the bulk of income. Making profit receivers move first, by accepting a freeze of profits, would have virtually no quantitative significance. A larger move, such as cutting profits by some percentage in order to slow down prices, would have severe repercussions on the economy without necessarily bringing on a slowing of wages.

The principles underlying the foregoing proposals permit a great variety of applications, only a few of which are stated here. My preference is for a macro version with an "excess profits tax" affecting all corporations, i.e., designed to bring the share of corporate profits back to some benchmark level when that share has risen as a result of acceptance by labor of a wage guideline.

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The CHAIRMAN. Senator Riegle.

Senator RIEGLE. Thank you, Mr. Chairman.

I, too, am very interested in the TIP concept and we have been doing some work on it and, as a matter of fact, putting some concepts into legislative language to see what we can develop in the way of a vehicle, so I would very much like to see that latest refinement you describe here.

In terms of your suggesting that maybe we should find some way of tax indexing for companies on depreciation and what you see as an overstatement of profits, why wouldn't exactly the same rationale apply on the personal tax side? Aren't we finding with bracket creep people in effect paying taxes on incomes that don't represent real income increases? If we're going to make the adjustment, shouldn't we make it on both sides?

Mr. WALLICH. It is certainly true that there is a bracket creep and that people therefore are paying more in taxes than was intended. The quantitative effect, I think, is much larger on the corporate side.

I believe that about 25 percent of book profits before tax are now treated by the Department of Commerce as nonoperating profits, as profits due to underdepreciation and inventory gains.

Senator RIEGLE. Well, I think we would be very hard pressed to start adjusting for inflation on the corporate side and not also make adjustments for individuals. For example, taxing nominal interest income—I mean the discrepancy between the rate of inflation and what the people are paying tax on in the way of, say, a 5¼ percent interest rate on a savings account—I don't know how you can address one and not the other.

Mr. WALLICH. I very much agree with that part of your argument, Senator. We are taxing the inflation premium. With the inflation premium, the 5¼ or 5½ interest rate is not anywhere near adequate, so that is an area of serious distortion.

Somebody whose pay goes up 10 or 12 percent per year—of which perhaps only 2 percent is real—also suffers from that distortion. He does not suffer as grievously. We have fairly routinely engaged in tax cuts that, broadly speaking, have kept the effective rate of taxation—that is, the ratio of taxes paid to taxable income—constant. We have not raised that rate. That rate could go up over time. I think if inflation continues, in time there will be a need to make such a correction, but I would like to see that done on its merits and not mixed in with a cyclical situation and with an attempted fine tuning which I think could be counterproductive.

Senator RIEGLE. Let me ask you this. This is a blunt question, but I hope you would be as frank as possible in answering it, and that is:

Being in the Federal Reserve and looking over at the policy within the administration, and in light of what we've seen and the acceleration of inflation in the last few months, is it your view that there really is an anti-inflation program at this point?

There's obviously one in name, but in terms of one in substance, and any comprehensive way, do we really have an anti-inflation program working at the moment?

Mr. WALLICH. I think a considerable effort has been made. The Congress has brought the budget deficit down; the budget process

itself is under better control. The Federal Reserve has made an effort. It has not been enough in the circumstances.

One could say that we have had bad luck. We have been hit by food price increases; we have been hit by the oil price increase. One could say that this was not foreseeable, and in any event, not controllable. But, of course, when an inadequate effort is made, bad luck becomes worse.

I would argue that we have to strengthen our effort. I do not think we fully understand how damaging inflation is.

I think the inflation is responsible for a good part of the drop in productivity gains. In other words, it costs us an enormous amount over time that can never be made up; more, in my opinion, than unemployment has cost us. It is in that sense that one could say that we have not made enough of an effort.

Senator RIEGLE. With the bind that we are in which you've described very well this morning, if we're going to produce our way out of this situation, it's obviously going to take major capital investment and other changes that can improve productivity, and yet the policy that you are following to fight inflation and presumably shore up the dollar is to have a tighter monetary policy.

You don't foresee a serious recession, you don't see letting up much on the monetary side, as far as I can judge from what you said, and I'm not sure how we ever stimulate capital investment and productivity gains.

Is there another avenue, or are we just going to be caught in this bind for some period of years?

Mr. WALLICH. We are caught, Senator, in a very bad bind. This can be eased over time on the tax side, on the regulatory and through positive stimulation of investment in energy, which we desperately need.

I do not think that much would be accomplished in attempting to stimulate business spending by a temporary easing of monetary policy. People are looking at investments that they are going to have to make over a period of years. Much of the investment that will be put in place is not for this year, but for future years; the level of interest rates during the last part of 1979 is not going to influence that very much.

Senator RIEGLE. One final thing from me, and that is:

If we find the recession develops faster and is more severe than we anticipated, and the run of bad luck continues in other forms, so that we really have a serious recession developing, what course of action would you suggest for the Fed, if we were to find that scenario developing?

Mr. WALLICH. I see that scenario as not having a great deal of likelihood. If it should develop, then we would have to make a new assessment. In that case, again, we would have to look at the possibility of a tax cut. We would have to look at monetary policy.

But again I would warn of excessive fine tuning. We have been lured into error with that every time. We have finally reached a situation in which both inflation and unemployment are very high because we always switched from fighting one to fighting the other to fighting the first again; and we always lagged behind. I think steadiness is a very good watchword for our policy now.

Senator RIEGLE. But if we carry that forward—and I know you don't anticipate a serious recession, but if one develops and if the answer of the Fed is, we've got to stay on a steady course and tight money is the order of the day, and it will be downward-reinforcing and make the recession worse, I'm wondering is there ever a point at which the Fed would wake up one day and say, "Maybe this is not a good policy response"?

Mr. WALLICH. Historically the Fed has always eased up; I think it has done too much rather than too little. I think you can be confident that if the circumstances—that you probably do not anticipate but are asking about in a hypothetical sense—arise, there will be action; but I think it is premature to contemplate that.

Senator RIEGLE. Just one other thing. We're going to have a Treasury Secretary who has just come from the Fed, and he may well have a different view on that policy role, because he is not independent in a sense, as you members of the Fed are. What if he has one view as to what the Fed policy ought to be and you have another, and he starts to lean on the Fed? How would you react to that?

Mr. WALLICH. Relations with the Treasury have been very good, and I hope they will continue to be very good. We are in close touch all the time. We never have exactly the same opinion, but such differences, as they exist, are easily removed. I really do not see a great problem, particularly under Bill Miller.

Senator RIEGLE. Well, I hope you are right. I fought very hard to get Miller confirmed here. But it's not just Bill Miller, it's Jimmy Carter and Hamilton Jordan, and whoever else. Miller has given up a great deal of his independence, whether he realizes it or not, because the Treasury Secretary is not the same thing as Chairman of the Fed, as you well know. And I hope tension don't arise, but it's conceivable that they might very well arise. The head of the Treasury, the Secretary, is going to be responding to the initiatives of the administration, which may or may not coincide with your judgment or the judgment of the the Fed collectively.

So I would hope if tensions arise, the Fed would continue to be an independent body.

Mr. WALLICH. Thank you very much.

The CHAIRMAN. Dr. Wallich, yesterday Mr. Kaufman challenged the notion of gradualism. He said everybody is for gradualism and, of course, that's kind of like mother and apple pie and Fourth of July and baseball and Chevrolet, and all those good things that we like to think are American. We're gradual, we're not extremists, we just do everything gradually.

He says gradualism has a terrible performance record in monetary policy and fiscal policy, we ought to forget it, and that we ought to—what we need now is a real attack on inflation, not a gradual attack, saying over the years we're going to follow policies that ultimately will get us down to maybe 8 percent, 7 percent, and so forth.

He said we've been doing something like that, or we think we have, and it hasn't worked. What's your reaction to that?

Mr. WALLICH. I think there are degrees of gradualism, but I cannot see anything but a gradual approach. Inflation is not going to be stopped overnight—I think that is a delusion—not even with

TIP, not even with drastic measures. We have to be prepared. What we have to do is keep inflation at the top of our priorities and stick to the flight. In that sense, a more massive attack on inflation seems very desirable to me, but not in the sense that one could do something drastic now and get it over with in a year.

The CHAIRMAN. But a more massive attack, you wouldn't disagree with that, a more forceful and restrained fiscal policy, and perhaps even monetary policy? But you'd say what you have to do is recognize that whatever you do, you're going to have to stick with it for years in order to succeed?

Mr. WALLICH. Yes.

The CHAIRMAN. Now, during the past 13 weeks, we've had quite an increase in monetary aggregates, better than 11 percent rate growth in both M_1 and M_2 .

Given the short-term interest rates that are at historic highs and therefore ought to be restraining the growth in money supply, what's the explanation for this recent rapid growth?

Mr. WALLICH. In the short run, the behavior of M_1 often is very puzzling. One can always explain some part of these sudden bulges—a couple of percentage points—by things that have to do with tax collections, the timing of the Treasury checks—

The CHAIRMAN. This is a full quarter, 13 weeks, not just week to week.

Mr. WALLICH. At some point that just becomes hard to explain, just as hard to explain as why during the preceding two quarters M_1 was so flat.

One has to assume that there may be shifts in what economists call the demand function for money, for M_1 , and that businesses and people from time to time take a different attitude with respect to the amount of money they want to hold relative to their transactions. Perhaps the availability of these money substitutes plays a role, but we see that the deviations are both on the up side and the down side.

We have seen, in the past, very substantial deviations on the down side, below what was expected. One can only say that as soon as one begins to try to control an economic variable, it ceases to be as easy a phenomenon as when it is merely observed by economists.

The CHAIRMAN. Last week the House of Representatives took an action that has put the banking community in a dither. They've been in a dither about this all along.

They approved the so-called the Fed membership bill by a wide margin. As passed, the legislation would do the following:

No. 1, would perpetuate the voluntary reserve requirement system until and unless the ratio of deposits of members as a percentage of total bank deposits falls below 67½ percent.

Second, would make a very large reduction in reserve requirements.

Third, set the reserve requirements on all time and savings deposits, including large corporate CD's, at zero.

And fourth, cost the Treasury and the American taxpayer over \$300 million net at a minimum, in the beginning, and the cost would be greater as time goes on.

How does the Board view this legislation as it was passed? Favorably or unfavorably?

Mr. WALLICH. The basic membership problem exists, it is well known. Here is an effort to come to grips with it. It is not ideal. The question is how far from ideal can it be before one says that it is not good enough.

The CHAIRMAN. Well, does the board approve or not?

Mr. WALLICH. We have not reached that point yet. We would have preferred—

The CHAIRMAN. How do you feel about it personally?

Mr. WALLICH. I believe it is very important to come to a conclusion on this membership debate, but I have not studied the legislation sufficiently to make any determination, so I would like to keep my vote open on that. But as of now, I would not say that it is unacceptable.

The CHAIRMAN. Well, that \$300 million bothers me plenty. It's very hard to justify it at a time when we are holding down spending on all kinds of social programs, and we have to. I favor holding those down. But then turning around and providing hundreds of millions of dollars to the bankers—you can understand how that's a little hard to sell in Oshkosh. Except in the Oshkosh banks. [Laughter.]

Mr. WALLICH. I have to agree to that.

You are aware, are you not, Mr. Chairman, that because of inflation bank profits are totally distorted. What happens to the average bank due to inflation is that it loses something like 7½ percent of its capital each year in a 10-percent inflation. The other 2½ percent is covered by hard assets, buildings and so on. By deducting from bank earnings this annual attrition of capital from inflation, only about half or less is left.

The CHAIRMAN. Pardon me if I don't take my handkerchief out and start sobbing for the banks. [Laughter.]

The Fed is considering placing reserve requirements on repurchase agreements. Chairman Miller has also been in favor of reserve requirements on Eurocurrencies. I'd like to have your opinion on both of these, and an indication of whether such zero requirements would help monetary controls. First on repurchase agreements.

Mr. WALLICH. The Board has asked for comment on the question of placing reserve requirements on repurchase agreements. I would think that one might want to place a restraint on something growing more than 25 percent per year.

It is not only the degree of restraint that comes from reserve requirements, but also competitive equality. If there are two sources of credit, and one is burdened with a higher cost than the other, that is going to cause a distortion. It is going to cause the untaxed one to expand more rapidly.

I feel the same way about Euromarkets. I do not see reserve requirements on Euromarkets as acting primarily as a restraint on the expansion. I see them as acting as a competitive equalizer.

Under H.R. 7, of course, as it now stands, the reserve requirements on time deposits and therefore Euromarket deposits would not exist. But H.R. 7 also provides that if reserve requirements on

Eurodeposits were negotiated, then they could be placed on domestic time deposits.

The CHAIRMAN. As a competitive equalizer, do they—does it help monetary control?

Mr. WALLICH. Yes, I think very much. And for this reason: at the present time the Euromarket is expanding much faster than the domestic. One has to see the two together if one wants to see what it is that one wants to control, to get to expand at the proper rate.

Now either we ignore the Euromarket—which means we are probably allowing the domestic market to expand faster than it should—or we look at them both together and observe that the component we can control is expanding too fast and is pulling the combination up. Then we have to work harder—that is restrain harder—the domestic component in order to bring down the rate of growth of the combination. That means restraining domestic credit more severely in order to offset the consequences of overexpansion in the Euromarket.

If we had equality of competitive conditions, if the Euromarket did not have a cost advantage, it would not expand any faster, and it would be under the control of domestic interest rates, to the same extent as the domestic sector.

The CHAIRMAN. Would you comment on the need for reserves on time and savings deposits at banks and thrift institutions?

Mr. WALLICH. On transaction balances, I think this is very logical, because we are now moving into a phase—

The CHAIRMAN. Can you confine it to time and savings balances? I'll agree with you on transaction balances.

Mr. WALLICH. Yes. I meant NOW accounts and their equivalent—share drafts, demand deposits at savings banks and so on.

The CHAIRMAN. The question was on the need for reserve requirements on time and savings deposits.

Mr. WALLICH. Yes. I would say there is a need on savings deposits that are subject to ATS or transactions balance.

The CHAIRMAN. Well, Mr. Wallich, I want to thank you very much.

You're a splendid economist, and you've made, I think, a very fine presentation, and were most responsive and helpful, and made an excellent and helpful record for us, and we are grateful to you.

The committee will stand adjourned, and I also want to apologize if we've made you tardy for your appointment. I hope you make it.

Mr. WALLICH. Thank you very much.

[Whereupon, at 11:30 o'clock a.m., the hearing was adjourned.]

[Additional information received for the record follows:]

Credit Policy and Inflation

by

Peter Konijn and Michael K. Ulan*

For years it has been assumed that controlling the money supply is the key to halting inflation. The Quantity Theory of Money links the quantity of money in circulation to the level of prices in the economy. We have examined the relationship between several measures of "money" and the Consumer Price Index. We have found a "money" which explains more than 99% of U.S. inflation. Therefore, the key to controlling inflation is to regulate the supply of "money" as we will define it.

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The "money" to which we refer is Total Credit Market Debt or simply, "Credit." The Federal Reserve Board defines Total Credit Market Debt as the sum of: U.S. government securities, state and local obligations, corporate and foreign bonds, mortgages, consumer credit, open-market paper, rp's, and other loans.

We examined the relationship between the price level and the supply of Credit per dollar of real GNP. We found that a one-percent change in Credit per unit of GNP leads to a 0.9-percent change in the Consumer Price Index after three months. For example, a 10-percent increase in Credit per unit of GNP will cause a 9-percent increase in the Consumer Price Index.

This relationship is highly significant from a statistical point of view. The quarterly data used in our study covered the period from the beginning of 1960 to the middle of 1978.

In addition to the Credit variable, we tested the relationship between the Consumer Price Index and the supply of each of the Federal Reserve Board's five "M's" per unit of real GNP. Each of the Fed's "M's" explains less about the cause of inflation than does the Credit variable.

Policy Recommendations

The results of our investigations indicate that inflation can be controlled by keeping the increase in the supply of Credit in line with the growth of real output in the economy.

The supply of Credit can be considered to have a fiscal and a monetary component. The fiscal component is comprised of federal, state, and local securities. The fiscal component can be controlled through tight budget policies.

The remaining portion of Credit can be considered the monetary component control of which lies with the Federal Reserve Board. By changing the reserve require-

ment, the Fed controls the supply of credit extended by banks to individuals and businesses. By changing the margin requirement, the Fed controls the supply of credit extended to purchasers of securities.

Implications of Our Policy Recommendations

Our policy recommendation can slow or stop inflation. However, there are some costs to the implementation of a policy of credit restraint:

1. people who buy on credit will not enjoy being told that, in order to fight inflation, they cannot get so much credit as they might like; and
2. the policy may be recessionary. The extent of the recessionary impact of a credit-restriction policy may be mitigated by tightening credit gradually. The more gradual the slowing of the rate of increase in the supply of Credit, the shallower any induced recession will be; however, the more gradual the process, the longer the length of time that would be required to reach the goal of a Credit supply that is expanding no faster than the real output of the economy and the longer the "shallow" recession will last.

Appendix

Here we present tables containing results for the quarterly ordinary least squares regressions estimated. We have estimated equations for each of the Fed's five "M's" and the Credit variable which was defined previously. An explanation of column headers follows:

lag	number of quarters that the liquidity variable is lagged behind the price variable in the regression
cons	estimated constant in the equation
x	estimated elasticities of the Consumer Price Index with respect to the liquidity variable
rho	estimates of the coefficient of autoregression from the equation
	$Y_t = A + bX_t + \int u_{t-1} + \epsilon_t$
R ²	correlation coefficient
F	F-ratio
SEE	standard error of estimate
DW	Durbin Watson statistic
()	the numbers in parentheses are t-ratios
*	Cochrane-Orcutt adjusted equation
liq	liquidity variable, M ₁ through M ₅ , or Credit

We employed a Cochrane-Orcutt procedure to try to remove autocorrelation from the disturbance terms. The procedure removed the serial correlation for each equation involving Credit and one of the equations involving M_1 and one involving M_2 . However, for the Credit equations involving more than a one-period lag and for the M_1 and M_2 equations mentioned above, the elasticity estimates in the adjusted equations were markedly different from those in the corresponding ordinary least squares equations. We hypothesize that the changes in the elasticity estimates, which occur when the Cochrane-Orcutt-adjusted data are used, arise because the impact captured in the adjustment process is that of the liquidity variable with a lag different from that of the explanatory variable explicitly-specified in the equations. The various lagged liquidity variables are highly-collinear. In no case is the partial correlation coefficient between any two lag specifications of a liquidity variable less than 0.95. In view of the collinearity among these variables and the effect the collinearity appears to have on the estimated elasticities in the M_1 and M_2 equations, those Cochrane-Orcutt-adjusted equations are not presented.

An attempt to reduce the extent of the collinearity among the regressors through the use of an Almon transformation of the data was made. If successful, the Almon procedure would have permitted the estimation of the elasticity of the CPI with respect to more than one regressor in a single equation. It would also have reduced or eliminated serial correlation among the residuals of the equations if the autocorrelation were being caused by the exclusion of segments of the lag structure from the individual equations. However, the Almon transformation failed to reduce partial correlation coefficients among regressors to less than 0.90.

The hypothesis that the lag structure is not fully specified is supported by the fact that when long-run elasticities with respect to each of the M 's and Credit are estimated for the period 1960-1977 using annual December data lagged one year, only the M_1 equation exhibits serial correlation, and all equations except that employing M_1 have R^2 's of at least 0.985. These long run equations are presented in the table entitled, "Annual Equations."

In the long-run equations, the M_2 elasticity exceeds unity by a statistically-significant extent, a condition that is not consistent with a quantity-theory approach

to price-level determination unless the velocity of circulation is increasing, a matter that was not examined here. There appears not to be much reason to choose among the long-run equations for M_2 through M_5 , or Credit as vehicles to explain the long-run response of the price level to changes in the monetary base.

However, in the short run--periods of less than a year--Credit outperforms any of the M 's as an "explainer" of the price level. The fact that the estimates of the short-run elasticities for Credit are so close to the estimated long-run elasticity for that variable indicates that the reaction of the price level to a change in Credit is very much front-loaded; hence, the superior explanatory power of Credit in the short run becomes critical to policy-makers.

Quarterly Tables

<u>lag</u>	<u>cons</u>	<u>x</u>	<u>rho</u>	<u>R²</u>	<u>F</u>	<u>SEE</u>	<u>DW</u>	<u>liq</u>
0	1.928 (1762)	0.884 (159)	0.691 (9.22)	0.997	25,260	0.00565	0.498	Credit
0*	1.931 (735)	0.869 (68)	-0.046 (-0.38)	0.999	59,633	0.00368	2.026	Credit
1	1.930 (1664)	0.902 (149)	0.728 (9.34)	0.997	22,059	0.00604	0.511	Credit
1*	1.933 (599)	0.882 (56)	-0.089 (-0.76)	0.999	50,271	0.00400	2.173	Credit
2	1.932 (1473)	0.921 (130)	0.806 (12.17)	0.996	16,918	0.00689	0.352	Credit
3	1.935 (1209)	0.937 (105)	0.787 (12.43)	0.994	11,064	0.00851	0.332	Credit
4	1.937 (1,041)	0.952 (89)	0.830 (13.92)	0.990	7,972	0.0100	0.283	Credit

Quarterly Tables

<u>lag</u>	<u>cons</u>	<u>x</u>	<u>rho</u>	<u>R²</u>	<u>F</u>	<u>SEE</u>	<u>DW</u>	<u>lig</u>
0	3.543 (60)	2.134 (25)	0.939 (32)	0.897	630	0.0339	0.064	M1
1	3.574 (54)	2.174 (23)	0.923 (33)	0.878	518	0.0370	0.064	M1
2	3.600 (48)	2.207 (20)	0.922 (36)	0.852	414	0.0407	0.054	M1
3	3.623 (43)	2.236 (18)	0.937 (37)	0.826	341	0.0442	0.051	M1
4	3.639 (38)	2.256 (17)	0.934 (37)	0.793	276	0.0482	0.049	M1
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0	2.488 (615)	1.017 (108)	0.862 (13)	0.994	11,582	0.00832	0.304	M2
1	2.500 (620)	1.034 (111)	0.837 (12)	0.994	12,259	0.00809	0.358	M2
2	2.513 (587)	1.055 (107)	0.844 (12)	0.994	11,521	0.00846	0.337	M2
3	2.526 (541)	1.075 (101)	0.820 (12)	0.993	10,209	0.00886	0.372	M2
4	2.540 (489)	1.097 (93)	0.809 (12)	0.992	8,731	0.00958	0.367	M2

Quarterly Tables

<u>lag</u>	<u>cons</u>	<u>x</u>	<u>rho</u>	<u>R²</u>	<u>F</u>	<u>SEE</u>	<u>DW</u>	<u>liq</u>
0	2.260 (924)	0.889 (91)	0.866 (17)	0.991	8,193	0.00988	0.193	M3
1	2.268 (870)	0.902 (88)	0.888 (18)	0.995	7,662	0.0102	0.190	M3
2	2.277 (816)	0.919 (85)	0.912 (20)	0.990	7,145	0.0106	0.163	M3
3	2.285 (753)	0.934 (80)	0.891 (18)	0.989	6,431	0.0111	0.185	M3
4	2.294 (705)	0.952 (77)	0.894 (18)	0.988	5,978	0.0116	0.198	M3
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0	2.415 (442)	0.897 (67)	0.942 (21)	0.984	4,445	0.0134	0.143	M4
1	2.424 (457)	0.910 (70)	0.937 (19)	0.986	4,969	0.0127	0.170	M4
2	2.435 (464)	0.925 (73)	0.945 (18)	0.987	5,344	0.0122	0.182	M4
3	2.445 (466)	0.939 (75)	0.919 (16)	0.987	5,629	0.0119	0.234	M4
4	2.455 (468)	0.954 (77)	0.893 (14)	0.988	5,900	0.0116	0.272	M4

Quarterly Tables

<u>lag</u>	<u>cons</u>	<u>x</u>	<u>rho</u>	<u>R²</u>	<u>F</u>	<u>SEE</u>	<u>DW</u>	<u>liq</u>
0	2.234 (794)	0.830 (71)	0.914 (22)	0.986	4,970	0.0127	0.13	M5
1	2.240 (775)	0.841 (71)	0.924 (22)	0.986	4,985	0.0126	0.13	M5
2	2.248 (750)	0.854 (70)	0.940 (23)	0.986	4,936	0.0127	0.12	M5
3	2.256 (716)	0.866 (69)	0.920 (21)	0.985	4,743	0.0129	0.15	M5
4	2.263 (690)	0.879 (68)	0.920 (20)	0.985	4,652	0.0131	0.16	M5

Annual Equations

<u>cons</u>	<u>x</u>	<u>rho</u>	<u>R²</u>	<u>F</u>	<u>SEE</u>	<u>DW</u>	<u>liq</u>
1.933 (475)	0.959 (41)	0.294 (1.28)	0.991	1,717	0.00966	1.33	Credit
3.615 (19)	2.221 (8)	0.730 (6.36)	0.803	65	0.0460	0.28	M1
2.536 (227)	1.091 (43)	0.070 (0.26)	0.991	1,847	0.00961	1.86	M2
2.294 (336)	0.956 (37)	0.320 (1.37)	0.988	1,334	0.0113	1.29	M3
2.451 (230)	0.946 (37)	-0.050 (-0.19)	0.989	1,392	0.0110	1.99	M4
2.262 (331)	0.878 (32)	0.320 (1.50)	0.985	1,045	0.0127	1.20	M5

