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TO: Federal Open Market Committee

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SUBJECT: Impacts of Alternative Monetary Growth Rates

The economic projections in the Greenbook assume M-1 growth rates identical to that of longer-run Alternative B in the Bluebook. The attached tables 1 and 2 compare projections of selected variables for the QIV/78-QIV/79 period based on M-1 growth rates identical to that of Bluebook Alternatives A and C.[1/] However, in all three projections the staff has assumed interest rates consistent with the low end of the Bluebook ranges of Federal funds rates. With these assumptions, the Greenbook forecast implies downward drift of a little more than 2 per cent per year in the demand for M-1 relative to historically measured relationships. No allowance has been made for the proposed introduction of automatic transfers.

The projections shown in the attached tables also display extended forecasts through 1982. The longer-run forecasts assume that M-1 growth continues over the QIV/79-QIV/82 period at 5-1/4, 6-1/4,

1/ Bluebook money growth rates are for the QIV/78 to QIII/79 period. The GNP forecasts assume similar growth rates of money beyond QIII/79.

and 7-1/4 per cent. The "base forecast"--line 2 of each panel of Table 1--is identical to that shown in the Greenbook for the QIV/78-QIV/79 period and assumes a 6-1/4 per cent rate of growth of M-1. For the period beyond 1979, the base forecast has been derived from econometric model extensions of the judgmental projection. Differences from the base forecast of alternative M-1 growth rates for the entire forecast period have been derived mainly from simulations of the econometric model.

Extension of the base forecast suggests that maintenance of a 6-1/4 per cent rate of growth of M-1 would result in a somewhat further decline during 1980-82 in the rate of expansion of real GNP which would average somewhat below 2 per cent toward the end of the period.[1/] [2/] The unemployment rate would rise above 7 per cent by the end of 1982, with the rate of increase of the fixed-weight deflator remaining around the 7 per cent level forecasted for the second half of 1979. It should be noted that were it not for an increase in early 1981 of social security taxes there would be a slight downtrend in the rate of inflation in the extended period. The base forecast implies a Treasury bill rate of around 7-1/2 per cent by 1982.

Table 2 shows the differences from the base forecast of the projections assuming slower and faster M-1 growth rates. In each panel, the rows are numbered 1 and 3 to correspond to the numbering in Table 1.

1/ The downward drift in money demand is assumed to be 2-1/2 per cent in the extension.

2/ Real GNP is depressed in early 1981 by the scheduled sharp increase in the social security tax rate and base.

A 5-1/4 per cent rate of growth of M-1--row 1 of each panel of Table 2--implies that real GNP by the end of 1979 would be about $12 billion below the base forecast, and by the end of 1982 real GNP would be about $47 billion lower. However, by the end of the extended forecast period, the rate of growth of real GNP is not much different from that of the base forecast. Under this tighter monetary policy, the price level is only slightly lower by the end of 1979, but by 1982 the price level is about 1-1/2 per cent less than in the base forecast. (As shown in Table 1, the rate of inflation by the end of the extended forecast period is about 6 per cent as compared to 6-3/4 per cent under the base forecast.) Similarly, by the end of 1979 a 5-1/4 per cent rate of growth of money has only small effects on the unemployment rate, but by the end of 1982 the unemployment rate is 1 percentage point higher. Short-term interest rates under the 5-1/4 per cent M-1 alternative rise as much as 7/8 percentage point above the base forecast by early 1981; by the end of 1982, however, the effect on short-term interest rates is somewhat reduced because the reduced money growth is partially offset by lower income.

If money expands at a 7-1/4 per cent rate (path A in the Bluebook), real GNP would be about $45 billion higher by the end of 1982, but by that time the rate of growth of real GNP would again be moving toward that of the base forecast. Under the easier monetary policy, the unemployment rate would be only 1/4 percentage point below that of the base forecast by the end of 1979, but nearly 1 percentage point lower by the end of 1982. However, the price level, while only slightly higher by the end of 1979, would be nearly 2 per cent above that associated with the base forecast by the end of 1982. At that time, prices would be growing at about a 7-1/2 per cent annual rate. While short-term interest rates would be almost 1 percentage point lower than the base forecast by late 1978, the difference would be narrowing by the end of 1982, because higher nominal income offsets the effects of higher money growth.

In reviewing the results of the exercise, there are two factors that might be kept in mind. First, as in any econometric model simulations, the forecasts presented in this exercise hinge importantly on a number of arbitrary assumptions. Among these assumptions, it should be noted that the monetary policies are not adjusted during the entire period in response to emerging or anticipated developments. A second factor of importance relates to forecast errors. Any errors in the projections will inevitably grow larger as the forecast period lengthens. Even so, the staff believes that the differential impacts of alternative monetary policies (i.e., Table 2) are reasonably indicative of what might be expected.

Attachments

Table 1

Projection of Selected Economic and Financial Variables Assuming
Alternative Money Growth Rates

	1978	1979				1980		1981		1982	
	Q4	Q1	Q2	Q3	Q4	Q2	Q4	Q2	Q4	Q2	Q4
Real GNP Growth (per cent, annual rate)											
1) 5-1/4% M-1 Growth	3.1	3.6	2.5	2.3	1.6	1.6	1.1	1.1	1.1	1.4	1.3
2) 6-1/4% M-1 Growth	3.3	4.1	3.3	3.3	2.7	2.8	2.1	1.9	1.6	1.9	1.7
3) 7-1/4% M-1 Growth	3.4	4.5	3.9	4.1	3.7	3.8	3.0	2.6	2.1	2.4	2.4
Unemployment Rate (per cent)											
1) 5-1/4% M-1 Growth	5.9	5.9	5.9	6.1	6.2	6.5	6.9	7.3	7.6	8.0	8.3
2) 6-1/4% M-1 Growth	5.9	5.8	5.8	5.9	6.0	6.1	6.3	6.6	6.8	7.1	7.3
3) 7-1/4% M-1 Growth	5.9	5.8	5.8	5.8	5.8	5.8	5.8	5.9	6.1	6.3	6.4
Fixed Weight Deflator (per cent change, annual rate)											
1) 5-1/4% M-1 Growth	6.9	7.8	7.8	7.1	7.2	7.0	6.9	7.1	6.5	6.5	6.0
2) 6-1/4% M-1 Growth	6.9	7.9	7.9	7.2	7.4	7.3	7.1	7.7	7.1	7.1	6.7
3) 7-1/4% M-1 Growth	7.0	8.0	9.0	7.3	7.5	7.7	7.7	8.5	7.9	7.9	7.6
Three-month Treasury Bill Rate (per cent)											
1) 5-1/4% M-1 Growth	8 1/2	9	9	9	9	9 1/8	9	9	8 3/4	8 1/2	8 1/4
2) 6-1/4% M-1 Growth	8 1/4	8 1/4	8 1/4	8 1/4	8 1/4	8 3/8	8 1/4	8 1/4	8	7 3/4	7 3/8
3) 7-1/4% M-1 Growth	8	7 3/4	7 3/4	7 3/4	7 3/4	7 3/4	7 1/2	7 1/2	7 3/8	7 1/8	7

Table 2

Differences from Base Forecast of Projections Assuming
Alternative Money Growth Rates 1/

	1978	1979				1980		1981		1982	
	Q4	Q1	Q2	Q3	Q4	Q2	Q4	Q2	Q4	Q2	Q4
Nominal GNP (billions of $)											
1) 5-1/4% M-1 Growth	-1.0	-4.1	-9.4	-16.1	-24.0	-42.0	-60.9	-80.7	-101.1	-121.5	-141.9
3) 7-1/4% M-1 Growth	.9	3.6	7.9	13.6	20.5	37.3	56.1	76.2	97.1	120.3	146.7
Real GNP (billions of 1972 $)											
1) 5-1/4% M-1 Growth	-.5	-2.3	-5.0	-8.5	-12.4	-20.8	-28.5	-34.7	-39.5	-43.5	-47.2
3) 7-1/4% M-1 Growth	.5	2.0	4.3	7.3	10.7	18.4	25.7	31.3	35.6	39.8	44.9
Fixed-Weight Deflator (percentage differences in levels											
1) 5-1/4% M-1 Growth	.0	.0	.0	-.1	-.1	-.2	-.4	-.6	-.9	-1.2	-1.5
3) 7-1/4% M-1 Growth	.0	.1	.1	.1	.1	.2	.4	.7	1.0	1.4	1.7
Unemployment Rate (percentage points)											
1) 5-1/4% M-1 Growth	.0	.0	.1	.1	.2	.4	.6	.7	.8	.9	1.0
3) 7-1/4% M-1 Growth	.0	.0	-.1	-.1	-.2	-.3	-.5	-.6	-.7	-.8	-.9
Three-month Treasury Bill Rate (percentage points)											
1) 5-1/4% M-1 Growth	1/4	3/4	3/4	3/4	3/4	3/4	3/4	7/8	3/4	3/4	3/4
3) 7-1/4% M-1 Growth	-1/4	-1/2	-1/2	-1/2	-1/2	-5/8	-5/8	-3/4	-3/4	-5/8	-1/2
AAA Corporate Bond New Issues (percentage points)											
1) 5-1/4% M-1 Growth	1/8	1/4	1/4	1/4	3/8	3/8	3/8	1/2	5/8	3/4	3/4
3) 7-1/4% M-1 Growth	-1/8	-1/8	-1/4	-1/4	-1/4	-3/8	-3/8	-3/8	-3/8	-1/2	-1/2
Money Stock (billions of $) 2/											
1) 5-1/4% M-1 Growth	-.3	-1.4	-2.7	-3.5	-4.5	-6.5	-8.6	-10.8	-13.1	-15.6	-18.2
3) 7-1/4% M-1 Growth	.2	1.5	2.7	3.6	4.5	6.6	8.7	11.0	13.4	16.0	18.7

1/ Base forecast assumes 6-1/4% per cent growth from Q3, 1978 level.
2/ Quarterly average levels.