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RULES PLUS DISCRETION IN MONETARY POLICY--
An Appraisal of Our Experience Since October 1979

by

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One of the oldest arguments in economic theory is whether monetary policy should be guided by rules or discretion. My object in this paper is to assess what we have learned about this subject since the famous FOMC meeting of October 1979. This is purely a personal assessment, not a Federal Reserve position.

Rules for monetary policy seem to have an intuitive appeal to many people. To some they seem to offer easy answers to complex problems. To others the rules offer a discipline which they think we would not impose upon ourselves.

All rules for monetary policy, whether they be based on the growth of money, the exchange rate, the price of gold or a basket of commodities, must rest on one of two assumptions. One assumption is that the behavior of the object to be controlled is predictably related to the nominal GNP. The only alternative assumption is that monetary policy should be directed solely toward controlling inflation and that the central bank should have no responsibility or concern for the level of employment or output.

I will argue that the events of recent years demonstrate that neither of these assumptions is viable. At the same time, our experience with monetary targeting, for all of its problems, has brought two substantial advantages to the conduct of monetary policy. First, monetary targeting automatically forces the FOMC to consider the longer-run consequences of actions taken to meet short-run objectives. This is an important discipline for the Committee. It reduces the risk of excessive reactions to temporary shortfalls in employment and output. Changes in the guidelines, while they may have to be made from time to time, require an overt decision by the FOMC and cannot be viewed as a casual matter. Second, monetary targeting has made it easier for the Federal Reserve to communicate its policies to the public and the Congress. It automatically injects into the dialogue with the Congress the long-run consequences of alternative policies in a way that no purely discretionary regime could do. These are advantages not to be discarded.

I conclude, therefore, that monetary policy should be one of rules, tempered by discretion. This is not a neat solution but the world is, unfortunately, too complex for neat solutions.

The Problems With Pure Rules Regimes

No one, to my knowledge, has demonstrated predictable relationships between the exchange rate, the price of gold, or the price of a basket of commodities and the nominal GNP. Thus any advocate of a pure rules regime in targeting these variables must necessarily assume that the central bank will concern itself solely with the inflation rate, regardless of

the short-term impact on employment or output. The revealed unpredictability of the relationship of the monetary aggregates to the nominal GNP is leading some monetarist economists to the same position.¹

This transition should not be difficult. Implicit in monetarist theory has always been the proposition that the public should accept any short-run consequences of a monetary rule, secure in the knowledge that in the long run, monetary growth rates are neutral with respect to employment and output. However, the monetarist long run is certain to be too long to be relevant for public policy unless some other policy instrument could assure a reasonably acceptable level of employment and output in the shorter run.

The supply-side-monetarist policy mix of 1981 was to have accomplished this. While a policy of gradually reducing monetary growth was to deal with inflation, the tax reduction program was to generate rapid and sustained economic growth. Most economists had difficulty in seeing how a monetary policy tight enough to bring down the inflation rate substantially could coexist with rapid economic growth. The reconciling element was to have been a massive change in inflationary expectations, which would produce declining interest rates despite rapid economic growth.

In the event, we learned that long-term expectations do not change rapidly. It took a number of years of high inflation rates before the bond investor demanded an adequate inflation premium. It will take a number of years of low inflation rates for that premium to be eliminated.

Looking back to 1951 with our inflationary mind-set, it seems amazing that the Federal Reserve could still be pegging government bonds at 2 1/2 percent despite six years of rather strong economic growth following World War II. It was possible only because the long-term expectations of 1951 were still dominated by the experience of the 1930s.

Policymakers should beware of any policy whose success requires a rapid change in the long-term expectations of the buyers of stocks and bonds.

The most critical recent demonstration of the need for discretion in monetary policy occurred in the summer of 1982. In the first half of 1982, M1 grew at a 7 percent rate, substantially above our policy range of 2.5 to 5.5 percent. During the same period, the nominal GNP grew at an annual rate of only 2.2 percent and real GNP declined at a rate of 2.8 percent.

Both Federal Reserve and private forecasters were predicting an upturn in the third quarter. The strong M1 growth in the first half was felt to presage such an upturn. As we moved into the third quarter, however, it became apparent that the widely forecast upturn was not occurring. The economy was still contracting. The FOMC responded by setting aside the M1 target, permitting interest rates to decline despite the M1 overshoot.

Sufficient time has passed to assess the wisdom of this judgment. Suspending the rule did not lead to excessive real growth or to a reacceleration of inflation.

Milton Friedman has argued that monetary policy should ideally be conducted by a few clerks at the New York Fed who should be instructed to provide a constant and low rate of growth of the money supply. He argues that Federal Reserve officials reject this advice only because it would eliminate their power. One can only speculate what would have happened if Milton's clerks were running monetary policy in the last half of 1982. The rate of inflation would probably be even lower than it is today, but the costs in terms of employment and output would have been prohibitive. Furthermore, the impact of a rigid monetary rule on an already shaky financial structure, both domestic and international, might have been catastrophic. It was a classic case of the occasional need for rules to be tempered by discretion.

In the last half of 1982, monetary policy was the only instrument that could have been applied quickly and powerfully in response to the unexpected weakness of the economy in the third quarter. In 1985, with fiscal policy almost completely immobilized, it is even more unrealistic to contemplate focusing monetary policy solely on inflation control.

What To Target?

Three years ago, I published an article in which I argued that we could no longer measure the money supply in the United States; that is, we could no longer distinguish balances held for transactions purposes from other balances. I argued that we could not assume that the historical relationship of M1 and M2 to the nominal GNP would prevail in the future.²

The reasons were simple. In the case of M1, we could not assume that interest-bearing "money" would behave in the same way as the old non-interest-bearing money. In the case of M2, we could not assume that deposits bearing market-determined rates would behave in the same way as deposits bearing regulated rates. To the extent that bankers kept the rates on money market deposit accounts reasonably in line with market rates, we should expect M2 to be much less interest-elastic than in the past.

In the place of M1 and M2, I argued that we should target on those aggregates that were sufficiently broad so as not to be impacted by financial innovation--specifically, total liquid assets and total, nonfinancial debt (hereafter, debt).

With the passage of three years, it is clear that financial innovation has, indeed, changed the behavior of M1 and M2, but factors other than financial innovation have also been at work which have affected the behavior of all the financial aggregates.

Goodhart's Law worked with amazing swiftness with respect to debt. No sooner had the FOMC adopted a monitoring range for debt than it became apparent that the very stable relationship which Benjamin Friedman of Harvard had found between debt and the nominal GNP over a number of decades had gone off the track. We can explain a large part of it. In recent years, the debt aggregate has been inflated by massive substitutions of debt for equity, in buy-out situations and in the actions of corporations to protect themselves against buy-outs. It has also been inflated by advance refunding issues of state and local governments. These debt issues do not generate economic activity. However, even after making a rough adjustment for these factors, it appears that more debt is now required to generate a dollar of nominal GNP than was required in the 1970s.

In addition to financial innovation, M1 behavior has been impacted by large changes in interest rates which have dramatically changed the opportunity costs of holding M1-type assets. The introduction of the Super NOW account, which can pay a market rate, was expected to have reduced the interest-elasticity of M1. In fact, because of the way these accounts have been priced, the introduction of the Super NOW has increased the interest-elasticity of M1.

Bankers have been quick to reduce the rate paid on Super NOWs when interest rates declined, but loath to raise the rate when market rates rose. In contrast, when pricing money market deposit accounts, bankers promptly adjusted MMDA rates in both directions. (See Charts 1 and 2.) As a result of this pricing practice, the opportunity cost of holding Super NOWs can vary substantially. In early 1984 the opportunity cost of holding Super NOWs instead of money market funds was about 1.5 percent and Super NOWs were growing at about a 30 percent rate. By the third quarter of 1984, the opportunity cost of holding Super NOWs had risen to 3 percent and the growth rate of Super NOWs fell below 10 percent. By early 1985, the opportunity cost had dropped to 1 percent and the growth rate surged to 40 percent. This interest sensitivity accounted for a significant part of the changes in M1 growth rates in 1984-85.

CHART 1 SELECTED YIELDS

SUPERNOW AND MONEY MARKET DEPOSIT ACCOUNTS

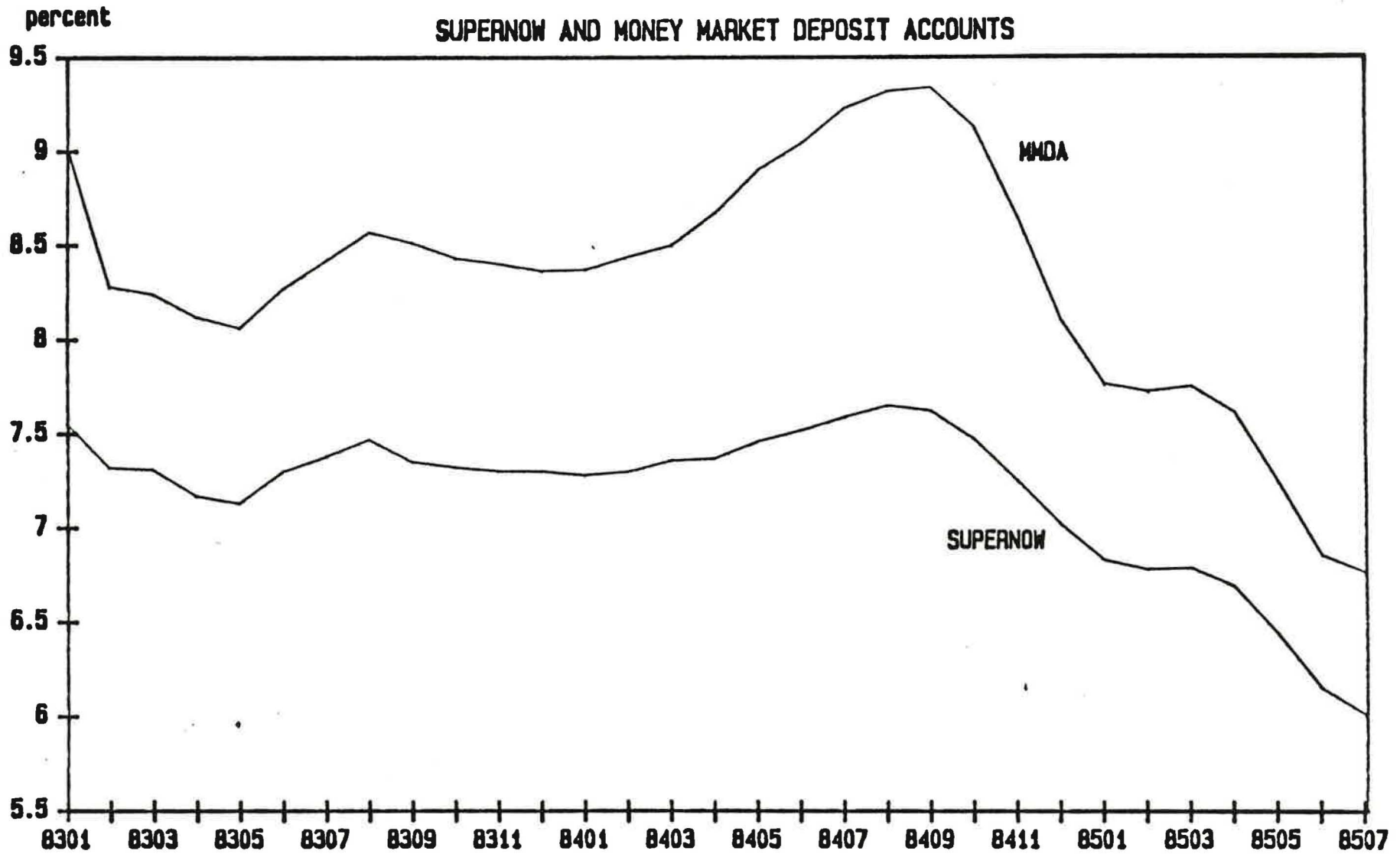
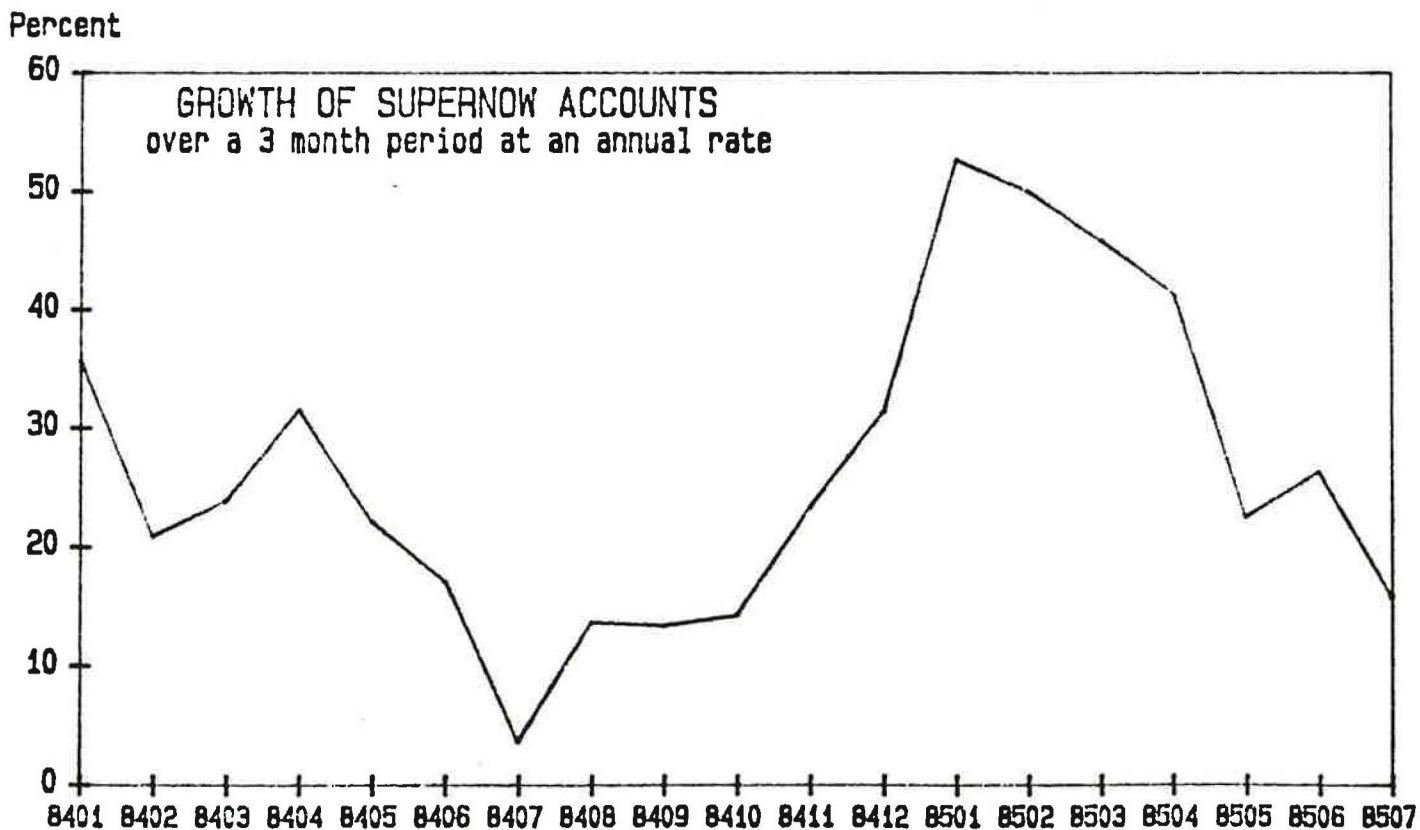
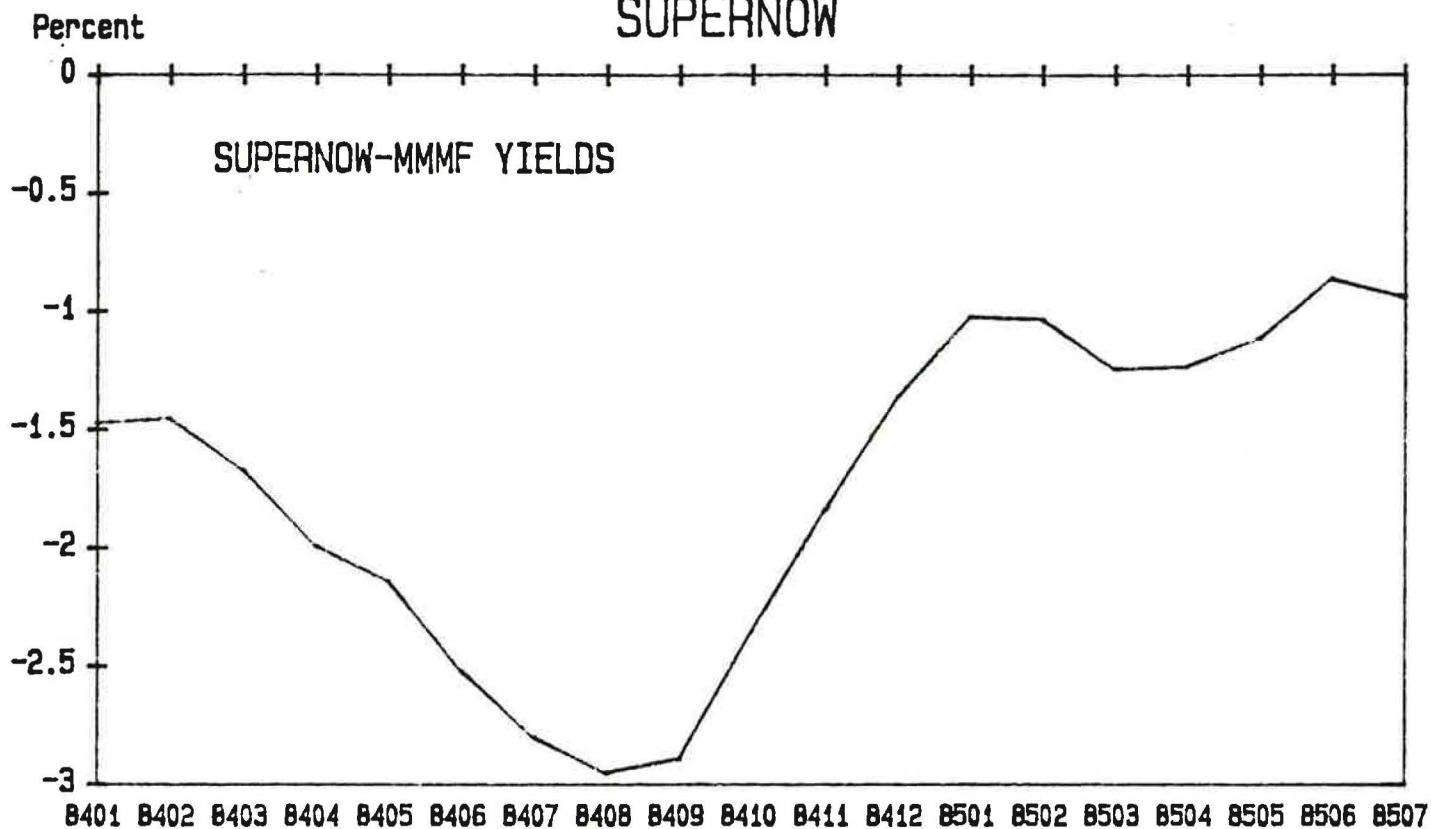


Chart 2

SUPERNOW



The M1-nominal GNP relationship has become even more unpredictable than I anticipated three years ago. In the autumn of 1983, prominent monetarist economists forecast that the economy would move into recession in the first half of 1984 and that the inflation rate would accelerate sharply in the second half.³

The combination of two such seemingly contradictory events would have been most unusual in business cycle history. The forecasts were based on rules of thumb with respect to the lagged relationships of M1 growth, nominal GNP and the inflation rate, rules of thumb that had often been reliable in the past. In the annals of economic forecasting there can be few forecasts with such large misses. Instead of moving into recession, the first half of 1984 showed a real growth rate of 8.4 percent and, instead of a sharp escalation in the inflation rate in the last half, the inflation rate actually declined. Forecasting the nominal GNP and the inflation rate on the basis of past M1 growth has become a chancy enterprise, indeed

In three out of the past four years, the FOMC has either set aside the M1 target (1982) or rebased the target on the second quarter level (1983 and 1985). Only in 1984 did the original target set for M1 prove to be compatible with a reasonably acceptable outcome for the nominal GNP. This fact speaks volumes about the suitability of M1 as a target for monetary policy.

We have been pointing to financial innovation and large interest rate changes as the source of aberrant behavior by the aggregates. The information presented in the table and Chart 3 suggests a third factor. Shown on the table and chart are the cumulative deviation of velocity from the 1970-80 trend for M1, M2, M3, total liquid assets (L) and debt.⁴ Although the amplitudes of the deviations differ widely, all of the aggregates showed larger than expected velocity gains in 1981 and much larger than expected velocity declines in 1982-85.

This suggests a third factor at work which has affected all of the aggregates in different degree but in a similar fashion. Perhaps the third factor is the sharp decline in the rate of inflation, which since 1981 has led people to be willing to hold more financial assets relative to real assets and relative to income.⁵

If we are to target financial aggregates, which should we use? My answer is that the only ones we should use are those with a long track record and those whose character has not changed in recent years. This leaves out M1 and M2, since they are new aggregates, even though they bear old designations. The behavior of M3 since 1980 has been fairly good, but it has to be a very suspect aggregate in an era when the regulatory authorities are pressing banks and thrifts to

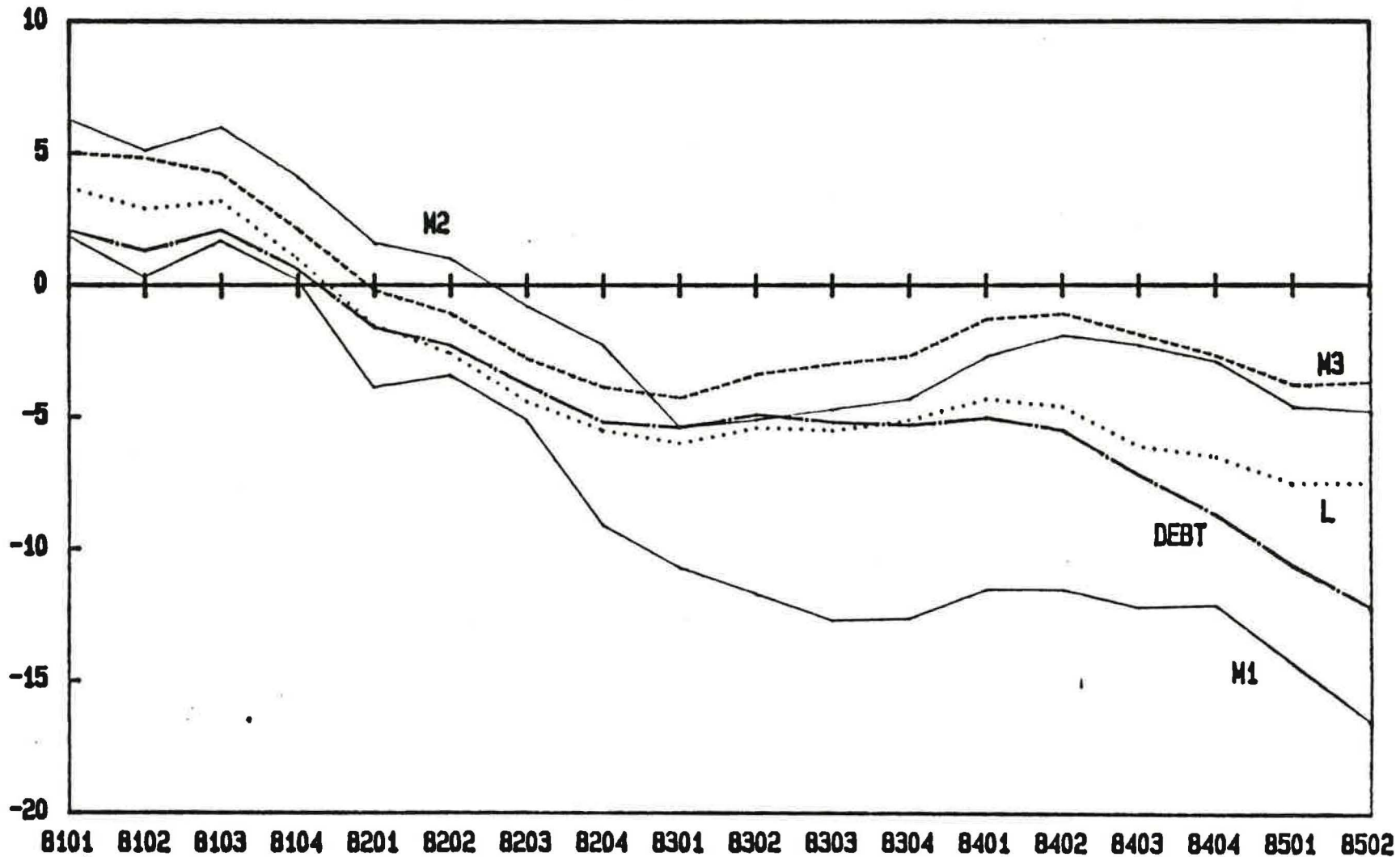
Recent Behavior of Velocities
 Deviation from 1970-1980 Trends
 (in percent)

	<u>M1</u>	<u>M2</u>	<u>M3</u>	<u>L</u>	<u>D</u>
1981:I	1.9	6.3	5.0	3.7	2.1
1981:II	0.3	5.1	4.8	2.9	1.3
1981:III	1.7	6.0	4.2	3.2	2.1
1981:IV	0.2	4.1	2.1	1.0	0.6
1982:I	-3.9	1.6	-0.2	-1.5	-1.6
1982:II	-3.4	1.0	-1.1	-2.6	-2.3
1982:III	-5.1	-0.8	-2.8	-4.4	-3.8
1982:IV	-9.1	-2.3	-3.9	-5.5	-5.2
1983:I	-10.7	-5.4	-4.3	-6.0	-5.4
1983:II	-11.7	-5.1	-3.4	-5.4	-4.9
1983:III	-12.7	-4.7	-3.0	-5.5	-5.2
1983:IV	-12.6	-4.3	-2.7	-5.1	-5.3
1984:I	-11.5	-2.7	-1.3	-4.3	-5.0
1984:II	-11.5	-1.9	-1.1	-4.6	-5.5
1984:III	-12.2	-2.3	-1.9	-6.1	-7.2
1984:IV	-12.1	-2.9	-2.7	-6.5	-8.7
1985:I	-14.3	-4.6	-3.8	-7.5	-10.6
1985:II	-16.5	-4.8	-3.7	-7.5	-12.1
Mean Absolute Error 1970:I-1980:IV	1.0	2.2	2.2	1.6	0.7

CHART 3 VELOCITY DEVIATIONS

from 1970-80 Trends

percent



improve their capital ratios. It is quite possible, in fact, that the fairly decent behavior of M3 has been a consequence of banks moving substantial assets off their books to improve their capital ratios. M3 may also not mean what it used to mean.

What about my two candidates of three years ago? I will confess that when I recommended total, non-financial debt as a target three years ago, it never occurred to me that American corporations would be issuing vast quantities of debt for the sole purpose of retiring equity. I will not comment on the sanity of this in an already over-leveraged economy, but it is clear that if we are to utilize a debt target, we will have to differentiate debt that will generate economic activity from debt that will not.

This leaves me with total liquid assets. It seems to me that if we can no longer measure transactions balances, the next logical step would be to concentrate on controlling liquidity. I can emphasize how very personal a view this is by telling you that I doubt I could get two votes for this proposition on the FOMC, even if one of the votes were mine.

How has total liquid assets performed as a target during the last four years? Better than the rest. It had a disastrous year in 1982, when its velocity was 6.5 percent below trend. But 1982 was a disastrous year for all of the financial aggregates, with deviations from trend velocity ranging from -5.8 percent for debt to -9.3 percent for M1. In the other three years, the velocity for total liquid assets fell 0.7 percent faster than its trend, with the largest deviation being -1.4 percent in 1984.⁶

Since 1981 we have seen an increased willingness to hold liquid assets relative to income. This has impacted all of the aggregates. When the adjustment to a lower inflation rate has been completed, there is every reason to believe that the relationship of total liquid assets to the nominal GNP will be similar to that of earlier years. This, however, is not the case with the new interest-bearing M1. There is no basis for thinking that its future velocity will be similar to that of the old non-interest-bearing M1. We will need at least another decade of data before we can be confident in forecasting the velocity of the new M1.

To Sum Up

Asked the question "What have we learned since October 1979?" I would list the following:

1. A targeting procedure for monetary policy has great disciplining values which we should not discard.

2. There is no variable that the Federal Reserve can target which has a highly predictable relationship to the nominal GNP.
3. It is not feasible for monetary policy to focus solely on the price level, since there is no other policy tool available with which to deal with an unexpected weakness in the economy--à la 1982--or unexpected strength.
4. If one accepts the first three propositions, then it follows that the optimum monetary policy regime is one of rules tempered by discretion.
5. I would choose a total liquid assets rule for two reasons: (1) unlike all of the other aggregates its meaning has not been changed by the events of the past 10 years; and (2) if we can no longer measure transactions balances, controlling liquidity is the next best choice.

FOOTNOTES

¹See Milton Friedman's latest views in Challenge, July/August 1985.

²Frank E. Morris, "Do the Monetary Aggregates Have a Future as Targets of Federal Reserve Policy?" Federal Reserve Bank of Boston, New England Economic Review (March/April 1982). See also Frank E. Morris, "Monetarism without Money," Federal Reserve Bank of Boston, New England Economic Review (March/April 1983).

³See Edward Mervosh, Business Week, December 12, 1983, "Milton Friedman's Recession Forecast Sparks a Controversy:" Milton Friedman, the Nobel laureate economist, is playing Scrooge this holiday season. While most economists and Administration officials are enjoying the steady diet of cheerful economic news coming from Washington, Friedman, the guiding light of monetarism, is gloomily predicting that the Federal Reserve is setting the U.S. up for a return to stagflation next year, possibly as early as the first half. Friedman's scenario is based on straightforward monetarist analysis: By letting the money supply grow too fast from mid-1982 to mid-1983, the Fed has insured a sharp reacceleration of inflation at least by the second half of 1984. Beginning this summer, the Fed reined in the growth of the money supply, and Friedman argues that if the money growth continues its limp performance for another couple of months, the economy will be heading into a sharp slowdown or even a recession early next year. 'If money growth continues at its present rate for another two months, we are almost sure to have a recession in the first half of 1984,' he predicts.

Friedman holds out little hope that money growth will accelerate soon enough to head off the impending disaster.

See also: Walter Guzzardi, Fortune, March 19, 1984, "The Dire Warnings of Milton Friedman:"

Still when Friedman takes his eye off the (tennis) ball to regard the economy, he is depressed. He forecasts a slow current quarter, with real growth of the gross national product running at an annual rate of only 1%; he also sees a strong possibility that by the end of this year inflation could reach an annual rate of 9%.

⁴I am indebted to my colleague, Richard W. Kopcke, for this analysis.

⁵This was suggested to me by Donald L. Kohn of the staff of the Federal Reserve Board of Governors among others.

⁶The velocity deviations from trend are measured fourth quarter to fourth quarter.