Monetarism and the M1 Target

by William T. Gavit

The Federal Reserve has once again decreased emphasis on the M1 target as a guide for short-run policy actions. In the first four months of 1986, money grew at an annual rate of 11.8 percent, while nominal gross national product (GNP) growth averaged only 4.6 percent and inflation continued to be lower than expected. Policy makers and economists, including monetarists, believe that the Federal Reserve is no longer an appropriate short-run guide for monetary policy. 1

Chart 1: Velocity of M1 and the Commercial Paper Rate, 1950-1985

The monetarist solution to this problem is to discuss the apparent breakdown in the relationship between M1 and economic activity. The first part of this essay makes a claim that is quite simple, although perhaps controversial; namely, that the breakdown in the relationship between M1 and nominal GDP is not apparent. The illusion of stability between M1 and nominal GDP that prevailed after World War II resulted from the accelerating inflation and interest rate regulations that uniquely characterized that period. Such stability should not be considered normal.

In fact, as the first part of this essay shows, the recent variability of M1 velocity, while large in comparison to our experience after World War II, is still small relative to our experience before that war. The monetarist calls for a constant money growth rule followed an expectation that inflation would fall in a predictable fashion with a rise in interest rates. However, experience shows that it is no longer a constant.

Conclusion

The recent instability of M1 velocity is due to forces that were set in motion by economic policies of the past. The attempt to change important monetary or bank regulatory policy are likely to lead to a temporary period of instability in velocity. Even when this period of transition is over, we should expect M1 velocity to be more variable in a regime of stable prices (or stable inflation) and deregulation of deposit interest rate ceilings than it was during the period of accelerating inflation. To conduct policy efficiently in such an environment, it is important to develop institutions that allow the Federal Reserve to commit to long-run price stability. At the same time, we must retain the short-run flexibility to respond to technical advances and other shocks to the structure of financial markets.
When interest rates rise, people economize on non-interest-bearing currency and on checking balances, and then velocity falls. When rates fall, people are more likely to leave funds idle as cash balances, and velocity rises. Of course, interest rates vary from day to day, but firms and households do not adjust their money balances to every short run change in interest rates. It takes time and resources to rearrange our monetary affairs. Therefore, the adjustments will be made when it is convenient, or when there is a significant change in the level of interest rates that people expect to be sustained.

We have also seen a rise in velocity (decline in the demand for money) with the associated rise in interest rates. The innovations in the banking industry. For example, households use credit cards for transactions, reducing average balances that are kept in checking accounts. Firms have developed a wide array of cash management techniques. The technological innovations were partly spurred by rising interest rates; when interest rates are high, the economies of cash management methods will become more beneficial, but others, with lower marginal costs, will remain.

The Velocity Breakdown in the 1980s

During the 1970s, many came to believe that these other factors (interest rates and innovations in cash management) didn’t matter too much for the purpose of choosing the M1 target. While velocity growth was quite variable from quarter to quarter, fluctuations were largely offsetting. Over periods of a year or two, M1 velocity usually seemed to grow at a rate of 3 percent, regardless of what happened in the short run to interest rates and advances in cash management. Indeed, one of the debates among economists was whether the Federal Reserve’s monetary policy should take account of changes in interest rates and other factors affecting money demand. Monetarists said no, claiming that while interest rates mattered in theory, they did not seem to matter much in practice. A more accurate description is that velocity and interest rates in the period from 1950 to 1980 seems to confirm the monetarist position (See chart 1).

Velocity rose in a smooth fashion from 2.52 in 1950 to 7.11 in 1981. The interest rate shown in chart 1 is the short term (4-6 month) commercial paper rate. This interest rate rose from 1.45 in 1950 to 14.76 in 1981; however, its rise was not smooth. While the trend in both velocity and interest rates was rising, there does not appear to be much quarter-to-quarter or year-to-year co-movement between these variables. Consequently, there did not seem to be much reason to make the monetary targets conditional on the outcome for interest rates. Furthermore, given the relation between velocity and interest rates from 1950 to 1981, one would not have predicted an abrupt decline in velocity, even knowing the actual outcome for interest rates in the early 1980s.

The smooth rise in velocity occurred despite the period we are examining being the fastest growing in history with our current system of money and income. While velocity and interest rates have been rising, there is a long-standing relationship between M1 and interest rates (See chart 2). While velocity changes in interest rates did not seem to be closely related to M1 velocity, it appears that changes in the trend of interest rates have been associated with changes in the trend of velocity. When the trend in the interest rate was flat, from 1985 to 1929, the trend in M1 velocity was flat. When interest rates fell, velocity fell. After World War II, rates began to rise—approximately doubling every decade from 1950 to 1980. Of course, the velocity also rose. If the decline in interest rates since 1982 is regarded as a perma- nent change, there was an initial decline with a decline in the velocity trend.

From this perspective, what seems unusual is that the experience of the 1980s, but rather the apparent stability of velocity from 1950 to 1980. It is likely that this relative stability was made possible by a combination of two atypical circumstances. The first was the combination of inflation and rising interest rates of the period. The other was the prohibition against paying interest on deposits. These two circumstances, which combined to produce the steady rise in velocity, were both eliminated in the early 1980s. Not only was there a change in the growth trend of M1 velocity in the 1980s, but there was also a change in the level of velocity measured by changes in the level. This measure of the variability of M1 velocity is shown in chart 3. This measure includes changes in M1 velocity from 1895 to 1985. Once again, we see that the different times and periods of velocity growth in the 1980s is not so different if we take a longer historical perspective. The variability in M1 velocity in the early 1980s looks like the period before World War II.

The recent period, 1981-1985, the data for this early period of low quality. But these data that Milton Friedman collected and used to support his monetarist rule of constant money growth. ¹ Using these data, Friedman concluded that the money stock grew at a consistent rate (quarter-to-quarter or year-to-year) relationship between money and the economy was so unpre- dictable that the money stock should be used so fine-tune the path for nominal GNP. He also went so lengths to argue that the mechanics of velocity instability in velocity were due to a failure to maintain stable growth in the monetary base.

Friedman argued that the social costs of having the economy adjust to money demand disturbances are high. The social costs of having the economy adjust to the uncertain environment associated with discretionary monetary policy.

When one cannot prove or disprove the proposition that money demand disturbances are high, the Federal Reserve could make operational a rule for the monetary base. When asked to make monetary policy recommendations, monetarists have been supported by recommending that the Federal Reserve adopt a constant

3. See Milt Friedman, “The Quantity Theory of Money – A Restatement,” in Studies in the Quantity Theory of Money, University of Chicago Press, 1956, p. 321. While Friedman advocated alternative measures of money (M2 in his early work and, more recently, the monetary base), we use the term money to refer to balances held primarily to conduct transactions. This correspond to the definition of money as M1. M1 includes currency, travelers’ checks, demand deposits, and other checkable deposits such as NOW accounts and credit union share drafts. A more precise definition, see any recent issue of the Federal Reserve Bulletin, page 43.


5. Friedman recommends a 4 percent constant money growth rule in Chapter 4 of Milton Fried- man, A Program for Monetary Stability, Fortham University Press, 1959.

6. See Milt Friedman and Anna J. Schwartz, A Monetary History of the United States, 1867-1960, Princeton University Press, 1963. For example, in Chapter 7, Friedman and Schwartz attribute the steep decline in velocity to the seventy of the depression of the 1930s, which is the 35 percent decline in the stock of money between August 1929 and April 1933.