

# Monetary Trends



## M2 Velocity Looks to Be on a New Track

The chart is a scatter diagram of M2 velocity and a measure of the opportunity cost of holding M2 balances.

M2 is defined as the sum of business and individual holdings of currency plus checking, savings, and time deposit accounts including money market mutual funds. M2 is a broad measure of liquidity. M2 velocity is the ratio of annual nominal GDP to M2. It measures how many times M2 turns over in making payments included in national spending, and is thus a measure of the work done by M2 in generating nominal GDP. M2 opportunity cost is the difference between the yield on a 10-year Treasury bond and the average rate of interest that M2 balances yield. The 10-year bond yield approximates the rate of return that would be given up by someone holding M2 balances.<sup>1</sup>

The scatter diagram shows that before the 1990s, M2 velocity ranged between 1.6 to 1.8 while its bond rate opportunity cost ranged between 1.5 and 6 percentage points. Theoretically, M2 velocity would vary directly with its opportunity cost. Empirically, it does, as estimated with quarterly data from 1959 through 1989. The fit, however, is loose.

The scatter diagram shows that in the 1990s, M2 velocity shifted up sharply from a 1.6 to 1.8 range to about 2, where it has remained for more than three years. Such a short period may not be long enough to establish that M2 velocity has shifted from one track to another, but it looks as if it has. The “new track” was estimated with data from 1995:1 through 1998:2. The shift in the relationship is presumably the result of institutional changes, such as the availability of financial services that have increased the efficiency of M2 balances in supporting spending. In effect, the information technology revolution permits more “bang for

the buck” in money management even as it permits “just in time” inventory management elsewhere.

Whatever the cause, if M2 velocity stays around 2 and remains relatively insensitive to opportunity costs, then current M2 growth would be associated with nominal GDP growth of roughly the same magnitude. Since trend real growth is about 2.5 percent, M2 growth of 5 percent to 7 percent—such as has been observed in recent years—would be associated with nominal GDP growth of 5 percent to 7 percent and inflation of 2.5 percent to 4.5 percent. Inflation currently is about 1.5 percent. Thus, if M2 growth continues to range from 5 percent to 7 percent and M2 velocity doesn’t reverse its upward shift, the inflation trend would accelerate by 1 to 3 percentage points or more. It is such arithmetic that has some economists worried about inflation rising again.

—William G. Dewald

<sup>1</sup>Many studies of velocity use a Treasury bill rate rather than a bond rate in measuring opportunity cost, e.g. Richard G. Anderson “Is M2 Growth on a New Track?” *Monetary Trends*, May 1997. The bill rate fits marginally better over 1959-1989, but worse over 1995:1-1998:2.

