

Money Demand Hypotheses

Even without full knowledge of the transmission mechanism, the usefulness of a money supply target could be established if income could be shown to be the principal independent variable in a reliable demand for money function. If other determinants enter importantly, such as interest rates, the problem of the transmission mechanism is reopened.

The range of money demand hypotheses is wide. Measured income, permanent income, wealth, short-term rates, long-term rates, have been among the principal explanatory variables. The introduction of what amounts to a general trend variable, in the form for instance of permanent income, and of the lagged value of the dependent variable, as in stock adjustment models, seems virtually to assure a good fit in some time series models. But knowledge of the relation of income to the rest of the independent variables, that is, of the transmission mechanism, is still needed where such variables are present if a money supply target is to be useful.

At a theoretical level, the most striking contrast is that between the economies of scale model of demand for money presented by Tobin⁵ and Baumol,⁶ the "economies of large numbers" model of Patinkin, and Friedman's⁷ view that money is a luxury good, implying diseconomies of scale. The Tobin-Baumol-Patinkin hypothesis so far has not been confirmed by cross-section analysis of firms' money holdings. Friedman's evidence is impressive up to the end of World War II. Since that time, the income elasticity of money, previously well above unity, has been below unity. If, as seems intuitively plausible, liquidity is a luxury, firms and households seem to have been enjoying it in other forms besides money.

The empirical evidence employed by most analysts rests upon monetary data of particular countries, often the United States, and often in time series form. I have tried to examine some of the more obvious relations for a cross section of countries. This permits

⁵ J. Tobin, "The Interest Elasticity of Transactions Demand for Cash," *Review of Economic Statistics*, August 1956, pp. 241-247.

⁶ W. J. Baumol, "The Transactions Demand for Cash: An Inventory Theoretic Approach," *Quarterly Journal of Economics*, November 1952, pp. 545-556.

⁷ Milton Friedman, "The Demand for Money: Some Theoretical and Empirical Results," *Journal of Political Economy*, August 1959, pp. 327-351.