
FRBSF WEEKLY LETTER

January 13, 1989

Time To Give Credit Its Due?

The last ten years have seen significant innovations in the financial sector of our economy that have altered the environment in which the Federal Reserve conducts monetary policy. This *Letter* reviews some of these developments and argues that now may be a good time to examine whether credit-based measures of financial intermediation might be useful policy indicators instead of, or in addition to, the traditional monetary aggregate measures.

Money-based policies

Over most of the period since 1975, the Federal Reserve has expressed its policy stance by setting targets for the growth of the monetary aggregates, M1, M2, and M3. Until quite recently, M1, which comprises the outstanding stocks of currency and fully-checkable deposits, was found to be a particularly useful target for policy purposes, because it was a reasonably reliable leading indicator of real GNP and inflation. Rapid growth in M1 tended to signal an impending uptick in economic activity and hence a need to restrict the supply of bank reserves in order to push up interest rates, slow the growth of the economy, and head off inflation.

This observed behavior of M1 as a leading indicator rested on solid theoretical ground. Both Keynesian and monetarist economists argue that the supply of money has an important bearing on the rate of price inflation in the economy. They agree that, at least in the short run, the supply of and demand for money, relative to other, less liquid, financial assets, influence the level of interest rates, which in turn affect the level of economic activity and the rate of inflation. Monetary policy works by affecting the ability of the banking system to create money. When it undertakes open market operations that decrease bank reserves, the Federal Reserve indirectly reduces the supply of money relative to the demand for it, causing interest rates to rise and economic activity to slow. Since M1 comprises the highly liquid assets that serve as the medium of exchange in the economy, it corresponds closely to

the concept of money in this theoretical framework.

Thus, on theoretical as well as purely empirical grounds, M1 was a logical target for monetary policy. In addition, because currency and checkable deposits did not pay interest, members of the public had a strong incentive to limit their holdings of M1 to the minimum level needed for transactions purposes. As a result, the public's demand for M1 was more directly related to developments in the macroeconomy than were the broader aggregates.

Financial innovation

In the last ten years, virtually all the restrictions on the interest yields payable by depository institutions on their deposit liabilities have been swept away. This process of deregulation has reduced the distinctions both among the monetary aggregates and between monetary and nonmonetary assets.

The introduction of interest-bearing checking accounts, for example, has reduced depositors' incentives to monitor carefully the distribution of their liquid assets between transactions and non-transactions accounts. As a result, checkable deposits now contain both transactions funds and saving balances. This commingling of transactions and saving balances has lessened the uniqueness of M1 and weakened the link between aggregate economic activity and the demand for the narrow aggregate. As a result, M1 no longer is a reliable leading indicator, and the Federal Reserve ceased setting formal targets for the growth of this aggregate in 1987.

However, this change in the nature of M1 is just one manifestation of a more fundamental concern that the institutional and regulatory changes of the last decade have made the line between instruments that serve as "money" and those that do not more difficult to draw. This weakens the usefulness of the traditional theoretical paradigm in which interest rates are viewed as being deter-

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mined by the interaction between the supply of and the demand for money, since the definition of what we mean by "money" has become a lot more "fuzzy."

A problem for the Federal Reserve

From the point of view of the Federal Reserve, a more immediate implication of this "fuzziness" is that there is no longer a single, well-understood, leading indicator that will serve as a reliable guide in the formulation of monetary policy. The Federal Reserve continues to set targets for the broad monetary aggregates, M2 and M3, but recognizes that at times neither one may be a particularly reliable indicator in the short run. In 1987, for example, M2 increased only four percent, which was below the lower bound of the targeted 5½ to 8½ percent range, while the economy expanded strongly and inflation picked up a bit. Hence, the growth of M2 and M3 relative to target receives less attention than the growth of M1 did in the early 1980s.

In view of the theoretical paradigm that has guided monetary policy for some time now, economists understandably would like to find some alternative monetary indicator that could replace M1 as a policy target. However, deregulation may have so muddied the distinction between money and other assets that this distinction and the paradigm that considers it important may no longer be useful for policy purposes. A new paradigm and a new indicator may be necessary.

The role of intermediaries

One potentially promising avenue of research is the impact of financial intermediation on the economy. For the economy to grow, we must continually invest resources in plant and equipment, education, homes, cars, and other durable goods. The funds needed to finance these investments ultimately come from the nation's savings. Financial intermediaries assist in the process of channelling funds from those who save to those who are in a position to undertake productive investments. By simultaneously providing savers with instruments that meet their individual maturity, denomination, and risk requirements, and borrowers with financing suited to their specific needs, intermediaries reduce the cost of moving funds from savers to investors. This lowers the general level of interest rates facing investors, thus making some investment projects profitable

that otherwise would not be. More investment occurs and we accumulate larger stocks of capital.

The traditional money-interest rate paradigm does not dispute this role of financial intermediaries in reducing the cost of capital in the long run, but does suggest that changes in the degree of intermediation are not significant factors affecting interest rates in the short run. In recent years, however, a number of economists have begun to examine the shorter-run impact of changes in the level of intermediation, or at least certain types of intermediation, on interest rates, economic activity, and prices. The emphasis of this research is on why these financial intermediaries come into existence and on how shocks to their ability to intermediate affect the overall economy. These economists argue that banks, in particular, have an impact on the economy not only because, as the traditional paradigm suggests, they create money, but also because they provide a particularly important form of financial intermediation for which there are few good substitutes.

Unlike most other intermediaries, banks maintain continuing business relationships with their customers, through the deposit and transactions services they supply. These continuing relationships make it easier for banks to obtain up-to-date information about the credit-worthiness of their customers and to monitor their activities. Having access to this information enables banks to provide credit to many smaller or more risky businesses and to individuals, who would find it difficult or impossible to borrow in anonymous financial markets. As part of their continuing customer relationships, banks specialize in providing short-term "repeat borrowing" to their customers rather than long-term loans of the type provided, for example, by insurance companies or pension funds. According to this view, then, the activities of banks are important because they alone provide a particularly important form of credit.

Thus, unlike the traditional paradigm, which claims that a tight monetary policy raises interest rates by reducing the supply of money relative to the demand for it, this view suggests that a decrease in bank reserves restricts the ability of banks to supply credit and it is this that drives up interest rates, with the decrease in the money stock being viewed as a by-product.

An early example of this research was the finding by economist Ben Bernanke that the collapse of the banking system in the 1930s worsened the Depression not so much because it reduced the money supply as because it interrupted the flow of bank credit. If this financial disruption had not occurred, Bernanke claims, nonfinancial businesses might have been better able to weather the downturn.

Is a new indicator needed?

In the not-too-distant past, a monetary aggregate like M1 could serve equally well as an indicator of changes either in the money supply/money demand relationship or in the degree of bank intermediation. This was because banks raised the bulk of their funds by issuing checkable deposits. In the 1950s, demand deposits represented about two-thirds of total bank liabilities. This meant that changes in the outstanding stock of transactions deposits were closely related to changes in the amount of financial intermediation through the banking system.

When the Federal Reserve reduced the stock of reserves and interest rates rose, this rise could be attributed equally well either to the slowing in monetary growth or to the simultaneous decline in the degree of financial intermediation provided by banks. Nonetheless, most economists found the money supply/money demand paradigm a more useful way of analyzing interest rate movements, and largely ignored the macroeconomic effects of changes in financial markets that did not involve changes in the demand for or supply of money.

Over the last three decades, however, the link between the stock of transactions money and the supply of bank credit has weakened, as banks have issued more non-transactions liabilities and

as non-bank institutions like money market mutual funds have begun to issue liabilities that are close substitutes for transactions accounts. Checkable deposits at banks now fund only one-third of all outstanding bank loans. Conversely, the volume of bank loans represents only one-half of total M3. As a result, changes in neither the broad nor the narrow concept of money are good indicators of changes in the flow of bank credit.

Consequently, if bank intermediation is an important determinant of interest rates, output, and prices, as some of the recent research suggests, a monetary aggregate no longer will provide the proper signals to policy-makers. Rather than look for a *monetary* indicator for policy, we may find it more useful to turn our attention to *credit-based* measures. Although broad measures of total debt outstanding already are monitored by the Federal Reserve, these do not appear to be good short-run indicators. The theoretical approach that focuses on the special role of banks or bank-like intermediaries, suggests that narrower credit aggregates that reflect the share of total credit flows provided by these institutions may turn out to be more useful for policy purposes.

It must be recognized however, that although these credit flows might provide useful information for policy purposes, it is unlikely that policy-makers would be able to control them with any precision. Since banks issue many liabilities with either zero or low reserve requirements and have large holdings of marketable securities, the ability of the Federal Reserve to alter the stock of bank loans by changing the supply of bank reserves is probably quite limited.

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