

# The Money Supply

By William F Hummel

What is meant by the *money supply*? The term itself implies that a certain amount of money exists at any given time, even though the quantity may be unknown. In truth there can be no meaningful measure of the quantity because it is continually varying as a function of demand.

The Fed has its own arbitrary measures of the money supply that it once used to help guide its monetary policy decisions. It defines money as the total of cash in circulation and deposit liabilities of banks and thrifts. At one time it set targets for the growth of the money supply. Now it largely ignores its own measures because it has found little correlation between them and its major policy objectives – limiting inflation and unemployment.

## Monetary Aggregates

The Fed has defined three monetary aggregates M1, M2, and M3. The narrowest definition, M1, includes the transaction deposits of banks and cash in circulation. M2 adds savings accounts, small time deposits at banks, and retail money market funds. M3 adds large time deposits, repurchase agreements, Eurodollars, and institutional money market funds. In March 2006 the Fed discontinued tracking M3 because it does not convey information about economic activity that is not already embodied in M2.

Note that the Fed's definition of the money supply includes only what the non-bank sector holds. Thus the reserves of banks, i.e. vault cash and deposits at the Fed, though a part of the monetary base, are not included in the monetary aggregates. That means when a bank spends for itself, it increases the money supply. When it receives payments from the private sector such as interest on loans, the money supply decreases.

## Bank Lines of Credit as a Money Equivalent

An important shortcoming of the Fed's definition is that it ignores lines of credit, which can be exercised at the discretion of the borrower. Firms often hold substantial lines of credit from their banks, which they can use on short notice. Likewise consumers hold lines of credit in their credit card accounts that are just as useful for purchases as checking accounts or the currency in their wallets. Lines of credit increase *liquidity*, which is ultimately what counts in terms of enhancing aggregate demand.

When someone uses a credit card in a purchase, he/she automatically expands the money supply. The seller receives a new deposit in his account, which increases the total of demand deposits in the banking system -- until the buyer pays off the loan. The result is that consumers who roll over their credit card

loans rather than paying them off have increased the money supply on their own initiative by hundreds of billions of dollars. In effect, the money supply is substantially larger and less measurable than the Fed's definition.

### The Quantity Theory of Money

Economists regularly use the term *money supply* without defining it. A notable example is the equation of exchange in the quantity theory of money.

$$MV = PT$$

This relates the money supply,  $M$ , and the velocity of money,  $V$ , to the average price level,  $P$ , and the total number of transactions,  $T$ , in a given time period. The equation is simply an *identity*, meaning it is true by definition. Yet it is often used to "prove" that the average price level increases with the quantity of money. An identity says nothing about causal relations. The only thing we know is the product  $MV$ , which equals the national income,  $PT$ , which itself is only roughly measurable. The quantity of money,  $M$ , remains undefined and unknowable.