

What's All This About the Ms?

While monetary policy is the subject of debates that capture the public's attention, the first steps in the formulation of policy may appear relatively mundane. We must first define and measure the money supply. Defining and measuring money has become an increasingly difficult task because of reforms in the financial system, and because people and banks hold money in myriad different forms.

Money Defined . . .

There is general agreement on a simple conceptual *definition* of money. However, the complexity of the real world and our rapidly evolving financial system prevent agreement on a single *measure* of money, and this can cause confusion.

The Federal Reserve defines monetary aggregates by grouping assets that the public uses in roughly similar ways. In defining these measures of money, the Fed draws somewhat arbitrary lines between groups of assets that serve in varying degrees as both the medium-of-exchange and store-of-value functions of money.

Depository institutions such as banks, savings and loan associations and credit unions report to the Fed the value of their time and savings deposits, vault cash and transaction accounts such as checkable deposits.

The data on checkable deposits are the primary source for the calculation of required reserves and the construction of the monetary aggregates. The Fed's Board of Governors and the Federal Open Market Committee use this information in the formulation of monetary policy.

. . . and Measured

M1 is the narrowest definition and measure of the money supply. It includes assets used primarily for transactions or as a medium of exchange. M1 includes currency and coin held by the nonbank public, demand deposits, other checkable deposits and traveler's checks.

M2 is a broader measure of money stock. In addition to the items included in M1, M2 includes the amount held in savings and small time deposits, money market deposit accounts (MMDAs), noninstitutional money market mutual funds (MMMFS) and certain other short-term money market assets.

M3 is an even broader definition of the money supply. It includes all of the components of M2 plus a number of financial assets and instruments generally employed by large businesses and financial institutions.

We can look at the three definitions of money in the following terms:

- M1 includes items that are primarily used as a medium of exchange.
- M2 includes items that are used as a store of value.
- M3 includes items that serve as a unit of account.

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The Fed considers a number of factors when it measures the monetary aggregates, but ultimately what matters is how the public uses the different forms of money available. For example, depositors can write checks on their MMDAs or their MMMFs. The public, however, primarily uses these types of accounts for savings and only secondarily for transactions. Therefore, these accounts are typically placed in M2 with savings accounts and time deposits, which also primarily serve the store-of-value function of money.

On the other hand, deposits in NOW (negotiable order of withdrawal) accounts are included in M1 because they are primarily used as a medium of exchange, even though they earn interest and depositors use them for savings.

1. What are the three basic functions of money?
2. Why is it important for the Fed to know the size and rate of growth of the money supply?
 - (A) What are the effects if the money supply grows too slowly?
 - (B) What are the effects if the money supply grows too rapidly?
3. Name a type of money that serves primarily as a medium of exchange.
4. Name a type of money that serves primarily as a store of value.
5. With the use of credit cards becoming more prominent and the availability of credit broader than ever, why are credit cards not included in the Ms?

6. Why is it difficult for the Fed to get an accurate measure of the money supply?

Economists use an equation made famous by Irving Fisher to show the relationship among money, price and real output. This equation is called the equation of exchange, and it typically takes the following form:

$$MV = PQ$$

M = the amount of money in circulation

7. Why must the Fed continue to develop new ways to track the money supply?

Q = real GDP or real value of all final goods and services

This equation attempts to show the balance between "money," which is represented on the left side of the equation, and goods and services, which are represented on the right side. For a given level of income velocity, if the supply of money grows faster than the rate of real output (changes in Q), then there will be inflation in the economy. Classical economists assumed that the velocity of money was stable (constant) over time because institutional factors—such as how frequently people are paid—

8. Use the data in Figure 35.1 to calculate M1, M2 and M3. Assume that all items not mentioned are zero. Show all components for your answers.



Figure 35.1

Calculating the Ms

Checkable deposits (demand deposits, NOW, ATM and credit union share draft accounts)	\$850
Currency	\$200
Large time deposits	\$800
Noncheckable savings deposits	\$302
Small time deposits	\$1,745
Institutional money market mutual funds	\$1,210

M1 = _____

M2 = _____

M3 = _____