

lifeblood of the circular flows of income and expenditure. A well-operating monetary system helps the economy achieve both full employment and the efficient use of resources. A malfunctioning monetary system distorts the allocation of resources and creates severe fluctuations in the economy's levels of output, employment, and prices.

The Functions of Money

Just what is money? There is an old saying that “money *is* what money *does*.” In a general sense, anything that performs the functions of money *is* money. Here are those functions:

- **Medium of exchange** First and foremost, money is a **medium of exchange** that is usable for buying and selling goods and services. A bakery worker does not want to be paid 200 bagels per week. Nor does the bakery owner want to receive, say, halibut in exchange for bagels. Money, however, is readily acceptable as payment. As we saw in Chapter 2, money is a social invention with which resource suppliers and producers can be paid and that can be used to buy any of the full range of items available in the marketplace. As a medium of exchange, money allows society to escape the complications of barter. And because it provides a convenient way of exchanging goods, money enables society to gain the advantages of geographic and human specialization.
- **Unit of account** Money is also a **unit of account**. Society uses monetary units—dollars, in the United States—as a yardstick for measuring the relative worth of a wide variety of goods, services, and resources. Just as we measure distance in miles or kilometers, we gauge the value of goods in dollars.

With money as an acceptable unit of account, the price of each item need be stated only in terms of the monetary unit. We need not state the price of cows in terms of corn, crayons, and cranberries. Money aids rational decision making by enabling buyers and sellers to easily compare the prices of various goods, services, and resources. It also permits us to define debt obligations, determine taxes owed, and calculate the nation's GDP.
- **Store of value** Money also serves as a **store of value** that enables people to transfer purchasing power from the present to the future. People normally do not spend all their incomes on the day they receive them. In order to buy things later, they store some of their wealth as money. The money you place in a safe or a checking account will still be available to you

a few weeks or months from now. When inflation is nonexistent or mild, holding money is a relatively risk-free way to store your wealth for later use.

People can, of course, choose to hold some or all of their wealth in a wide variety of assets besides money. These include real estate, stocks, bonds, precious metals such as gold, and even collectible items like fine art or comic books. But a key advantage that money has over all other assets is that it has the most *liquidity*, or spendability.

An asset's **liquidity** is the ease with which it can be converted quickly into the most widely accepted and easily spent form of money, cash, with little or no loss of purchasing power. The more liquid an asset is, the more quickly it can be converted into cash and used for either purchases of goods and services or purchases of other assets.

Levels of liquidity vary radically. By definition, cash is perfectly liquid. By contrast, a house is highly illiquid for two reasons. First, it may take several months before a willing buyer can be found and a sale negotiated so that its value can be converted into cash. Second, there is a loss of purchasing power when the house is sold because numerous fees have to be paid to real estate agents and other individuals in order to complete the sale.

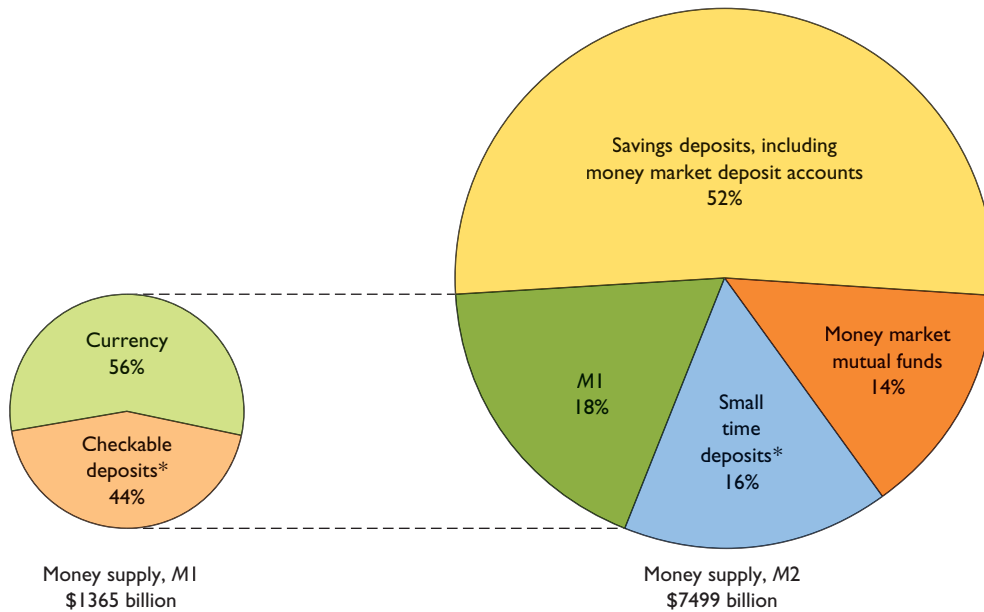
As we are about to discuss, our economy uses several different types of money including cash, coins, checking account deposits, savings account deposits, and even more exotic things like deposits in money market mutual funds. As we describe the various forms of money in detail, take the time to compare their relative levels of liquidity—both with each other and as compared to other assets like stocks, bonds, and real estate. Cash is perfectly liquid. Other forms of money are highly liquid, but less liquid than cash.

The Components of the Money Supply

Money is a “stock” of some item or group of items (unlike income, for example, which is a “flow”). Societies have used many items as money, including whales' teeth, circular stones, elephant-tail bristles, gold coins, furs, and pieces of paper. Anything that is widely accepted as a medium of exchange can serve as money. In the United States,

FIGURE 31.1 Components of money supply *M1* and money supply *M2*, in the United States.

(a) *M1* is a narrow definition of the money supply that includes currency (in circulation) and checkable deposits. (b) *M2* is a broader definition that includes *M1* along with several other relatively liquid account balances.



*These categories include other, quantitatively smaller components such as traveler's checks.

Source: Federal Reserve System, www.federalreserve.gov. Data are for January 2008.

currency is not the only form of money. As you will see, certain debts of government and financial institutions also are used as money.

Money Definition *M1*

The narrowest definition of the U.S. money supply is called ***M1***. It consists of:

- Currency (coins and paper money) in the hands of the public.
- All checkable deposits (all deposits in commercial banks and “thrift” or savings institutions on which checks of any size can be drawn).²

Government and government agencies supply coins and paper money. Commercial banks (“banks”) and savings institutions (“thrifts”) provide checkable deposits. Figure 31.1a shows the amounts of each category of money in the *M1* money supply.

Currency: Coins + Paper Money The currency of the United States consists of metal coins and paper

money. The coins are issued by the U.S. Treasury while the paper money consists of **Federal Reserve Notes** issued by the Federal Reserve System (the U.S. central bank). The coins are minted by the U.S. Mint while the paper money is printed by the Bureau of Engraving and Printing. Both the U.S. Mint and the Bureau of Engraving and Printing are part of the U.S. Department of the Treasury.

As with the currencies of other countries, the currency of the United States is **token money**. This means that the face value of any piece of currency is unrelated to its *intrinsic value*—the value of the physical material (metal or paper and ink) out of which that piece of currency is constructed. Governments make sure that face values exceed intrinsic values in order to discourage people from destroying coins and bills in order to resell the material that they are made out of. For instance, if 50-cent pieces each contained 75 cents’ worth of metal, then it would be profitable to melt them down and sell the metal. Fifty-cent pieces would disappear from circulation very quickly!

Figure 31.1a shows that currency (coins and paper money) constitutes 56 percent of the *M1* money supply in the United States.

Checkable Deposits The safety and convenience of checks has made **checkable deposits** a large component of the *M1* money supply. You would not think of

²In the ensuing discussion, we do not discuss several of the quantitatively less significant components of the definitions of money in order to avoid a maze of details. For example, traveler’s checks are included in the *M1* money supply. The statistical appendix of any recent *Federal Reserve Bulletin* provides more comprehensive definitions.

stuffing \$4896 in bills in an envelope and dropping it in a mailbox to pay a debt. But writing and mailing a check for a large sum is commonplace. The person cashing a check must endorse it (sign it on the reverse side); the writer of the check subsequently receives a record of the cashed check as a receipt attesting to the fulfillment of the obligation. Similarly, because the writing of a check requires endorsement, the theft or loss of your checkbook is not nearly as calamitous as losing an identical amount of currency. Finally, it is more convenient to write a check than to transport and count out a large sum of currency. For all these reasons, checkable deposits (checkbook money) are a large component of the stock of money in the United States. About 44 percent of *M1* is in the form of checkable deposits, on which checks can be drawn.

It might seem strange that checking account balances are regarded as part of the money supply. But the reason is clear: Checks are nothing more than a way to transfer the ownership of deposits in banks and other financial institutions and are generally acceptable as a medium of exchange. Although checks are less generally accepted than currency for small purchases, for major purchases most sellers willingly accept checks as payment. Moreover, people can convert checkable deposits into paper money and coins on demand; checks drawn on those deposits are thus the equivalent of currency.

To summarize:

Money, *M1* = currency + checkable deposits

Institutions That Offer Checkable Deposits

In the United States, a variety of financial institutions allow customers to write checks in any amount on the funds they have deposited. **Commercial banks** are the primary depository institutions. They accept the deposits of households and businesses, keep the money safe until it is demanded via checks, and in the meantime use it to make available a wide variety of loans. Commercial bank loans provide short-term financial capital to businesses, and they finance consumer purchases of automobiles and other durable goods.

Savings and loan associations (S&Ls), mutual savings banks, and credit unions supplement the commercial banks and are known collectively as savings or **thrift institutions**, or simply “thrifts.” *Savings and loan associations* and *mutual savings banks* accept the deposits of households and businesses and then use the funds to finance housing mortgages and to provide other loans. *Credit unions* accept deposits from and lend to “members,” who usually are a group of people who work for the same company.

The checkable deposits of banks and thrifts are known variously as demand deposits, NOW (negotiable order of

withdrawal) accounts, ATS (automatic transfer service) accounts, and share draft accounts. Their commonality is that depositors can write checks on them whenever, and in whatever amount, they choose.

Two Qualifications We must qualify our discussion in two important ways. First, currency held by the U.S. treasury, the Federal Reserve banks, commercial banks, and thrift institutions is *excluded* from *M1* and other measures of the money supply. A paper dollar or four quarters in the billfold of, say, Emma Buck obviously constitutes just \$1 of the money supply. But if we counted currency held by banks as part of the money supply, the same \$1 would count for \$2 of money supply when Emma deposited the currency into her checkable deposit in her bank. It would count for \$1 of checkable deposit owned by Buck and also \$1 of currency in the bank’s cash drawer or vault. By excluding currency held by banks when determining the total supply of money, we avoid this problem of double counting.

Also *excluded* from the money supply are any checkable deposits of the government (specifically, the U.S. Treasury) or the Federal Reserve that are held by commercial banks or thrift institutions. This exclusion is designed to enable a better assessment of the amount of money available *to the private sector* for potential spending. The amount of money available to households and businesses is of keen interest to the Federal Reserve in conducting its monetary policy (a topic we cover in detail in Chapter 33).

Money Definition *M2*

A second and broader definition of money includes *M1* plus several near-monies. **Near-monies** are certain highly liquid financial assets that do not function directly or fully as a medium of exchange but can be readily converted into currency or checkable deposits. There are three categories of near-monies included in the *M2* definition of money:

- **Savings deposits, including money market deposit accounts** A depositor can easily withdraw funds from a **savings account** at a bank or thrift or simply request that the funds be transferred from a savings account to a checkable account. A person can also withdraw funds from a **money market deposit account (MMDA)**, which is an interest-bearing account containing a variety of interest-bearing short-term securities. MMDAs, however, have a minimum-balance requirement and a limit on how often a person can withdraw funds.
- **Small (less than \$100,000) time deposits** Funds from **time deposits** become available at their

maturity. For example, a person can convert a 6-month time deposit (“certificate of deposit,” or “CD”) to currency without penalty 6 months or more after it has been deposited. In return for this withdrawal limitation, the financial institution pays a higher interest rate on such deposits than it does on its MMDAs. Also, a person can “cash in” a CD at any time but must pay a severe penalty.

- **Money market mutual funds held by individuals** By making a telephone call, using the Internet, or writing a check for \$500 or more, a depositor can redeem shares in a **money market mutual fund (MMMF)** offered by a mutual fund company. Such companies use the combined funds of individual shareholders to buy interest-bearing short-term credit instruments such as certificates of deposit and U.S. government securities. Then they can offer interest on the MMMF accounts of the shareholders (depositors) who jointly own those financial assets. The MMMFs in $M2$ include only the MMMF accounts held by individuals; those held by businesses and other institutions are excluded.

All three categories of near-monies imply substantial liquidity. Thus, in equation form,

$$\text{Money, } M2 = M1 + \text{savings deposits, including MMDAs + small (less than \$100,000) time deposits + MMMFs held by individuals}$$

In summary, $M2$ includes the immediate medium-of-exchange items (currency and checkable deposits) that constitute $M1$ plus certain near-monies that can be easily converted into currency and checkable deposits. In Figure 31.1b we see that the addition of all these items yields an $M2$ money supply that is about five times larger than the narrower $M1$ money supply. (**Key Question 4**)

QUICK REVIEW 31.1

- Money serves as a medium of exchange, a unit of account, and a store of value.
- The narrow $M1$ definition of money includes currency held by the public plus checkable deposits in commercial banks and thrift institutions.
- Thrift institutions as well as commercial banks offer accounts on which checks can be written.
- The $M2$ definition of money includes $M1$ plus savings deposits, including money market deposit accounts, small (less than \$100,000) time deposits, and money market mutual fund balances held by individuals.

CONSIDER THIS . . .



Are Credit Cards Money?

You may wonder why we have ignored credit cards such as Visa and MasterCard in our discussion of how the money supply is defined. After all, credit cards are a convenient

way to buy things and account for about 25% of the dollar value of all transactions in the United States. The answer is that a credit card is not money. Rather, it is a convenient means of obtaining a short-term loan from the financial institution that issued the card.

What happens when you purchase an item with a credit card? The bank that issued the card will reimburse the store, charging it a transaction fee, and later you will reimburse the bank. Rather than reduce your cash or checking account with each purchase, you bunch your payments once a month. You may have to pay an annual fee for the services provided, and if you pay the bank in installments, you will pay a sizable interest charge on the loan. Credit cards are merely a means of deferring or postponing payment for a short period. Your checking account balance that you use to pay your credit card bill is money; the credit card is *not* money.*

Although credit cards are not money, they allow individuals and businesses to “economize” in the use of money. Credit cards enable people to hold less currency in their billfolds and, prior to payment due dates, fewer checkable deposits in their bank accounts. Credit cards also help people coordinate the timing of their expenditures with their receipt of income.

*A bank debit card, however, is very similar to a check in your checkbook. Unlike a purchase with a credit card, a purchase with a debit card creates a direct “debit” (a subtraction) from your checking account balance. That checking account balance is money—it is part of $M1$.

What “Backs” the Money Supply?

The money supply in the United States essentially is “backed” (guaranteed) by government’s ability to keep the value of money relatively stable. Nothing more!

Money as Debt

The major components of the money supply—paper money and checkable deposits—are debts, or promises to pay. In the United States, paper money is the circulating debt of the Federal Reserve Banks. Checkable deposits are the debts of commercial banks and thrift institutions.