## *Our Money Supply*

What does our money supply consist of?

What does our money supply consist of? Gold? No! U.S. government bonds? No! Diamonds? No! Money consists of just a few things: coins, paper money, demand (or checking) deposits, and checklike deposits (sometimes called NOW—or negotiable order of withdrawal—accounts) held by the nonbank public. Coins (pennies, nickels, dimes, quarters, half-dollars, silver dollars, and other dollar coins) and paper money (dollar bills, fives, tens, twenties, fifties, and hundreds) together are considered currency. (By the way, where did the *dollar* come from? See the box on this topic.)

Five out of every 10 dollars in our money supply are demand deposits and other checkable deposits. Virtually all the rest is currency. We have to be careful, however, to distinguish between checks and demand (or checking) deposits. Jackie Gleason used to tell a story about two guys who get into an argument in a bar about who is more miserly (or cheaper). Suddenly one of them pulls out a dollar bill and a book of matches, lights the bill on fire, and lets it burn to a crisp. Not to be outdone, the other guy pulls out a five, lights it, and watches it burn to a crisp. So then the first guy does the same thing with a $10 bill. Well, the other guy doesn't want to look bad, so he reaches into his pocket, pulls out his checkbook, writes out a check for $1,000, lights it, and watches it burn to a crisp.

Checks are *not* money. Checking deposits *are*.

Incidentally, demand deposits are so named because they are payable "on demand." When you write a check, your bank must honor it, provided, of course, that you have enough money in your account to cover the check. Banks also insist that a certain number of business days go by before they will cash a specific check. It is usually 5 days for a local check and 7 to 10 days for an out-of-town check. Banks call this waiting period the time it takes for a check to clear. But any money in your checking account that has been cleared is available to depositors on demand.

Our currency is legal tender for all debts, public and private. But don't take *my* word for it. You'll find those words written just to the left of George Washington's portrait on the one dollar bill, or to the left of Abraham Lincoln's on the five. So the government says that your money must be accepted for payment of all debts. Does the government say that about checks and credit cards? No! (See the accompanying box.) Now what does it say on the back of each dollar just below "THE UNITED STATES OF AMERICA"? It says, "IN GOD WE TRUST." And as many people say: "In God we trust—all others pay cash."

### *Where Did the Dollar Come From?*

The U.S. dollar traces its roots back to the old Spanish-milled silver dollar. You didn't think it was based on the old British system, did you? You'd really have to be crazy to try to copy a system that uses pence, shillings, guineas, and pounds.

Are you any good at trivia questions? In Robert Louis Stevenson's *Treasure Island,* there was a parrot who, as parrots will do, kept repeating the same phrase over and over. OK, what was the phrase? You have eight seconds to answer the question. What was the phrase that the parrot, who, by the way, was acquainted with Long John Silver, kept repeating? Did you guess? Sorry—time's up.

The answer is "Pieces of eight. Pieces of eight." See that? You learn something every day.

By the way, how much money is two bits? It's a quarter. And four bits? That's right—50 cents. Eight bits? A dollar.

What was that parrot getting at with his "Pieces of eight. Pieces of eight"? He was talking dollars, Spanish-milled silver dollars. Those dollars were milled in such a way, that eight pieces—or bits—could be torn from each dollar, like perforated slices in a metal pie. That way, if you had a dollar and wanted to spend just 25 cents, you tore off two pieces or bits. To this day, some South American countries have coins worth 12½ centavos.

on the web

If you'd like to learn more about our supply of currency, the Federal Reserve Bank of Atlanta has a very interesting website: www.frbatlanta.org/publ.cfm and click on "Dollars and Cents brochure."

## *How Do We Pay Our Bills?*

There are many ways to pay for things—cash, check, credit card, debit card, prepaid or stored-value cards, and electronic fund transfers. Checks had been most important before the new millennium, but we have been moving rapidly toward a relatively checkless economy.

Credit cards, and especially debit cards, increasingly are used to pay for goods and services. And prepaid cards, which have long been issued by phone companies, have replaced food stamps, and are even being issued by employers in place of paychecks.

More and more people are paying their bills with electronic fund transfers—movements of funds directly from one bank account to another. Many people have arrangements with the phone and electric companies to have their bills automatically deducted from their bank accounts. Similarly, some employers deposit paychecks electronically. And every month, the Social Security Administration sends out tens of millions of benefit payments electronically. As electronic payments become more widespread, their share of total payments will continue to grow very rapidly, possibly passing 70 percent in 2010.

## *M1 and M2*

M1 = currency, demand deposits, traveler's checks, and other checkable deposits

Our money supply includes currency, demand deposits, traveler's checks, and what the Federal Reserve terms "other checkable deposits," which include the NOW accounts and "share draft accounts," or checking accounts issued by credit unions.

According to the Federal Reserve there is over $750 billion in currency in the hands of the public (see Figure 1). But the U.S. Treasury estimates that between two-thirds and three-quarters of U.S. currency is held outside the United States. Foreigners, especially Russians, consider American dollars—particularly one hundred dollar bills—as a much better medium of exchange and standard of value than their own currencies. So

### *Are Credit Cards Money?*

The answer is no. Credit cards are ID cards that enable you to buy a whole range of goods and services without having to pay until the end of the month. Who pays? The bank that issued your credit card pays the merchant; then, a few weeks later, you repay the bank.

What the bank would really like you to do is run up a large balance and pay 18 or 20 percent interest on that balance for years and years. That's the main reason they will give you a credit line of $5,000, $10,000, or even more.

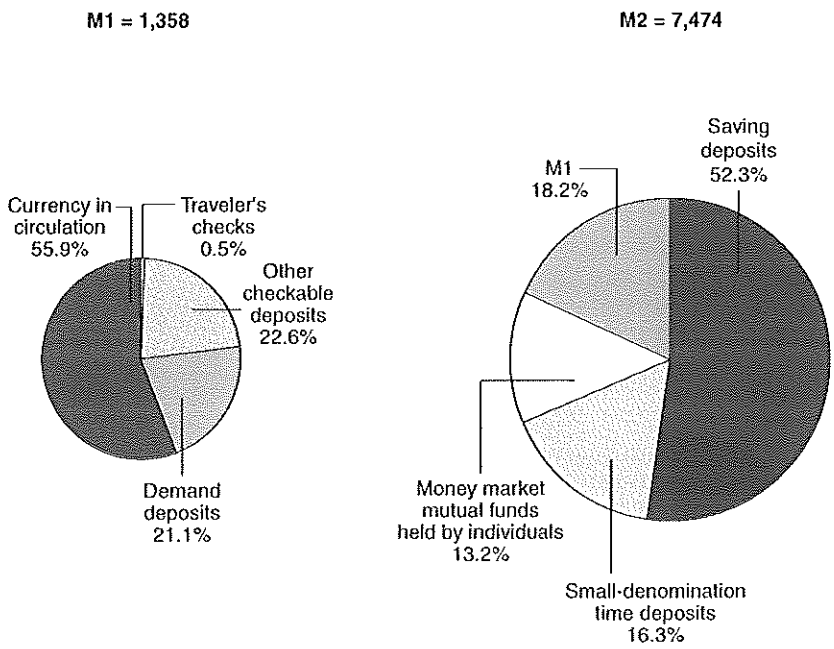
Credit cards are a convenient way to buy things and account for nearly one-quarter of the dollar value of all purchases. They provide short-term loans from the financial institutions that issued the cards.

Bank of America issued the first bank credit cards in 1958, but most people didn't begin using them regularly until the 1970s. Through the 1960s people used cash and checks to pay for nearly all purchases. American households, on average, possess nearly eight major bank cards—or 17, including store and gas cards.

Bank credit cards like VISA, MasterCard, and American Express have become extremely important in our economy. Not only can you travel and make major purchases without having to carry hundreds or thousands of dollars in cash, but you won't be able to rent a car, stay in some hotels, or transact certain types of business without such a card. But remember, they're only pieces of plastic—not money.

Debit cards look like credit cards. They're not money either. When you buy something, the sales clerk asks you, "Credit or debit?" If you have a debit card, the money comes right out of your checking account. Suppose you've got $1,000 in your checking account and use your debit card to pay for a $200 purchase. Before you've left the cash register, your checking account balance has already gone down to $800.

*Figure 1*
M1 and M2, February 11, 2008*
By adding savings deposits, small-denomination time deposits, and money market mutual funds held by individuals to M1, we get M2.
*Percentages may not add to 100.0 percent due to rounding.
*Source: Federal Reserve Statistical Release,* February 21, 2008.




the bottom line is that our money supply, M1, may be as much as $500 billion lower than the official figure shown in Figure 1.

M1 is shown along with M2 in Figure 1. As of February 2008, our money supply totaled $1,358 billion. Nearly everyone considers M1 our money supply, but we're also going to consider a broader measure of money, M2.

M1 + savings, small-denomination time deposits, and money market funds = M2

*By adding savings deposits, small-denomination time deposits, and money market mutual funds held by individuals to M1, we get M2.* You know what savings deposits are. Time deposits hold funds that must be left in the bank for a specified period of time—a week, a month, three months, a year, five years, or even longer.

Remember the bank ads that warn, "There is a substantial penalty for early withdrawal"? These warnings are another way of saying that under the conditions of a time deposit, you are legally required to leave your money in the bank for a specified period of time. And so, unlike a demand deposit, time deposits are not payable until a certain date.

Technically, the money held in time and savings deposits does not have to be paid to the depositors "on demand." When you fill out a withdrawal slip to take money out of your savings account, you are completely confident that you will walk out of the bank with your money. Legally, however, your bank can require up to 30 days' written notice before giving you these funds. In practice, of course, no bank ever does this. Although nearly every bank in the country is insured by the Federal Deposit Insurance Corporation, it is quite possible that, if a 30-day waiting period were enforced, many nervous depositors would rush into their banks to get their money while they could. Money market mutual funds are issued by stockbrokers and other institutions, usually pay slightly higher interest rates than banks, and offer check-writing privileges.

M2 + large-denomination time deposits = M3

Until 2006 the Federal Reserve also compiled and published figures for a still larger monetary aggregate, M3. M3 = M2 + large-denomination time deposits (of $100,000 and more) + money market mutual funds held by institutions. But the Federal Reserve Board concluded M2 played a much more important role in monetary policy process than M3, so it stopped collecting the underlying data and publishing M3 figures.

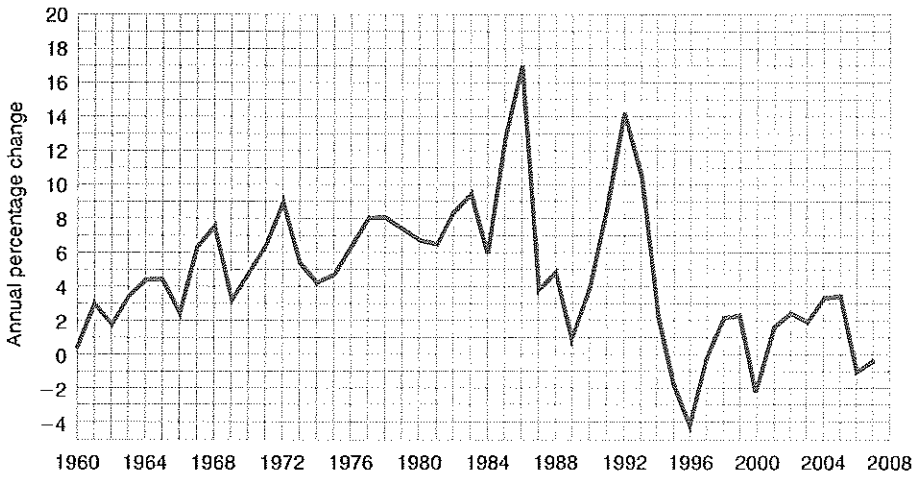



*Figure 2*
Annual Percentage Change in the Money Supply, M1, 1960–2007
Between 1960 and 1983, there was a fairly steady upward trend in the annual growth of M1 from less than 1 percent to just over 9 percent. But since then there have been extremely sharp fluctuations, ranging from an annual increase of 17 percent to a decrease of about 4 percent.
*Sources: Economic Report of the President,* 2008; *Federal Reserve Bulletin,* March 2008.

A strong case can be made to designate M2 as our basic money supply rather than M1. First, it is the monetary measure most closely watched by the Federal Reserve, the agency that controls the growth of our money supply. Second, with the enormous growth of money market deposit accounts, time deposits, and money market mutual funds, which people can quickly convert into cash, attention has shifted to M2. But I'm enough of a traditionalist to keep calling M1 our basic money supply—at least until the next edition of this text.

## *Our Growing Money Supply*

Our money supply grows from year to year as the amount of currency in circulation goes up and as our checking deposits and checklike deposits go up as well. How fast does the money supply grow? Figure 2 shows monetary growth from the 1960s through 2007.

Monetary growth has not been smooth. You'll notice huge jumps, for example, in the mid-1980s and early 1990s. The Federal Reserve controls the rate of monetary growth. How? Read all about it in the next chapter.

## *The Demand for Money*

How much of *your* assets do you hold in the form of money? A typical middle-class family might own a home, two cars, several thousand dollars' worth of corporate stock, and perhaps one or two U.S. Treasury bonds. Of course, none of that is money. But the same family may also have a couple of bank accounts and $800 in cash. Let's consider the reasons why people hold some of their assets in the form of money.

Why do people hold money?

Economists recognize that people hold money for a variety of purposes. John Maynard Keynes noted that people had three reasons for holding money: to make transactions, for precautionary reasons, and to speculate. After we discuss the Keynesian motives for holding money, we shall look at the influences that shape the demand for holding money.

**The Keynesian Motives for Holding Money** Instead of holding their assets in other forms—stocks, bonds, real estate, commodities—everyone opts to hold at least some of their assets in the form of currency or demand deposits. John Maynard Keynes observed that people hold money not just to buy things, but also for precautionary and speculative reasons. But the transactions motive is, by far, the most important motive for holding money.

Transactions motive

Individuals have day-to-day purchases for which they pay in cash or by check. You take care of your rent or mortgage payment, car payment, monthly bills, and major purchases by check. Cash is sometimes needed for groceries, gasoline, restaurant meals, the movies, and nearly every other small purchase. Businesses, too, need to keep substantial checking accounts to pay their bills and to meet their payrolls. Individuals and businesses, then, both need to hold a certain amount of money for regular expenses. Keynes called this the transactions motive for holding money.

Precautionary motive

Next we have the precautionary motive. People will keep money on hand, sometimes called a rainy-day fund, just in case some unforeseen emergency arises. They do not actually expect to spend this money, but they want to be ready if the need arises.

Speculative motive

Finally, there is the speculative motive for holding money. When interest rates are very low—as they were during the Great Depression when Keynes was writing—you don't stand to lose much by holding your assets in the form of money. Alternatively, by tying up your assets in the form of bonds, you actually stand to lose money should interest rates rise, because you'd be locked into very low rates. In effect, the speculative demand for money is based on the belief that better opportunities for investment will come along and that, in particular, interest rates will rise.

These three Keynesian motives, especially the transactions motive, explain why people want to hold some of their assets in the form of cash. But how *much?* That depends on the four influences on the demand for money.

**Four Influences on the Demand for Money** The amount of money we hold is influenced by four factors: (1) inflation (2) income, (3) interest rates, and (4) credit availability. Changes in these factors change how much money we hold.

*(1) Inflation* During periods of inflation, as prices rise, we need to hold an increasing amount of money to meet our day-to-day needs. When the price of a hot dog rose from a nickel to a dime during the late 1940s, hot dog lovers needed to carry twice as much money to satisfy their craving. Fifty years ago a family of four could eat out and go to the movies for about $10; doing that today might cost six times as much. So they would need to have six times as much money.

*Money is the poor people's credit card.*
—Marshall McLuhan

*(2) Income* Poor people seldom carry around much money. Check it out. The more you make, the more you spend, and the more you spend, the more money you need to hold as cash or in your checking account. Even if you use a credit card, you still have to pay your bill at the end of the month. As income rises, so does the demand for money balances.

*(3) The Interest Rate* So far we've had two positive relationships: the quantity of money demanded rises with the level of prices and income. Are you ready for a negative relationship? All right, then. The quantity of money demanded goes down as interest rates rise.

Until recently people did not receive interest for holding money. Cash that you keep in your wallet or under your mattress still pays no interest, and until the late 1970s neither did checking deposits. Even today nearly all checking deposits pay less than 2 percent interest, and some don't pay any interest whatsoever. Alternatives to holding your assets in the form of money are to hold them in the form of bonds, money market funds, time deposits, and other interest-bearing securities. As interest rates rise, these assets become more attractive than money balances. Thus, there is a negative relationship between interest rates and money balances.

Do you remember the concept of opportunity cost, which was introduced in Chapter 2? What is the opportunity cost of holding money? It's the interest that you forgo.

*(4) Credit Availability* If you can get credit, you don't need to hold so much money. Forty years ago most Americans paid cash for their smaller purchases and used checks for big-ticket items. The only form of consumer credit readily available was from retail merchants and manufacturers. The last four decades have seen a veritable explosion in consumer credit in the form of credit cards and bank loans. Over this period increasing credit availability has been exerting a downward pressure on the demand for money.