Paper currency and checkable deposits have no intrinsic value. A $5 bill is just an inscribed piece of paper. A checkable deposit is merely a bookkeeping entry. And coins, we know, have less intrinsic value than their face value. Nor will government redeem the paper money you hold for anything tangible, such as gold. To many people, the fact that the government does not back the currency with anything tangible seems implausible and insecure. But the decision not to back the currency with anything tangible was made for a very good reason. If the government backed the currency with something tangible like gold, then the supply of money would vary with how much gold was available. By not backing the currency, the government avoids this constraint and indeed receives a key freedom—the ability to provide as much or as little money as needed to maintain the value of money and to best suit the economic needs of the country. In effect, by choosing not to back the currency, the government has chosen to give itself the ability to freely "manage" the nation's money supply. Its monetary authorities attempt to provide the amount of money needed for the particular volume of business activity that will promote full employment, price-level stability, and economic growth.

Nearly all today's economists agree that managing the money supply is more sensible than linking it to gold or to some other commodity whose supply might change arbitrarily and capriciously. For instance, if we used gold to back the money supply so that gold was redeemable for money and vice versa, then a large increase in the nation's gold stock as the result of a new gold discovery might increase the money supply too rapidly and thereby trigger rapid inflation. Or a long-lasting decline in gold production might reduce the money supply to the point where recession and unemployment resulted.

In short, people cannot convert paper money into a fixed amount of gold or any other precious commodity. Money is exchangeable only for paper money. If you ask the government to redeem $5 of your paper money, it will swap one paper $5 bill for another bearing a different serial number. That is all you can get. Similarly, checkable deposits can be redeemed not for gold but only for paper money, which, as we have just seen, the government will not redeem for anything tangible.

Value of Money

So why are currency and checkable deposits money, whereas, say, Monopoly (the game) money is not? What gives a $20 bill or a $100 checking account entry its value? The answer to these questions has three parts.

Acceptability

Currency and checkable deposits are money because people accept them as money. By virtue of long-standing business practice, currency and checkable deposits perform the basic function of money: They are acceptable as a medium of exchange. We accept paper money in exchange because we are confident it will be exchangeable for real goods, services, and resources when we spend it.

Legal Tender

Our confidence in the acceptability of paper money is strengthened because government has designated currency as **legal tender.** Specifically, each bill contains the statement "This note is legal tender for all debts, public and private." That means paper money is a valid and legal means of payment of any debt that was contracted in dollars. (But private firms and government are not mandated to accept cash. It is not illegal for them to specify payment in noncash forms such as checks, cashier's checks, money orders, or credit cards.)

The general acceptance of paper currency in exchange is more important than the government's decree that money is legal tender, however. The government has never decreed checks to be legal tender, and yet they serve as such in many of the economy's exchanges of goods, services, and resources. But it is true that government agencies—the Federal Deposit Insurance Corporation (FDIC) and the National Credit Union Administration (NCUA)—insure individual deposits of up to $100,000 at commercial banks and thrifts. That fact enhances our willingness to use checkable deposits as a medium of exchange.

Relative Scarcity

The value of money, like the economic value of anything else, depends on its supply and demand. Money derives its value from its scarcity relative to its utility (its want-satisfying power). The utility of money lies in its capacity to be exchanged for goods and services, now or in the future. The economy's demand for money thus depends on the total dollar volume of transactions in any period plus the amount of money individuals and businesses want to hold for future transactions. With a reasonably constant demand for money, the supply of money provided by the monetary authorities will determine the domestic value or "purchasing power" of the monetary unit (dollar, yen, peso, or whatever).

Money and Prices

The purchasing power of money is the amount of goods and services a unit of money will buy. When money rapidly loses its purchasing power, it loses its role as money.

The Purchasing Power of the Dollar

The amount a dollar will buy varies inversely with the price level; that is, a reciprocal relationship exists between the general price level and the purchasing power of the dollar. When the consumer price index or "cost-of-living" index goes up, the value of the dollar goes down, and vice versa. Higher

prices lower the value of the dollar because more dollars are needed to buy a particular amount of goods, services, or resources. For example, if the price level doubles, the value of the dollar declines by one-half, or 50 percent.

Conversely, lower prices increase the purchasing power of the dollar because fewer dollars are needed to obtain a specific quantity of goods and services. If the price level falls by, say, one-half, or 50 percent, the purchasing power of the dollar doubles.

In equation form, the relationship looks like this:

$$\$V = 1/P$$

To find the value of the dollar $\$V$, divide 1 by the price level P expressed as an index number (in hundredths). If the price level is 1, then the value of the dollar is 1. If the price level rises to, say, 1.20, $\$V$ falls to .833; a 20 percent increase in the price level reduces the value of the dollar by 16.67 percent. Check your understanding of this reciprocal relationship by determining the value of $\$V$ and its percentage rise when P falls by 20 percent from $1 to .80. **(Key Question 6)**

Inflation and Acceptability

In Chapter 26 we noted situations in which a nation's currency became worthless and unacceptable in exchange. These instances of runaway inflation, or *hyperinflation*, happened when the government issued so many pieces of paper currency that the purchasing power of each of those units of money was almost totally undermined. The infamous post–World War I hyperinflation in Germany is an example. In December 1919 there were about 50 billion marks in circulation. Four years later there were 496,585,345,900 billion marks in circulation! The result? The German mark in 1923 was worth an infinitesimal fraction of its 1919 value.[3]

Runaway inflation may significantly depreciate the value of money between the time it is received and the time it is spent. Rapid declines in the value of a currency may cause it to cease being used as a medium of exchange. Businesses and households may refuse to accept paper money in exchange because they do not want to bear the loss in its value that will occur while it is in their possession. (All this despite the fact that the government says that paper currency is legal tender!) Without an acceptable domestic medium of exchange, the economy may simply revert to barter. Alternatively, more stable currencies such as the U.S. dollar or European euro may come into widespread use. At the extreme, a country may adopt a foreign currency as its own official currency as a way to counter hyperinflation.

Similarly, people will use money as a store of value only as long as there is no sizable deterioration in the value of that money because of inflation. And an economy can effectively employ money as a unit of account only when its purchasing power is relatively stable. A monetary yardstick that no longer measures a yard (in terms of purchasing power) does not permit buyers and sellers to establish the terms of trade clearly. When the value of the dollar is declining rapidly, sellers do not know what to charge and buyers do not know what to pay.

Stabilizing Money's Purchasing Power

Rapidly rising price levels (rapid inflation) and the consequent erosion of the purchasing power of money typically result from imprudent economic policies. Since the purchasing power of money and the price level vary inversely, stabilization of the purchasing power of a nation's money requires stabilization of the nation's price level. Such price-level stability (2–3 percent annual inflation) mainly necessitates intelligent management or regulation of the nation's money supply and interest rates *(monetary policy)*. It also requires appropriate *fiscal policy* supportive of the efforts of the nation's monetary authorities to hold down inflation. In the United States, a combination of legislation, government policy, and social practice inhibits imprudent expansion of the money supply that might jeopardize money's purchasing power. The critical role of the U.S. monetary authorities (the Federal Reserve) in maintaining the purchasing power of the dollar is the subject of Chapter 33. For now, simply note that they make available a particular quantity of money, such as $M2$ in Figure 31.1, and can change that amount through their policy tools.

QUICK REVIEW 31.2

- In the United States, all money consists essentially of the debts of government, commercial banks, and thrift institutions.
- These debts efficiently perform the functions of money as long as their value, or purchasing power, is relatively stable.
- The value of money is rooted not in specified quantities of precious metals but in the amount of goods, services, and resources that money will purchase.
- The value of the dollar (its domestic purchasing power) is inversely related to the price level.
- Government's responsibility in stabilizing the purchasing power of the monetary unit calls for (a) effective control over the supply of money by the monetary authorities and (b) the application of appropriate fiscal policies by the president and Congress.

[3] Frank G. Graham, *Exchange, Prices and Production in Hyperinflation Germany, 1920-1923* (Princeton, N.J.: Princeton University Press, 1930), p. 13.

The Federal Reserve and the Banking System

In the United States, the "monetary authorities" we have been referring to are the members of the Board of Governors of the **Federal Reserve System** (the "Fed"). As shown in Figure 31.2, the Board directs the activities of the 12 Federal Reserve Banks, which in turn control the lending activity of the nation's banks and thrift institutions. The Fed's major goal is to control the money supply. But since checkable deposits in banks are such a large part of the money supply, an important part of its duties involves assuring the stability of the banking system.

Historical Background

Early in the twentieth century, Congress decided that centralization and public control were essential for an efficient banking system. Decentralized, unregulated banking had fostered the inconvenience and confusion of numerous private bank notes being used as currency. It also had resulted in occasional episodes of monetary mismanagement such that the money supply was inappropriate to the needs of the economy. Sometimes "too much" money precipitated rapid inflation; other times "too little money" stunted the economy's growth by hindering the production and exchange of goods and services. No single entity was charged with creating and implementing nationally consistent banking policies.

Furthermore, acute problems in the banking system occasionally erupted when banks either closed down or insisted on immediate repayment of loans to prevent their own failure. At such times, a banking crisis could emerge, with individuals and businesses who had lost confidence in their banks attempting to simultaneously withdraw all of their money—thereby further crippling the already weakened banks.

An unusually acute banking crisis in 1907 motivated Congress to appoint the National Monetary Commission to study the monetary and banking problems of the economy and to outline a course of action for Congress. The result was the Federal Reserve Act of 1913.

Let's examine the various parts of the Federal Reserve System and their relationship to one another.

Board of Governors

The central authority of the U.S. money and banking system is the **Board of Governors** of the Federal Reserve System. The U.S. president, with the confirmation of the Senate, appoints the seven Board members. Terms are 14 years and staggered so that one member is replaced every 2 years. In addition, new members are appointed when resignations occur. The president selects the chairperson and vice-chairperson of the Board from among the members. Those officers serve 4-year terms and can be reappointed to new 4-year terms by the president. The long-term appointments provide the Board with continuity, experienced membership, and independence from political pressures that could result in inflation.

The 12 Federal Reserve Banks

The 12 **Federal Reserve Banks,** which blend private and public control, collectively serve as the nation's "central bank." These banks also serve as bankers' banks.

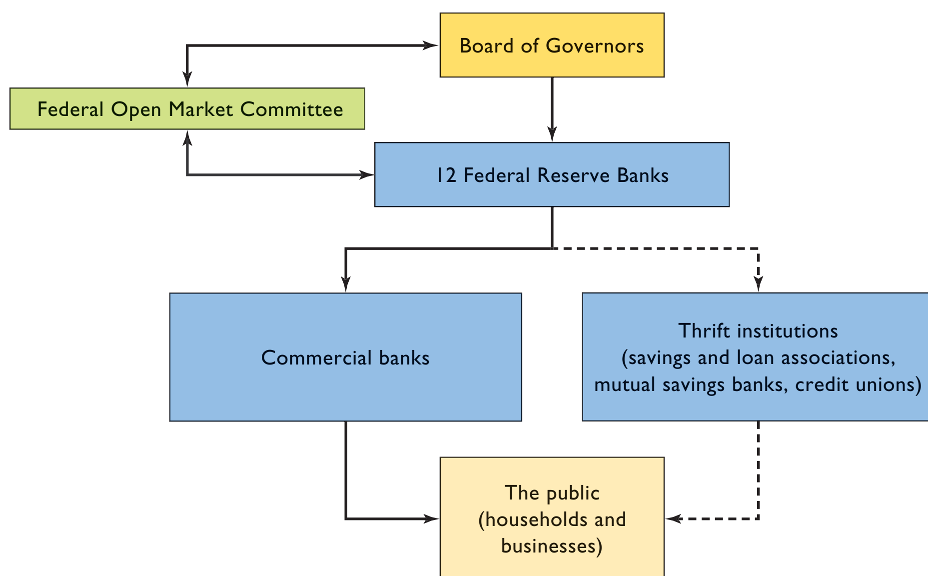
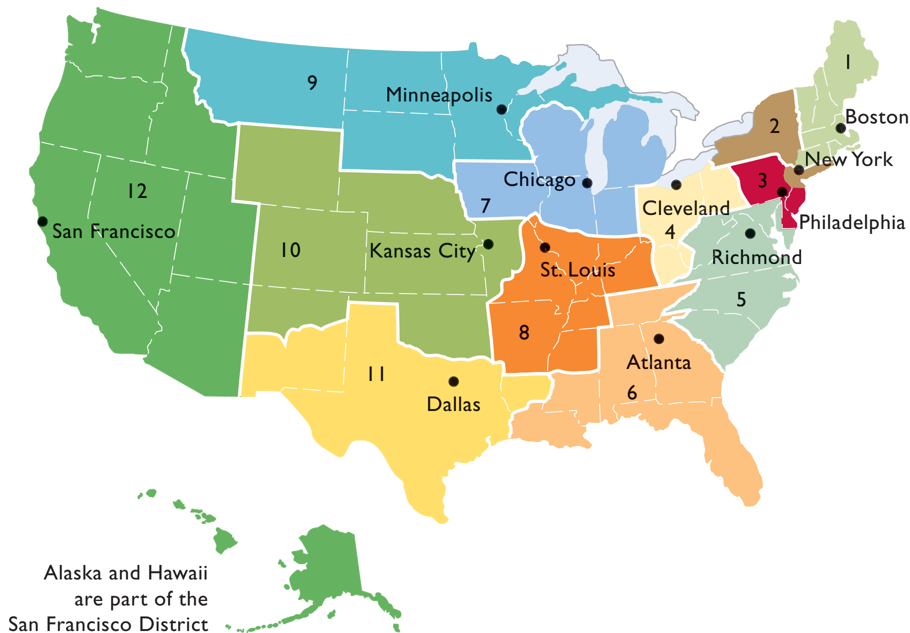


FIGURE 31.2 Framework of the Federal Reserve System and its relationship to the public. With the aid of the Federal Open Market Committee, the Board of Governors makes the basic policy decisions that provide monetary control of the U.S. money and banking systems. The 12 Federal Reserve Banks implement these decisions.



Source: Federal Reserve Bulletin, ***www.federalreserve.gov/pubs/bulletin.***

FIGURE 31.3 The 12 Federal Reserve Districts. The Federal Reserve System divides the United States into 12 districts, each having one central bank and in some instances one or more branches of the central bank.

Central Bank Most nations have a single central bank—for example, Britain's Bank of England or Japan's Bank of Japan. The United States' central bank consists of 12 banks whose policies are coordinated by the Fed's Board of Governors. The 12 Federal Reserve Banks accommodate the geographic size and economic diversity of the United States and the nation's large number of commercial banks and thrifts.

Figure 31.3 locates the 12 Federal Reserve Banks and indicates the district that each serves. These banks implement the basic policy of the Board of Governors.

Quasi-Public Banks The 12 Federal Reserve Banks are quasi-public banks, which blend private ownership and public control. Each Federal Reserve Bank is owned by the private commercial banks in its district. (Federally chartered banks are required to purchase shares of stock in the Federal Reserve Bank in their district.) But the Board of Governors, a government body, sets the basic policies that the Federal Reserve Banks pursue.

Despite their private ownership, the Federal Reserve Banks are in practice public institutions. Unlike private firms, they are not motivated by profit. The policies they follow are designed by the Board of Governors to promote the well-being of the economy as a whole. Thus, the activities of the Federal Reserve Banks are frequently at odds with the profit motive.[4] Also, the Federal Reserve Banks do not compete with commercial banks. In general, they do not deal with the public; rather, they interact with the government and commercial banks and thrifts.

Bankers' Banks The Federal Reserve Banks are "bankers' banks." They perform essentially the same functions for banks and thrifts as those institutions perform for the public. Just as banks and thrifts accept the deposits of and make loans to the public, so the central banks accept the deposits of and make loans to banks and thrifts. Normally, these loans average only about $150 million a day. But in emergency circumstances the Federal Reserve Banks become the "lender of last resort" to the banking system and can lend out as much as needed to ensure that banks and thrifts can meet their cash obligations. On the day after terrorists attacked the United States on September 11, 2001, the Fed lent $45 *billion* to U.S. banks and thrifts. The Fed wanted to make sure that the destruction and disruption in New York City and the Washington, D.C., area did not precipitate a nationwide banking crisis.

---

[4]Although it is not their goal, the Federal Reserve Banks have actually operated profitably, largely as a result of the Treasury debts they hold. Part of the profit is used to pay 6 percent annual dividends to the commercial banks that hold stock in the Federal Reserve Banks; the remaining profit is usually turned over to the U.S. Treasury.