MONEY.

**MONEY IS USED FOR BUYING OR SELLING GOODS, FOR MEASURING VALUE AND FOR STORING WEALTH.** Almost every society now has a money economy based on coins and paper notes of one kind or another. However, this has not always been true. In primitive societies a system of barter was used. Barter was a system of direct exchange of goods. Somebody could exchange a sheep, for example, for anything in the market place that they considered to be equal value. Barter however was a very unsatisfactory system because people’s precise needs seldom coincided. People needed a more practical system of exchange, and various money systems developed based on goods, which the members of a society recognized as having a value. Cattle, grain, teeth, shells, features, skulls, salt, elephant tusks and tobacco have all been used. Precious metals gradually took over because, when made into coins, they were portable, durable, recognizable, and divisible into larger and smaller units of value.

A coin is a piece of metal, usually disc-shaped, which bears lettering, designs or numbers showing its value. Until the 18th and 19th centuries coins were given monetary worth based on the exact amount of metal contained in them, but most modern coins are based on face value, the value the governments choose to give them, irrespective of the actual metal content. Coins have been made of gold (Au), silver (Ag), copper (Cu), aluminum (Al), nickel (Ni), lead (Pb), zinc (Zn), plastic and in China even from pressed tealeaves. Most governments now issue paper money in the form of notes, which are “promises to pay". Paper money is obviously easier to handle and much more convenient in the modern world. Checks, bankers, cards and credit cards are being used increasingly and it is possibly to imagine a world where “money” in the form of coins and paper currently will no longer be used. Even today, in the U.S many places-especially filling stations-will not accept cash at night for security reasons.

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*Barter and the Double Coincidence of Wants*

As long as specialization was limited, desirable trades were relatively easy to uncover. As the economy developed, however, greater specialization in the division of labor increased the difficulty of finding goods that each trader wanted to exchange. Rather than just two possible types of producers, there were, say, a hundred types of producers, ranging from potters to shoemakers. The potter in need of new shoes might have trouble finding a shoemaker in need of pots. Barter depends on a **double coincidence of wants,** which occurs only when traders are willing to exchange their product for what the other is selling. The cobbler must be willing to exchange shoes for the pots offered by the potter, *and* the potter must be willing to exchange pots for the shoes offered by the cobbler. Not only might this double coincidence of wants be hard to find but after the two traders connect they would also need to agree upon a rate of exchange—that is, how many pots should be exchanged for a pair of shoes? Increased specialization made the barter system of exchange more time-consuming and cumbersome.

When only two goods are produced, only one exchange rate must be determined, but as the number of goods produced in the economy increases, the number of exchange rates grows sharply. Negotiating the exchange rates among commodities is complicated in a barter economy because there is no common measure of value. Sometimes the differences in the value of the products made barter difficult. For example, suppose the cobbler wanted to buy a home. If a home exchanged for 2000 pairs of shoes, the cobbler would be hard-pressed to find a home seller in need of that many shoes. These difficulties with barter have led even very simple and primitive economies to use money, as we will see next.

*Earliest Money and Its Functions*

We have already discussed the movement from self-sufficiency to more specialized production requiring barter. We saw that the greater the degree of specialization in the economy, the more difficult it became to discover a double coincidence of wants and then to negotiate mutually beneficial exchanges. We should note that nobody actually recorded the emergence of money. Thus, we can only speculate about how money first came into use.

Through repeated exchanges, traders may have found that there were certain goods for which there was always a ready market. If a trader could not find a desired match or did not need goods for immediate consumption, some good with a ready market could be accepted instead. So traders began to accept certain goods not for immediate consumption but because these goods would be acceptable to others and therefore could be retraded later. For example, corn might become accepted because traders knew corn was always in demand. As one good became generally acceptable in return for all other goods, that good began to function as **money.** As we will see, anything that is used as money serves three important functions: a medium of exchange, a standard of value, and a store of wealth.

**Medium of Exchange** If a community, by luck or by design, can find one commodity that everyone accepts in exchange for whatever is sold, traders can save much time, disappointment, and sheer aggravation. Separating the sale of one good from the purchase of another requires something acceptable to all parties involved in the transaction. Suppose corn plays this role, a role that clearly goes beyond its usual function as food. We call corn a medium of exchange because corn is accepted in exchange by all buyers and sellers, whether or not they want corn for its own uses. A **medium of exchange** is anything that is generally accepted in return for goods and services sold. Corn is no longer an end but a means to an end. The end may be shoes, meat, pots, whatever. The person who accepts corn in exchange for some product may already have more corn than the entire family could eat in a year, but the corn is not accepted with a view toward consumption. It is accepted because it can be readily exchanged for other goods. Corn can be used to purchase whatever is desired whenever it is desired. Because in this example corn both is a commodity and serves as money, we call corn a **commodity money.** The earliest money was commodity money.

**Standard of Value** As one commodity, such as corn, became widely accepted, the prices of all goods came to be quoted in terms of corn. The chosen commodity became a common **standard of value.** The price of shoes or pots could be expressed in bushels of corn. Thus, not only does corn serve as a medium of exchange but it also becomes a yardstick for measuring the value of all goods and services. Rather than having to quote the rate of exchange for each good in terms of every other good, as was the case in the barter economy, the price of everything could be measured in terms of corn. For example, if a pair of shoes sells for two bushels of corn and a five-gallon pot sells for one bushel of corn, then one pair of shoes exchanges for two five-gallon pots.

**Store of Wealth** Because people often do not want to make purchases at the same time they sell an item, the purchasing power acquired through sales must somehow be preserved. Money serves as a **store of wealth** by retaining purchasing power over time. The cobbler exchanges shoes for corn in the belief that other suppliers will accept corn in exchange for whatever the cobbler demands later. Corn represents a way of deferring purchasing power yet conserving that power until consumption is desired. The better money is at preserving purchasing power, the better it serves as a store of wealth.

When we think of someone selling one good in order to be able to buy a second good, then the exchange of the first good for corn is only half of the exchange. Goods are first exchanged for the commodity money, corn; corn is -later exchanged for other goods. Breaking the exchange in two is much more convenient than trying to work out a barter arrangement, with its frequent delays and disappointments. With money, the buyers and sellers need to have only one good in common instead of two.

Any commodity that acquires a high degree of acceptability throughout the economy thereby becomes money. Consider some commodities used as money over the centuries. Cattle served as money, first for the Greeks and then for the Romans. In fact, the word pecuniary comes from the Latin word *pecus,* meaning "cattle." Other commodity moneys used at various times include tobacco and wampum (polished strings of shells) in colonial Amer­ica, tea pressed into small cakes in Russia, and dates in North Africa.

Whatever serves as a medium of exchange is called money, no matter what it is, no matter how it first came to serve as a medium of exchange, and no matter why it continues to serve this function. So long as there is something that sellers willingly accept in exchange for whatever they sell—rather than looking around for goods they in particular would like to consume—that article is money, whether it is animal, vegetable, or mineral. The only test for money is that it be widely accepted in return for goods and services. Some kinds of money perform this function well, others not so well. But good or bad, it is all money.

*Problems with Commodity Money*

Corn does as well as some other commodities that have served as money throughout history. But there are problems with most commodity moneys, including corn. First, corn must be properly stored or its quality will deteriorate; even then, it will not maintain its quality for long. Second, corn is bulky, so exchange becomes unwieldy for major purchases. For example, suppose a new home cost 50,000 bushels of corn. Many truckloads of corn would be involved in such a transaction. Third, if all corn is valued equally in exchange, people will tend to keep the best corn and trade away the lowest-quality corn. The quality of corn in circulation will therefore decline, reducing the acceptability of this commodity money. Sir Thomas Gresham, founder of the Royal Exchange of London, pointed out back in the sixteenth century that "bad money drives out good money," and this has come to be known as **Gresham's Law".** When moneys of different quality circulate side .by side, people tend to trade away the inferior money and hoard the best.

A final problem with corn as with other commodity moneys is that the value of corn depends on its supply and demand, which may vary unpredictably. On the supply side, if a bumper crop increases the supply of corn, corn would likely become less valuable, so more corn would exchange for all other goods. On the demand side, any change in the demand for corn as food would alter the amount available as a medium of exchange, and this, too, would influence the value of corn. Erratic fluctuations in the value of corn limit its usefulness as money, particularly as a store of wealth. If people cannot rely on the value of corn over time, they will be reluctant to hold it as a store of wealth. More generally, since the value of money depends on its supply being limited, anything that can be easily produced by anyone would not serve well as commodity money. For example, dirt would not serve well as commodity money.

*Metallic Money and Coinage*

Throughout history several metals were used as commodity moneys, includ­ing iron and copper. More important, however, were the precious metals— silver and gold—which have always been held in high regard. The division of commodity money into units was often quite natural, as in a bushel of corn or a head of cattle. When rock salt was used as money, it was cut into uniform bricks. Since salt \vas usually of consistent quality, a trader needed only to count the bricks to determine the amount of money. With precious metals, however, both the quantity and quality became open to question. Because precious metals could be debased with cheaper alloys, the quantity and quality of the metal had to be ascertained with each exchange.

This quality-control problem was addressed by coinage. Coinage, when fully developed, determined both the amount of metal and the quality of the metal. The use of coins allowed payment by count rather than by weight. Initially, coins were stamped only on one side, but undetectable amounts of the metal could be "shaved" from the smooth side of the coin. To prevent shaving, coins were stamped on both sides. But another problem arose. Because the borders of coins remained blank, small amounts of the metal could be "clipped" from the edges. To prevent this, coins were bordered with a well-defined rim and were milled around the edges. If you have a dime or quarter, notice the tiny serrations on the edge plus the words along the border. These features, throwbacks from the time when these coins were silver rather than a cheap alloy, prevented the recipient from "getting clipped."

The power to coin money was viewed as an act of sovereignty, and counterfeiting, an act of treason. In England the king extended his sover­eignty only to silver and gold coins. When the face value of the coin exceeds the cost of coinage, the minting of coins becomes a source of revenue to the sovereign. **Seigniorage** refers to the amount of precious metal extracted by the sovereign, or the seignior, during coinage. Debasement of the currency represented a source of profit for profligate governments. **Token money** is the name given to coins whose face value exceeds their metallic value.

*Money and Banking*

Early banks were little more than moneychangers, exchanging coins and bullion (uncoined gold or silver bars) from one form to another for a fee. Money was counted on a *banque,* the French word for "bench." Banking, as the term is understood today, dates back to London goldsmiths of the seventeenth century. Because goldsmiths had a safe in which to store gold, others in the community came to rely on goldsmiths to hold their money and other valuables for safekeeping. The goldsmith found that when money was held for many customers, deposits and withdrawals tended to balance out, so a pool of deposits remained in the safe at a fairly constant level. Loans could be made from this pool of idle cash, and the goldsmith could thus earn interest.

The system of keeping one's money on deposit with the goldsmith was safer than leaving money where it could be easily stolen, but it was a bit of a nuisance to have to visit the goldsmith each time money was needed. For example, the farmer would visit the goldsmith to withdraw enough money to buy a horse. The farmer then paid the horse trader, which promptly deposited the receipts with the goldsmith. Thus, money took a round trip from goldsmith to farmer to horse trader and back to goldsmith. Because depositors grew tired of going to the goldsmith every time they needed to make a purchase, the practice developed whereby a purchaser, such as the farmer, wrote the goldsmith instructions to pay the horse trader so much from the farmer's account. The payment amounted to having the goldsmith move gold from one stack (the farmer's) to another (the horse trader's). These written instructions to the goldsmith were the first checks.

By combining the idea of cash loans w4th checking, the goldsmith soon discovered how to make loans by check. The check was a claim against the goldsmith, but the borrower's promise to repay the loan became the gold­smith's asset. The goldsmith could extend a loan by creating an account against which the borrower could write checks. Goldsmiths, or banks, in this way were able to "create moneys—that is, create claims against themselves that were -generally accepted as a means of payment—as a medium of exchange. This money, though based only on an entry in the goldsmith's ledger, was accepted because of the public's confidence that these claims would be honored. The total claims against the bank consisted of customer deposits plus deposits created through loans. Because these claims against the bank exceeded the bank's gold and other reserves, this was the first **fractional reserve banking system,** a system in which only a portion, or fraction, of deposits were backed up by reserves. The *reserve ratio* measures reserves as a proportion of total deposits. For example, if the goldsmith had reserves of $5000 but total deposits of $10,000, the reserve ratio would be 50 percent.

Paper Money

Another way a bank could create claims against itself was to issue bank notes. In London, goldsmith bankers introduced bank notes about the same as they introduced checks. **Bank notes** were pieces of paper that promised to pay the bearer a specific amount in gold when presented to the issuing bank for redemption. Whereas only the individual to whom the deposit was directed could redeem checks, notes could be redeemed by anyone who held them. Notes redeemable for gold or another valuable commodity are called **fiduciary money.** Fiduciary money was often "as good as gold" since the bearer could, upon request, redeem the note for gold. In some ways fiduciary money was better than gold because it took up less space and was easier to carry.

The amount of fiduciary money issued depended on the bank's estimate of the proportion of notes that would be redeemed for gold. The greater the redemption rate, the fewer notes could be issued based on a given amount of gold reserves. Initially, these promises to pay in gold were issued by private individuals or banks, but over time governments developed a larger role in their printing and circulation. The tendency to redeem notes for gold depended on the note holder's confidence in the bank's willingness to do so upon request.

Once fiduciary money became widely accepted, it was perhaps inevitable that governments would begin issuing **fiat money,** which consists of notes that derive their status as money by power of the state, of *fiat.* Fiat money is money because the government says it is money. Fiat money is not redeemable for anything other than more fiat money; it is not backed by a promise to pay something of intrinsic value. You can think of fiat money as mere paper money. It is acceptable not because it is intrinsically useful or valuable but because the government requires that it be accepted as payment. Fiat money is declared **legal tender** by the government, meaning that creditors must accept it as payment for debts. Gradually, people came to accept fiat money because of the belief that others would accept it as well. The money issued in the United States today and, indeed, paper money throughout most of the world is now largely fiat money.

The Value of Money

Why does money have value? As we have seen, various commodities served as the earliest moneys. Commodities such as corn or tobacco had value in use even if for some reason they became less acceptable in exchange. The commodity feature of the money bolstered confidence in its acceptability. When paper money came into use, acceptability was initially fostered by the promise to redeem it for gold or silver. But since most paper money throughout the world is now fiat money, there is no promise of redemption.

So why can a piece of paper bearing the image of Alexander Hamilton and a 10 in each corner be exchanged for a large pepperoni pizza or anything else selling for $10. People accept these pieces of paper because they believe others will do so. Fiat money has no value other than its ability to be exchanged for goods and services now and in the future. Its value lies in people's belief in its value.

The value of money is reflected by its purchasing power—the rate at which money is exchanged for goods and services. The higher the price level is, the fewer goods and services can be purchased with each dollar, so the less each dollar is worth. The purchasing power of each dollar can be compared over time by accounting for changes in the price level. To measure the purchasing power of the dollar in a particular year, first compute the price index for that year, then divide 100 by that price index. For example, the consumer price index for 1986 was 328, using 1967 as the base year. The value of a 1986 dollar is therefore 100/328, or about SO.30 measured in 1967 dollars. Thus, a 1986 dollar buys less than one-third the goods and services purchased by a dollar in 1967.

Too Much and Too Little Money

Money serves as a medium of exchange, a standard of value, and a store of wealth. One way to understand these functions of money is to look at situations in which money did not perform these functions well. Money may not function well as a medium of exchange because there is too little money, too much money, or because the price system is not allowed to operate. With prices growing by the hour, money no longer represented a stable store of wealth, so people were unwilling to hold money. With rapidly rising prices, relative prices also became distorted, so buyers and sellers had difficulty knowing the appropriate price of each good. Thus, money became less useful as a standard of value—that is, as a way of comparing the price of one good relative to another. Money still served as a medium of exchange, but as larger and larger amounts of money were needed to carry out the simplest purchases, money became more cumbersome. Exchange demanded more time and energy. In short, when there is too much money, the economy becomes less productive than when there is an appropriate amount of money.

On the other hand, if there is too little money in the economy or if the price system is not allowed to function, the economy may be reduced to barter, and, as we have seen, barter is inefficient. For example, just after World War II money in Germany became -largely useless because, despite tremendous inflationary pressure in the economy, occupation forces imposed strict price controls. Since prices were set well below what people thought they should be, sellers stopped accepting money, forcing people to use barter. Experts estimate that because of the lack of a viable medium of exchange, the German economy produced only half the output that it would have produced with a smoothly functioning monetary system. The German "economic miracle" that occurred after 1948 can be credited in large part to that country's adoption of a reliable monetary system. It has been said that no machine increases the economy's productivity like properly functioning money. Indeed, it seems hard to overstate the value of a reliable monetary system. Consider in the following case study a more contemporary example of the official currency failing to serve well as a medium of exchange.

*Conclusion*

Just as the division of labor creates the need for exchange, exchange creates the need for money. With money, exchange need not rely on the double coincidence of wants required with barter. People can sell their labor in return for money to be used for future consumption.

1. Barter was the first form of exchange. As the degree of specialization grew, it became more difficult to uncover the double coincidence of wants required with barter. The time and inconvenience involved with barter led even simple economies to introduce money.
2. Money serves three primary functions: a medium of exchange, a standard of value, and a store of wealth. The first money was commodity money, where a good such as corn served also as money. With fiduciary money, the second type of money introduced what changed hands was a piece of paper that could be redeemed for something of value, such as silver or gold. The third type of money introduced was fiat money, which is paper money that can not be redeemed for anything other than more paper money. Fiat money is given its value as money by law. Most currencies throughout world today are fiat money.