

10 Money and Banking



Essential Question, Chapter 10
How well do financial institutions serve our needs?

- Section 1: Money
- Section 2: The History of American Banking
- Section 3: Banking Today

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SECTION 1 Money

OBJECTIVES

1. **Describe** the three uses of money.
2. **List** the six characteristics of money.
3. **Analyze** the sources of money's value.

ECONOMIC DICTIONARY

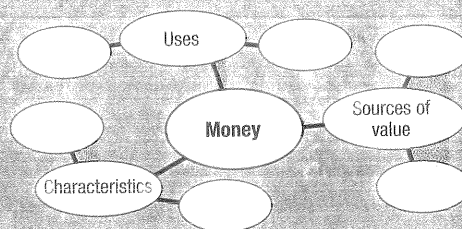
As you read the section, look for the definitions of these **Key Terms**:

- money
- medium of exchange
- barter
- unit of account
- store of value
- currency
- commodity money
- representative money
- specie
- fiat money



Guiding Question
How does money serve the needs of our society?

Copy this concept web and fill it in as you read.



► **Economics and You** It's been a hot day, and you have just arrived at your neighborhood store after playing basketball. You grab a soda and search the pockets of your jeans for some money. You find a pen, keys, and a chewing gum wrapper, but, unfortunately, no money. Then you reach into your jacket pocket. Finally!—a crumpled dollar bill. You hand the money to the clerk and take a long, cold drink.

Principles in Action Money, like the dollar you used to buy the soda, serves the needs of individuals and society in many ways. It provides a means for comparing values of goods and services, and it serves as a store of value. Without it, we can't get the things we need and want. That's not the whole story of money, as you will see. In fact, money has functions and characteristics that you might never have thought about.

The Three Uses of Money

If you were asked to define money, you would probably think of the coins and bills in your wallet. Economists define money in terms of its three uses. To an economist, **money** is anything that serves as a medium of exchange, a unit of account, and a store of value.

Money as a Medium of Exchange

A **medium of exchange** is anything that is used to determine value during the exchange of goods and services. Without money, people acquire goods and services through **barter**, or the direct exchange of one set of

money anything that serves as a medium of exchange, a unit of account, and a store of value

medium of exchange anything that is used to determine value during the exchange of goods and services

barter the direct exchange of one set of goods or services for another

Visual Glossary online

Go to the Visual Glossary Online for an interactive review of money.

Action Graph online

Go to Action Graph Online for animated versions of key charts and graphs.

How the Economy Works online

Go to How the Economy Works Online for an interactive lesson on **what happens when you put money in the bank.**



VISUAL GLOSSARY

Reviewing Key Terms

To understand *money*, review these terms:

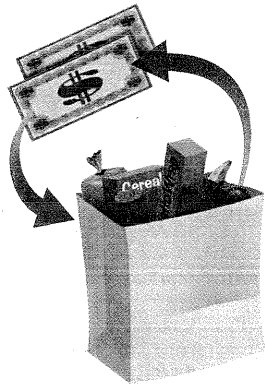
goods, p. 3
services, p. 3
scarcity, p. 4
capital, p. 6

What is Money?

◀ **money** anything that serves as a medium of exchange, a unit of account, and a store of value

THE THREE FUNCTIONS OF MONEY

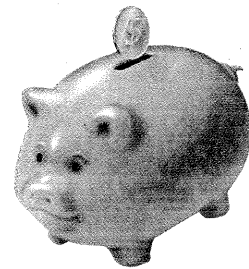
Medium of Exchange



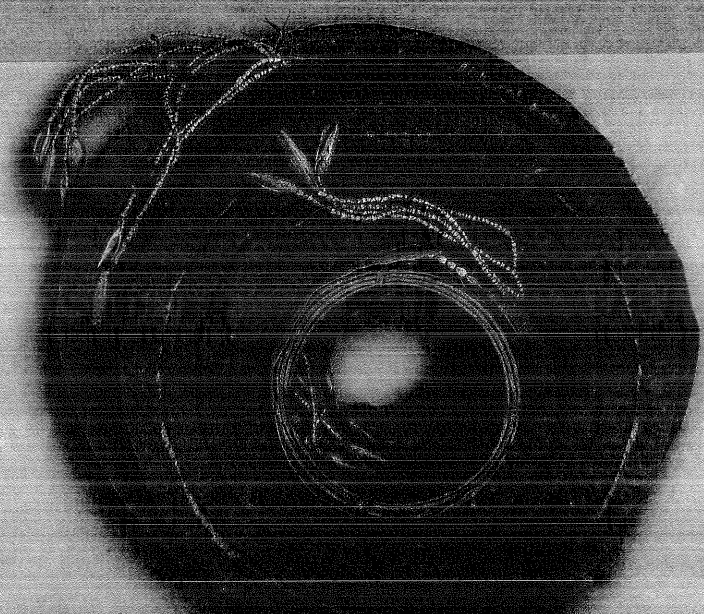
Unit of Account



Store of Value



Money serves as a medium of exchange, a unit of account, and a store of value. *How does each illustration represent functions of money?*



◀ Money is essential to easy exchanges of property. This coil of feathers was used by people on the Santa Cruz Islands in the Pacific Ocean as payment at marriage ceremonies. *How does it represent one of the three functions of money?*

Visual Glossary
online

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goods or services for another. Barter is still used in many parts of the world, especially in traditional economies in Asia, Africa, and Latin America. It is also sometimes used informally in the United States. For example, a person might agree to mow a neighbor's lawn in exchange for vegetables from the neighbor's garden. In general, however, as an economy becomes more specialized, it becomes too difficult to establish the relative value of items to be bartered.

To appreciate how much easier money makes exchanges, suppose that money did not exist, and that you wanted to trade your portable DVD player for a spanking new mountain bike. You probably would have a great deal of trouble making the exchange. First, you would need to find a person who wanted to both sell the model of mountain bike you want and buy your particular DVD player. Second, this person would need to agree that your DVD player is worth the same as his or her bike. As you might guess, people in barter economies spend a great deal of time and effort exchanging the goods they have for the goods they need and want. That's why barter generally works well only in small, traditional economies. In those small economies, people can devote much of their time to exchanging goods.

Now consider how much easier your transaction would be if you used money as a medium of exchange. All you would have to do is find someone who is willing to pay you \$100 for your DVD player. Then you could use that money to buy a mountain bike from someone else. The person selling you the bike could use the \$100 however he or she wished. By the same token, the person who pays \$100 for your DVD player could raise that money however he or she wished. Because money makes exchanges so much easier, people have been using it for thousands of years.

Money as a Unit of Account

In addition to serving as a medium of exchange, money serves as a **unit of account**. That is, money provides a means for comparing the values of goods and services. For example, suppose you see a jacket

on sale for \$30. You know this is a good price because you have checked the price of the same or similar jackets in other stores. You can compare the cost of the jacket in this store with the cost in other stores because the price is expressed in the same way in every store in the United States—in terms of dollars and cents. Similarly, you would expect seeing a movie in a theater to cost about \$8.00, a new DVD rental about \$3.50, and so forth.

Other countries have their own forms of money that serve as units of account. The Japanese quote prices in terms of yen, the Russians in terms of rubles, Mexicans in terms of pesos, and so forth.

Money as a Store of Value

Money also serves as a **store of value**. This means that money keeps its value if you decide to hold on to—or store—it instead of spending it. For example, when you sell your DVD player to purchase a mountain bike, you may not have a chance to purchase a bike right away. In the meantime, you can keep the money in your wallet or in a bank. The money will still be valuable and will be recognized as a medium of exchange weeks or months from now when you go to buy the bike.

Money serves as a good store of value with one important exception. Sometimes economies experience a period of rapid inflation, or a general increase in prices. For example, suppose the United States experienced 10-percent inflation during a particular year. If you sold your DVD player at the beginning of that year for \$100, the money you received would have 10 percent less value, or buying power, at the end of the year. Inflation would have caused the price of the mountain bike to increase by 10 percent during the year, to \$110. The \$100 you received at the beginning of the year would no longer be enough to buy the bike.

In short, when an economy experiences inflation, money does not function as well as a store of value. You will read more about the causes and effects of inflation in Chapter 13.

✓ CHECKPOINT *Under what circumstance does money not serve as a good store of value?*

Simulation Activity

Use of Money

You may be asked to take part in a role-playing game about alternatives to printed money.

unit of account a means for comparing the values of goods and services

store of value something that keeps its value if it is stored rather than spent



▲ Without the portability, divisibility, and uniformity of our currency, sharing a restaurant bill would be very complicated. **What other characteristics are essential to a sound currency?**

The Six Characteristics of Money

The coins and paper bills used as money are called **currency**. In the past, societies have also used an astoundingly wide range of other objects as currency. Cattle, salt, dried fish, furs, precious stones, gold, and silver have all served as currency at various times in various places. So have porpoise teeth, rice, wheat, seashells, tulip bulbs, and olive oil.

These items all worked well in the societies in which they were used. None of them, however, would function very well in our economy today. Each lacks at least one of the six characteristics that economists use to judge how well an item serves as currency. These six characteristics are durability, portability, divisibility, uniformity, limited supply, and acceptability.

Durability

Objects used as money must withstand the physical wear and tear that comes with being used over and over again. If money wears out or is easily destroyed, it cannot be trusted to serve as a store of value.

Unlike wheat or olive oil, coins last for many years. In fact, some collectors have ancient Roman coins that are more than 2,000 years old. Although our paper

currency coins and paper bills used as money

money may not seem very durable, its rag (cloth) content helps \$1 bills typically last at least a year in circulation. When paper bills wear out, the United States government can easily replace them.

Portability

People need to be able to take money with them as they go about their daily business. They also must be able to transfer money easily from one person to another when they use money for purchases. Paper money and coins are very portable, or easy to carry, because they are small and light.

Divisibility

To be useful, money must be easily divided into smaller denominations, or units of value. When money is divisible, people can use only as much of it as necessary for any exchange. In the sixteenth and seventeenth centuries, people actually used parts of coins to pay exact amounts for their purchases. Spanish dollars, widely circulated in the American colonies, were often cut into as many as eight “bits,” or pieces. For this reason these coins came to be called “pieces of eight.”

Today, of course, if you use a \$20 bill to pay for a \$5 lunch, the cashier will not rip your bill into four pieces in order to make change. That’s because American currency, like currencies around the world, consists of various denominations—\$5 bills, \$10 bills, and so on.

Uniformity

Any two units of money must be uniform—that is, the same—in terms of what they will buy. In other words, people must be able to count and measure money accurately.

Suppose everything were priced in terms of dried fish. One small dried fish might buy an apple. One large dried fish might buy a sandwich. This method of pricing is not a very accurate way of establishing the standard value of products, because the size of a dried fish can vary. Picture the arguments people would have when trying to agree whether a fish was small or large. A dollar bill, however, always buys \$1 worth of goods.

Limited Supply

Suppose a society uses certain pebbles as money. These rare pebbles have been found only on one beach. One day, however, someone finds an enormous supply of similar pebbles on a different beach. Now anyone can scoop up these pebbles by the handful. Since these pebbles are no longer in limited supply, they are no longer useful as currency.

In the United States, the Federal Reserve System controls the supply of money in circulation. By its actions, the Federal Reserve is able to keep just the right amount of money available. You'll read more about how the Federal Reserve monitors and adjusts the money supply in Chapter 16.

Acceptability

Finally, everyone in an economy must be able to take the objects that serve as money and exchange them for goods and services. When you go to the store, why does the person behind the counter accept your money in exchange for a carton of milk or a box of pencils? After all, money is just pieces of metal or paper. Your money is

accepted because the owner of the store can spend it elsewhere to buy something he or she needs or wants.

In the United States, we expect that other people in the country will continue to accept paper money and coins in exchange for our purchases. If people suddenly lost confidence in our currency's value, they would no longer be willing to sell goods and services in return for dollars.

✓ **CHECKPOINT** Why would gold cease to be a good form of currency if scientists could create gold out of sand?

Sources of Money's Value

Think about the bills and coins in your pocket. They are durable and portable. They are also easily divisible, uniform, in limited supply, and accepted throughout the country. As convenient and practical as they may be, however, bills and coins have very little value in and of themselves. What, then, makes money valuable? The answer is that there are actually several possible sources of money's value, depending on whether it is commodity money, representative money, or fiat money.

Americans used both commodity and representative money during the colonial period. Representative money was used until 1913, when the first Federal Reserve notes were issued. **What are some advantages of fiat money over commodity and representative money?** ▼

Sources of Money's Value



◀ Commodity money

Objects like this wheat once served as commodity money.



▲ Representative money

Representative money like this silver certificate could be exchanged for silver.

◀ Fiat money

Today, Federal Reserve notes are fiat money, decreed by the federal government to be an acceptable way to pay debts.

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"Sorry. Cash only."

▲ To be useful as commodity money, the commodity has to have some value. **Why are cattle more useful as commodity money than the frog?**

commodity money
objects that have value in and of themselves and that are also used as money

representative money
objects that have value because the holder can exchange them for something else of value

specie coined money, usually gold or silver, used to back paper money

Commodity Money

A commodity is an object. **Commodity money** consists of objects that have value in and of themselves and that are also used as money. For example, various societies have used salt, cattle, and precious stones as commodity money. The usefulness of objects is what gives them value. If not used as money, salt can preserve food and make it tastier. Cattle can be slaughtered for their meat, hides, and horns. Gems can be made into beautiful jewelry. Tobacco, corn, and cotton all served as commodity money in the American colonies.

As you can guess, commodity money tends to lack several of the characteristics that make objects good to use as money. Take cattle, for example. Cows and bulls are not all that portable, or even durable. A cow is not divisible, at least not if you want to keep it alive. That's why commodity money only works in simple economies. As the American colonies developed more complex economic systems, tobacco and

other objects were no longer universally accepted as money. The colonies needed a more convenient payment system. They turned to representative money to meet their needs.

Representative Money

Representative money makes use of objects that have value solely because the holder can exchange them for something else of value. For example, if your brother gives you an IOU for \$20, the piece of paper itself is worth nothing. The promise that he will do all of your chores for a month may be worth quite a lot, however. The piece of paper simply represents his promise to you.

Early representative money took the form of paper receipts for gold and silver. Gold or silver money was heavy and thus inconvenient for customers and merchants to carry around. Each time someone made a transaction, the coins would have to be weighed and tested for purity. People therefore started to leave their gold in goldsmiths' safes. Customers would carry paper ownership receipts from the goldsmith to show how much gold they owned. After a while, merchants began to accept goldsmiths' receipts instead of the gold itself. In this way, the paper receipts became an early form of paper money.

Colonists in the Massachusetts Bay Colony first used representative money in the late 1600s when the colony's treasurer issued bills of credit to lenders to help finance King William's War. The bills of credit showed the exact amount that colonists had loaned to the Massachusetts government. Holders of these bills could redeem the paper for **specie**, or coins made of gold or silver.

Representative money was not without its problems. During the American Revolution, the Second Continental Congress issued representative money called Continentals to finance the war against England. Unfortunately, few people were able to redeem these early paper currencies for specie because the federal government had no power to collect taxes. Until the Constitution replaced the Articles of Confederation in 1789, the federal

government depended on the states' voluntary contributions to fill the treasury. As a result, the federal treasury held very little gold or silver to back the Continentals. People even began to use the phrase "not worth a Continental" to refer to something of no value.

During the summer of 1780, this wretched "Continental" currency fell into contempt. As Washington said, it took a wagon-load of money to buy a wagon-load of provisions. At the end of the year 1778, the paper dollar was worth 16 cents in the northern states and twelve cents in the south. Early in 1789 its value had fallen to two cents and before the end of the year it took ten paper dollars to make a cent. A barber in Philadelphia papered his shop with bills.

—John Fiske, *The American Revolution*, 1896

Later, the United States government issued representative money in the form of silver and gold certificates. These certificates were "backed" by gold or silver. In other words, holders of such certificates could redeem them for gold or silver at a local bank. The United States government thus had to keep vast supplies of gold and

silver on hand to be able to convert all paper dollars to gold if the demand arose. Some silver certificates circulated until 1968, but for the most part, the government stopped converting paper money into silver or gold in the 1930s.

Fiat Money

If you examine a dollar bill, you will see George Washington's picture on one side. To the left of the portrait are the words "This note is legal tender for all debts, public and private." In essence, these words mean that this Federal Reserve Note is valuable because our government says it is.

United States money today is fiat money. A fiat is an order or decree. **Fiat money**, also called "legal tender," has value because a government has decreed that it is an acceptable means to pay debts. Furthermore, citizens have confidence that the money will be accepted. It remains in limited supply, and therefore valuable, because the Federal Reserve controls its supply. This control of the money supply is essential for a fiat system to work. If the money supply grows too large, the currency may become worthless due to inflation.

CHECKPOINT Why is commodity money impractical for use in our modern society?

fiat money objects that have value because a government has decreed that they are an acceptable means to pay debts

SECTION 1 ASSESSMENT

Essential Questions Journal

To continue to build a response to the Essential Question, go to your Essential Questions Journal.

Guiding Question

1. Use your completed concept web to answer this question: How does money serve the needs of our society?
2. **Extension** Money helps people and groups in a society meet their needs. Individuals, governments, and other groups use money to buy things they want and need. Describe a time when you used money to meet one of your needs.

Key Terms and Main Ideas

3. Identify the three uses of **money**.
4. Would a pair of sneakers be a good **store of value**? Explain why or why not.
5. Economists use six characteristics to judge how well an item serves as currency. List these six characteristics.

6. Describe how American dollars are divisible.
7. Salt has been used as money in some societies in the past. Is salt an example of **commodity money** or **representative money**? Explain.

Critical Thinking

8. **Contrast (a)** How does barter work? **(b)** How does this differ from the way money is used?
9. **Predict** What might happen if currency were not portable, or easy to carry?
10. **Summarize (a)** What was the problem with the Continentals issued during the American Revolution? **(b)** Describe a challenge facing governments that issue representative money in the form of silver and gold certificates.

Quick Write

11. Reread Sources of Money's Value in this section. Write a short essay answering the following questions: What are the advantages and disadvantages of each? Which kind of money do you think is the most practical? Consider how well each kind of money—commodity money, representative money, and fiat money—meets the six characteristics of currency.

SECTION 3 Banking Today

OBJECTIVES

1. **Explain** how the money supply in the United States is measured.
2. **Describe** the functions of financial institutions.
3. **Identify** different types of financial institutions.
4. **Describe** the changes brought about by electronic banking.

ECONOMIC DICTIONARY

As you read the section, look for the definitions of these **Key Terms**:

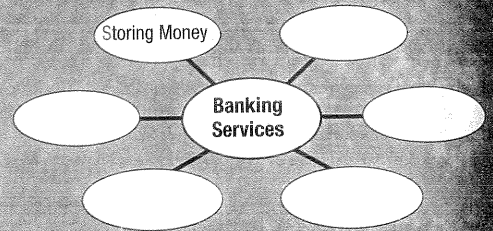
- money supply
- liquidity
- demand deposit
- money market mutual fund
- fractional reserve banking
- default
- mortgage
- credit card
- interest
- principal
- debit card
- creditor



Guiding Question

What banking services do financial institutions provide?

Copy this concept web and fill it in as you read.



► **Economics and You** It's Friday. You just got your paycheck for the week. You take it to the bank, where you fill out a deposit slip and then stand in line and wait... and wait... and wait for the next available teller. Hold on a minute. That scenario is out-of-date! You don't have time for standing in line. You deposit your check quickly at an ATM. Or better yet, you have arranged to have your week's pay electronically deposited directly into your bank account.

Principles in Action Financial institutions provide these electronic services—and many others suited to the computer age. They issue credit cards, make loans to businesses, and provide mortgages to prospective home buyers. They also manage automated teller machines that enable a person to deposit or withdraw money in almost any place on the globe. In this section you'll learn more about electronic transactions, the fractional reserve system, and other aspects of banking today.

Measuring the Money Supply

You are familiar with paying for the items you need with currency—the bills and coins in your pocket. Currency is money. So are traveler's checks, checking account deposits, and a variety of other components. All of these components make up the United States **money supply**—all the money available in the United States economy. To more easily keep track of these different kinds of money, economists divide the money supply into several categories. The main categories are called M1 and M2.

M1

M1 represents money that people can gain access to easily and immediately to pay for goods and services. In other words, M1 consists of assets that have **liquidity**, or the ability to be used as, or directly converted into, cash.

As you can see from **Figure 10.2**, about 55 percent of M1 is made up of currency held by the public, that is, all currency held outside of bank vaults. Another large component of M1 is deposits in checking accounts. Funds in checking accounts are also called **demand deposits**, because checks can be paid “on demand,” that is, at any time.

money supply all the money available in the United States economy

liquidity the ability to be used as, or directly converted into, cash

demand deposit money in a checking account that can be paid out “on demand,” or at any time

Until the 1980s, checking accounts did not pay interest. When they began paying interest, the Fed introduced a new component to measure M1, called *other checkable deposits*, to describe those accounts. Today this category is not as meaningful as it once was, since many checking accounts pay interest if the balance is sufficiently high.

Traveler's checks make up a very small part of M1. Unlike personal checks, traveler's checks can be easily turned into cash.

M2

M2 consists of all the assets in M1 plus several additional assets. These additional M2 funds cannot be used as cash directly, but can be converted to cash fairly easily. M2 assets are also called *near money*.

For example, deposits in savings accounts are included in M2. They are not included in M1 because they cannot be used directly in financial exchanges. You cannot hand a sales clerk your savings account passbook to pay for a new backpack. You can, however, withdraw money from your savings account and then use that money to buy a backpack.

Deposits in **money market mutual funds** are also included as part of M2. These are funds that pool money from a large number of small savers to purchase short-term government and corporate securities. They earn interest and can be used to cover checks written over a certain minimum amount, such as \$250. You will read more about money market mutual funds in Chapter 11.

CHECKPOINT Which category of the money supply includes deposits in money market mutual funds?

Functions of Financial Institutions

Banks and other financial institutions are essential to managing the money supply. They also perform many functions and offer a wide range of services to consumers.

Storing Money

Banks provide a safe, convenient place for people to store money. Banks keep cash in fireproof vaults and are insured against the loss of money in the event of a robbery.

money market mutual fund a fund that pools money from small savers to purchase short-term government and corporate securities

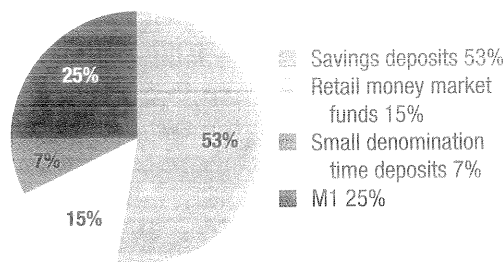
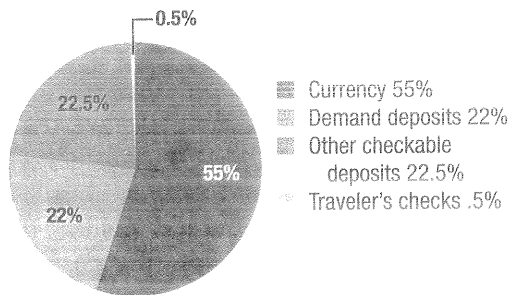


Personal Finance
For more help in finding the right bank, see your Personal Finance Handbook in the back of the book or visit PearsonSchool.com/PHecon

Figure 10.2 Major Components of the Money Supply

M1 Components	Billions
Currency	\$749.6
Demand deposits	\$305.9
Other checkable deposits	\$304.0
Traveler's checks	\$6.7
Total M1	\$1,366.2

M2 Components	Billions
Savings deposits	\$2,902.1
Retail money market funds	\$805.0
Small denomination time deposits	\$398.7
Total M1	\$1,366.2
Total M2	\$5,472.0



Individual categories may be affected by rounding.
SOURCE: Statistical Supplement to the *Federal Reserve Bulletin*, July 2007

GRAPH SKILLS

To keep track of the money supply in the United States, economists divide the money supply into two main categories, M1 and M2.

1. What is the largest component of M1? What is the largest component of M2?
2. What is the difference between M1 and M2?

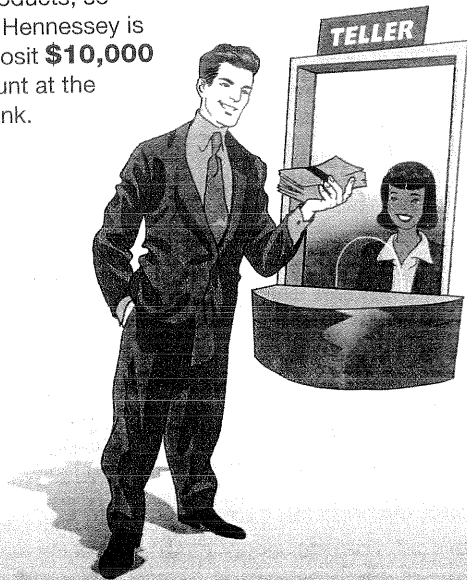
Action Graph online

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How does the fractional reserve system work?

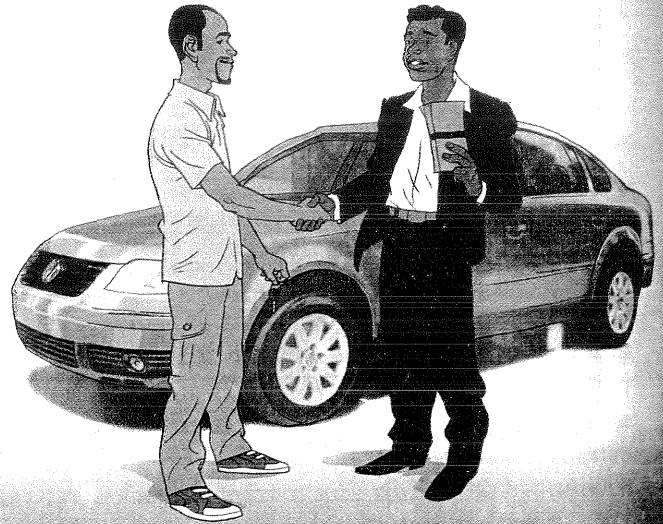
In fractional reserve banking, banks keep a fraction of their funds on hand and lend the remainder to customers.

1 It's been a good week at Acme Products, so owner Don Hennessey is able to deposit **\$10,000** in his account at the Friendly Bank.



Original Deposit

2 Marco Gonzalez wants to buy a car. Friendly Bank can lend him 80 percent of the money Don deposited, or **\$8,000**. The bank holds 20 percent, or **\$2,000**, in reserve.



Loans

As you read in Section 2, FDIC insurance protects people from losing their money if the bank is unable to repay funds.

Saving Money

Banks offer a variety of ways for people to save money. Four of the most common ways are savings accounts, checking accounts, money market accounts, and certificates of deposit (CDs).

Savings accounts and checking accounts are the most common types of bank accounts. They are especially useful for people who need to make frequent withdrawals. Savings accounts and most checking accounts pay interest at an annual rate.

Money market accounts and certificates of deposits (CDs) are special kinds of savings accounts that pay a higher rate of interest than savings and checking accounts. Money market accounts allow

you to save and to write a limited number of checks. Interest rates are not fixed, but can move up or down. CDs, on the other hand, offer a guaranteed rate of interest. Funds placed in a CD, however, cannot be removed until the end of a certain time period, such as one or two years. Customers who remove their money before that time pay a penalty for early withdrawal.

Loans

Banks also perform the important service of providing loans. As you have read, the first banks started doing business when goldsmiths issued paper receipts. These receipts represented gold coins that the goldsmiths held in safe storage for their customers. They would charge a small fee for this service.

In early banks, those receipts were fully backed by gold—every customer who held

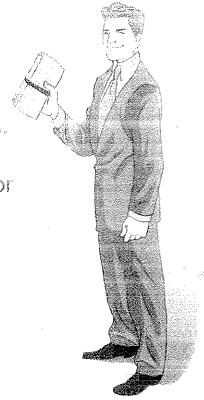
How the Economy Works online

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3 The car dealer who sold Marco the car puts the \$8,000 in his bank account at the Even Friendlier Bank. The bank lends 80 percent, or **\$6,400**, to Jack and Ginny Li, who are redecorating their living room. The bank holds the remaining **\$1,600** in reserve.



4 From the original **\$10,000**, three banks have lent out a total of **\$19,520**, and placed **\$4,880** in their reserves. The reserves protect the bank against demands for withdrawals.



5 The owner of the furniture store deposits the \$6,400 in the Friendliest of All Bank. The bank then lends 80 percent of \$6,400, or **\$5,120**, to C.S. Perkins, to help him pay for college. The bank puts the remaining **\$1,280** in reserve.



Check Your Understanding

1. By Step 3, how much of the original \$10,000 is still being held in bank reserves?
2. What would happen if banks were required to keep all deposits in reserve?

Final Result

a receipt could be sure that the goldsmith kept the equivalent amount of gold in his safe. Gradually, however, goldsmiths realized that their customers seldom, if ever, asked for all of their gold on one day. Goldsmiths could thus lend out half or even three quarters of their gold at any one time and still have enough gold to handle customer demand. Why did goldsmiths want to lend gold? The answer is that they charged interest on their loans. By keeping just enough gold reserves to cover demand, goldsmiths could run a profitable business lending deposits to borrowers and earning interest.

A banking system that keeps only a fraction of its funds on hand and lends out the remainder is called **fractional reserve banking**. Like the early banks, today's banks also operate on this principle. They lend money to homeowners for home improvements, to families to

pay for college tuition, and to businesses. The more money a bank lends out, and the higher the interest rate it charges borrowers, the more profit the bank is able to make.

By making loans, banks help new businesses get started, and they help established businesses grow. When a business gets a loan, that business can create new jobs by hiring new workers or investing in physical capital in order to increase production.

A business that gets a loan may also help other businesses grow. For example, suppose you and a friend want to start a window-washing business. Your business will need supplies like window cleaner and ladders, so the companies that make your supplies will also benefit. They may even hire workers to expand their businesses.

Bankers must, however, consider the security of the loans they make. Suppose

fractional reserve banking a banking system that keeps only a fraction of its funds on hand and lends out the remainder

CAREER CENTER

REAL ESTATE

Possible Careers

- Real estate agent
- **Real estate appraiser**
- Real estate manager
- Building inspector
- Surveyor
- Commercial industrial designer
- Grounds maintenance worker

Profile: Real Estate Appraiser

Duties:

- estimate the value of property for a variety of purposes, such as to assess property tax, to determine a sales price, or to determine the amount of a mortgage

Education:

- Must be licensed or certified, which requires advanced training and passing one or more examinations.

Skills:

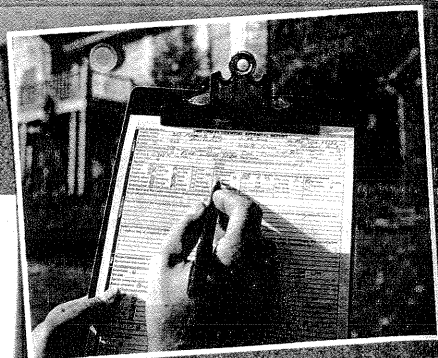
- good analytical and mathematical skills
- ability to pay attention to detail and to work well with people or alone

Median Annual Salary:

- \$46,130 (2007)

Future prospects:

- Employment of appraisers and assessors of real estate is expected to grow, depending on the market, faster than the average for all occupations.
- Employment of appraisers will grow with increases in the level of real estate activity.



Career Link Activity

Choose another career in real estate from the list of possible careers. Create a profile for that career similar to the one for Real Estate Appraiser.

default failing to pay back a loan

mortgage a specific type of loan that is used to buy real estate

credit card a card entitling its owner to buy goods and services based on the owner's promise to pay for those goods and services

interest the price paid for the use of borrowed money

principal the amount of money borrowed

borrowers **default**, or fail to pay back their loans. Then the bank may lose a large part, or even the entire amount, of the money it has loaned. Bankers therefore always face a trade-off between profits and safety. If they make too many bad loans—loans that are not repaid—they may go out of business altogether. (See your Personal Finance Handbook to learn more about banks and the services they offer.)

Mortgages

A **mortgage** is a specific type of loan that is used to buy real estate. Suppose the Lee family wants to buy a house for \$250,000. They are unlikely to have the cash on hand to be able to pay for the house. Like almost all home buyers, they will need to take out a mortgage.

The Lees can afford to make a down payment of 20 percent of the price of the house, or \$50,000. After investigating the Lees' creditworthiness, their bank agrees to lend them the remaining \$200,000 so that they can purchase their new house. Mortgages usually last for 15, 25, or 30 years. According to the terms of their loan, the Lees are responsible for paying back

the loan, plus whatever interest the bank charges, in regular monthly payments over a period of 25 years.

Credit Cards

Another service that banks provide is issuing **credit cards**—cards entitling their owners to buy goods and services based on the owners' promise to pay. How do credit cards work? Suppose you buy a sleeping bag and tent for \$100 on May 3. Your credit-card bill may not arrive until June. You do not actually pay for the gear until you pay that bill. In the meantime, however, the credit-card issuer (often a bank) will have paid the sporting-goods store. Your payment repays the bank for the "loan" of \$100. If you do not pay your credit-card bill in full when you receive it, you will end up paying a high rate of interest on that loan.

Simple and Compound Interest

As you have read, **interest** is the price paid for the use of borrowed money. The amount borrowed is called the **principal**. Simple interest is interest paid only on principal. For example, if you deposit

Personal Finance

For more about simple and compound interest, see your Personal Finance Handbook in the back of the book or visit PearsonSchool.com/PHecon

\$100 in a savings account at 5 percent simple interest, you will make \$5 in a year (assuming that interest is paid annually).

Suppose that you leave the \$5 in interest in the bank, so that at the end of the year you have \$105 in your account—\$100 in principal and \$5 in interest. Compound interest is interest paid on both principal and accumulated interest. That means that in the second year, as long as you leave both the principal and the interest in your account, interest will be paid on \$105. In **Figure 10.3** you can see how an account paying compound interest grows over time.

Banks and Profit

The largest source of income for banks is the interest they receive from customers who have taken loans. Banks, of course, also pay out interest on customers' savings and most checking accounts. The amount of interest they pay out, however, is less than the amount of interest they charge on loans. The difference in the amounts is how banks cover their costs and make a profit.

✓ CHECKPOINT *Why are checking accounts more useful than CDs for people who must make frequent withdrawals?*

Types of Financial Institutions

Several kinds of financial institutions operate in the United States. These include commercial banks, savings and loan associations, mutual savings banks, and credit unions. During the 1990s, these financial institutions became more similar than dissimilar, although differences still remain.

Commercial Banks

Commercial banks, which traditionally served businesses, offer a wide range of services today. Commercial banks offer checking accounts, accept deposits, and make loans to businesses and to individuals. Some commercial banks are chartered by states and are regulated by state authorities and by the Federal Deposit Insurance Corporation (FDIC). About one third of all commercial banks are national banks and are part of the Federal Reserve System. Commercial banks provide the most services and play the largest role in the economy of any type of bank.

Figure 10.3 Compound Interest

End of Year	Principal Amount	Interest Earned at 5%	Principal at End of Year
—	\$100.00	\$5.00	\$105.00
1	\$105.00	\$5.25	\$110.25
2	\$110.25	\$5.51	\$115.76
5	\$127.63	\$6.38	\$134.01
10	\$162.90	\$8.14	\$171.04
15	\$207.90	\$10.39	\$218.29



CHART SKILLS

The chart at left shows the money earned on a \$100 deposit when interest is compounded yearly at 5 percent.

1. How many years does it take for the original deposit to double?
2. After five years, what is the total interest that the deposit-holder will have earned?

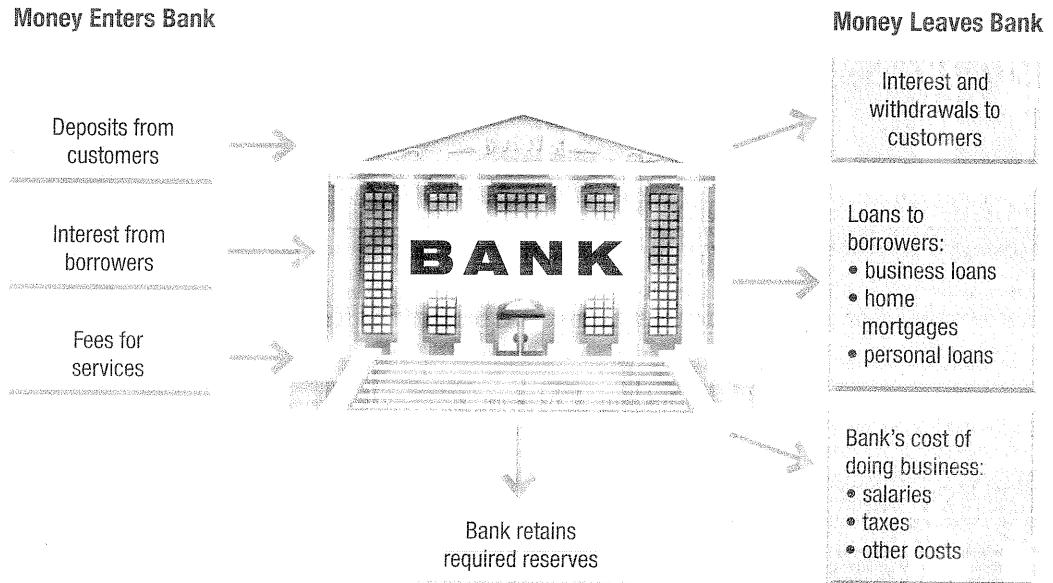
Figure 10.4

How Banks Make a Profit

CHART SKILLS

A bank uses the money customers have deposited to lend to businesses and other borrowers. The bank uses this income to cover its costs and make a profit.

1. What are the sources of a bank's income?
2. Why is the interest banks pay to depositors at a lower rate than the interest banks charge to lenders?



Savings and Loan Associations (S&Ls), which you read about in Section 2, were originally chartered to lend money for building homes during the mid-1800s. Members of S&Ls deposited funds into a large general fund and then borrowed enough money to build their own houses. Savings and Loans are also called thrifts because they originally enabled “thrifty” working-class people—that is, people who were careful with their money—to save up and borrow enough to build or buy their own homes. Over time, S&Ls have taken on many of the same functions as commercial banks.

Mutual savings banks (MSBs) originated in the early 1800s to serve people who made smaller deposits and transactions than commercial banks wished to handle. Mutual savings banks were owned by the depositors themselves, who shared in any profits. Later, many MSBs began

to sell stock to raise additional capital. These institutions became simply savings banks because depositors no longer owned them.

Although savings banks were traditionally concentrated in the Northeast, they had an important influence on the national economy. In 1972, the Consumer's Savings Bank of Worcester, Massachusetts, introduced a Negotiable Order of Withdrawal (NOW) account, a type of checking account that pays interest. NOW accounts became available nationwide in 1980.

Credit unions are cooperative lending associations usually established by and for particular groups, usually employees of a specific firm or government agency. Some are open to an entire community. Credit unions are commonly fairly small and specialize in consumer loans, usually at interest rates favorable to members. Some credit unions also provide checking account services.

Finance Companies

Finance companies make installment loans to consumers. These loans spread the cost of major purchases such as computers, cars, and large appliances over a number of months. Because people who borrow from finance companies more frequently fail to repay the loans, finance companies generally charge higher interest rates than banks do.

CHECKPOINT Which type of financial institution plays the largest role in the economy?

Electronic Banking

Banks began to use computers in the early 1970s to keep track of transactions. As computers have become more common in the United States, their role in banking has also increased dramatically. In fact, computerized banking may revolutionize banking in much the same way that paper currency changed banking long ago.

Automated Teller Machines

If you use an Automated Teller Machine (ATM), you are already familiar with one of the most common types of electronic banking. ATMs are computers that customers can use to deposit money, withdraw cash, and obtain account information at their convenience. Instead of having to conduct banking business face-to-face with a teller during the bank's hours of operation, you can take care of your finances at an ATM.

ATMs are convenient for both banks and for customers, since they are available 24 hours a day and reduce banks' labor costs. Their popularity has made them a standard feature of modern banking.

Debit

At an ATM, bank customers can use a **debit card** to withdraw money from an account. They can also use a debit card in stores equipped with special machines. When you "swipe" your debit card through one of those machines, the card sends a message to your bank to debit, or subtract money from, your checking account. The money goes directly into the store's bank account. For security, debit cards require

customers to use personal identification numbers, or PINs, to authorize financial transactions.

debit card a card used to withdraw money from a bank account

More and more people are using the Internet to conduct their financial business. Many banks, credit unions, and other financial institutions allow people to check account balances, transfer money to different accounts, automatically deposit their paychecks, and pay their bills via computer. Many Americans have also opened accounts with private online bill-paying services and money-transfer services that allow them to send money instantly over the Internet.



Personal Finance

For more help in beginning online banking, see your Personal Finance Handbook in the back of the book or visit PearsonSchool.com/PHecon

FUTURE WATCH Global Impact

Easy Access

The first electronic Automated Teller Machine network was unveiled in Dallas, Texas, in 1968. Today, there are more than 1.5 million ATMs throughout the world, in banks, stores, shopping centers, cruise ships, even on ships in the U.S. Navy. Every eight minutes a new ATM is installed somewhere in the world. **Review the chart tracking the number of ATMs per 100,000 people in a number of countries. Do you think the wide gap in ATM access among nations will lessen over time? Why or Why not?**



SOURCE: Financial Sector Development Indicators, The World Bank



▲ Phone cards, gift cards, and mass transit cards are among the many useful types of stored-value, or smart, cards.

Automated Clearing Houses

Automated Clearing Houses (ACHs), located at Federal Reserve Banks and their branches, allow consumers to pay bills without writing checks. An ACH transfers funds automatically from customers' accounts to creditors' accounts. (A **creditor**

a person or institution to whom money is owed

is a person or institution to whom money is owed.) People can use ACHs to pay regular monthly bills such as mortgage payments, rent, utility bills, and insurance premiums. They save time and postage costs, and end any worries about forgetting to make a payment.

Stored-Value Cards

Stored-value cards, or smart cards, are similar to debit cards. These cards carry embedded magnetic strips or computer chips with account balance information. College students may be issued a smart card to pay for cafeteria food, computer time, or photocopying. Phone cards, with which customers prepay for a specified amount of long-distance calling, are also smart cards, as are gift cards. Some people even use a special kind of smart card in place of a bank account. They can make deposits, withdraw cash, or pay bills with the card.

Will stored-value smart cards someday replace cash altogether? No one can know for sure, but private companies and public facilities continue to explore new uses for smart card technology.

✔ **CHECKPOINT** How does a debit card work?

SECTION 3 ASSESSMENT

Essential Questions Journal

To continue to build a response to the Essential Question, go to your Essential Questions Journal.

Guiding Question

1. Use your completed concept web to answer this question: What banking services do financial institutions provide?
2. **Extension** If you were opening a checking account at a local bank, what services would you expect your bank to provide?

Key Terms and Main Ideas

3. How does **fractional reserve banking** help banks earn a profit?
4. What happens when borrowers **default** on their loans?
5. Describe a situation in which a person would need a **mortgage** from a bank.
6. When would you pay **interest**?
7. List at least three services that are available through home banking over the Internet.

Critical Thinking

8. **Summarize (a)** What kinds of money are included in M1 and M2? **(b)** Why do economists use these different categories?
9. **Extend** If you are planning to leave money in a savings account for 10 years, would it be better to receive simple interest or compound interest? Explain.
10. **Contrast (a)** In what ways are debit cards and stored-value cards similar? **(b)** How are they different?

Math Skills

11. There is a simple formula for finding simple interest:

$$I = prt.$$

To find the interest (I), multiply your principal (p) times the interest rate (r) times the length of time (t). The interest

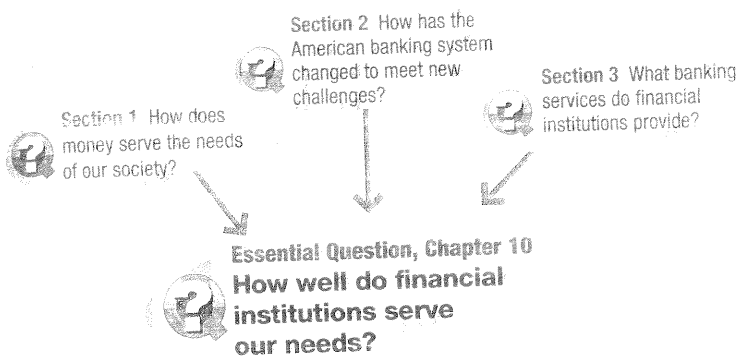
rate must be expressed in the form of a decimal. For example, 1% interest would equal 0.01, and 10% interest would equal 0.10. The time is the number of years your deposit draws interest. Use this formula to answer the following questions:

- (a) Suppose your bank pays an interest rate of 6% per year. What is the interest rate in decimal form?
- (b) Suppose you keep \$500 in the bank for ten years, receiving 6% simple interest. Write the numbers into the formula to calculate simple interest.
- (c) How much interest will you receive at the end of the ten years?

Visit PearsonSchool.com/PHecon for additional math help.

QUICK STUDY GUIDE

Chapter 10: Money and Banking



Developments in U.S. Banking

Problem	Problem Resolved by	Date
Many different currencies in the U.S.	National Banking Acts	1863, 1864
Gold did not support U.S. currency	U.S. adopts gold standard	1870s
No central decision-making authority to regulate banks	Federal Reserve System	1913
No central bank to monitor reserves	Federal Reserve System	1913
No insurance on savings deposits	FDIC	1933
No convenient way of getting bank credit for small purchases	First bank-issued credit card	1946
Difficult for people to get consumer credit	Development of credit unions	1909
Making deposits and withdrawals outside business hours	Automated teller machines	1968

Economic Dictionary

- money, p. 249
- medium of exchange, p. 249
- barter, p. 249
- unit of account, p. 251
- store of value, p. 251
- currency, p. 252
- commodity money, p. 254
- representative money, p. 254
- specie, p. 254
- fiat money, p. 255
- bank, p. 256
- national bank, p. 257
- bank run, p. 258
- greenback, p. 259
- gold standard, p. 259
- central bank, p. 260
- member bank, p. 260
- foreclosure, p. 263
- money supply, p. 264
- liquidity, p. 264
- demand deposit, p. 264
- money market mutual fund, p. 265
- fractional reserve banking, p. 267
- default, p. 268
- mortgage, p. 268
- credit card, p. 268
- interest, p. 268
- principal, p. 268
- debit card, p. 271
- creditor, p. 272

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CHAPTER 10 ASSESSMENT

Self-Test
online

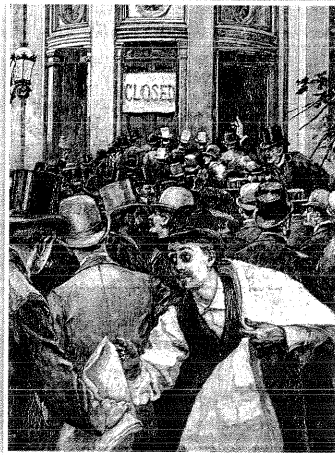
To test your understanding of key terms and main ideas, visit PearsonSchool.com/PHecon

Key Terms and Main Ideas

To make sure you understand the key terms and main ideas of this chapter, review the Checkpoint and Section Assessment questions and look at the Quick Study Guide on the preceding page.

Critical Thinking

- Predict** Why is money acceptable to people in the United States? If American merchants stopped accepting dollars, predict how people might get the goods and services they needed.
- Evaluate (a)** Identify the powers the National Banking Acts of 1863 and 1864 gave to the federal government. **(b)** How did each of these powers help stabilize the American banking system? **(c)** Which of these reforms do you think contributed most to the stability of American money and banks? Why?
- Extend (a)** In what ways did the government regulate banks from the 1930s until the 1960s? **(b)** What factors contributed to the S&L crisis in the 1980s? **(c)** What regulations could help prevent another S&L crisis in the future?
- Select** Suppose you have \$2,000 that you want to save in the bank for at least two years. **(a)** List four types of accounts



where you could keep your money. **(b)** If interest rates were very high, which account would be best? Explain your choice.

- Summarize (a)** What are some reasons individuals need loans? **(b)** How do businesses benefit from being able to get loans? **(c)** How do banks profit from meeting these needs of individuals and businesses?

Applying Your Math Skills

Simple and Compound Interest

Interest works for you when you have savings and against you when you have debt. The formula for simple interest is $\text{principal} \times \text{rate} \times \text{time}$. To find a final balance with simple interest, add the interest and the principal. The formula will look like this:

$$B = prt + p$$

The formula to find a final balance using compound interest uses the same original values as the formula for simple interest: principal, interest rate expressed as a decimal, and time. Here is the formula for finding a balance using compound interest:

$$B = p(1 + r)^t$$

Visit PearsonSchool.com/PHecon for additional math help.

- If you carried over a credit card balance of \$400 on a credit card that charges 2% per month (24% per year), what would your balance be after one month?
- If you missed the payment and incurred a \$35 late fee, what would your balance be the second month if you made no additional charges?
- If you made a \$50 payment, what would your balance be the third month?



Essential Question Activity

Essential Questions Journal

To respond to the chapter Essential Question, go to your **Essential Questions Journal**.

- Complete this activity to answer the Essential Question **How well do financial institutions serve our needs?** Imagine that after many years of service, you become the manager of the bank that serves the neighborhood in which you grew up. Your responsibility to the bank is to increase its profits. However, you also want to do good works in your community. Using the worksheet in your Essential Questions Journal or the electronic worksheet available at PearsonSchool.com/PHecon, gather the following information:
 - In the first column, write the services you will offer your customers.
 - In the second column, write how these services will benefit your neighborhood. For example, how might giving people mortgages be good for the neighborhood?

Think about which services and benefits are most likely to attract customers to your bank. Based on your ideas, write one or more advertising slogans for your bank in the third column.

- Modify** Now suppose another bank opens down the block from your bank. Choose two of the following situations. Describe how each of them might cause you to modify the services you offer and how you choose to advertise.
 - The new bank offers free debit cards and electronic banking through the Internet.
 - The new bank offers low-interest mortgages—but only to borrowers who have an excellent history of paying back loans.
 - The new bank offers low interest mortgages to poor people who want to live in their own house but who may not be able to pay back their debt.

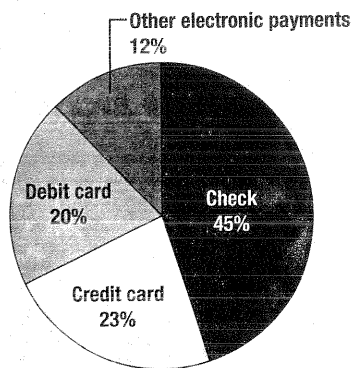
DOCUMENT-BASED ASSESSMENT

Is the move toward a “cashless” economy good or bad?

In the United States, people are replacing cash and paper checks with credit cards, debit cards, and electronic banking in many situations. Some people argue that this development has negative consequences for individuals and the economy. Others believe that going “cashless” can benefit the economy.

Document A

Non-cash Payments, 2003



Document B

“The less cash that flows through our hands, the more intangible it becomes and the more we lose our sense of its real value.... Technology is simply making it easy not to count every dollar....

“Before you apply for a new “smart card,” consider the tradeoff for convenience. The next time you’re making a major purchase, say for a new washing machine, go to the bank, take out \$450 and count out that fistful of bills for the sales clerk. You’ll have a fuller appreciation of the cost, the satisfaction of exchanging tangible earnings for your betterment — and a sense of just what we’re losing.”

—From “Cash: An Endangered Species,” by Chris Plummer, CBS Marketwatch, June 8, 2004

Document C

“Debit cards are often more convenient for consumers than paper checks.... Banks offer debit cards both because consumers have come to expect them, and because debit card transactions can be less costly for banks to process than cash or check transactions. Finally, merchants find debit cards attractive because it is often faster and less costly to accept payments by debit card than by cash or check. Card payments have become increasingly important in situations where transaction speed is a priority for merchants, such as in check-out lines and at fast food restaurants.”

—From “A Summary of the Atlanta Forum on Transforming U.S. Retail Payments,” The Federal Reserve Board, February 6, 2007

ANALYZING DOCUMENTS

Use your knowledge of the “cashless” economy and Documents A, B, and C to answer questions 1–3.

- Document A shows that, of payments that were not made in cash, the largest number were made by**
 - checks.
 - credit cards.
 - debit and credit cards combined.
 - debit cards and other electronic payments.
- According to Document B, what is the problem with having fewer cash transactions?**
 - Electronic transactions have serious security risks.
 - People who do not use cash have a harder time keeping track of their money.
 - There is no problem with having fewer cash transactions.
 - People who use electronic transactions are often charged additional fees.
- The authors of Document B and Document C would probably agree that debit cards**
 - are convenient for consumers.
 - should be used in more places.
 - benefit banks more than consumers.
 - help consumers borrow money easily.

WRITING ABOUT ECONOMICS

Whether increasing electronic payments will help or harm the U.S. economy is an ongoing issue. Use the documents on this page and resources on the Web site below to answer the question: *Is the move toward a “cashless” economy good or bad?* Use the sources to support your opinion.

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