Financial Markets, Instruments, and Institutions

In nations such as Brazil, Colombia, Paraguay, and Peru, price-level-adjusted mortgages, or PLAMs, are commonly used to finance home purchases. Unlike traditional fixed-rate mortgages, for which nominal monthly payments are fixed, or adjustable-rate mortgages, for which monthly payments vary with changes in market interest rates, under a PLAM the real monthly payments are constant over the life of the loan. That is, nominal monthly payments adjust automatically to variations in the price level so that the real value of each month’s payment is the same. As a result, PLAMs are most clearly desirable to residents of nations with particularly high inflation rates.

In the United States, PLAMs have not been very popular for two reasons. For one thing, U.S. inflation rates have been relatively low in recent years. For another, it is not always clear how U.S. tax laws and loan disclosure rules and related regulations would apply to PLAMs.

Another nontraditional mortgage, which does show signs of catching on in the United States, is the reverse mortgage, available to people aged sixty-two and older. This type of mortgage permits older individuals to borrow against the equity accumulated in their homes. Instead of the normal arrangement in which a borrower makes monthly payments to a mortgage lender, the lender issuing a reverse mortgage makes monthly payments to the borrower until the house is sold or the borrower dies. At that time, all equity in the house reverts to the mortgage lender. Although reverse mortgages have existed since the 1960s, as the portion of the American population aged sixty-two and older has grown, the incentive to enter into reverse mortgages has increased. Consequently, the market for reverse mortgages, which already involves billions of dollars, is growing rapidly.
Fixed-rate mortgages, adjustable-rate mortgages, PLAMs, and reverse mortgages are just a few of the vast array of financial instruments. In this chapter, you will learn about financial instruments and the markets in which they are traded.

Saving and Investment in a Global Economy

As we discuss below, financial markets help direct financial resources from the owners of these resources to those who require them to finance productive activities. The owners of financial resources are individuals who accumulate resources rather than consuming them each year. These people are savers of financial resources. When other individuals or businesses use financial resources to finance productive endeavors, they invest these resources. These two groups—those who save and those who invest—interact in financial markets as follows:

- **Saving.** The key economic function of financial markets is to channel saving to productive investment. Saving is forgone consumption. Thus, when an individual does not spend all after-tax income received within a given year, that individual has saved some of her money income.

- **Investment.** Savers, however, do not want their savings to sit idly in money balances (currency and non-interest-bearing demand deposits) if there are alternatives that yield positive returns. Typically, such alternatives exist. The reason is that other individuals or firms normally engage in investment, or additions to the stock of capital goods. Capital goods are goods that may be used to produce other goods or services in the future.

Investment in capital goods can require significant financial resources, so individuals and firms that invest often must borrow funds or sell ownership shares via initial public offerings or issues of new shares. They obtain these funds from savers with a promise to return the borrowed funds on some future date. Those who invest also promise interest, or payments for the use of funds borrowed from savers. They finance these interest payments using revenues from the production that their new capital goods make possible.

Savers are the ultimate lenders in our economy. Many of the borrowers are firms or individuals who wish to undertake investment. Some individuals, of course, borrow to finance current consumption. Nevertheless, the main reasons for lending and borrowing are that savers desire future interest income on the savings that they hold today, while most borrowers desire to finance investment projects that they expect to yield returns in the future.

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**Saving:*** Forgone consumption.

**Investment:** Additions to the stock of capital goods.

**Capital goods:** Goods that may be used to produce other goods or services in the future.

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**I. What is the main economic function of financial markets?** The main economic role of financial markets is to direct saving to those who wish to make capital investments, or purchases of capital goods that may be used to produce additional goods and services in the future.
Financial Markets and Instruments

Financial markets facilitate the lending of funds from saving to those who wish to undertake investments. Those who wish to borrow to finance investment projects sell IOUs to savers, as Figure 3-1 illustrates. Financial markets are markets for these IOUs, which can have many forms. The various forms of IOUs are known as financial instruments. Such instruments, which are also called securities, are claims that those who lend their savings have on the future incomes of the borrowers who use those funds for investment.

When we think of “instruments,” we may think of tools such as a surgeon’s scalpel. We refer to financial claims as “instruments” because they also are tools, though they are in the form of paper (or electronic) documents. Yet just as a surgeon’s instruments can be used to perform delicate tasks, individuals and firms can use financial instruments to undertake crucial exchanges of financial resources. They can also use financial instruments to help reduce risks of financial loss.

Financial markets can be categorized in two basic ways. One distinguishes between primary and secondary markets by separating types of financial markets depending on whether or not they are markets for newly issued instruments. The other distinguishes between money and capital markets, depending on the maturities of the instruments that are traded in the markets. The maturity of an instrument is the time from the date of issue until final principal and interest payments are due to its holders. Maturities of less than a year are short-term maturities, maturities in excess of ten years are long-term maturities, and maturities ranging from one to ten years are intermediate-term maturities.

Primary and Secondary Financial Markets

One way of categorizing the many financial markets is to distinguish between primary and secondary financial markets.

Primary Markets A primary market is a financial market in which newly issued financial instruments are purchased and sold. For instance, a newly formed business that wishes to sell shares of ownership (commonly called

FIGURE 3-1
The Function of
Financial Markets.

Financial markets facilitate the transfer of funds from savers to those who wish to invest in capital goods. For instance, companies that wish to undertake investment projects offer financial instruments to savers in exchange for funds to finance the projects.
“stocks”) offers these shares for sale in a primary financial market. Likewise, when the U.S. Treasury issues new Treasury bonds to fund some of the public debt (which increases when the federal government spends more than its revenues), the Treasury sells these instruments in a primary market.

The first attempt by a business to issue ownership shares to the public in the primary market is called an initial public offering (IPO). Although businesses could attempt to manage an IPO on their own, many rely on the assistance of investment banks. These institutions specialize in marketing initial ownership shares offered by new businesses. An investment bank typically underwrites such issues, meaning that the investment bank guarantees the business’s initial fixed share price. Essentially, the investment bank temporarily purchases the shares of the business. Then it attempts to resell them in the primary market at a slightly higher price. The investment bank keeps the difference between the purchase price and the resale price (often 10 percent) as a profit.

SECONDARY MARKETS

Most financial instruments sold in primary markets have maturities ranging from several months to many years. Shares of ownership in firms have no set maturities. Firms in principle can last “forever,” if they are going concerns. Bonds issued by the U.S. Treasury have fixed maturities in excess of ten years. Yet at some point after the initial purchase of such ownership shares or bonds, but before their maturity dates, the original purchaser may not wish to hold them any longer. Then that original owner may sell them in a secondary market, which is simply a market for financial instruments that were issued at some point in the past.

Secondary markets contribute to the efficient functioning of primary markets, because the ability to buy or sell previously issued financial instruments makes these instruments much more liquid than they would otherwise be. For instance, persons will be much more likely to buy ownership shares in a fledgling company if they know that there is a readily available market where they can sell the shares if they later wish to access their funds or become dissatisfied with the company’s performance.

There are a variety of active secondary markets for financial instruments, including secondary markets for U.S. Treasury securities, shares of ownership in corporations, and state and municipal bonds. Now there are also secondary markets for many consumer credit obligations and for business, mortgage, and consumer loans of financial institutions. For instance, each year banks package billions of dollars of their credit-card loans into separate securities that they sell in secondary markets.

Much as investment bankers facilitate the functioning of primary markets, brokers assist in matching borrowers and lenders in secondary markets. Typically, brokers specialize in a single secondary market and develop expert knowledge of the factors that influence risks, costs, and returns relating to instruments exchanged in that market. Brokers receive fees for the services they provide to secondary market buyers and sellers. For instance, a broker at a firm such as Merrill Lynch earns fee income for attempting to help clients earn the highest possible returns from shares of ownership in corporations.

**On the Web**

What are the prices for the latest IPO filings? To view a directory of the most recent IPOs, visit IPO Central at Hoover’s Online at [http://www.hoovers.com](http://www.hoovers.com).

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**Investment banks**: Institutions that specialize in marketing and underwriting sales of firm ownership shares.

**Secondary market**: A financial market in which financial instruments issued in the past are traded.

**Brokers**: Institutions that specialize in matching buyers and sellers of financial instruments in secondary markets.
Money Markets and Capital Markets

As discussed in more detail below, financial instruments come in a variety of maturities. For instance, there are three-month Treasury bills and twenty-year Treasury bonds. Banks and other depository financial institutions issue six-month certificates of deposit and two-and-a-half-year time deposits.

Firms, banks, and individuals trade these and other instruments in many different financial markets. Economists and traders themselves have adopted the convention of classifying markets into two broad groups based on the maturities of the financial instruments exchanged in the markets. As we shall discuss in the next chapter, the maturities of financial instruments influence their interest yields. Thus, separating financial markets by maturity is a way of grouping together sets of markets whose interest rates tend to be most closely linked.

Money Markets

The term money markets refers to markets for financial instruments with short-term maturities of less than one year. The money markets include markets for short-maturity Treasury securities, including three- and six-month Treasury bills. They also include markets for bank six-month certificates of deposit, which include most of the large certificates of deposit included in the M3 measure of money discussed in Chapter 1.

The market for repurchase agreements is also a money market. Nearly all repurchase agreements have relatively short maturities. Indeed, as we noted in Chapter 1, many repurchase agreements have one-day maturities.

Banks do a significant amount of trading in the market for repurchase agreements. In addition, they lend to each other directly in a money market known as the federal funds market. In this private market, banks borrow from and lend to each other deposits that they hold at Federal Reserve banks. This is why it is called a market for “federal” funds, even though the funds actually belong to the lending banks themselves. Federal funds are discussed in more detail in Chapter 4.

Money market trading typically is very active, with many buyers and sellers entering the market with offers each day. As a result, money market instruments tend to be liquid. Because there are so many potential buyers, a seller of an instrument in this market can usually find someone who is willing to buy that instrument at a mutually agreeable price.

Capital Markets

Markets for financial instruments with maturities of one year or more are called capital markets. The reason for this name is that instruments with such long maturities are likely to be associated directly with funding capital investment projects.

There are several different capital markets. Stock shares of ownership in businesses and bonds issued by corporations are traded in separate capital markets. So are longer-term securities issued by the U.S. Treasury and agencies of the U.S. government, state and local municipal securities, home mortgages, and bank commercial and consumer loans.

Trading in capital markets can be very active, but on a given day relatively fewer buyers and sellers generally interact in these markets than in the money markets. As a consequence, capital market instruments are less liquid than money market instruments.
2. What are primary and secondary markets for financial instruments, and what distinguishes money markets from capital markets?

Primary markets are markets where newly issued financial instruments are purchased and sold. Secondary markets are markets where previously issued financial instruments are traded. Money markets are markets where financial instruments with maturities of less than one year are traded. Instruments with maturities equal to or more than a year are traded in capital markets.

Money Market Instruments

Each of the many types of financial instruments has its own special set of characteristics. The most straightforward way of categorizing these instruments, however, is according to their maturities.

Money market instruments have maturities shorter than one year. As we mentioned, because they are so widely traded, money market instruments typically are more liquid than capital market instruments. Most also are less risky because of their shorter terms to maturity. Fewer “bad” things can happen within, say, three months than can occur during a span of twenty years. Thus, market traders usually have fewer risk concerns about a corporation’s three-month commercial paper than about a twenty-year corporate bond.

Because of their high liquidity and relatively low risk, money market instruments are widely held and traded by banks and other depository institutions. Large corporations and individuals hold and exchange these instruments as well. Figure 3-2 displays the relative magnitudes of outstanding issues of money market instruments.

Figure 3-2
Money Market Instruments Outstanding.

Treasury bills, commercial paper, and certificates of deposit are the predominant instruments traded in the money markets.

TREASURY BILLS   The U.S. government issues financial instruments called Treasury securities. These are U.S. government debt obligations that are exchanged in both the money markets and the capital markets. Treasury bills (T-bills) are government-issued financial instruments with maturities of less than a year, so they are money market instruments. Traders widely view T-bills as very safe assets. After all, if the government decides that it needs to pay them off, it can always raise taxes. It is this taxing authority of the government that causes most individuals to regard T-bills as having extremely low risk.

Since 1998, the federal government has issued T-bills with minimum denominations of $1,000. Each successive T-bill denomination is in $5,000 increments. T-bills have terms to maturity of 91 days (three months), 182 days (six months), and 52 weeks (twelve months). The government sells T-bills at discounts from the face-value denominations. T-bills are negotiable instruments, which means that the bearer of a T-bill can sell the bill in the secondary market.

COMMERCIAL PAPER   Banks, corporations, and finance companies often need to obtain short-term funding. One way to obtain such funds is to issue commercial paper, which is a short-term debt instrument. For businesses, commercial paper has become an important substitute for borrowing directly from banks.

Issuers typically offer commercial paper in maturities from 2 to 270 days. Most issuers sell commercial paper at a discount, just as the Treasury sells T-bills. Some commercial paper instruments offer coupon returns, however.

Typically, only the most creditworthy banks and corporations are able to sell commercial paper to finance short-term debts. Nevertheless, Moody's and Standard and Poor's assign credit ratings to different issuers. Consequently, commercial paper issues of some companies may have higher market yields than those of others because of differences in risk perceptions.

CERTIFICATES OF DEPOSIT   Banks also raise short-term funds by issuing certificates of deposit (CDs). Most CDs are short-term time deposits with maturities of six months, although banks also issue CDs with longer maturities. At one time, CDs were nonnegotiable, meaning that the original purchasers could not sell them without incurring interest penalties. Since 1961, however, banks have issued negotiable CDs. They now are traded actively in a secondary money market.

EURODOLLARS   As you learned in Chapter 1, dollar-denominated deposits in banks located outside the United States are called Eurodollar deposits. These deposits may be in foreign banks or in foreign branches of U.S. banks. Many of these deposits are negotiable. In effect, a Eurodollar deposit amounts to a type of CD that is held outside the United States.

REPURCHASE AGREEMENTS   As defined in Chapter 1, a repurchase agreement is a contract to sell a financial asset with the understanding that the seller will buy back the asset at a later date and, typically, at a higher price. This means that effectively the seller of the asset borrows from the buyer. Thus, a repurchase agreement amounts to a very short term loan. Most repurchase agreements have maturities ranging between one and fourteen days. Banks and large corporations are active traders in the market for repurchase agreements.

FEDERAL FUNDS   When banks borrow from or lend to one another, the funds that they trade are federal funds. These funds are privately owned but are held on deposit at Federal Reserve banks. Many federal funds loans have maturities
of one day, though maturities of a week or two are not uncommon. The interest rate at which federal funds are exchanged is the federal funds rate. As you will learn in Chapter 20, the federal funds rate is a closely watched indicator of Federal Reserve monetary policy.

**Banker’s Acceptances** A banker’s acceptance is a bank loan that typically is used by a company to finance storage or shipment of goods. These instruments commonly arise from international trade arrangements. They are traded in secondary money markets.

**Capital Market Instruments**

The maturities of capital market instruments exceed one year. Financial instruments with both intermediate-term (one to ten years) maturities and long-term (more than ten years) maturities are included in this category.

Capital market instruments generally are regarded as somewhat more risky than money market instruments. They also are less liquid than money market instruments. Figure 3-3 shows the relative outstanding amounts of various types of capital market instruments.

**Equities** Business equities are shares of ownership, such as common stock, that corporations issue. Owners of equities are residual claimants on the income and net worth of a corporation. This means that all other holders of the corporation’s debt must be paid before the equity owners. The key advantage of equity ownership, however, is that the rate of return on equities varies with the profitability of the firm. Equities typically offer dividends, which are periodic payments to holders that are related to the corporation’s profits.

Because corporations are ongoing concerns as long as they remain profitable, the equities that they issue have no stated maturities. Hence, equities are long-term financial instruments and are classified among capital market instruments.

**Figure 3-3**

**Capital Market Instruments Outstanding.**

Corporate equities, mortgage instruments, and Treasury notes and bonds are key instruments of the capital markets.

Common Stock  Equity shares most commonly are issued in two forms: common stock and preferred stock. Ownership of common stock entitles the shareholder to have some direct say about how the company conducts its business. As a common stock owner, the shareholder is entitled to attend meetings where shareholders can vote in elections for a company’s board of directors and have some input concerning matters such as management strategy. (Shareholders do not have to attend meetings to vote.)

The fact that owners of common stock are the residual claimants means that if a company goes bankrupt, they are the last in line for any remaining assets of the firm. These residual assets could very well have less value than the stated value of the company’s stock. Hence, owners of common stock take on more default risk than any other creditors of the company. For this reason they are granted the greatest say in management.

The potential liability of a stockholder, however, is limited to the value of the individual’s shareholdings. Hence, if a company goes bankrupt, the most that a stockholder can lose is the funds that he or she has allocated to its shares.

Preferred Stock  Holders of preferred stock have no voting rights. They sacrifice this power to influence the company’s management in exchange for a guarantee that they will receive any dividends that the company may pay to stockholders. And if the company is forced into bankruptcy, preferred stockholders have first claim on any residual value of the firm after other creditors have been paid.

Stock Exchanges  Corporate equity shares are traded on stock exchanges, which are organized physical locations that function as marketplaces for stocks. Members of stock exchanges function both as brokers and as dealers. As brokers they trade on behalf of others, and as dealers they trade on their own accounts.

There are several stock exchanges in the United States. The oldest and largest is the New York Stock Exchange (NYSE), which began in 1792. Roughly half of the stock trading in the United States is done on the NYSE. Shares of more than 3,000 companies, including many of the largest U.S. corporations, are traded there. The number of membership positions in the NYSE, called “seats,” is fixed at 1,366. Over 500 of these seats are owned by securities firms. About a third of these firms are Exchange specialists, which are responsible for laying out and honoring basic ground rules for orderly trading activity in the Exchange. Figure 3-4 (p. 60) explains how to read NYSE data published in the Wall Street Journal.

Over-the-Counter Stocks  In recent years a number of corporations have chosen not to be listed on the organized exchanges. Shares in these corporations are over-the-counter (OTC) stocks that are traded in decentralized markets. OTC trading volumes have increased in recent years as more OTC stocks are traded on electronic networks that link traders around the world.

In the United States, most OTC stocks are traded on the National Association of Securities Dealers Automated Quotation (Nasdaq) system. In February 1971, Nasdaq was launched as a tiny network of 100 or so securities firms linked by $25 million worth of interconnected “desktop devices” to trade about 2,800 OTC stocks. At that time, trading in the rest of the financial world was done largely through phone calls, and stock prices were often distributed by runners on foot. Indeed, the screens displaying the OTC stock prices on Nasdaq’s
“desktop devices” were not even known as computer screens—appropriately, because the devices did not actually compute anything. The system simply displayed stock quotes and the phone number of the broker to call to trade. Today, the Nasdaq market links about 500 dealers via true computers, and the market is home to nearly 5,500 stocks, including those of such companies as Microsoft, Intel, and Cisco.

CORPORATE BONDS  Corporations may wish to fund capital expansions by borrowing instead of by issuing stock. One way to borrow is by issuing corporate bonds, which are long-term debt instruments of corporations. A typical corporate bond pays a fixed amount of interest twice each year until maturity. Some corporate bonds are convertible, meaning that the holder has the right to convert them into a certain number of equity shares prior to maturity. Corporations that offer such a convertibility feature usually do so to make the bonds more attractive to potential buyers.

TREASURY NOTES AND BONDS The U.S. Treasury issues two categories of financial instruments with maturities of more than one year. These are Treasury notes and Treasury bonds. Treasury notes have maturities ranging from one to ten years.
years. **Treasury bonds** have maturities of ten years or more. Both notes and bonds have minimum denominations of $1,000. The Treasury sells most notes and bonds at auctions.

**Securities of U.S. Government Agencies** These are long-term debt instruments issued by a variety of federal agencies. For instance, one agency called the General National Mortgage Association (GNMA, or “Ginnie Mae”) issues securities backed by the value of household mortgages that it holds.

**Municipal Bonds** Long-term securities issued by state and local governments are called municipal bonds. An attractive feature of these bonds for many holders is that the interest payments the holders receive typically are tax-free. Consequently, the stated interest rates on municipal bonds are lower than the rates on corporate bonds.

**Mortgage Loans and Mortgage-Backed Securities** Long-term loans to individual homeowners or to businesses for purchases of land and buildings are mortgage loans. Most mortgage loans are made initially by savings banks, savings and loan associations, and commercial banks. These depository institutions sell many of the mortgage loans that they initiate to other institutions in a secondary market. The purchasing institutions, which include GNMA and other governmental or quasi-governmental agencies, fund their mortgage purchases by issuing mortgage-backed securities. These are financial instruments whose returns are derived from the underlying returns on the mortgage loans held by the issuer, such as GNMA. The existence of secondary markets for mortgage-backed securities makes mortgage loans more liquid than they would otherwise be.

**Commercial and Consumer Loans** Long-term loans made by banks to businesses are commercial loans. Long-term loans that banks and other institutions, such as finance companies, make to individuals are consumer loans. Until recently, there were not many secondary markets for these loans, so they traditionally have been the most illiquid capital market instruments. As we shall discuss in Chapter 13, however, banks have worked in recent years to increase the liquidity of the loans that they make.

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3. **What are the key financial instruments of the money and capital markets?** The most important money and capital market instruments are U.S. Treasury securities (bills, notes, and bonds), corporate equities (common and preferred stock), consumer debt instruments (mortgage loans and consumer loans), and corporate debt instruments (commercial paper, corporate bonds, and commercial loans).

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**The Cybertrading Revolution and Its International Ramifications**

New technologies have fundamentally altered the way that many people trade financial instruments. The result has been a growing “internationalization” of financial trading.
Electronic Securities Trading

Electronic trading began in the mid-1990s with just a few Internet addresses, such as www.etrade.com, www.schwab.com, and www.lombard.com. These Web sites offered something never before available: the capability to buy shares of stock online. (Some Web-based stock-trading systems specialize in providing trade-execution services to so-called institutional investors; see Cyber Focus: The Growing Role of Electronic Communications Networks in U.S. Stock Markets.)

Lower Fees Trading online offers several advantages, including low brokerage fees. For instance, buying 100 shares of stock in International Business Machines (IBM) from a traditional brokerage firm entails fees in the neighborhood of $100, whereas online brokers typically charge $10—or even less—for the transaction. The result has been predictable: online securities trading has taken off.

Speed Counts Online trading is faster as well as less expensive. Anyone can reach Internet-based brokerage accounts from any computer with a secure Web browser. Today, literally at one’s fingertips are hundreds of sites offering investment research sources and trading capabilities—all of which help make the Web a logical fit with the fast-paced, high-tech world of Wall Street. After a typical Internet trader punches in an ID and account password, she often has access to a package of services that might otherwise be quite costly if purchased separately, such as portfolio tracking and a database containing information about such things as companies’ market capitalization and earnings growth. After conducting market research, the Internet trader can scan her portfolio of holdings, search for key information on companies whose stock she owns or is interested in, and send a request to buy or sell stock, all in a few minutes. (Trading stocks on the Internet has become a full-time job for some individuals; see on page 64 Management Focus: Does “Day Trading” Pay?)

Some Brokerage Firms Benefit Internet trading also provides payoffs for the brokerage firms that offer it. Most Wall Street discount brokers now accept Internet-generated orders. Internet-based brokerage firms can get by with less printed marketing material to send to clients, smaller customer-service staffs, and fewer physical branches.

Direct Offering to Savers Many companies, such as Ford Motor Company and IBM, now issue commercial paper directly to savers through interactive online services. On screen, commercial paper traders can see the issuer, maturity, settlement date, yield, ratings, and trading instructions. Typically, a commercial paper exchange can be completed in as little as eight seconds, although it can take longer if the two sides bargain about the price or yield. If the trader wishes to bargain, the computer program usually gives customers about a half-minute to decide whether to take the yield offered or to counter with a lower yield. At the conclusion of a transaction, the computer automatically thanks the saver and logs the time of the exchange.

Internet trading in commercial paper began in early 1996. By the end of that year, commercial paper trading volumes had surpassed $100 million per day. Current daily volumes average hundreds of millions of dollars.
International Cybertrading

What are CORES, MATIF, and CATS? CORES, or the Computer-Assisted Order Routing and Execution System, is a completely automated system based in Tokyo that links buyers and sellers of government securities, corporate bonds, and equity shares. MATIF, or the Marché à Terme International de France, is an analogous system located in Paris. CATS, the Toronto-based Computer-Assisted Trading System, performs the same basic functions. These trading systems, plus others in such locales as Denmark, Singapore, Sweden, the United Kingdom, and the United States, share the common feature that they permit traders in financial markets to place orders for purchases and sales of securities via computers.
Does “Day Trading” Pay?

Some Internet traders, known as day traders, conduct numerous securities trades each day with a primary goal of earning a living through the profits derived from their activities. Many day traders buy and sell securities from their homes, but a number also engage in their trading activities at so-called day trading firms, which offer day traders access to services such as real-time data feeds and up-to-the-minute news links for monthly fees ranging from $50 to in excess of $600. Day trading firms also charge day traders commissions ranging from $15 to $25 per trade. Traders who use these services must take these costs into account when calculating their profits.

Figure 3-5 shows the trading revenues day traders at such firms must earn each month to break even under alternative fee structures. For instance, if a day trader who pays a day trading firm just $50 a month and a commission of $14.95 per trade engages in fifty trades per day, he must earn net revenues of $15,000 on his trades just to cover his explicit costs.

Unfortunately for some day traders, as well as for others who trade frequently online, evidence indicates that people who engage in more stock purchases and sales tend to earn lower overall returns on their portfolios. Terrance Odean and Brad Barber of the University of California at Davis studied the trading behavior and earnings of more than 1,600 investors who switched from phone-based trading through brokers to online trading in the 1990s. They found that the average returns on the stock portfolios of these individuals declined from about 2 percent above the market average to about 3 percent below the market average.

Odean and Barber blamed this decline on the more active and speculative purchases and sales of stocks that occurred when people started trading online. In other words, some online traders may have a tendency to act impulsively, resulting in more trading, hasty decision making, and lower earnings.

For Critical Analysis: Why might some people desire to engage in day trading even though they may earn below-average returns as a consequence?

Mechanics of Automated Financial Trading Each automated trading system has its own unique characteristics, but in general computer-connected traders use system-specific software programs to access information on current market conditions.
terms on a number of financial instruments. The software displays on the trader’s computer screen the best bid and offer with the amounts involved, the most recent sale price and quantity traded, and related spot market prices for reference. The trader may then use the computer’s keyboard to interact with the system and make trades via appropriate commands.

Automated trading has made possible nearly seamless, around-the-clock securities trading. When financial markets open in Tokyo, Hong Kong, Australia, and Singapore, it is evening of the previous day in New York and Chicago. At this time, a trader in Tokyo, for instance, may see an acceptable asking price for a financial instrument in New York and initiate a transaction to purchase the instrument. If the instrument is a U.S. Treasury security, then ownership is transferred and payment settled the next business day in the United States. A transaction arranged, for instance, on Wednesday in Tokyo—Tuesday night in New York—would settle on Thursday in New York, about a day and a half later.

**Policy Issues of Globalized Cybertrading**  The globalization of financial markets brought about by automated trading has raised two problems for policymakers. One concerns how rules for securities trading on various national trading systems should be adapted to the new global trading environment. Nations with more demanding requirements for trading on their securities exchanges may incur fewer risks to their systems as trading becomes more globalized. At the same time, however, their exchanges may lose business to nations with less stringent rules.

A second concern for policymakers is that automated trading across borders has the potential to exacerbate financial crises. As we shall discuss in greater depth in Chapter 5, international cybertrading also increases the speed at which traders can sell one nation’s financial instruments and reallocate funds to holdings of instruments issued by another nation. Thus, traders located far from the scene can respond very quickly to financial uncertainties in a country or region. Although this capability is advantageous for individual traders, there may be drawbacks for the countries experiencing such uncertainties. For instance, if many traders respond to greater uncertainty about a country’s financial prospects by liquidating their holdings of financial instruments issued by that country, the result can be a collapse in the prices of those instruments. Thus, cybertrading can increase the swiftness with which financial uncertainty gives way to financial crisis. It can also increase the speed with which a financial crisis in one nation or region spills over into another.

**4. Why has automated financial trading grown, and what are its implications for world financial markets?** Although cybertrading of financial instruments may tempt some people to buy and sell with a frequency that actually reduces their average returns, an increasing number of individuals trade stocks and bonds via Internet brokers and other automated trading systems because of their convenience and lower costs. Cybertrading across national borders raises two fundamental policy issues. One is the potential mismatch of national regulatory responses to cybertrading. The other is the potential for widespread use of automated trading across national borders to heighten national or regional financial uncertainties and to speed the transmission of financial crises from one country or region to another.
Domestic and International Financial Intermediation

When a saver allocates funds to a company by purchasing a newly issued corporate bond, she effectively lends directly to the company. That is, she takes part in directly financing the capital investment that the company wishes to undertake.

But the process of financing business investment is not always so direct. Consider, for instance, a situation in which the saver also holds a long-term time deposit with a bank. The bank can use these funds, together with those of other depositors, to purchase the same company’s corporate bonds. In this instance, the saver has indirectly financed business capital investment. The bank, in turn, has intermediated the financing of the investment.

Figure 3-6 below illustrates the distinction between direct and indirect finance. In the case of direct finance, the process does not involve a financial intermediary such as a bank. A saver lends directly to parties who invest. In the case of indirect finance, however, some other institution allocates the funds of savers to those who wish to invest in capital.

This latter process of indirect finance, in which an institution stands between savers and ultimate borrowers, is financial intermediation. The institutions that serve as the “middlemen” in this process are financial intermediaries. They exist solely to channel the funds of savers to ultimate borrowers.

Asymmetric Information

Why do many savers choose to hold their funds at a financial intermediary instead of lending them directly? Most economists agree that one key reason is asymmetric information in financial markets.

Suppose, for instance, that a resident of Seattle, Washington, has an opportunity to purchase a relatively high-yield municipal bond issued by a town in New
Jersey. One reason that the municipal bond may have a relatively high yield is that the town issuing the bond intends to direct the funds it raises to a risky investment project. For instance, the town may be planning to use the funds to build a convention-center hotel and auditorium complex that has uncertain financial prospects. Unless the Seattle resident happens to be an expert on the economics of municipal convention centers, he likely will find it difficult to evaluate the true riskiness of the municipal bond. This makes it hard for him to compare the yield on this bond with yields on alternative financial instruments.

In contrast, the New Jersey town issuing the municipal bond likely has considerable information about the prospects for its convention center. On the one hand, the prospects may be very good for its long-term financial success. Perhaps the city has hard evidence that it can expect significant earnings from the project. On the other hand, the program may have been launched primarily for the short-term political gains that the mayor and town council expect to reap from pleasing owners of construction companies and other town businesspersons. Either way, the town issuing the municipal bond has information about its risk that the Seattle resident does not possess. Whenever one party in a financial transaction has information not possessed by the other party, asymmetric information exists. Adverse selection: The problem that those who desire to issue financial instruments are most likely to use the funds they receive for unworthy, high-risk projects.

**Moral hazard:** The possibility that a borrower may engage in more risky behavior after a loan has been made.

**Asymmetric information:** Information possessed by one party to a financial transaction but not by the other party.
endeavor would be very costly, however. The Seattle bondholder would have to
pay the direct costs of making the trips and would also incur opportunity costs,
because all the time he devoted to information collecting could be used in
other ways.

Benefits of Financial Intermediation

A fundamental reason for the existence of financial intermediaries is to collect
information on behalf of savers so that they will not have to incur these direct
and opportunity costs. Financial intermediaries cannot completely eliminate the
adverse-selection and moral-hazard problems resulting from asymmetric informa-
tion. Nevertheless, they can reduce these problems by specializing in gathering
information about the likely prospects of financial instruments and
monitoring the performance of those who issue such instruments.

Economies of Scale

Another key reason for the existence of financial intermediaries is economies of
scale, or the reduction in average operating costs that can be achieved as a finan-
cial trader’s scale of operations increases. Some financial intermediaries assist
people in pooling their funds, thereby increasing the amount of funds that are saved.
Pooling allows an intermediary to manage a larger amount of funds, thereby
reducing average fund management costs below those that people would incur if
they managed their savings individually. If intermediaries can manage funds for
many savers at a lower average cost than all the savers would face if they man-
aged their funds alone, then financial economies of scale exist. Several financial
institutions, such as mutual funds and pension funds, owe their existence in large
part to their ability to realize such cost reductions on behalf of individual savers.

Financial Intermediation across National Boundaries

Instead of buying a bond issued by a New Jersey municipality, the Seattle resident
in our example might contemplate purchasing a bond issued by a municipality
located across the border in Canada. The U.S. saver might wish to hold bonds
issued by a Canadian city for several reasons. One reason might be to earn an
anticipated higher return.

Another reason might be to avoid risks specific to the United States by allo-
cating a portion of savings to Canadian municipal bonds. More broadly, the
saver’s goal might be to achieve overall risk reductions via international financial
diversification, or holding bonds issued in various nations and thereby spreading
portfolio risks across both U.S.-issued and foreign-issued financial instruments.

International Financial Intermediation

Rather than buying U.S. and
Canadian municipal bonds, our Seattle resident might decide to allocate part of
his savings to a global bond mutual fund, thereby becoming a participant in the
process of international financial intermediation. This is the indirect finance of
capital investment across national borders by financial intermediaries such as
banks, investment companies, and pension funds.
The rationales for international financial intermediation are the same as the justifications for domestic intermediation. For the Seattle-based U.S. saver, for example, evaluating the riskiness of Canadian bonds presents asymmetric-information problems that are probably at least as severe as those associated with assessing the riskiness of U.S. bonds. By allocating a portion of his total savings to a global bond mutual fund operated, say, by an investment company, the saver assigns that company the task of judging and tracking the prospects and performances of bond issuers around the world. In exchange for this service, the saver pays the investment company management fees.

**ECONOMIES OF SCALE AND GLOBAL BANKING**  The Eurocurrency markets are at the center of international banking activities. Very few nations’ capital investment projects are purely domestically financed. Even in the United States, non-U.S. banks finance a part of investment. Today, the largest U.S.-based multinational corporations on average have accounts with more foreign banks than U.S. banks.

Furthermore, as Table 3-1 indicates, the world’s largest banks are not necessarily located in the United States. Most of the largest banking institutions, sometimes called megabanks, are based in Europe and Japan. These megabanks take in deposits and lend throughout the world. They report their profits and pay taxes in their home nations, but otherwise they are truly international banking institutions.

One possible reason that megabanks exist is economies of scale, or a reduction in average operating costs as a bank’s size increases. Some economists argue that a particular form of economies of scale may help explain the megabank phenomenon: *economies of scale in information processing*. According to these economists, because many companies now have operations that span the globe, banks must also have worldwide offices to assess and monitor the creditworthiness of these companies. Having an international presence, they argue, allows banks to address asymmetric-information problems at lower average cost than they could if they were purely domestic intermediaries. Thus, this explanation of the megabank phenomenon hinges on the existence of both asymmetric information and economies of scale in international banking operations.

<table>
<thead>
<tr>
<th>Bank</th>
<th>Country</th>
<th>Assets ($ Billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mizuho Holdings Tokyo</td>
<td>Japan</td>
<td>$1,281</td>
</tr>
<tr>
<td>Citigroup Inc.</td>
<td>United States</td>
<td>1,051</td>
</tr>
<tr>
<td>Sumitomo Mitsui Bank</td>
<td>Japan</td>
<td>924</td>
</tr>
<tr>
<td>Mitsubishi Tokyo Financial Group</td>
<td>Japan</td>
<td>855</td>
</tr>
<tr>
<td>Deutsche Bank</td>
<td>Germany</td>
<td>815</td>
</tr>
<tr>
<td>Allianz AG</td>
<td>Germany</td>
<td>805</td>
</tr>
<tr>
<td>UBS AG</td>
<td>Switzerland</td>
<td>754</td>
</tr>
<tr>
<td>BNP Paribas Group</td>
<td>France</td>
<td>735</td>
</tr>
<tr>
<td>HSBC Holdings PLC</td>
<td>United Kingdom</td>
<td>695</td>
</tr>
<tr>
<td>J. P. Morgan Chase</td>
<td>United States</td>
<td>639</td>
</tr>
</tbody>
</table>

*Source: American Banker, July 12, 2002.*
5. Why do financial intermediaries exist, and what accounts for international financial intermediation? A key reason that financial intermediaries exist is to address problems arising from asymmetric information. One such problem is adverse selection, or the potential for the least creditworthy borrowers to be the most likely to seek to issue financial instruments. Another is moral hazard, or the possibility that an initially creditworthy borrower may undertake actions that reduce its creditworthiness after receiving funds from a lender. A further reason for the existence of financial intermediaries is the existence of economies of scale, or the ability to spread costs of managing funds across large numbers of savers. A potential justification for international financial intermediation by global banking enterprises is that they may experience economies of scale in information processing by spreading their credit evaluation and monitoring operations across the world.

Financial Institutions

Financial circumstances for various firms and individuals can vary widely. This is why there are so many different kinds of financial instruments and markets. Likewise, asymmetric information can exist in financial markets in a variety of ways. In large measure this helps explain why many different types of firms serve as financial intermediaries. These firms typically are called financial institutions.

Insurance Companies

Insurance companies specialize in trying to limit the adverse-selection and moral-hazard problems unique to efforts to insure against possible future risks of loss. They issue policies, which are promises to reimburse the holder for damages suffered as the result of a “bad” event, such as an auto accident. Certainly, individuals could insure others. But such direct insurance usually is limited to informal agreements. For instance, parents often stand ready to lend financial assistance to their young-adult children who experience “bad” events, so in a sense they offer insurance. But parents also have a lot of information about their children’s behavior that others do not have. Most of us, therefore, ultimately turn to insurance companies that specialize in dealing with the asymmetric-information problems associated with insuring risks.

There are two basic kinds of insurance companies. Life insurance companies charge premiums for policies that insure people against the financial consequences associated with death. They also offer specialized policies called annuities, which are financial instruments that guarantee the holder fixed or variable payments at some future date. Property and casualty insurers insure risks relating to property damage and liabilities arising from injuries or deaths caused by accidents or adverse natural events. Property and casualty insurance companies offer policies that insure individuals and businesses against possible property damages or other financial losses resulting from injuries or deaths sustained as a result of accidents, adverse weather, earthquakes, and so on.


Pension Funds

Pension funds are institutions that specialize in managing funds that individuals put away as a “nest egg” for when they retire from their jobs and careers. Part of the compensation of many workers is in the form of employer contributions to such funds.

The key specialty of pension funds is creating financial instruments called pension annuities, which are similar to the annuities offered by life insurance companies. But life insurance annuities usually are intended as supplements to a person’s income at some fixed point in the future, whether or not the person is working at the time. In contrast, pension annuities apply only to the future event of retirement. Most people regard pension annuities as their main sources of income after retirement.

Why do people use the services of pension funds instead of saving on their own? One reason certainly is asymmetric information: those who operate pension funds may be better informed about financial instruments and markets than individual savers. But the existence of economies of scale is probably a more important reason. Many people would find it very costly to monitor the instruments that they hold on a day-by-day basis throughout their lives. Pension funds do this for many people at the same time, thereby spreading the costs across large numbers of individuals.

Mutual Funds

A mutual fund is a mix of redeemable instruments, called “shares” in the fund. These shares are claims on the returns on financial instruments held by the fund, which typically include equities, bonds, government securities, and mortgage-backed securities.

Mutual funds are usually operated by investment companies, which charge shareholders fees to manage the funds. The popularity of mutual funds increased considerably during the 1970s and 1980s. During those two decades, the assets held in these funds grew by a factor of over sixty times the initial level. Indeed, today more than 7,000 mutual funds are in operation.

Like pension funds, mutual funds take advantage of financial economies of scale. Mutual fund shareholders typically pay lower fees to investment companies than they might have to pay brokers to handle their funds on a personal basis. The reason is that mutual fund managers can spread the costs of managing shareholders’ funds across all the shareholders.

Depository Financial Institutions

Another type of financial institution that deals with problems arising from asymmetric information is a depository financial institution or, for short, a depository institution. As we discussed in Chapter 1, one key characteristic of a depository institution is that its liabilities include various deposits, such as time, savings, or checking accounts. But most depository institutions also deal with asymmetric-information problems specific to loan markets.
COMMERCIAL BANKS

Financial firms known as commercial banks are depository financial institutions that specialize in sizing up the risk characteristics of loan applicants. They collect information about the creditworthiness of individuals and businesses that desire loans and seek to limit their exposure to adverse-selection difficulties. In addition, commercial banks keep tabs on the customers to which they lend, thereby limiting the risks arising from moral hazard.

SAVINGS BANKS AND SAVINGS AND LOAN ASSOCIATIONS

Residential housing accounts for a large portion of capital investment in the United States. Savings and loan associations and savings banks are depository institutions that traditionally have specialized in extending mortgage loans to individuals who wish to purchase homes. These institutions also face asymmetric-information difficulties. A person who wants a mortgage loan may or may not be a good risk for a loan. That person also may or may not be tempted to become a bad risk after receiving the loan. Thus, there are adverse-selection and moral-hazard problems specific to mortgage lending.

CREDIT UNIONS

A credit union is a depository institution that accepts deposits from and makes loans to only a closed group of individuals. In the past, a credit union's services were usually available only to people employed by a business with which the credit union was affiliated. As we shall discuss in Chapter 11, however, in recent years credit unions have significantly expanded the “closed groups” eligible for membership. Credit unions typically have specialized in making consumer loans, though some have branched into the mortgage-loan business.

Finance Companies

A finance company also specializes in making loans to individuals and businesses. Finance companies, however, do not offer deposits. Instead, they use the funds invested by their owners or raised through issuing other instruments to finance loans to individuals and small businesses. Many finance companies specialize in making loans that depository institutions regard as too risky.

Government-Sponsored Financial Institutions

The federal government also operates or subsidizes some of the largest financial institutions in the United States. Among these are the Federal Financing Bank, which coordinates federal and federally assisted borrowing, and the Banks for Cooperatives, Federal Intermediate Credit Banks, and Federal Land Banks, which are supervised directly or indirectly by the Farm Credit Administration.

The government also sponsors four institutions that support housing markets: the Federal National Mortgage Association (FNMA, or “Fannie Mae”), the General National Mortgage Association (GNMA, or “Ginnie Mae”), the Federal Home Loan Banks (FHLBs), and the Federal Home Loan Mortgage Corporation (FHLMC, or “Freddie Mac”). These agencies make mortgage markets more liquid by buying mortgages with funds that they raise by selling mortgage-backed securities.
Under the terms of a reverse mortgage, an individual who already owns his or her home receives payments from a lender based on a sum equal to all or a portion of the borrower’s equity ownership of the house. When the individual sells the house or dies, the lender receives this amount as a lump-sum payment from the borrower or his or her heirs.

A Booming Financial Market

During the late 1990s, reverse mortgages got a bad name when a few lenders were accused of taking advantage of elderly people by using misleading sales pitches. For a while some media outlets even classified reverse mortgages as products marketed by so-called predatory lenders—a catchall term for financial companies that stretch the truth when marketing their services.

By the early 2000s, however, the market for reverse mortgages was growing by leaps and bounds. At a number of major mortgage lenders, annual growth rates for reverse mortgages have exceeded 50 percent since 2000. Undoubtedly, one key factor contributing to this big growth spurt has been the increase in the number of homeowners who meet the minimum age requirement of sixty-two. Many such individuals have been attracted by the ability to supplement their monthly incomes with stipends from reverse mortgages.

Who Bears the Downside Risks of Reverse Mortgages?

Some state and federal banking regulators worry that another factor may also be contributing to the rapid growth of reverse mortgages. A reverse mortgage is a type of nonrecourse loan, in which the lender does not have the legal right to hold the borrower responsible for the entire amount of the loan. For this reason, banking regulators traditionally have enforced rules sharply restricting the portion of total loans that financial institutions can issue as nonrecourse loans.

In the case of a reverse mortgage, the borrower (or the borrower’s heir) is responsible only for transmitting the current market value of the house.
to the lender. Therefore, if the market value when
the house is sold or the borrower dies turns out to
be lower than the value when the loan was made,
the borrower (or heir) does not have to come up
with the difference. Only the lender loses if the
value of the house declines between the time the
lender makes the loan and the time the borrower
sells the house or dies.

Reallocation of Risks in the
Market for Reverse Mortgages

In years past, mortgage lenders’ worries about the
downside risk discouraged them from offering
reverse mortgages. This reluctance to issue reverse
mortgages helped depress the growth of the pri-
mary market for these instruments. It also made
reverse mortgages relatively illiquid, so the second-
ary market for reverse mortgages had trouble even
going off the ground.

Beginning in the late 1990s, however, the U.S.
government got involved in the reverse-mortgage
business. The Federal Housing Administration
(FHA) began offering the Home Equity Conversion
Mortgage Program. Under this program, the FHA
provides insurance against reverse-mortgage losses,
thereby transferring the risk of loss to taxpayers.
Shortly thereafter, the Federal National Mortgage
Association (“Fannie Mae”; see Chapter 10), a
quasi-public company, also began offering reverse
mortgages. It also began purchasing reverse mort-
gages in the secondary mortgage market, which
rapidly became much more liquid. Thus, govern-
ment sponsorship of reverse mortgages has done
much to improve the fortunes of the market for
these capital market instruments.

Research Project
Evaluate how factors such as loan fees and tax rules can
influence a borrower’s decision about whether to enter into
a reverse mortgage. In addition, consider what might happen
if the market values of houses fell nationwide. Under current
rules, who bears many of the risks associated with the
potential for a broad decline in house prices? Who would
incur the resulting losses, and how would these losses
be paid?

Web Resources
1. For more general information about reverse mortgages,
visit the Web site of the AARP (formerly the American Associa-
tion of Retired Persons) devoted to this topic, http://www.
reverse.org, or go to the home page of the National Reverse

2. How much do monthly payments from a reverse mort-
gage vary depending on the borrower's age, the market value
of the borrower's home, and other factors? To find out, go to
http://www.rmaarp.com, and use the AARP’s reverse-
mortgage loan calculator to evaluate various possibilities.
Chapter Summary

1. The Main Economic Function of Financial Markets: Financial markets channel funds of savers to those individuals and businesses that wish to make capital investments.

2. Primary and Secondary Markets, and Money and Capital Markets: Primary markets are financial markets where newly issued financial instruments are bought and sold. Secondary markets are markets where individuals and firms exchange previously issued financial instruments. Money markets are financial markets where individuals and firms exchange financial instruments with maturities under one year. Capital markets are markets for instruments with maturities equal to or greater than one year.

3. The Main Types of Financial Instruments: The most important money market instruments are U.S. Treasury bills, commercial paper, bank certificates of deposit, Eurodollar deposits, and federal funds loans. Key capital market instruments include business equities, corporate bonds, U.S. Treasury notes and bonds and other securities issued by federal government agencies, municipal bonds, mortgage loans, and consumer and commercial loans.

4. Automated Trading of Financial Instruments: Many individuals regard cybertrading via Internet brokers and other automated trading systems as more convenient and less costly than using the services of traditional brokers or exchanges. This has spurred the growth of cybertrading, both within and among nations. Cross-border exchange of financial instruments using automated trading systems has provoked divergent regulatory responses from different nations. International cybertrading also heightens the speed at which savers can shift funds among national markets. Potentially, this can increase the speed with which financial crises take place and with which they spill over onto other world markets.

5. Financial Intermediaries: Financial intermediaries help to reduce problems stemming from the existence of asymmetric information in financial transactions. Asymmetric information can lead to adverse-selection and moral-hazard problems. Financial intermediaries may also permit savers to benefit from economies of scale, which is the ability to reduce the average costs of managing funds by pooling funds and spreading costs across many savers.

6. The Main Types of Financial Institutions: One main grouping is depository institutions, which include commercial banks, savings banks and savings and loan associations, and credit unions. In addition, there are insurance companies, pension funds, mutual funds, and finance companies, brokers, investment banks, and government-sponsored institutions such as the Federal Financing Bank, agricultural credit institutions, and mortgage-financing institutions.

Questions and Problems

(Answers to odd-numbered questions and problems may be found on the Web at http://money.swcollege.com under “Student Resources.”)

1. In your view, what are the relative advantages of holding common stock instead of preferred stock? Explain.

2. What are the disadvantages of holding common instead of preferred stock? Explain.

3. How could “impulsive” traders of stocks over the Internet find themselves earning lower net returns on their portfolios of financial instruments, even if on average they hold the same basic portfolios from month to month as more traditional traders? [Hint: Remember that people pay broker’s fees when they trade.]

4. In the 1990s, many pension funds and mutual funds offered U.S. savers special portfolios composed only of financial instruments issued by companies and governments located in other nations. In 1997 and 1998, many savers who held these portfolios earned very low, and sometimes negative, returns. In contrast, most people who allocated
100 percent of their savings to U.S. financial instruments earned higher returns. Does this experience mean that international financial diversification is a mistake? Explain your reasoning.

5. A few years ago, a Florida county commissioner and her husband, a Washington lobbyist, were indicted for securities law violations. Allegedly, they sought to improve the terms under which the county could issue new municipal bonds. Suppose this information had not come to light and had made the municipal bonds riskier than they might otherwise have seemed to potential buyers. Would this have been an example of adverse selection or of moral hazard? Explain your reasoning.

6. Commercial banks make various loans, such as loans to businesses, but they also issue a variety of deposits, such as checking accounts. In the absence of asymmetric-information problems in lending, do you believe that commercial banks might cease to exist? Or would there still be a place for commercial banks? Explain your reasoning.

7. Both life insurance companies and pension plans issue annuities. Nevertheless they are generally regarded as fundamentally different types of financial intermediaries. Why? Explain your reasoning.

8. During the early years following the formation of the United States, its first Treasury secretary, Alexander Hamilton, worked hard to develop conditions in which secondary financial markets could emerge and grow. Based on this chapter’s discussion, can you rationalize Hamilton’s actions?

9. Commercial and savings banks issue loans and hold other financial instruments that yield interest returns. These banks pass some of this interest income on to their depositors through the interest rates that they pay on deposits that they issue. Bank deposits also are federally insured. Mutual fund shares, in contrast, are not federally insured. Would you expect that mutual fund shares would pay higher or lower returns to shareholders, as compared with rates of return on bank deposits? Explain your reasoning.

10. In what ways is competition among stock exchanges beneficial for traders and for companies that issue stocks? What gains might emerge if the United States had only one stock exchange? What factors might motivate U.S. stock exchanges to consider merging?

Before the Test

Test your understanding of the material covered in this chapter by taking the Chapter 3 interactive quiz at http://money.swcollege.com.

Online Application

**Internet URL:**  http://www.nyse.com/

**Title:**  The New York Stock Exchange: How the NYSE Operates

**Navigation:**  Begin at the URL listed above. In the left margin, click on “About the NYSE” and then “Education,” followed by “Educational Publications.” Then click on “You and the Investment World.” Next, click on Chapter 3: How the NYSE Operates.

**Application:**  Read the chapter, and answer the following questions.

1. According to the article, the price of a seat on the NYSE currently can sell for more than $1 million. Why do you suppose that someone would be willing to pay this much for a seat? [Hint: Think about the potential ways that someone could generate earnings from holding an NYSE seat.]

2. List the key functions of a stock exchange specialist. Why is the cybertechnology called the “Point-of-Sale Display Book” likely to be particularly useful for a specialist?
For Group Study and Analysis: Divide the class into groups, and have each group examine and discuss the description of how NYSE trades are executed. Ask each group to list the various points at which Internet trading may be a more efficient way to execute a trade than trading via a traditional brokerage firm. Then go through these lists as a class, and discuss the following issue: What people in the NYSE cannot be replaced by cybertechnologies?

Selected References and Further Reading


MoneyXtra

Log on to the MoneyXtra Web site now ([http://moneyxtra.swcollege.com](http://moneyxtra.swcollege.com)) for additional learning resources such as practice quizzes, case studies, readings, and additional economic applications.