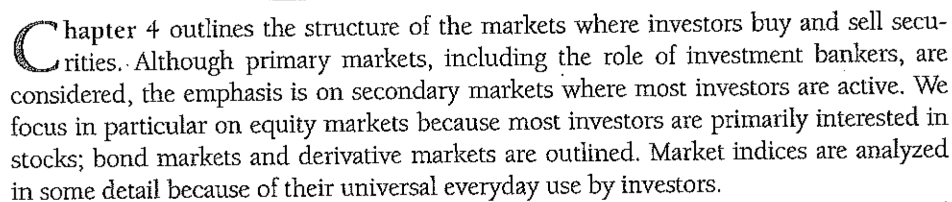
chapter 4

Securities Markets



Chapter 4 outlines the structure of the markets where investors buy and sell securities. Although primary markets, including the role of investment bankers, are considered, the emphasis is on secondary markets where most investors are active. We focus in particular on equity markets because most investors are primarily interested in stocks; bond markets and derivative markets are outlined. Market indices are analyzed in some detail because of their universal everyday use by investors.

The structure and operating mechanisms of the securities markets in the United States have changed drastically in the last 20 years. Given the financial crisis starting in 2008, more changes can be expected.

AFTER READING THIS CHAPTER YOU WILL BE ABLE TO:

- Distinguish between primary and secondary markets.
- Outline where the three major types of securities discussed in Chapter 2—bonds, equities, and derivatives—are traded.
- Understand how the equity markets, where stocks are traded, are organized, how they operate, and how they differ from each other.
- Recognize the various stock market indexes typically encountered by investors.

As you prepare to invest your inheritance, you realize that like most people you have certainly heard of the New York Stock Exchange, but you really don't know how it works. Why should you care if the stocks you buy trade there or not? Having heard of the bubble in the Nasdaq market that burst in 2000, causing investors spectacular losses, you also wonder if you should even consider Nasdaq stocks. And someone has mentioned that Electronic Communications Networks may be the future of investing, but you do not know what these are. Even more basic, despite listening to the national news each night and hearing how the Dow Jones Index and Nasdaq Index closed for the day, you clearly realize that this doesn't tell you much. Does a 75-point gain in one day constitute a great day, or could it be less significant in today's world than in the past? Finally, what about bonds—where do they trade, and how will you handle their purchase and sale?

The Importance of Financial Markets

In order to finance as well as expand their operations, business firms must invest capital in amounts that are beyond their capacity to save in any reasonable period of time. Similarly, governments must borrow large amounts of money to provide the goods and services that the people demand of them. The financial markets permit both business and government to raise the needed funds by selling securities. Simultaneously, investors with excess funds are able to invest and earn a return, enhancing their welfare.

Financial markets are absolutely vital for the proper functioning of capitalistic economies, since they serve to channel funds from savers to borrowers. Furthermore, they provide an important allocative function by channeling the funds to those who can make the best use of them—presumably, the most productive. In fact, the chief function of a capital market is to allocate resources optimally.[1]

The existence of well-functioning secondary markets, where investors come together to trade existing securities, assures the purchasers of new securities that they can quickly sell their securities if the need arises. Of course, such sales may involve a loss, because there are no guarantees in the financial markets. A loss, however, may be much preferred to having no cash at all if the securities cannot be sold readily.

In summary, in the United States secondary markets are indispensable to the proper functioning of the primary markets, where new securities are sold. The primary markets, in turn, are indispensable to the proper functioning of the economy.

The Primary Markets

Primary Market The market for new issues of securities, typically involving investment bankers

A **primary market** is one in which an issuer seeking new funds sells additional securities in exchange for cash from an investor (buyer). New sales of Treasury bonds, or Apple stock, or North Carolina bonds all take place in the primary markets. The issuers of these securities—the U.S. government, IBM, and the state of North Carolina, respectively—receive cash from the buyers of these new securities, who in turn receive new financial claims on the issuer.

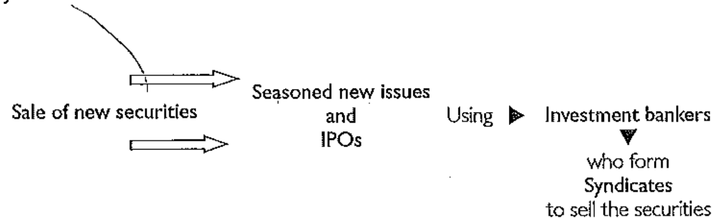
Initial Public Offerings (IPOs) Common stock shares of a company being sold for the first time

Sales of common stock of a publicly traded company are called *seasoned new issues*. On the other hand, if the issuer is selling securities for the first time, these are referred to as **initial public offerings (IPOs)**. Once the original purchasers sell the securities, they trade in secondary markets. New securities may trade repeatedly in the secondary market, but the

[1] A securities market with this characteristic is said to be *allocationally efficient*. An *operationally efficient* market, on the other hand, is one with the lowest possible prices for transactions services.

original issuers will be unaffected in the sense that they receive no additional cash from these transactions.

Primary markets can be illustrated as



INITIAL PUBLIC OFFERINGS (IPOs)

The year 2000 set a record for equity issuance of $223 billion in U.S. common stock underwriting when 391 IPOs raised $61 billion. In contrast, there were only 107 IPOs in 2001, with $39 billion raised, and in 2002, the number dropped to 97 domestic IPOs, with approximately $27 billion raised. 2007 was the strongest year for IPOs since 2000, with more than 230 offerings involving in excess of $53 billion. There were more than 50 technology IPOs in 2007; 2008, on the other hand, was a year of financial crisis.

When the IPO market is very active, and investors are clamoring for shares of new companies, the prices of these stocks often soar on the first day of trading. Those investors lucky enough to receive an initial allocation of these stocks at the price set by the investment banker can see the value of their shares increase dramatically in a short time. However, the average investor typically cannot receive any of the initial allocation because the investment bankers reward favored clients with shares.

IPOs tend to run in cycles of investor interest. For example, the IPO market was very active in the late 1990s because of the dot.com craze and technology boom. In the severe market downturn of 2000–2002, on the other hand, investors had little interest in assuming the risk of new issues.

Example 4-1

Unlike the late 1990s, when IPOs tended to soar indefinitely, in 2000 they often did well on the first day but suffered thereafter. Almost 70 percent of IPOs traded below their issue price at the end of the year. In 2004 an IPO doubled in value on the first day of trading, the first time that had happened since 2000.

THE INVESTMENT BANKER

Investment Banker Firm specializing in the sale of new securities to the public, typically by underwriting the issue

In the course of selling new securities, issuers often rely on an **investment banker** for the necessary expertise as well as the ability to reach widely dispersed suppliers of capital. Along with performing activities such as helping corporations in mergers and acquisitions, *investment banking firms* specialize in the design and sale of securities in the primary market while operating simultaneously in the secondary markets. For example, Merrill Lynch offers investment banking services while operating a large retail brokerage operation throughout the country. Other investment banking names have included JP Morgan, Goldman Sachs, and Morgan Stanley; however, the financial crisis of 2008 significantly changed the industry.

Investment banking firms suffered tremendous upheavals and even failures in 2008. Bear Sterns was acquired by JP Morgan Chase in 2008, following a loss of confidence in the

Concepts in Action

Domino's Pizza Goes Public

Domino's Pizza, DPZ, a 44-year-old company, announced in April 2004 that it planned to go public. It had over 7,000 franchised and company-owned stores, including some 2,500 international stores. The company had 2003 reported net income of $39 million on sales of $1.33 billion and first-quarter 2004 net income of $18.4 million. Domino's is the #2 pizza chain in the United States. Independents account for roughly half of the market.

According to the SEC filing, the company planned to sell 9.38 million shares, raising $14 × 9.38 = $131.2 million. Stockholders sold 14.8 million shares. J.P. Morgan Securities, Citigroup Global Markets, Bear, Stearns & Co., Credit Suisse First Boston, and Lehman Brothers served as underwriters for the offering.

Domino's went public on July 12, 2004. The stock began trading on the New York Stock Exchange the next day, Tuesday, and fell 25 cents to $13.75 per share with 9.5 million shares having changed hands in morning trading. It hovered just below the offering price through noon Tuesday, and finished down 4 percent for the day.

organization. Lehman Brothers filed for bankruptcy in the Fall of 2008. Merrill Lynch, facing massive losses, agreed to be acquired by Bank of America in late 2008. Morgan Stanley and Goldman Sachs, the last big investment banks in the Fall of 2008, applied to become bank holding companies, subject to much more regulation than before.

Investment bankers act as intermediaries between issuers and investors. The issuer sells its securities to investment bankers, who in turn sell the securities to investors. For firms seeking to raise long-term funds, the investment banker can provide important advice to their clients during the planning stage preceding the issuance of new securities. This advice includes providing information about the type of security to be sold, the features to be offered with the security, the price, and the timing of the sale.

Underwrite The process by which investment bankers purchase an issue of securities from a firm and resell it to the public

Selling the New Issue Investment bankers often **underwrite** new issues by purchasing the securities (once the details of the issue have been negotiated) and assuming the risk of reselling them to investors. Investment bankers provide a valuable service to the issuers at this stage. The issuer receives its check and can spend the proceeds for the purposes for which the funds are being raised. The investment bankers own the securities until they are resold. Although many issues are sold out quickly (e.g., the first day they are offered to the public), others may not be sold for days or even weeks. Investment bankers are compensated for their efforts by a spread, which is the difference between what they pay the issuer for the securities and what they sell them for to the public (i.e., the securities are purchased from the issuer at a discount).

Investment Banking Syndicates In addition to having expertise in these matters and closely scrutinizing any potential issue of securities, investment bankers can protect themselves by forming a *syndicate*, or group of investment bankers. This allows them to diversify their risk. One investment banker acts as the managing underwriter, overseeing the underwriting syndicate. This syndicate becomes part of a larger group that sells the securities.

Prospectus Provides information about an initial public offering of securities to potential buyers

Figure 4-1 illustrates a primary offering of securities through investment bankers, a process referred to as a syndicated offering. The issuer (seller) of the securities works with the originating investment banker in designing the specific details of the sale.[2] A **prospectus**, which

[2]All documents are prepared to satisfy federal laws. In particular, the issuer files a registration statement, which contains financial and other information about the company, with the appropriate government agency.

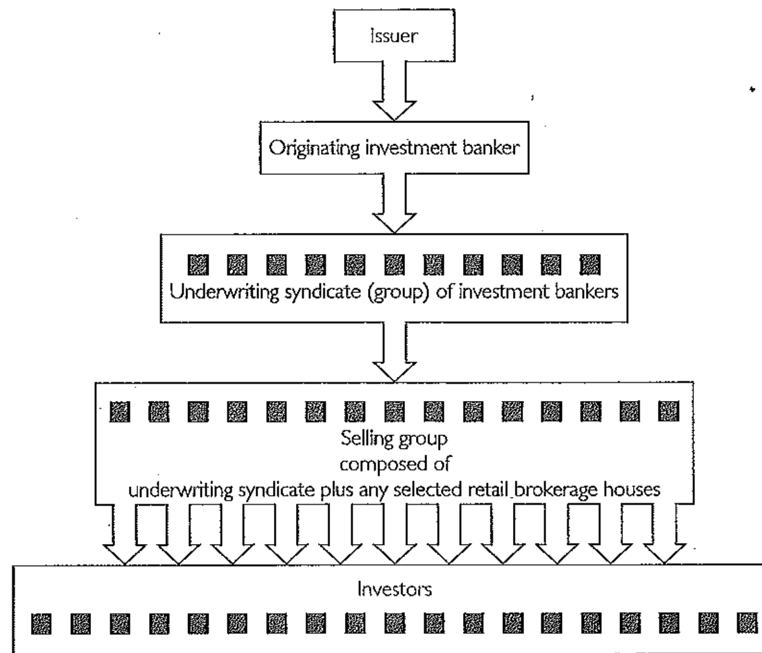


Figure 4.1
A primary offering of securities.

summarizes this information, offers the securities for sale officially.[3] The lead underwriter forms a syndicate of underwriters who are willing to undertake the sale of these securities once the legal requirements are met.[4] The selling group consists of the syndicate members and, if necessary, other firms affiliated with the syndicate. The issue may be fully subscribed (sold out) quickly, or several days (or longer) may be required to sell it.[5]

Automatic Shelf Registration Securities and Exchange rules since the end of 2005 allow "well-known seasoned issuers" to file shelf registration statements with the SEC which become effective immediately. This means that an issuer can make a primary offering immediately upon the statement becoming effective; alternatively, having filed the "base prospectus," they can choose to sell the securities at a later time quickly and easily. Large issuers may find this procedure to be the most efficient when selling both debt and equity issues.

GLOBAL INVESTMENT BANKING

The global perspective now in place allows companies in various countries to raise new capital in amounts that would have been impossible only a few years earlier because these companies often were limited to selling new securities in their own domestic markets. The global equity offering has changed all that. An important new development in investment banking is the emphasis on managing the global offerings of securities. A lead investment banker can

[3]However, the selling group can send out a preliminary prospectus to investors describing the new issue. No offering date or price is shown, and the prospectus is identified clearly as an informational sheet and not a solicitation to sell the securities. For this reason, the preliminary prospectus is often referred to as a "red herring."

[4]New issues must be registered with the SEC at least 20 days before being publicly offered. Upon approval from the SEC, the selling group begins selling the securities to the public.

[5]During this time, the underwriting manager can legally elect to stabilize the market by placing purchase orders for the security at a fixed price. Underwriters believe that such stabilization is sometimes needed to provide for an orderly sale (thereby helping the issuer) and reduce their risk (thereby helping themselves).

act as a "global coordinator," linking separate underwriting syndicates throughout the world in selling equity issues.

Consider U.S. firms selling bonds in the euro market. The appeal for U.S. firms is that bond yields in the euro market could be lower than in the United States. U.S. firms with foreign operations can also raise foreign currency in the form of euros by directing selling bonds in that market, thereby saving the costs of converting dollars to euros.

PRIVATE PLACEMENTS

In recent years an increasing number of corporations have executed *private placements*, whereby new securities issues (typically, debt securities) are sold directly to financial institutions, such as life insurance companies and pension funds, bypassing the open market. One advantage is that the firm does not have to register the issue with the SEC, thereby saving both time and money.[6] Investment bankers' fees also are saved because they are not typically used in private placements, and even if they are used as managers of the issue, the underwriting spread is saved. The disadvantages of private placements include a higher interest cost, because the financial institutions usually charge more than would be offered in a public subscription, and possible restrictive provisions on the borrower's activities.[7]

Example 4-2 In 2008 Merrill Lynch sold $6.6 billion of its own preferred shares through private placements to long-term investors. This sale was intended to enhance its capital position.

Checking Your Understanding

1. In a typical underwriting, the procedure is referred to as a firm commitment. What do you think this means?
2. It is said that IPOs are often underpriced relative to the price at which they could be marketed. What are some possible reasons for this?

The Secondary Markets

Secondary Markets Markets where existing securities are traded among investors

Once new securities have been sold in the primary market, an efficient mechanism must exist for their resale if investors are to view securities as attractive opportunities. **Secondary markets** provide investors with a mechanism for trading existing securities.

Secondary markets exist for the trading of common and preferred stock, warrants, bonds, and derivative securities. Exhibit 4-1 diagrams the structure of the secondary markets, which is discussed below in the following order: equities, bonds, and derivative securities.

U.S. SECURITIES MARKETS FOR THE TRADING OF EQUITIES

U.S. equity markets lead the world in the trading of securities. In 2008 total U.S. trading volume in equities was almost 2 trillion shares. Competition between markets benefits investors and the economy as a whole.

[6]The savings in time can sometimes be important because market conditions can change rapidly between the time an issue is registered and sold.

[7]In addition, a lack of marketability exits, because the issue is unregistered. Therefore, the buyer may demand additional compensation from the lender in the form of a higher yield.

EXHIBIT 4-1

Structure of the Secondary Markets

Type of Securities	Where Traded
EQUITY SECURITIES	The Two Major Market Places NYSE Nasdaq Stock Market
	ECNs
Unlisted Equities	Over-the-Counter
BONDS	Mostly Over-the-Counter
	NYSE and Amex Bond Markets (very small amounts of corporates)
PUTS AND CALLS	Various Options Exchanges
FUTURES CONTRACTS	Various Futures Exchanges

Currently, equities trade in the United States on two major exchanges: The New York Stock Exchange/Euronext and the Nasdaq Stock Market (Nasdaq).[8] In addition, investors increasingly trade on Electronic Communication Networks (ECNs), an important new venue for investor trading.

Listed Securities The securities of companies meeting specified requirements of exchanges and marketplaces

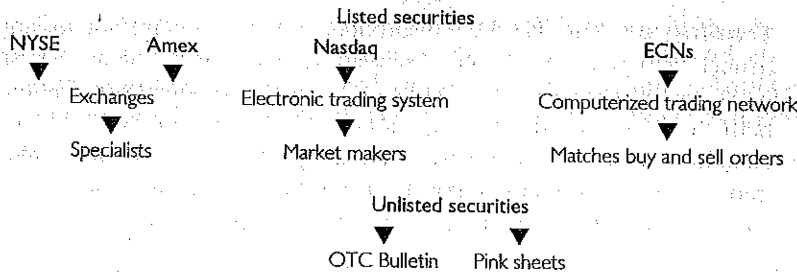
Each major exchange trades **listed securities**. Companies that issue stock for public trading must choose where their shares will be listed for trading, and then apply for listing. They must also meet the listing requirements of the respective marketplace, and agree to abide by the investor protection rules of that market. Additionally, each listing company must pay a listing fee to the market where their securities are traded.

What about companies not listed on any market? In most cases these companies fail to qualify for trading on an exchange or market, but in some cases they simply choose not to apply for listing for whatever reason. These securities are considered to be over-the-counter (OTC) securities, a term which refers to an equity security not listed or traded on a national securities exchange or market.

Exhibit 4-2 shows where both listed and unlisted stocks are traded in the secondary markets, and the principal mechanism for doing so.

EXHIBIT 4-2

Where Listed and Unlisted Securities Are Traded, and How



[8] NYSE Euronext acquired the American Stock Exchange® (Amex®).

The NYSE involves a physical location in New York, while the Nasdaq stock market is an electronic market of dealers who make a market in each of the Nasdaq stocks. In either case, investors are represented by **brokers**, intermediaries who represent both buyers and sellers and attempt to obtain the best price possible for either party in a transaction. Brokers collect commissions for their efforts and generally have no vested interest in whether a customer places a buy order or a sell order, or, in most cases, in what is bought or sold (holding constant the value of the transaction).

Brokers Intermediaries who represent buyers and sellers in securities transactions and receive a commission

THE NEW YORK STOCK EXCHANGE

New York Stock Exchange (NYSE) The major secondary market for the trading of equity securities

Tracing its history back to 1792, the **New York Stock Exchange (NYSE)** is the oldest and most prominent secondary market in the United States, and the world's largest and most valuable equity market. An historic change occurred in 2005 when the NYSE announced that it and the Archipelago Exchange (ArcaEx) had entered a definitive merger agreement (which closed in April 2006). The combined entity, called the NYSE Group, Inc., represented a merger of the world's leading equity market with the most successful, totally open, fully electronic exchange (an ECN). Furthermore, for the first time in its long and storied history, the NYSE became a publicly-owned company.

An additional major change occurred in 2007 with the merger of the NYSE Group with Euronext N.V. to form NYSE Euronext. According to its website, "Euronext operates the world's largest and most liquid exchange group and offers the most diverse array of financial products and services.[9] NYSE Euronext, which brings together six cash equities exchanges in five countries and six derivatives exchanges, is a world leader for listings, trading in cash, equities, equity and interest rate derivatives, bonds and the distribution of market data."

✓ Think of the NYSE as the traditional stock exchange that has existed for over 200 years. NYSE Arca is an ECN offering investors a different way to trade. NYSE Euronext is the European regulated market of NYSE Euronext group, with over 1,700 companies listed in Europe alone.

Listing Requirements The New York Stock Exchange has specific listing requirements that companies must meet in order to be listed (i.e., accepted for trading). In considering an application to be listed, the NYSE pays particular attention to the degree of national interest in the company, its relative position and stability in the industry, and its prospects for maintaining its relative position. Companies pay substantial annual fees to be listed on the NYSE.

The NYSE lists a range of companies including "blue chip" companies as well as younger, high-growth companies. It also lists several hundred non-U.S. companies.

Blocks Transactions involving at least 10,000 shares

Trading on the NYSE Institutional investors often trade in large **blocks**, which are defined as transactions involving at least 10,000 shares. The average size of a trade on the NYSE has grown sharply over the years, as has institutional participation by block volume on both the NYSE and the Nasdaq National Market. In late 2007, NYSE Euronext and BIDS Holdings (an ATS, or Alternative Trading System) agreed to offer a mechanism designed to improve execution and liquidity for block trading. BIDS operates an ATS, consisting of an anonymous electronic market open to all market participants, for U.S. equity block trading.

[9] www.nyse.com.

Program Trading Involves the use of computer-generated orders to buy and sell securities based on arbitrage opportunities between common stocks and index futures and options

Program trading is defined by the NYSE as the purchase or sale of a basket of 15 stocks or more and valued at $1 million or more. It is used to accomplish certain trading strategies, such as arbitrage against futures contracts and portfolio accumulation and liquidation strategies. By 2008, program trading volume accounted for approximately 30 percent of total NYSE volume.

AMERICAN STOCK EXCHANGE

For many years the American Stock Exchange (Amex) was the only other national organized exchange. Its organization and procedures resembled those of the NYSE, most notably in being a specialist-based system. In 2008, the NYSE EuroNext and the Amex agreed to merge, and Amex is now a wholly owned subsidiary of NYSE Group.

THE NASDAQ STOCK MARKET

Nasdaq Stock Market (Nasdaq) A U.S. electronic equity securities market

Market Makers (dealers) An individual (firm) who makes a market in a stock by buying from and selling to investors

The **Nasdaq Stock Market** has called itself "the largest electronic screen-based equity securities market in the United States." This electronic trading system provides instantaneous transactions as Nasdaq market makers compete for investor orders. NASDAQ is the primary market for trading NASDAQ-listed stocks. In addition, it claims that it routes more share volume to the floor of the NYSE than any other member.

Orders on Nasdaq come from **market makers (dealers)** who make markets in Nasdaq stocks, ECNs, and on-line brokers such as E*Trade. These participants compete freely with each other through an electronic network of terminals. Dealers conduct transactions directly with each other and with customers. In effect, what Nasdaq does is link together all of the liquidity providers for a particular stock, allowing them to efficiently compete with each other. The Nasdaq market gathers the quotes and orders from these participants and consolidates them into one tape (which is, effectively, the Nasdaq market).

The sharp market decline of 2000–2002 dramatically impacted this market. The Nasdaq index went from an all time high of 5048 in March 2000 to levels such as 1200 in 2002, and trading in technology stocks, a prominent feature of Nasdaq, plunged sharply. For example, the telecommunications companies—Global Crossing, WorldCom, etc.—were completely devastated, and many technology/Internet companies went bankrupt.

Some well-known technology companies are listed on NASDAQ. For example, on NASDAQ's Global Market are Apple (AAPL), Cisco (CSCO), Adobe Systems (ADBE), and Research in Motion (RIMM). Note that each of the stock symbols (in parentheses) consists of four letters.

Nasdaq is now part of the Nasdaq OMX Group, which is the world's largest exchange company. Its trading and technology reach across six continents. NASDAQ OMX claims the number one spot in major worldwide listings, with over 3,900 companies in 39 countries representing $5.3 trillion in total market value as of 2008. In the United States, NASDAQ had 49 percent of U.S. equities market share in January 2008.

In September 2008 Nasdaq OMX launched the Nasdaq OMX Pan European Market, designed to trade stocks listed on exchanges across Europe. The system matches customer buy and sell orders electronically, or transmits them to other exchanges.

THE OTC (OVER-THE-COUNTER) MARKET

The OTC (Over-the-Counter) market is not an organized marketplace or exchange. Instead, it indicates a forum for equity securities not listed on a U.S. exchange. OTC securities are issued by companies that either are unable to meet the standards for listing or, for whatever reason, choose not to be listed on an exchange.

Many OTC issuers are small companies facing financial difficulties, or that perhaps have a limited operating record. It is safe to say that many of these companies are high-risk investments, and often lead to a complete loss for the investor.

OTC equity securities can be quoted on the Pink Sheets Electronic Quotation Service, and/or, if the securities are registered with the SEC and their issuers are current in their reporting obligation, on the OTC Bulletin Board.

ELECTRONIC COMMUNICATION NETWORKS (ECNs)

The traditional ways of trading equity securities—agency auction markets and the fully computerized Nasdaq market—have been significantly changed by new advances in electronic trading. Electronic Communication Networks (ECNs) have clearly had an effect on the traditional markets such as Nasdaq and the NYSE. They compete for customers with the more traditional Nasdaq market makers, and the NYSE is now a hybrid market with the addition of Arca.

Electronic Communication Networks (ECN) A computerized trading network that matches buy and sell orders

An **electronic communication network (ECN)** is a computerized trading network that matches buy and sell orders that come from their own subscribers as well as customer orders routed from other brokerage firms. Each order received is displayed by the ECN in its computer system. Paying subscribers can see the entire order book, and ECNs display their best bid and ask quotes in the Nasdaq quotation system for all market participants to see. An investor wishing to transact at one of the prices displayed on the computer system electronically submits an order to the ECN. The role of the ECN is to match buy and sell orders, thereby completing trades. Since ECNs simply match orders, they earn their fees from those who trade on their systems.

ECNs offer automation, lower costs, and anonymity as to who is doing the buying or selling. There are no spreads, or conflicts of interest with a broker. Costs are about one cent a share.

Instinet (Institutional Network) An electronic trading network

Instinet is the original electronic trading network, started in 1969 long before the term ECN, which is a relatively recent innovation. It is a system offering access to equity markets worldwide through electronic trading platforms. Instinet offers anonymous trading, allowing large traders to bypass brokers with their often attendant leaks on who is transacting. Trades are often less than 10,000 shares each, and an institution can do multiple trades to get into or out of a position in a stock without others knowing.

ECNs have both grown and consolidated. For example, Instinet and Island merged in 2002. The NYSE merged with Arca.

After-Hours Trading Normal stock exchange hours are 9:30 A.M. to 4 P.M. ECNs allow investors to trade after exchange hours, which primarily means 4 to 8 P.M. EST, and sometimes early morning. However, Instinet, one of the largest ECNs, usually operates around the clock.

On-line brokerage firms offer their clients access to this trading using the computerized order matching systems of the ECNs. It is important to note that such trading is completely independent from the standard trading during market hours. Investors must, in effect, find someone willing to fill their orders at an acceptable price. Liquidity may be thin, although heavily traded NYSE stocks are good candidates for trading, as are most Nasdaq 100 stocks. Limitations may exist on the types of orders that can be placed and the size of the orders.

FOREIGN MARKETS

As noted, investors have become increasingly interested in equity markets around the world because the United States now accounts for a decreasing part of the world's stock market capitalization. Many equity markets exist, including both developed countries and emerging markets.

Western Europe has well-developed markets which are now mostly electronic. The London Stock Exchange (LSE) is an important equity market. Euronext operates cash and derivatives exchanges in Europe and merged with the NYSE Group to form NYSE Euronext. Switzerland is home to some of the largest global companies in the world, including Nestle (food and beverage) and Hoffman La Roche (drug manufacturer).

Europe's emerging markets include the Czech Republic, Hungary, and Poland where potential profits are large, but risks are also large: illiquidity is great, corporate information can be difficult to obtain, and political risk of a type unknown to U.S. investors may exist.

The Far East has been a fast-growing region. Some of these markets have been very volatile, with large gains and losses because of illiquidity (a scarcity of buyers at times) as well as currency risks and political risks.

Japan, the dominant Asian economic power, has one of the largest stock markets in the world, although the Japanese markets have been severely battered since 1989. While Japan has a few stock exchanges, the Tokyo Stock Exchange (TSE) dominates that country's equity markets. Both domestic and foreign stocks are listed on the TSE, and among domestic issues relatively few are traded on the floor of the exchange; the rest (as well as foreign stocks) are handled by computer.

Other Asian markets include Hong Kong, India, Indonesia, South Korea, Malaysia, Pakistan, the Philippines, Singapore, Sri Lanka, Taiwan, and Thailand. Hong Kong, Singapore, South Korea, and Taiwan tend to dominate these markets when Japan is excluded.

The big player in Asian markets is, of course, China, a rapidly emerging economy which is having a significant impact on the rest of the world. China has been booming as an economy but with great risks, for politics can strongly affect investments in China. China has also been significantly affected by the economic crisis that gripped the world. Chinese companies trade on the Hong Kong exchange as well as on exchanges in China such as Shanghai.

Latin America is the remaining emerging marketplace that has been of great interest to investors recently. The markets in Latin America include Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela. Mexico and Brazil have large markets, with the others smaller in terms of market capitalization. As we would expect in emerging markets, profit potentials are large, but so are risks—volatile prices, liquidity problems, and political risks such as the assassination of Mexico's leading presidential candidate in 1994. In early 1999, Brazil suffered a severe financial crisis; by 2008, however, its economy was growing dynamically. By early 2009, Brazil's economic boom was slowed as the economic crisis impacted the world.

Checking Your Understanding

3. What are some important differences between the NYSE and Nasdaq?
4. Distinguish between Nasdaq and the over-the-counter market.
5. Why might a company opt to have its shares traded on Nasdaq rather than the NYSE? What about the reverse?

Stock Market Indexes

The most popular question asked about stock markets is probably, "What did the market do today?" To answer this question, we need a composite report on market performance, which is what stock market averages and indices are designed to provide. Because of the large number of equity markets, both domestic and foreign, there are numerous stock market indicators. In this section, we outline some basic information on these averages and indices, with subsequent chapters containing more analysis and discussion as needed.

It is important to note in the discussion below the difference between a stock index, measuring prices only, and a total return index. For example, the Dow Jones Industrial Average, like all major stock indexes, measures only the change in prices of a defined group of stocks over some period of time. Such indexes ignore dividend payments, which as we shall see in Chapter 6 constitute the other part of the total return for a common stock. Dividend payments can often make total returns much larger than the price change component alone.

✓ Stock market indexes generally understate the total returns to investors from owning common stocks because they do not include the cash payments received on the stocks (dividends). These indexes measure only the price change.

THE DOW JONES AVERAGES

Dow Jones Industrial Average (DJIA) A price-weighted series of 30 leading industrial stocks, used as a measure of stock market activity

Blue-Chip Stocks Stocks with long records of earnings and dividends—well-known, stable, mature companies

The best known average in the United States is the **Dow Jones Industrial Average (DJIA)**, probably because it has always been affiliated with Dow Jones & Company, publishers of *The Wall Street Journal*, and it is reported daily on virtually all major newscasts.[10] It is the oldest market measure, originating in 1896 and modified over the years.[11] The DJIA is computed from 30 leading stocks chosen somewhat arbitrarily by Dow Jones & Company to represent different industries. Traditionally, this average is said to be composed of **blue-chip stocks**, meaning large, well-established, and well-known companies.

A Price-Weighted Index Because of its historical origins the DJIA is a *price-weighted series*, which is extremely unusual. Because it gives equal weight to equal dollar changes, high-priced stocks carry more weight than low-priced stocks. A 10 percent change in the price of stock A at $200 will have a much different impact on the DJIA from that of a 10 percent change in stock B at $20. This also means that as high-priced stocks split and their prices decline, they lose relative importance in the calculation of the average, whereas nonsplit stocks increase in relative importance. This bias against growth stocks, which are the most likely stocks to split, can result in a downward bias in the DJIA.

The Dow Divisor It is important to note that because of the ongoing adjustments in the divisor of the DJIA to account for stock splits and stock dividends, one point on the Dow is not equal to $1. In late October 2008 the divisor was .125552709; therefore, if we divide 1 by the divisor we obtain a "multiplier" that shows how much the index will change for a one-point change in only one stock in the index. This multiplier was 1/.125552709 or 7.965 points.[12]

Example 4-3

What if the DJIA fell 73 points, which most people would consider a notable decline? With a multiplier of 7.965, a decrease in price of only one of the Dow's 30 stocks of $3.75 would produce a change of 29.87 points. Therefore, 29.87/73 = 41 percent (rounded) of the decrease in the DJIA that day was caused by the movements in only one of the stocks in this index.

[10] There are three other Dow-Jones Averages: the transportation, the public utility, and the composite. The first two encompass 20 and 15 stocks, respectively, and the composite consists of these two groups plus the DJIA (i.e., 65 stocks). Each average is calculated similarly to the DJIA, with changes made in the divisor to adjust for splits and other factors. Daily information on these averages can be found in *The Wall Street Journal* and other newspapers.

[11] The first average of U.S. stocks was created by Charles Dow in 1884 and consisted of 11 stocks, mostly railroads. The Dow Industrial Average, first published in 1896, consisted of 12 industrial companies.

[12] Using the divisor, a movement of 30 points in the DJIA results in an *average* movement in each component stock of only $0.1256.

Dow Index Points and Levels Investors need to distinguish between point changes in the DJIA and percentage changes. When the index is at a level such as 11,000 or 12,000, a 300-point change in one day can't mean as much as the same point change several years ago when the index was at 5000. Therefore, we need to be careful to put point changes in perspective.

Example 4-4 On March 18, 2000 the Dow gained approximately 500 points to close at 10,630.6. This was a percentage gain of 4.94 percent. In contrast, on October 21, 1987, the Dow gained 186.84 points to close at 2027.85—this represented a percentage gain of 10.15 percent because the base was much lower. On July 24, 2002, the Dow gained about 489 points to close at 8191.29, a gain of 6.35 percent. (All calculations are done using the opening level of the index that day.)

Like any index, the level of the DJIA simply reflects the decisions that have been made on which stocks to include in the index. The stocks in this index are chosen by the senior editors of *The Wall Street Journal*. Changes occur periodically, primarily because of acquisitions or the loss of importance in an index company.[13]

The Dow did not reach the 10,000 level until 1999, and it hit its all-time high on October 09, 2007 when it closed at almost 14,164. One year later, on October 10, 2008, the Dow was at 7774.[14] It closed the year 2008 at 8776, and by March 9, 2009 it was at 6547.

✓ What should matter to investors is the percentage change in the DJIA, or any index, for a specified time period. The level of an index, and the point change in that level, are not important. In the case of the DJIA its level simply reflects the decisions of which stocks are in the index, and its point change on any given day does not directly represent dollars and cents.

Criticisms of the DJIA The DJIA has been criticized because of its use of only 30 stocks to reflect what the overall market is doing, and because it is price weighted (rather than value weighted). Furthermore, one can argue it is no longer an "industrial" index because two-thirds of its weighting comes from sectors involving consumer products, financial services companies, and technology companies. Nevertheless, it is the oldest continuous measure of the stock market, and it remains the most prominent measure of market activity for many investors. Regardless of its problems, the DJIA remains relevant because it is so widely reported and cited in daily newspapers and broadcasts, and because it is closely associated with *The Wall Street Journal*. The DJIA does fulfill its role as a measure of market activity for stocks such as those on the New York Stock Exchange.

[13]In November 1999 Chevron, Goodyear, Union Carbide, and Sears were removed from the index and replaced by Intel, Microsoft, Home Depot, and SBC Communications. In 2004 other traditional American companies, AT&T, Kodak, and International Paper, were replaced by American International Group, Pfizer, and Verizon Communications. In 2008 two more stocks in the index were replaced.

[14]It closed in 2004 at 10,783.01, an increase of 3.15 percent for the year. For 2003, the increase was about 25 percent. For 2008, the change was –34 percent. Clearly, yearly changes can vary widely.

STANDARD & POOR'S STOCK PRICE INDEXES

Standard & Poor's Corporation makes available the widely cited 500-stock Composite Index (the S&P 500).[15] This index is carried in the popular press such as *The Wall Street Journal*, and investors often refer to it as a "good" measure of what the overall market is doing, at least for large NYSE stocks. The S&P 500 is typically the measure of the market preferred by institutional investors when comparing their performance to that of the market. One justification for this is that it accounts for about 75 percent of U.S. stock-market value.

The S&P 500 includes most of the big companies familiar to investors. All 30 of the Dow Jones Industrials are in this index. Unlike the DJIA, the makeup of the S&P 500 changes several times a year as a result of acquisitions and other reasons. Enron and WorldCom, both of which were spectacular failures, were in the S&P 500 but not the DJIA.

Standard & Poor's 500 Composite Index (S&P 500) Capitalization-weighted index of stock market activity covering 500 stocks

Capitalization-Weighted Indexes Unlike the Dow Jones Industrial Average, the **Standard & Poor's 500 Composite Index (S&P 500)** is a market value index or capitalization-weighted index. It is expressed in relative numbers with a base value arbitrarily set to 10 (1941–1943). Technically what this means is that the current level of this index—for example, if it were 1200—is some multiple of the base; in this case it is 120 times larger than the base. Of course, what is actually meaningful to investors is the percentage increase in the index. For example, if the index goes from 1075 to 1190 in one year, this is an increase of (1190/1075) –1.0, or 10.7 percent.

All stock splits and dividends are automatically accounted for in calculating the value of the index because the number of shares currently outstanding (i.e., after the split or dividend) and the new price are used in the calculation. Unlike the Dow Jones Average, each stock's importance is based on relative total market value instead of relative per-share price. If two stocks in the S&P 500 have approximately equal market values, a 10 percent change in the price of one would affect the index about the same as a 10 percent change in the other. On the other hand, a 10 percent change in a larger stock in this index, as measured by total market value, would have a bigger impact on the index.

UNDERSTANDING A CAPITALIZATION-WEIGHTED INDEX

Table 4-1 illustrates how a market value, or capitalization-weighted, index is constructed. For each stock the share price is multiplied by the number of shares outstanding to obtain the current market value of the stock. A base value has to be set by construction—in Table 4-1 the value at the end of the first year is set at 100. At the end of the second year, market value is calculated the same way. Notice in Table 4-1 that stock ABD has a two-for-one stock split in the second year, and this is automatically adjusted for because we are multiplying share price by number of shares to obtain market value. The new index value is 114.29 because the total market value of the stocks in this index has increased by 14.29 percent.

Using the S&P 500 Index The S&P 500 is obviously a much broader measure than the Dow, and it should be more representative of the general market. In fact, although this index constitutes less than 10 percent of all stocks in the Wilshire 5000 Index, the broadest market measure, it represents about three-fourths of the value of all U.S. stocks.

✓ The S&P 500 Index comprises about three-quarters of the value of all U.S. equities, and includes more than 100 industry groups, making it very useful as a benchmark of the overall stock market. It is used by many investors, and money managers, for this purpose in constructing a diversified portfolio.

[15] Standard & Poor's also publishes indices for various groupings of stocks, covering specific industries, low-priced stocks, high-grade stocks, and so on.

Table 4-1 Illustration of How a Value-weighted Index Is Constructed and Calculated

	Stock	Price	Number of Shares	Market Value (price × shares)
Year-end 2007				
	ABD	$10	10,000,000	$ 100,000,000
	TWE	20	15,000,000	300,000,000
	CWF	40	25,000,000	1,000,000,000
				Total market value = $1,400,000,000
Base value of index = 100 (by construction)				
Year-end 2008				
	ABD	$ 7	20,000,000*	$ 140,000,000
	TWE	14	15,000,000	210,000,000
	CWF	50	25,000,000	1,250,000,000
				Total market value = $1,600,000,000

New value of index = $1,600,000,000 / $1,400,000,000 × 100 = 1.1429 × 100 = 114.29

* ABD splits two-for-one during the year 2008.

It is important to note, however, that the S&P 500 consists primarily of NYSE stocks, and it is clearly dominated by the largest corporations.[16] Like any index, it is affected by the performance of the individual stocks in the index. However, there is one important characteristic of the S&P 500 that limits its usefulness as a market benchmark. Being capitalization weighted, the performance of the S&P 500 Index is significantly affected by a relatively small number of companies. For example, the largest 10 companies (based on total market value) in the S&P make up about one-fourth of its total value, and the largest 100 comprise over two-thirds of its total value. Therefore, if these few companies are quite cheap or quite expensive using valuation metrics, any conclusions about "the market" based solely on the valuation of the S&P 500 will be flawed.

What about international exposure for this index? In July 2002, the committee at Standard & Poor's that handles the S&P 500 Index decided that henceforth foreign corporations would no longer be included in the index. This resulted in dropping seven foreign-based firms, including Royal Dutch Petroleum and Unilever. They were replaced with, among others, eBay and UPS. The S&P 500 Index hit its all-time high in October 2007 when it reached 1565.15. After suffering three consecutive years of declines in 2000, 2001, and 2002, it was up 26 percent in 2003. It gained 100 points in 2004 to close at 1,211.92, a gain of 8.99 percent, and in 2005 the percentage price gain in the index was 3 percent. The year 2006 and 2007 showed positive gains in the S&P Index of 13.6 percent and 3.5 percent, respectively. The year 2008, of course, was a different story.

NASDAQ INDEXES

NASDAQ Composite Index A composite measure of the Nasdaq stock market

The Nasdaq indexes of most interest to investors, the Composite Index and the 100 Index, are widely available daily. The **NASDAQ Composite Index** measures all NASDAQ domestic- and international-based common stocks listed on the Nasdaq Stock Market.[17] The Nasdaq 100 consists of 100 of the largest domestic and international nonfinancial firms listed on Nasdaq.

[16]The S&P 500 contains some stocks from the Nasdaq Stock Market.

[17]The base period January 1971 is assigned a value of 100 for the Composite Index and the Industrial Index, and monthly data are available from January 1971.

The Nasdaq Composite Index suffered the most horrific declines of all the major U.S. indexes during the period 2000–2002. After reaching a record level of almost 5050 on March 10, 2000, it closed at 1240 on July 25, 2002, falling about 4 percent on that day alone. At that point it had declined about 75 percent from its record high (it declined 36 percent in 2002 alone up to July 25). By the end of 2004 the Index stood at 2,175.44, gaining 8.59 percent for the year. By year-end 2008 the Nasdaq Index was at 1577.

The Nasdaq Composite Index is heavily dominated by the technology stocks such as Cisco, Dell, Microsoft, Oracle, and Intel. Therefore, this index is going to be significantly affected by the performance of technology stocks. In the 1990s such stocks soared, but in 2000–2002 these stocks collapsed. The index clearly reflected both events.

Concepts in Action

When Indexes Really Go South

As we all know, the U.S. economy and financial markets suffered a number of significant negative events in 2008. In October 2008, the S&P Index suffered its biggest monthly decline since 1987, losing 16.9 percent. In both September and October 2008, the stock market suffered large losses. For example, the week of October 6–10 saw the DJIA decline 18 percent, the largest one-week decline in the history of this index.

OTHER INDEXES

The Russell indexes are well known. The *Russell 1000 Index* is closely correlated with the S&P 500 because it consists primarily of "large cap" stocks. These 1,000 stocks make up about 90 percent of the total market value of the Russell 3000. The *Russell 2000* consists of the remaining 10 percent of the Russell 3000. These "small caps" have an average market capitalization of about $200 million compared to $4 billion for the Russell 1000. The Russell 2000 is often cited as an index of small common stocks.

The Dow Jones Wilshire 5000 claims to be the most comprehensive measure of U.S. stocks. Included are the primary equity issues of U.S.-based companies with readily available prices.

USING THE CORRECT DOMESTIC STOCK INDEXES

As the previous discussion indicates, numerous measures of the "market," ranging from the DJIA to the broadest measure of the market, the Wilshire Index, are available. It is obvious that the overall market is measured and reported on in several different ways.

Investors should use the correct index for the purpose at hand:

1. To measure how large stocks are doing, use the S&P 500, the Russell 1000, or the Dow Jones Equity Market Index. Alternatively, use the DJIA but be aware of its potential problems.
2. To measure how Nasdaq stocks are doing, use the Nasdaq Composite index to cover all Nasdaq securities, or the Nasdaq 100 to cover 100 of the largest companies.
3. To measure small capitalization stocks, "small cap" stocks, use the Russell 2000 Index.
4. To measure "mid-cap" stocks, use the S&P 400 Index.
5. To measure the U.S. stock markets in the broadest sense, use the Wilshire 5000 Index (which actually contains 6,500+ stocks)

FOREIGN STOCK MARKET INDICATORS

Stock market indices are available for most foreign markets, but the composition, weighting, and computational procedures vary widely from index to index. This makes it difficult to make comparisons. To deal with these problems, some organizations have constructed their own set of indices on a consistent basis. Certain international indices also are regularly computed.

EAFE Index The Europe, Australia, and Far East Index, a value-weighted index of the equity performance of major foreign markets

Dow Jones World Stock Index A capitalization-weighted index designed to be a comprehensive measure of worldwide stock performance

A well-known index of foreign stocks is the MSCI **EAFE Index**, or the Europe, Australia, and Far East Index. This index, compiled by Morgan Stanley Capital International, is, in effect, a non-American world index.

The **Dow Jones World Stock Index** covers the Pacific Region, Europe, Canada, Mexico, and the United States. It is designed to be a comprehensive measure, and represents approximately 80 percent of the world's stock markets. Unlike the DJIA, the World Stock Index is a capitalization-weighted index. *The Wall Street Journal* calculates and reports the DJ World Stock Index as part of its "Dow Jones Global Indexes" carried daily in the *Journal*. Stock market indexes for all of the major foreign markets are also shown on this page in the *Journal*.

Other foreign indexes include the Dow Jones Stoxx 600 Index of European shares, created in 1986, and the narrower Dow Jones Stoxx 50 Index of major European companies. In 2008 the Stoxx 600 Index declined 46 percent.

Checking Your Understanding

6. What is the major presumed deficiency of the DJIA?
7. Is the S&P 500 Index affected by the size of the companies in the index?

Bond Markets

Just as stockholders need good secondary markets to be able to trade stocks and thus preserve their flexibility, bondholders need a viable market in order to sell before maturity. Otherwise, many investors would be reluctant to tie up their funds for up to 30 years. At the very least, they would demand higher initial yields on bonds, which would hinder raising funds by those who wish to invest productively.

Investors can purchase either new bonds being issued in the primary market or existing bonds outstanding in the secondary market. Yields for the two must be in equilibrium.

The NYSE has the largest centralized bond market of any exchange. It is called NYSE Bonds. The trading platform incorporates an all-electronic trading platform, and involves corporates, agencies, and Treasury bonds. The majority of the volume is in corporate debt.

INDIVIDUAL INVESTORS AND BOND TRADING

Traditionally, the bond market has not been friendly to individual investors. Currently, individual investors can buy bonds directly only from the Federal government.[18] Moving beyond Treasuries, investors generally must use a broker to buy bonds.

[18]As noted in Chapter 2, TreasuryDirect allows investors to maintain accounts directly with the U.S. Treasury online, buying bills, notes, and bonds at auction without paying a commission.

Most bonds trade over the counter, which means there is no centralized marketplace or exchange. The bond market is actually a dealer to dealer market, with brokerage firms employing traders to deal in specific types of bonds. Bond brokers are generally buying bonds for their own accounts, and reselling them at a profit. Brokers typically earn a spread (the difference between the current market price and the cost to buy the bonds) and may also add a service charge to the transaction. A small number of corporate bonds are listed on the exchanges.

Better bond information has become available because of the Internet. More sites are offering pricing information. For example, Fidelity Investments allows you to access screens of all the major bond categories. Fidelity now discloses its fee structure for bonds, charging $1 to $4 per bond. Other brokerage firms charge a flat fee. Keep in mind that the fees do not tell investors the spreads between the buy and sell prices that are imbedded in the transactions.

Some Practical Advice

Although changes such as those made by Fidelity are benefiting bond investors, buying bonds still has its challenges. For example, municipals normally come in units of $5,000. Commissions are not obvious, but transaction costs typically range from 0.5 percent to 3 percent of principal depending on the size of the order. Because yields on municipals are low to start with, it is critical for investors to minimize their costs when buying bonds either directly or indirectly.

Derivatives Markets

We discuss the details of derivatives markets in their respective chapters. At this point, however, we can note that options trade on the floor of exchanges, such as the Chicago Board Options Exchange, using a system of market makers. A bid and asked price is quoted by the market maker, and floor brokers can trade with the market maker or with other floor brokers.

Futures contracts traditionally were traded on exchanges in designated "pits," using as a trading mechanism an open-outcry process. Under this system, the pit trader offers to buy or sell contracts at an offered price and other pit traders are free to transact if they wish. Futures markets now tend to be electronic. For example, the CME Globex electronic trading platform is an electronic marketplace with a wide range of products across all asset classes. Investors can trade around the clock and around the world, with millisecond response time.

The Globalization of Securities Markets

Instinet, mentioned earlier in the chapter, is an electronic trading mechanism allowing large investors (primarily institutions) to trade with each other electronically at any hour. Through such sources as Instinet, stock prices can change quickly although the exchanges themselves are closed. The after-hours trading is particularly important when significant news events occur, or when an institutional investor simply is anxious to trade a position. Such activity could lead to the 24-hour trading for stocks such as that which already exists for currencies.

chapter 5

How Securities Are Traded

In Chapter 4 we considered how securities markets are organized. In this chapter we learn the mechanics of trading securities which investors must know in order to operate successfully in the marketplace. Chapter 5 discusses various details involved in trading securities, critical information for every investor. Brokerage firms and their activities are analyzed, as are the types of orders to buy and sell securities, and the handling of these orders. The regulation of the securities markets is discussed. Finally, the various aspects of trading securities that investors often encounter are considered. Although the details of trading, like the organization of securities markets, continue to evolve, the basic procedures remain the same.

AFTER READING THIS CHAPTER YOU WILL BE ABLE TO:

- Explain brokers' roles and how brokerage firms operate.
- Understand the types of orders investors use in trading securities.
- Assess the role of regulation in the securities markets.
- Appreciate how margin trading and short selling contribute to investor opportunities.

Now that you know what investing alternatives are available to you, both direct and indirect, and where they trade, you need to consider the details of trading securities as you prepare to invest your inheritance. What type of brokerage account will best meet your needs? What type of orders can you use to buy and sell securities? How well does the securities legislation in place today protect you from the many pitfalls awaiting you as an investor? Should you take additional risk by buying stocks on margin, and if so, how do you go about trading on margin? Should you bet on security price declines by selling short, or is this technique too risky for average investors? Details, details, but investors must deal with them. Unless you master these details, you will not be able to take full advantage of the trading opportunities that financial markets offer. Furthermore, you will be at the mercy of others who may not have your best interests at heart.

Brokerage Transactions

BROKERAGE FIRMS

In general, it is quite easy for any responsible person to open a brokerage account. An investor selects a broker or brokerage house by personal contact, referral, reputation, and so forth. Member firms of the NYSE are supposed to learn certain basic facts about potential customers, but only minimal information is normally required. Actually, personal contact between broker and customer seldom occurs in today's world, with transactions carried out by phone or by computer.

Customers can choose the type of broker they wish to use. They can be classified according to the services offered and fees charged.

Full-Service Brokers Traditionally, brokerage firms offered a variety of services to investors, particularly information and advice. Today, investors can still obtain a wide variety of information on the economy, particular industries, individual companies, and the bond market from **full-service brokers** such as Merrill Lynch, Morgan Stanley, and Smith Barney. These large retail brokerage firms execute their customers' orders, provide advice and recommendations to investors, and send them publications about individual stocks, industries, bonds, and so forth.

Full-Service Brokers A brokerage firm offering a full range of services, including information and advice

Today's full-service stockbrokers go by different titles, such as financial consultants or investment executives (or simply registered representatives). This change in title reflects the significant changes that have occurred in the industry. Full-service brokerage firms now derive only a small percentage of their revenues from commissions paid by individual investors, a major change from the past.[1] And the typical full-service stockbroker, whatever he or she is called, now derives much less of his or her income from customer commissions than was the case in the past. This is why firms such as Merrill Lynch encourage their brokers to become more like fee-based financial planners and less like salespeople.

✓ Full-service brokers seek to build relationships with clients by meeting all of the needs of a client, whether it be retirement planning, estate planning, taxes, financing children's education, or providing you access to such exotic assets as coffee futures and thinly traded foreign stocks. One recent financial magazine survey found that 55 percent of their online readers were either somewhat satisfied or very satisfied with their full-service firm.

[1] Other sources of revenue for these firms include the sale of mutual funds run by the firms, the sale of new issues of securities (IPOs) (discussed in Chapter 4) and "principal transactions," which involves brokerage firms trading for their own accounts. Lastly, underwriting new issues is generally a profitable activity for large firms which have brokerage operations, and brokers may have an incentive to steer their customers into the new issues.

Commissions charged by full-service brokers vary by product. For stocks, commissions vary across firms, although costs are typically higher than for discount brokers. Treasury securities may carry a commission of less than 1 percent, whereas a complicated limited partnership may carry a commission of 8 percent or more. In some cases, the commission is "transparent" to the investor.

Discount Broker Brokerage firms offering execution services at prices typically significantly less than full-line brokerage firms

Discount Brokers Investors can choose to use a **discount broker** who will provide virtually all of the same services except they may or may not offer advice and publications and will charge less for the execution of trades.[2] Smart investors choose the alternative that is best for them in terms of their own needs. Some investors need and want personal attention and detailed research publications, and are willing to pay in the form of higher brokerage commissions. Others, however, prefer to do their own research, make their own decisions, and pay only for order execution.

At the beginning of 2008, a survey by the American Association of Individual Investors (AAII) covered 52 discount brokers, 45 of which offered on-line trading.[3] Note that the total number includes the well-known large discount brokers such as Schwab, Fidelity, and E*Trade, as well as an array of often less-known brokerages offering a varied mix of services. Thus, with on-line discount brokers, investors must carefully evaluate the package of services offered.

The AAII survey found that most of these firms offer many of the same basic services to customers. For example, all of them offered SIPC coverage, which insures the securities and cash in customer accounts, and all offered margin accounts (discussed later in the chapter). On the other hand, only three-fourths of the firms allow customers to write personal checks against cash balances in their brokerage accounts. Some discount brokerage firms offer research information and investment recommendations. More than half of the firms in this survey used an outside source for their research offerings, while a few had in-house analysts. Some charge for research information, and some do not.

Commissions charged by discount brokers vary widely, in both the amount and how they are calculated. As a result, it is not possible to easily make comparisons among discount brokers. Investors should do some careful analysis of the likely commissions and fees to be paid at a discount brokerage they are considering.

The 2008 Discount Broker Survey conducted by AAII (cited earlier) found that for a broker-assisted $5,000 trade, the average commission was 0.63 percent of the trade. For a similar $25,000 trade, the average commission was 0.19 percent of the trade.[4]

Cash Account The most common type of brokerage account in which a customer may make only cash transactions

BROKERAGE ACCOUNTS

Margin Borrowing Borrowing from a brokerage firm to finance a securities transaction

The most basic type of account is the **cash account**, whereby the customer pays the brokerage house the full price for any securities purchased. Many customers add **margin borrowing** to the account, which allows the customer to borrow from the brokerage firm to purchase securities. (Margin is explained in some detail later in this chapter.) To have the margin feature, investors are required by both the NYSE and NASD to deposit with their

[2] Some discount brokers do provide research information beyond very basic information. This includes standard information supplied to the brokerage from outside sources and customized information generated in-house.

[3] See "2008 Discount Broker Guide," *AAII Journal*, February 2008, pp. 5–15. This journal is a publication of the American Association of Individual Investors, an organization serving individual investors. Their website is www.aaii.com.

[4] "2008 Discount Broker Guide," *The AAII Journal*, American Association of Individual Investors, February 2008, p. 5.

Ethics in Investing

Do You Have an Obligation for Good Advice Unsolicited?

Investors have a choice of brokers, ranging from those providing advice and recommendations (and typically charging more), and those offering little or no advice (and typically charging less). While we generally think of an investor seeking out a broker, brokers often seek out customers. Assume that you as an investor have a brokerage account of your own choosing where you transact your investing decisions. Out of the blue, a broker you have never met, employed at a brokerage firm you are not familiar with, calls you (for obvious reasons, this is referred to in the business as "cold-calling"). He offers to send you for free some investing ideas. You accept the offer. You later decide to invest in one of the stocks he has recommended because after thinking about it and checking further, you decide this stock has merit. You execute the transaction in your regular brokerage account rather than through a new account with the broker who called. Is this ethical behavior on your part?

Most observers would agree that in this situation you are under no obligation to transact with the broker who sought you out as a potential customer. Had you solicited the recommendation, you would have an obligation, but in this case you do not. Of course, you may not receive any more recommendations from this broker.

brokerage firm a minimum of $2,000 or 100 percent of the purchase price, whichever is less (this is referred to as the "minimum margin"). Some firms may require a deposit of more than $2,000.

Asset Management Account Brokerage accounts offering various services for investors, such as investment of cash balances and check writing privileges

Most brokerage accounts today are "**asset management accounts**" (or cash management accounts), which means they offer a variety of what are essentially banking services to the investor. They may require a minimum balance to open and the payment of an annual fee, although some do not. All offer automatic reinvestment of the account holders' free credit balances in shares of a money market fund (taxable or nontaxable) or other fund, such as a government securities fund. Money is typically swept daily into such funds, although a minimum balance of $500 or $1,000 may be required.

Account holders are issued bank checks and a bank card. Checks can be written against the account's assets, and the checking account is no minimum, no fee. In addition, instant loans based on the marginable securities in the account can be obtained for virtually any purpose, not just securities transactions, at the current broker's call money rate plus 0.75 to 2.25 percent. For example, if you write a check for $10,000 against your account and your money market fund contains only $5,000, you will automatically borrow the other $5,000. Each month the customer receives a comprehensive summary statement.

Wrap Accounts Brokers can act as middlemen, matching clients with independent money managers. Using the broker as a consultant, the client chooses an outside money manager from a list provided by the broker. Under this **wrap account**, all costs—the cost of the broker-consultant and money manager, all transactions costs, custody fees, and the cost of detailed performance reports—are wrapped in one fee. For stocks, the fee is 1–3 percent of the assets managed.[5]

Wrap Account A newer type of brokerage account where all costs are wrapped in one fee

Large brokerage houses such as Merrill Lynch pioneered wrap accounts for investors with a minimum of $100,000 to commit. Merrill Lynch now offers several different types of wrap programs ranging from the traditional consultant wrap (the placement of client funds with institutional money managers) to a program where the investor makes the buy and sell decisions and can have unlimited no-commission trading. Because of their popularity, other financial companies such as bank trusts have begun offering these accounts.

[5]Fees are lower for bond portfolios or combinations of stocks and bonds.

A newer variation of wrap programs is the *mutual fund wrap account*, involving an investment in various mutual funds. Minimum account size requirements are more modest at $10,000 to $100,000. A few mutual fund companies such as Fidelity participate in this market directly. Fees average 1.1 percent to 1.4 percent of assets. Mutual fund wrap accounts are based on an asset allocation model that is updated quarterly to account for market conditions and client needs. The adviser may decide, for example, to shift some funds from bonds to stocks.

Dividend Reinvestment Plans (DRIPs) A plan offered by a company whereby stockholders can reinvest dividends in additional shares of stock at no cost

DRIPs Many companies now offer **dividend reinvestment plans (DRIPs)**. For investors enrolled in these plans, the company uses the dividends paid on shares owned to purchase additional shares, either full or fractional. Typically, no brokerage or administrative fees are involved. The advantages of such plans include dollar cost averaging, whereby more shares are purchased when the stock price is low than when it is high.

In order to be in a company's dividend reinvestment plan, investors often buy the stock through their brokers, although some companies sell directly to individuals. On becoming stockholders, investors can join the dividend reinvestment program and invest additional cash at specified intervals.

DRIPs are starting to resemble brokerage accounts. Investors can purchase additional shares by having money withdrawn from bank accounts periodically, and shares can even be redeemed by phone at many companies.

It is possible to invest in the market without a stockbroker or a brokerage account in the traditional sense. As an outgrowth of their dividend reinvestment plans, a number of companies now offer *direct stock purchase programs* (DSPs) to first-time investors. Investors make their initial purchase of stock directly from the company for small purchase fees. The price paid typically is based on the closing price of the stock on designated dates (no limit orders are allowed). The companies selling stock by this method view it as a way to raise capital without underwriting fees and as a way to build goodwill with investors.

Example 5-1

Exxon/Mobil permits investors to buy up to $250,000 a year worth of Exxon stock from the company itself, with no commissions. Investors can open a direct-purchase account with Exxon for as little as $250. Other companies that offer similar plans include Kroger, Sears, Procter & Gamble, and Home Depot.

Treasury bond buyers can also avoid brokers by using the *Treasury Direct Program*. Investors can buy or sell Treasuries by phone or Internet, and check account balances, reinvest Treasuries as they mature, and get the forms necessary to sell Treasuries. Investors eliminate brokerage commissions, but some fees are involved ($34 per security sold, and in some cases a $25 account fee).[6]

How Orders Work

TRADING ON TODAY'S EXCHANGES

The NYSE was traditionally thought of as an agency auction market. That is, agents represent the public at an auction where the interactions of buyers and sellers determine the price of stocks traded on the NYSE. Brokers and specialists are key components of this system for the trading of securities on the organized exchanges.

[6]Treasury Direct can be reached at 800-943-6864 or www.publicdebt.treas.gov.

Example 5-2

Assume that an investor places an order to buy or sell shares of an NYSE-listed company and that the brokerage firm transmits the order to the NYSE trading floor. As of early 2008, there were 17 trading booths on the floor of the NYSE, each representing the auction market for many different securities. Investor buy and sell orders are received on terminals and executed in the open market. Upon completion of the trade, a report is sent back to the originating brokerage firm and to the Consolidated Tape Displays worldwide. The investor's brokerage firm processes the transaction electronically, settling the investor's acount.

SuperDot An electronic order-routing system for NYSE-listed securities

Given the volume of shares handled by the NYSE, several billion shares a day, trading must be highly automated. An electronic system matches buy and sell orders entered before the market opens, setting the opening price of a stock. **SuperDot** is the electronic order-routing system for NYSE-listed securities. Member firms send market and limit orders directly to the specialist post where the securities are traded, and confirmation of trading is returned directly to the member firm over the same system.[7]

Financial markets are changing as new techniques and processes are developed. ECNs are an obvious example of a new way to trade stocks. As noted in Chapter 4, the NYSE merged with ArcaEx, an ECN. For the first time in its history, the NYSE now describes itself as a hybrid market, offering both an auction path seeking best price and an electronic path seeking the quickest execution. In effect, NYSE EuroNext operates two exchanges in the United States—the NYSE and NYSE Arca—which provide differentiated trading models to meet different customer needs.

ORDERS IN THE NASDAQ STOCK MARKET

Nasdaq has been thought of as an electronic screen-based equity market. Market makers (dealers) match the forces of supply and demand, with each market maker making a market in certain securities. They do this by standing ready to buy a particular security from a seller or to sell it to a buyer. As explained in Chapter 4, market makers quote bid and asked prices for each security. The dealer profits from the spread between these two prices.

Assume you place an order for a Nasdaq stock. The brokerage firm will enter it into the computer system, which will find the best price. Market makers are constantly buying and selling shares and earning the spread, the compensation for acting as a middleman. In effect, they are being paid to make the market.

Nasdaq is now a U.S. stock exchange. As of June 2008, it offers free, universal real-time stock data to individual investors.

TYPES OF ORDERS

Market Order An order to buy or sell at the best price when the order reaches the trading floor

Limit Order An order to buy or sell at a specified (or better) price

Stop Order An order specifying a certain price at which a market order takes effect

Investors use three basic types of orders: market orders, limit orders, and stop orders. Each of these orders is explained in Exhibit 5-1. Briefly,

- A **market order** ensures that the order will be executed upon receipt, but the exact price at which the transaction occurs is not guaranteed.
- A **limit order** ensures that the price specified by the investor will be met or bettered, but execution of the order may be delayed or may not occur.
- A **stop order** directs that when a stock reaches a specified price a market order takes effect, but the exact transaction price is not assured.

[7]SuperDot Anonymous® (A Dot) allows institutional investors sponsored by a member firm to submit orders directly to the NYSE without any party knowing their identity, including the NYSE, specialists, or floor brokers.

EXHIBIT 5-1

Types of Orders Used by Investors

1. *Market orders*, the most common type of order, instruct the broker to buy or sell the securities immediately at the best price available. As a representative of the buyer or seller, it is incumbent upon the broker to obtain the best price possible. A market order ensures that the transaction will be carried out, but the exact price at which it will occur is not known until its execution and subsequent confirmation to the customer.
2. *Limit orders* specify a particular price to be met or bettered. They may result in the customer obtaining a better price than with a market order or in no purchase or sale occurring because the market price never reaches the specified limit. The purchase or sale will occur only if the broker obtains that price, or betters it (lower for a purchase, higher for a sale). Limit orders can be tried immediately or left with the broker for a specific time or indefinitely. In turn, the broker leaves the order with the specialist who enters it in the limit book.

EXAMPLE: Assume that the current market price of a stock is $50. An investor might enter a buy limit order at $47. If the stock declines in prices to $47, this limit order, which is on the specialist's book, will be executed at $47 or less. Similarly, another investor might enter a sell limit order for this stock at $55. If the price of this stock rises to $55, this investor's shares will be sold.

3. *Stop orders* specify a certain price at which a market order takes effect. For example, a stop order to sell at $50 becomes a market order to sell as soon as the market price reaches (declines to) $50. However, the order may not be filled exactly at $50 because the closest price at which the stock trades may be 49.95. The exact price specified in the stop order is therefore not guaranteed and may not be realized.

EXAMPLE 1: A sell stop order can be used to protect a profit in the case of a price decline. Assume, for example, that a stock bought at $32 currently trades at $50. The investor does not want to limit additional gains, but may wish to protect against a price decline. To lock in most of the profit, a sell stop order could be placed at $47.

EXAMPLE 2: A buy stop order could be used to protect a profit from a short sale. Assume an investor sold short at $50, and the current market price of the stock is $32. A buy stop order placed at, say, $36 would protect most of the profit from the short sale.

Investors can enter limit orders as day orders, which are effective for only one day, or as good-until-canceled orders or open orders, which remain in effect for six months unless canceled or renewed.[8] There is no guarantee that all orders will be filled at a particular price limit when that price is reached because orders are filled in a sequence determined by the rules of the various exchanges.[9]

Stop orders are used to buy and sell after a stock reaches a certain price level. A buy stop order is placed above the current market price, while a sell stop order is placed below the current price. A stop limit order automatically becomes a limit order when the stop limit price is reached.

✓ Use a market order to ensure execution of the order (exact price is not assured). Use a limit order to ensure a specified price or better (execution not assured).

[8] A market order remains in effect only for the day.

[9] Limit orders for more than one share can be filled in whole or in part until completed (involving more than one trading day) unless the order is specified as *all or none* (fill the whole order or no part of it), *immediate or cancel* (fill the whole order or any part immediately, canceling the balance), or *fill or kill* (fill the entire order immediately or cancel it).

Some Practical Advice

As we should expect, certain types of orders can have both good and bad effects. A stop loss order calls for a stock to be automatically sold when the price drops by a specified percentage or hits a specified price. This can limit losses on short-term trades, and can be effective in locking in profits. However, the normal volatility of the market can cause investors to buy at a higher price and sell at a lower price, only to see the price rebound and continue upward. Setting the right price at which the stock is to be sold is critical, and difficult to do.

A standard order is a round lot, which is 100 shares or a multiple of 100; an odd lot is any number of shares between 1 and 99. Odd lots are now executed by the NYSE directly by computer, and the overall volume of such transactions is small.[10]

CLEARING PROCEDURES

Most securities are sold on a regular way basis, meaning the settlement date is three business days after the trade date. On the settlement date the customer becomes the legal owner of any securities bought, or gives them up if sold, and must settle with the brokerage firm by that time. Most customers allow their brokerage firm to keep their securities in a **street name**, that is, the name of the brokerage firm. The customer receives a monthly statement showing his or her position as to cash, securities held, any funds borrowed from the broker, and so on.[11]

Street Name When customers' securities are held by a brokerage firm in its name

Checking Your Understanding

1. Assume you bought a stock for $50 and it has now increased in price to $75. You think it may go higher, but you want to protect most of your current profit, realizing a minimum gain of abut $23 per share. What type of order could you place to accomplish this?
2. State two reasons why an investor establishing a brokerage account might prefer a wrap account to the more traditional asset management account.

Investor Protection in the Securities Markets

Investors should be concerned that securities markets are properly regulated for their protection. Our financial system depends heavily on confidence in that system. In the late nineteenth and early twentieth centuries, significant abuses in securities trading did occur; at the same time there was a lack of information disclosure, and trading procedures were not always sound. The market crash in 1929 and the Great Depression served as catalysts for reforms, which effectively began in the 1930s.

[10]Some large brokerage firms now handle their own odd lots, and most investors who transact in odd lots are actually transacting with a dealer.

[11]Use of stock certificates as part of the settlement is dying out in the United States. The Depository Trust Company (DTC) has helped to eliminate stock certificates by placing these transactions on computers. Members (brokers and dealers) who own certificates (in street name) deposit them in an account and can then deliver securities to each other in the form of a bookkeeping entry. This book-entry system, as opposed to the actual physical possession of securities in either registered or "bearer" form, is essential to minimize the tremendous amount of paperwork that would otherwise occur with stock certificates.

Investor protection can be divided into government regulation, primarily federal, and self-regulation by the industry. Although states also regulate securities transactions, the primary emphasis is on federal regulation, and so we will concentrate on that.

GOVERNMENT REGULATION

Federal Legislation Much of the legislation governing the securities markets and industry was enacted during the Great Depression. Many fraudulent and undesirable practices occurred in the 1920s, and the markets as a whole were shattered in the crash of 1929. Congress subsequently sought to improve the stability and viability of the securities markets, enacting the basis of all securities regulation in the 1930s. Additional acts have been legislated over the last 50 years. Exhibit 5-2 contains a brief description of the major legislation affecting securities markets.

The Justice Department can investigate alleged abuses in the financial markets. For example, an important development occurred in late 1994 concerning bid and asked prices on Nasdaq. Two professors discovered that actively traded Nasdaq stock spreads were typically quoted in quarters rather than eighths.[12] This finding caused quite an uproar, with the Justice Department looking into the issue of alleged price fixing among brokerage firms on the Nasdaq market. Settlements of such cases vary widely.

EXHIBIT 5-2

Major Legislation Regulating the Securities Markets

1. The Securities Act of 1933 (the Securities Act) deals primarily with new issues of securities. The intent was to protect potential investors in new securities by requiring issuers to register an issue with full disclosure of information. False information is subject to criminal penalties and lawsuits by purchasers to recover lost funds.
2. The Securities Exchange Act of 1934 (SEA) extended the disclosure requirements to the secondary market and established the SEC to oversee registration and disclosure requirements. Organized exchanges are required to register with the SEC and agree to be governed by existing legislation.
3. The Maloney Act of 1936 extended SEC control to the OTC market. It provides for the self-regulation of OTC dealers through the National Association of Securities Dealers (NASD), which licenses and regulates members of OTC firms. The SEC has authority over the NASD, which must report all its rules to the SEC.
4. The Investment Company Act of 1940 requires investment companies to register with the SEC and provides a regulatory framework within which they must operate. Investment companies are required to disclose considerable information and to follow procedures designed to protect their shareholders. This industry is heavily regulated.
5. The Investment Advisors Act of 1940 requires individuals or firms who sell advice about investments to register with the SEC. Registration connotes only compliance with the law. Almost anyone can become an investment advisor because the SEC cannot deny anyone the right to sell investment advice unless it can demonstrate dishonesty or fraud.
6. The Securities Investor Protection Act of 1970 established the Securities Investor Protection Corporation (SPIC) to act as an insurance company in protecting investors form brokerage firms that fail. Assessments are made against brokerage firms to provide the funds with backup government support available.
7. The Securities Act Amendments of 1975 was a far-reaching piece of legislation, calling for the SEC to move toward the establishment of a national market. This act abolished fixed brokerage commissions.

[12] Stock prices in the 1990s were quoted on the basis of eighths, whereas today they are quoted in dollars and cents.

Example 5-3

In July 1996, the Justice Department settled a civil agreement whereby the 24 firms involved did not have to admit any violations but did have to agree to obey the law in the future and establish trade-monitoring systems at a cost of $100 million. The Justice Department claims that spreads have narrowed on many of the most actively traded Nasdaq stocks.

The Securities and Exchange Commission In 1934 Congress created the **Securities and Exchange Commission (SEC)** as an independent, quasi-judicial agency of the U.S. government. Its mission is to administer laws in the securities field and to protect investors and the public in securities transactions. The commission consists of five members appointed by the president for five-year terms. Its staff consists of lawyers, accountants, security analysts, and others divided into divisions and offices (including nine regional offices). The SECs activities are expected to expand because of the financial crisis.

Securities and Exchange Commission (SEC) A federal government agency established by the Securities Exchange Act of 1934 to protect investors

In general, the SEC administers all securities laws. Thus, under the Securities Act of 1933, the SEC ensures that new securities being offered for public sale are registered with the commission, and under the 1934 act it does the same for securities trading on national exchanges. The registration of securities in no way ensures that investors purchasing them will not lose money. Registration means only that the issuer has made adequate disclosure. In fact, the SEC has no power to disapprove securities for lack of merit.

Under the two acts of 1940—the Investment Company Act and the Investment Advisors Act—investment companies and investment advisors must register with the SEC and disclose certain information. The SEC ensures that these two groups will meet the requirements of the laws affecting them. One problem, however, is that the number of registered investment advisors has increased significantly over the years, as has the number of investment companies. The SEC has a relatively small staff to deal with these two groups.

The SEC is required to investigate complaints or indications of violations in securities transactions. As mentioned above, the Justice Department began an antitrust investigation of the Nasdaq Stock Market. The focus was particularly on the spreads—the difference between what buyers pay for a stock and what they sell it for. The SEC launched its own investigation of this and related issues. It forced the NASD into significant reforms, such as becoming a holding company with two units, the Nasdaq market itself and a separate unit for regulation called NASD Regulation Inc.

SEC actions are designed to help investors. SEC investigations and actions cover a wide range of activities

Example 5-4

The SEC announced in 2008 that it filed a civil action against an individual and his two wholly-owned companies for violations of the antifraud and registration provisions of the federal securities laws. The SEC alleged that this individual and his companies raised about $10 million from hundreds of investors nationwide through a series of unregistered offerings of fractional interests in oil and gas projects.

The SEC and Insider Trading A well-known illustration of SEC activity involves "insider trading," which has been a primary enforcement emphasis of the SEC. Insider trading can be defined as a breach of a fiduciary duty while in possession of material, nonpublic information about a security. "Insiders" (officers and directors of corporations) are prohibited from misusing (i.e., trading on) corporate information that is not generally available to the public and are required to file reports with the SEC showing their equity holdings.

Several major insider-trading "scandals" have been reported over the years. For example, a well-known arbitrageur, Ivan Boesky, was fined $100 million by the SEC in a highly

publicized insider-trading case. Most recently, of course, the case involving Martha Stewart, which revolved around the issue of insider trading, became known to most Americans because of the prominence of the individual involved. Although questions remain about exactly what constitutes insider trading, small investors can, and are, charged with possessing "material, nonpublic information." This happens regularly as a result of mergers and takeovers where the individuals involved are charged with the use of inside information to trade the stock of a company about to be acquired.

Example 5-5

In November 2005, the SEC charged "unknown purchasers" of Placer Dome Inc. call options with insider trading in advance of an announcement by Barrick Gold Corporation that it intended to acquire Placer Dome. According to the SEC statement, the person or people bought over 10,000 Placer Dome call options while having nonpublic information about the intended acquisition offer for Placer. The buyer used overseas accounts to purchase the options.

SELF-REGULATION

Regulation of the Stock Exchange. Stock exchanges regulate and monitor trading for the benefit of investors and the protection of the financial system. The NYSE in particular has a stringent set of self-regulations and declares that it "provides the most meaningful market regulation in the world." The NYSE regulates itself as part of a combined effort involving the SEC (already discussed) itself and member firms (discussed below). Together, this triad enforces federal legislation and self-regulation for the benefit of the investing public.

NYSE Regulation, Inc., a subsidiary of NYSE Euronext, is a not-for-profit corporation which focuses on protecting investors and strengthening market integrity. NYSE Regulation is independent in its decision making.[13] It seeks to protect investors by enforcing federal securities laws as well as exchange rules. NYSE Regulation also ensures that companies listed on the NYSE and on NYSE Arca meet the listing standards.

During a typical trading day, the NYSE continuously monitors all market participants. It also closely monitors the performance of specialists in their responsibility for maintaining a fair and orderly market in their assigned stocks. NYSE rules and regulations are self-imposed and approved by the SEC.

The NYSE has instituted several measures to reduce market volatility and serve the investors' best interests. These safeguards are referred to as "circuit-breakers." A "Trading Halt" is an example of a circuit breaker. A trading halt—which typically lasts less than an hour but can be longer—is called during the trading day to allow a company to announce important news or where there is a significant order imbalance between buyers and sellers in a security. A trading delay (or "delayed opening") is called if either of these situations occurs at the beginning of the trading day.

The Financial Industry Regulatory Authority (FINRA), created in 2007, is now the largest regulator for all securities firms doing business in the United States.[14] Its oversight includes 5,000 brokerage firms, about 172,000 branch offices and more than 674,000 registered securities representatives.[15] FINRA's objective is to protect investors and ensure market integrity. It accomplishes this objective through both regulation and compliance measures.

[13]The organization consists of three divisions: Market Surveillance, Enforcement, and Listed Company Compliance.

[14]FINRA came about from the consolidation of the National Association of Securities Dealers (NASD) and the member regulation, enforcement, and arbitration functions of the New York Stock Exchange.

[15]FINRA has approximately 3,000 employees and operates from Washington, DC, and New York City. It has 15 District Offices around the country.

FINRA's impact on the securities business is widespread. For example, it examines securities firms and enforces federal securities laws. FINRA also performs market regulation under contract with certain exchanges.

Some Practical Advice

Conflicts between brokers and customers are inevitable, and investors should take steps to protect themselves. Investors can go to www.finra.org (website for the Financial Industry Regulatory Authority) and click on "FINRA BrokerCheck" under Investor Resources. FINRA regulates brokerage firms. State regulators can provide Central Registration Depository reports which offer more disciplinary details than provided by the NASD. Links to state regulators can be found at nasaa.org (website for the North American Securities Administrators Association).

OTHER INVESTOR PROTECTIONS

Insured Brokerage Accounts The Securities Investor Protection Corporation (SIPC) is a nonprofit, membership corporation overseen by the SEC. It insures each customer account of its member brokers against brokerage firm failure. Each account is covered for as much as $500,000. (Coverage of cash is limited to $100,000.)[16] From its creation by Congress in 1970 through December 2007, SIPC states that it has advanced $508 million in order to make possible the recovery of $15.7 billion in assets for an estimated 625,000 investors. SIPC's figures indicate that more than 99 percent of eligible investors have been made whole in the failed brokerage firm cases that it has handled to date.[17]

Mediation and Arbitration Investors who have disputes with their brokers generally cannot seek relief in court. When they open an account, investors pledge to resolve disputes through mediation or arbitration rather than go to court. When investors have problems, there are three stages of possible resolution.

First, investors can try to solve the problem with the brokerage firm. It is important to file a written claim (not an email), providing as much documentation as possible. Also, the claim should be sent to NASDR, the regulatory arm of the National Association of Securities Dealers as well as the investor's state securities regulator (which licenses brokers in a state).

The second stage, particularly where compensation or damages is being sought, is mediation, which is voluntary. NASDR maintains a list of mediators and can appoint one if requested (investors have veto power over the choice of mediator). Mediation decisions are nonbinding.

The last stage is arbitration, which is a binding process that can determine damages. Arbiters can be a person or panel which examines the evidence and makes a ruling. Arbitration is not free, and investors should probably hire a lawyer.

In general, arbitration rulings cannot be appealed. The few exceptions (such as bias by the arbitrator) must be appealed within three months. Finally, litigation is possible, but difficult because of the arbitration clause investors sign. An example of when this might occur would be cases alleging broker fraud. Suit must be filed within one year of the alleged incident.

[16]In addition, many brokerage firms carry additional insurance, often for several million dollars, to provide even more protection for customers.

[17]Investors should make sure they are dealing with an SIPC firm by verifying the words "Member SIPC" in the signs and ads provided by members.

Checking Your Understanding

3. The Securities Act of 1933 ensures investors that every new issue of stock has met its quality standards and is likely to be a good investment. Agree or disagree, and explain your reasoning.
4. When resolving investor disputes with brokers, what is the major difference between mediation and arbitration?

Margin

As previously noted, investors often add a margin borrowing feature to their brokerage accounts. Doing so requires some deposit of cash or marginable securities. The NYSE requires that member firms establish a minimum deposit of $2,000 or its equivalent in securities for customers opening a margin account, but individual firms may require more to simply open an account. For example, Fidelity Brokerage Services requires $2,500 to open an account while First Discount Brokerage requires $5,000.

Margin Account A brokerage account that allows customers to borrow funds from the broker

With a **margin account**, the customer can choose to pay part of the total amount due and borrow the remainder from the broker, who in turn typically borrows from a bank to finance customers. The bank charges the broker the "broker call rate," and the broker in turn charges the customer a "margin interest rate," which is the broker call rate plus a percentage added on by the brokerage firm.[18] Cash has 100 percent loan value, and most stock securities have 50 percent loan value. Other securities have differing amounts.

HOW MARGIN ACCOUNTS CAN BE USED

A margin account can be used to:

1. Purchase additional securities by leveraging the value of the eligible shares to buy more.
2. Borrow money from a brokerage account for personal purposes. The margin interest rate is comparable to a bank's prime rate.
3. Provide overdraft protection in amounts up to the loan value of the marginable securities for checks written (or debit card purchases).

Margin trading involves a secured loan, with securities serving as collateral.

Investments Intuition

The traditional appeal of margin trading to investors is that it magnifies the percentage gains on your equity by the reciprocal of the margin requirement (i.e., 1/margin percentage; for example, with a margin of 40 percent, the magnification is 1/0.4 = 2.50). Unfortunately, the use of margin also magnifies the percentage losses. Regardless of what happens, the margin trader must pay the interest costs on the margin account. An investor considering a margined stock purchase should remember that the stock price can go up, remain the same, or go down. In two of these three cases, the investor loses. Even if the stock rises, the breakeven point is higher by the amount of the interest charges.

[18] One large discount brokerage firm adds 2 percent for margin loans up to $10,000, 1.5 percent for loans up to $25,000, 1 percent for loans up to $50,000, and 0.50 percent for loans above $50,000.

MARGIN REQUIREMENTS AND OBLIGATIONS

Margin The investor's equity in a transaction, with the remainder borrowed from a brokerage firm

✓ **Margin** is the customer's equity in a transaction; that is, it is that part of the total value of the transaction that is *not* borrowed from the broker.

There are two separate margin requirements. The initial margin requirement must be met when the transaction is initiated, but the maintenance margin must be met on an ongoing basis. Failure to meet the latter requirements can result in a margin call. We consider each of these issues in turn.

✓ An investor must meet both the initial margin requirement (at the time of the transaction) and the maintenance (ongoing) margin requirement.

Initial Margin That part of a transaction's value a customer must pay to initiate the transaction, with the remainder borrowed

Initial Margin The Board of Governors of the Federal Reserve System (Fed), using Regulation T, has the authority to specify the **initial margin**, which is used as a policy device to influence the economy. Historically, the initial margin for stocks has ranged between 40 and 100 percent, with a current level of 50 percent since 1974.[19] The initial margin can be defined as

$$\text{Initial margin} = \frac{\text{Amount investor puts up}}{\text{Value of the transaction}} \qquad (5\text{-}1)$$

Example 5-6

If the initial margin requirement is 50 percent on a $9,000 transaction (100 shares at $90 per share), an investor who wants to fully use the margin provision must put up $4,500, borrowing $4,500 from the broker.[20] The investor could put up $4,500 in cash or deposit $9,000 in marginable securities. (We abstract from brokerage costs and any other costs in these examples.)

Example 5-7

To illustrate the leverage impact, assume that the stock in Example 5-6 goes up 20 percent from $90 to $108, for a gain of $18 × 100 shares, or $1,800. The investor has a $1,800/$4,500 = 40 percent gain on his or her equity, the actual cash put up by the investor (once again, ignoring any costs involved). On the other hand, if the stock goes down 6 percent to $84.60, a loss of $540, the investor has a $540/$4,500 = 12 percent loss on his or her equity.

Maintenance Margin The percentage of a security's value that must be on hand at all times as equity

Maintenance Margin In addition to the initial margin, all exchanges and brokers require a **maintenance margin** below which the actual margin cannot go. The maintenance margin is the absolute minimum amount of margin (equity) that an investor must have in the account at all times. Brokers usually require 30 percent or more on long positions.[21]

✓ An investor's equity is calculated as the market value of the stock minus the amount borrowed. In turn, the market value of the stock is equal to the current market price multiplied by the number of shares.

[19] Exchanges and brokerage houses can require more initial margin than that set by the Fed if they choose.

[20] With a 60 percent requirement, the customer must initially put up $6,000.

[21] The NYSE requires an investor to maintain an equity of 25 percent of the market value of any securities held.

If the investor's equity exceeds the initial margin, the excess margin can be withdrawn from the account, or more stock can be purchased without additional cash. Conversely, if the investor's equity declines below the initial margin, problems can arise, depending on the amount of the decline. It is at this point that the maintenance margin must be considered.

Example 5-8 Assume that the maintenance margin is 30 percent, with a 50 percent initial margin, and that the price of the stock declines from $100 to $90 per share. Equation 5-2 is used to calculate actual margin (as a percentage).[22]

$$\text{Actual margin \%} = \frac{\text{Current value of securities} - \text{Amount borrowed}}{\text{Current value of securities}} \tag{5-2}$$

$$44.44\% = \frac{(\$9{,}000 - \$5{,}000)}{\$9{,}000}$$

The investor's dollar equity amount is now $4,000. The actual margin percentage now is between the initial margin of 50 percent and the maintenance margin of 30 percent. This could result in a restricted account, meaning that additional margin purchases are prohibited, although the customer does not have to put additional equity (cash) into the account.

Marked to Market The daily posting of all profits and losses in a brokerage account

Margin Call A demand from the broker for additional cash or securities as a result of the actual margin declining below the maintenance margin

Brokerage houses calculate the actual margin in their customers' accounts daily to determine whether a margin call is required. This is known as having the brokerage accounts **marked to market**.

Margin Call A **margin call** (maintenance call or "house call") occurs when the market value of the margined securities less the debit balance (amount owed) of the margin account declines below the maintenance requirement set by the brokerage house (typically 30 percent on stocks). This type of call is payable on demand, and the brokerage house may reserve the right to take action without notice if market conditions are deteriorating badly enough.

Example 5-9 Assume in the previous example that the maintenance margin is 30 percent. If the price of the stock drops to $80, the actual margin percentage will be 37.5 percent [($8,000 − $5,000)/$8,000]. Because this is above the 30 percent maintenance margin requirement, there is no margin call. However, if the price of the stock declines to $66.66, the actual margin percentage will be 25 percent [($6,666 − $5,000)/$6,666]. This results in a maintenance call to restore the investor's equity to the minimum maintenance margin.

The price at which a margin call will be issued can be calculated as

$$\text{Margin call price} = \frac{\text{Amount borrowed}}{\text{Number of shares }(1 - \text{maintenance margin percentage})} \tag{5-3}$$

where margin call price equals the price of the stock that triggers a margin call.

[22] The difference between the market value of the securities and the amount borrowed is the investor's equity.

Example 5-10 Using the above data, for 100 shares, $5,000 borrowed, and a maintenance margin of 30 percent, a margin call will be issued when the price is

$$\text{MC price} = \frac{\$5{,}000}{100\ (1-.30)}$$
$$= \$71.43$$

On-line Appendix 5-A contains detailed examples of margin calculations. Included are examples of what happens when an investor is on margin as well as examples of satisfying a margin call.

MARGIN REQUIREMENTS ON OTHER SECURITIES

Although the initial margin requirement for common stocks and convertible bonds is 50 percent, it is only 30 percent (or less) of market value for "acceptable" municipal and corporate bonds.[23] U.S. government securities and GNMAs require an initial margin of only 8 to 15 percent, whereas Treasury bills may require only 1 percent of market value.

SOME MISCONCEPTIONS ABOUT MARGIN

1. *The broker must contact me before selling my securities.* In fact, while most brokers will attempt to contact their customers before selling, they are not obligated to do so.
2. *I choose which securities to sell to meet my margin obligations.* In fact, the brokerage can choose which of your securities to sell in order to best protect their interests.
3. *I am entitled to an extension of time.* In fact, a customer is not entitled to an extension of time, although in certain situations an extension could be granted.
4. *My broker must notify me before increasing the firm's maintenance requirements.* In fact, a brokerage firm can do this at any time, and without notice to you.
5. *The brokerage firm must set the same margin requirements on all stocks in my account.* In fact, a brokerage firm can set different requirements on the stocks in your account.

Short Sales

The purchase of a security technically results in the investor being "long" the security or position. This is Wall Street terminology of long standing.

- A normal transaction (investor is long the position)—A security is bought, and owned, because the investor believes the price is likely to rise. Eventually, the security is sold and the position is closed out. First you buy, then you sell.
- Reverse the transaction (investor is short the position)—What if the investor thinks that the price of a security will decline? If he or she owns it, you might be wise to sell. If the security is not owned, the investor wishing to profit from the expected decline in price can sell the security short. You do this by borrowing the stock, selling it, buying it back later, and replacing the borrowed shares.

[23] This may also be stated as a percentage of principal—for example, 10 percent for nonconvertible corporates and 15 percent for municipals.

Short Sale The sale of a stock not owned in order to take advantage of an expected decline in the price of the stock

✓ A **short sale** involves selling a security the seller does not own because of a belief that the price will decline, and buying back the security later to close the position. First you sell, then you buy. Having sold first, and before you repurchase, you are said to be "short" the position—hence the term short sale.

How can an investor sell short, which is to say sell something he or she typically does not own? Not owning the security to begin with, the investor will have to borrow from a third party. The broker, on being instructed to sell short, will make these arrangements for this investor by borrowing the security from those held in street-name margin accounts and, in effect, lending it to the short seller.[24] Therefore, short selling is simply borrowing a stock, selling it, and replacing it later (hopefully when the price has declined). After all, when you borrow your neighbor's lawnmower or power tools, you are expected to bring them back or replace them. The short seller has an obligation someday to replace the shorted (borrowed) stock.

The short seller's broker sells the borrowed security in the open market, exactly like any other sale, to some investor who wishes to own it. The short seller expects the price of the security to decline. Assume that it does. The short seller instructs the broker to repurchase the security at the currently lower price and cancel the short position (by replacing the borrowed security). The investor profits by the difference between the price at which the borrowed stock was sold and the price at which it was repurchased (once again we are ignoring brokerage costs).

The process of short selling is spelled out in steps in Exhibit 5-3.

EXHIBIT 5-3

How Short Selling Works

1. An investor believes that IBM is overpriced at $60 a share and will decline. This investor does not own IBM stock but wishes to profit if her beliefs are correct and the price goes down.
2. You instruct your brokerage firm to short 100 share of IBM for you, a transaction valued at $6,000 (ignore brokerage costs). The brokerage firm does this by borrowing the 100 shares from another investor's account, lending them to this investor, and selling the shares at the current market price of $6,000.
3. The sale proceeds of $6,000 are credited to your margin account because you sold the stock. The investor must put up 50 percent of the borrowed amount, or $3,000, as initial margin. The investor who sold short is now responsible for paying back 100 shares of IBM stock to replace the 100 shares that were borrowed.
4. Assume that the price of IBM goes to $40 three months later. The investor is now ahead $2,000 because she can buy back 100 shares of IBM for $4,000 on the open market and replace the 100 shares she borrowed.
5. Having closed out the short sale, the investor regains access to the $3,000 margin she had to put up.
6. Should the price of IBM rise, the investor has two choices. One, buy the stock back and close out the position, taking a loss. For example, buying back at $70 would result in a loss of $1,000. Two, continue to hold the position and hope the price eventually drops. In the case of a rising stock price for a short position, the investor may face a margin call requiring cash or equivalents equal to 25 to 30 percent of the stock's value. Exact maintenance margin requirements vary by firm.

[24] The securities could be borrowed from another broker. If the lending firm calls back the stock loan, the broker may be forced to close the short position. Also, individuals sometimes agree to lend securities to short sellers in exchange for interest-free loans equal to the collateral value of the securities sold short. Collateral value equals the amount of funds borrowed in a margin transaction.

Example 5-11 Assume an investor named Helen believes that the price of General Meters (GM) will decline over the next few months and wants to profit if her assessment is correct. She calls her broker with instructions to sell 100 shares of GM short (she does not own GM) at its current market price of $50 per share. The broker borrows 100 shares of GM from Kellie, who has a brokerage account with the firm and currently owns GM ("long"). The broker sells the borrowed 100 shares at $50 per share, crediting the $5,000 proceeds (less commissions, which we will ignore for this example) to Helen's account.[25] Six months later the price of GM has declined as Helen predicted, and is now $38 per share. Satisfied with this drop in the price of GM, she instructs the broker to purchase 100 shares of GM and close out the short position. Her profit is $5,000 − $3,800, or $1,200 (again, ignoring commissions). The broker replaces Kellie's missing stock with the just-purchased 100 shares, and the transaction is complete.[26]

Several technicalities are involved in a short sale; these are outlined in Exhibit 5-4. For example, there is no time limit on how long an investor can remain short in a stock, and any dividends paid on the stock during the time the seller is short must be covered by the seller.

EXHIBIT 5-4

The Details of Short Selling

1. Dividends declared on any stock sold short must be covered by the short seller. After all, the person from whom the shares were borrowed still owns the stock and expects all dividends paid on it.
2. Short sellers must have a margin account to sell short and must put up margin as if they had gone long. The margin can consist of cash or any restricted securities held long.
3. The net proceeds from a short sale, plus the required margin, are held by the broker; thus, no funds are immediately received by the short seller. The lender must be fully protected. To do this, the account is marked-to-the-market (as mentioned earlier in connection with margin accounts). If the price of the stock declines as expected by the short seller, he or she can withdraw the difference between the sale price and the current market price. If the price of the stock rises, however, the short seller will have to put up more funds.
4. There is no time limit on a short sale. Short sellers can remain short indefinitely. The only exception arises when the lender of the securities wants them back. In most cases the broker can borrow elsewhere, but in some situations, such as a thinly capitalized stock, this may not be possible.
5. Short sales may be permitted only on rising prices, or an uptick. A short seller can sell short at the last trade price only if that price exceeded the last different price before it. Otherwise, they must wait for an uptick. The uptick rule was repealed in 2007 after decades in use. In 2009 its reinstatement was being reconsidered.

Keep in mind that to sell short an investor must be approved for a margin account because short positions involve the potential for margin calls. Using our earlier example of Fidelity Brokerage Services, we see that the initial minimum equity to open a margin account required by Fidelity would be $2,500, the initial margin requirement would be 50 percent of the short sale, and the maintenance margin would be 30 percent of market value (the absolute

[25]Note that Kellie knows nothing about this transaction, nor is she really affected. Kellie receives a monthly statement from the broker showing ownership of 100 shares of GM. Should Kellie wish to sell the GM stock while Helen is short, the broker will simply borrow 100 shares from Elizabeth, a third investor who deals with this firm and owns GM stock, to cover the sale. It is important to note that all of these transactions are book entries and do not typically involve the actual stock certificates.

[26]Notice that two trades are required to complete a transaction, or "round trip." Investors who purchase securities plan to sell them eventually. Investors who sell short plan to buy back eventually; they have simply reversed the normal buy-sell procedure by selling and then buying.

minimum to open a margin account is $2,000 in cash or securities). Should the price of the security shorted rise, an investor will be required by the broker to put more cash in the account, or sell some securities.[27]

Example 5-12 Assume an investor shorts 100 shares of Merck at $100 per share. The investor must have $5,000 in the account (initial margin of 50 percent). If Merck rises to $180, the investor must have 30 percent of the total value of $18,000, or $5,400, in equity in the account, requiring an additional cash deposit.

SELLING SHORT AS AN INVESTOR

Short sellers argue that short sales help the overall market. For example, short sells provide liquidity and can help smooth out the highs and lows in stock prices. And, of course, there have been many periods in the stock market when prices did not rise, but instead fell. During such periods, short selling might be a good strategy for some investors.

Example 5-13 The DJIA was approximately 10,100 at the beginning of March 2000. By the end of September 2002, it was approximately 7,600, a very large decline in a relatively short time. Many short sellers did well during this period.

Some investors argue that a portfolio consisting of both long and short positions can dampen volatility while still producing good returns. According to one study, a portfolio holding positions that are 65 percent long and 35 percent short is half as volatile as a portfolio that is 100 percent long.[28]

A popular recent trend has been that of active extension funds, or long-short equity funds. Also called 130/30 funds, this type of investing involves being long and short at the same time. By having 130 percent long exposure, and 30 percent short exposure, the portfolio is using the proceeds from the short sale to invest more than 100 percent on the long side.

If you are interested in selling stocks short, how do you go about obtaining short-sale recommendations? Investors can do their own analysis or use investment advisory services. As in other areas of investing, the results of those who provide recommendations vary over a wide range.

Short Interest Ratio The ratio of total shares sold short to average daily trading volume

Short Interest Ratio Is it possible to measure how bearish investors are about a stock? The **short interest ratio** is calculated for a stock by dividing the amount of shares sold short by the average daily trading volume. It indicates the number of days it would take for short sellers to buy back (cover) all of the shares sold short. The higher the ratio, the

[27] It is possible for investors to get caught in a "short squeeze." As a stock continues to rise in price, short sellers start buying to cover their positions, pushing the price even higher. Short sellers can actually create significant runups in the stock price, thereby causing the opposite of what they are trying to achieve. Brokers, in turn, may force the short sellers to cover their short positions if the price is rising dramatically. One way for short sellers to protect themselves against this is to use a buy stop-loss order.

[28] This study is discussed in Pamela Black, "Upside-Down Investing," *Individual Investor*, Special Issue, January 2001, pp. 91–93.

more bearish they are. Some studies suggest there is a strong negative relationship between short interest and subsequent stock returns, indicating that the short interest conveys negative information.

Concepts in Action

Do You Want to Be a Short Seller?

The feverish market of the late 1990s, when the market indexes were hitting new highs and technology stocks seemed greatly overpriced to many, sparked the interest of some investors in selling short. How popular is this activity, and what exactly is involved?

First of all, short selling as a percentage of total volume on the NYSE is small. Clearly, most investors are not selling short. Part of the reason is the mechanics involved. Short sellers must put up 50 percent of the short sale in cash collateral, and meet ongoing margin requirements. They must also replace any dividends paid on the shorted stock. Finally, there is the widely stated note of caution to investors that while potential gains from short selling are limited, potential losses are not.

The bear market of 2000–2002 was a short seller's dream for those who recognized the situation and acted accordingly. Markets declined sharply, and many stocks collapsed. A number of technology stocks went bankrupt, with the price essentially going to zero. Even the big name technology stocks dropped like a rock. For example, Cisco, one of the great stocks to own in the 1990s, declined about 90 percent. This was the best environment for short selling in many years, until 2008–2009, when many stocks dropped dramatically.

Some short sellers could encounter a so-called short squeeze. This can occur when there is an excess demand for a stock but a lack of supply, which will drive up the price of the stock. If a stock starts to rise rapidly, many short sellers may choose to cover their position and get out. As more short sellers buy back the stock, the stock price rises even more. Short squeezes are more likely with smaller capitalization stocks with relatively fewer shares outstanding.

Finally, if you plan to sell short, remember the old Wall Street ditty: "He who sells what isn't his'n/Buys it back or goes to prison."

Checking Your Understanding

5. As an investor, you should be concerned only with the rate of return you earn on the amount of money you actually invest (your equity). Write out an equation that allows you to calculate your return on invested capital taking into account the following five items: The amount of your equity at purchase, the value of the stock at time of purchase, the value of the stock at time of sale, the total income received while holding the stock, and the total margin interest paid on the transaction.
6. Why sell short instead of using puts?
7. What does it mean to say the losses from short selling are infinite while the gains are finite?

Summary

- Brokerage firms consist of full-service brokers and discount brokers.
- Full-service stockbrokers earn their incomes from a variety of sources including individuals' trades, in-house mutual fund sales, principal transactions, new issues, and fees.
- With a cash brokerage account, the customer pays in full on the settlement date, whereas with a margin account money can be borrowed from the broker to finance purchases.
- Asset management accounts offering a variety of services are commonplace. With a wrap account,