Chapter 2
Financial Markets and Institutions

Learning Objectives

After reading this chapter, students should be able to:

- Identify the different types of financial markets and financial institutions, and explain how these markets and institutions enhance capital allocation.
- Explain how the stock market operates, and list the distinctions between the different types of stock markets.
- Explain how the stock market has performed in recent years.
- Discuss the importance of market efficiency, and explain why some markets are more efficient than others.

Lecture Suggestions

Chapter 2 presents an overview of financial markets and institutions. Students definitely have an interest in financial markets and institutions. We base our lecture on the integrated case. The case goes systematically through the key points in the chapter, and within a context that helps students see the real world relevance of the material in the chapter. We ask the students to read the chapter, and also to "look over" the case before class. However, our class consists of about 1,000 students, many of whom view the lecture on TV, so we cannot count on them to prepare for class. For this reason, we designed our lectures to be useful to both prepared and unprepared students.

Since we have easy access to computer projection equipment, we generally use the electronic slide show as the core of our lectures. We strongly suggest to our students that they print a copy of the *PowerPoint* slides for the chapter from the website and bring it to class. This will provide them with a hard copy of our lecture, and they can take notes in the space provided. Students can then concentrate on the lecture rather than on taking notes.

We do not stick strictly to the slide show—we go to the board frequently to present somewhat different examples, to help answer questions, and the like. We like the spontaneity and change of pace trips to the board provide, and, of course, use of the board provides needed flexibility. Also, if we feel that we have covered a topic adequately at the board, we then click quickly through one or more slides.

The lecture notes we take to class consist of our own marked-up copy of the *PowerPoint* slides, with notes on the comments we want to say about each slide. If we want to bring up some current event, provide an additional example, or the like, we use post-it notes attached at the proper spot. The advantages of this system are (1) that we have a carefully structured lecture that is easy for us to prepare (now that we have it done) and for students to follow, and (2) that both we and the students always know exactly where we are. The students also appreciate the fact that our lectures are closely coordinated with both the text and our exams.

The slides contain the essence of the solution to each part of the integrated case, but we also provide more in-depth solutions in this *Instructor's Manual*. It is not essential, but you might find it useful to read through the detailed solution. Also, we put a copy of the solution on reserve in the library for interested students, but most find that they do not need it. Finally, we remind students again, at the start of the lecture on Chapter 2, that they should bring a printout of the *PowerPoint* slides to class; otherwise, they will find it difficult to take notes.

DAYS ON CHAPTER: 2 OF 56 DAYS (50-minute periods)

Answers to End-of-Chapter Questions

2-1 The prices of goods and services must cover their costs. Costs include labor, materials, and capital. Capital costs to a borrower include a return to the saver who supplied the capital, plus a mark-up (called a "spread") for the financial intermediary that brings the saver and the borrower together. The more efficient the financial system, the lower the costs of intermediation, the lower the costs to the borrower, and, hence, the lower the prices of goods and services to consumers.

2-2 In a well-functioning economy, capital will flow efficiently from those who supply capital to those who demand it. This transfer of capital can take place in three different ways:

1. Direct transfers of money and securities occur when a business sells its stocks or bonds directly to savers, without going through any type of financial institution. The business delivers its securities to savers, who, in turn, give the firm the money it needs.
2. Transfers may also go through an investment bank that underwrites the issue. An underwriter serves as a middleman and facilitates the issuance of securities. The company sells its stocks or bonds to the investment bank, which then sells these same securities to savers. The businesses' securities and the savers' money merely "pass through" the investment bank.
3. Transfers can also be made through a financial intermediary. Here the intermediary obtains funds from savers in exchange for its own securities. The intermediary uses this money to buy and hold businesses' securities, while the savers hold the intermediary's securities. Intermediaries literally create new forms of capital. The existence of intermediaries greatly increases the efficiency of money and capital markets.

2-3 A primary market is the market in which corporations raise capital by issuing new securities. An initial public offering (IPO) is a stock issue in which privately held firms go public. Therefore, an IPO would be an example of a primary market transaction.

2-4 A money market transaction occurs in the financial market in which funds are borrowed or loaned for short periods (less than one year). A capital market transaction occurs in the financial market in which stocks and intermediate—or long-term debt (one year or longer)—are issued.

a. A U.S. Treasury bill is an example of a money market security.

b. Long-term corporate bonds are examples of capital market securities.

c. Common stocks are examples of capital market securities.

d. Preferred stocks are examples of capital market securities.

e. Dealer commercial paper is an example of a money market security.

2-5 If people lost faith in the safety of financial institutions, it would be difficult for firms to raise capital. Thus, capital investment would slow down, unemployment would rise, the output of goods and services would fall, and, in general, our standard of living would decline.

2-6 Financial markets have experienced many changes during the last two decades. Technological advances in computers and telecommunications, along with the globalization of banking and commerce, have led to deregulation, which has increased competition throughout the world. As a result, there are more efficient, internationally linked markets, which are far more complex than what existed a few years ago. While these developments have been largely positive, they have also created problems for policy makers. With these concerns in mind, Congress and regulators have moved to reregulate parts of the financial sector following the recent financial crisis.

Globalization has exposed the need for greater cooperation among regulators at the international level. Factors that complicate coordination include (1) the different structures in nations' banking and securities industries; (2) the trend toward financial services conglomerates, which obscures developments in various market segments; and (3) the reluctance of individual countries to give up control over their national monetary policies. Still, regulators are unanimous about the need to close the gaps in the supervision of worldwide markets.

Another important trend in recent years has been the increased use of derivatives. The market for derivatives has grown faster than any other market in recent years, providing investors with new opportunities but also exposing them to new risks. Derivatives can be used either to reduce risks or to speculate. Derivatives should allow companies to better manage risk but it's not clear whether recent innovations have "increased or decreased the inherent stability of the financial system."

2-7 The physical location exchanges are tangible entities. Each of the larger ones occupies its own building, allows a limited number of people to trade on its floor, and has an elected governing body. A dealer market includes all facilities that are needed to conduct security transactions not conducted on the physical location exchanges. The dealer market system consists of (1) the relatively few dealers who hold inventories of these securities and who are said to "make a market" in these securities; (2) the thousands of brokers who act as agents in bringing the dealers together with investors; and (3) the computers, terminals, and electronic networks that provide a communication link between dealers and brokers.

2-8 The two leading stock markets today are the New York Stock Exchange (NYSE) and the Nasdaq stock market. The NYSE is a physical location exchange, while the Nasdaq is an electronic dealer-based market.

2-9 There is an "efficiency continuum," with the market for some companies' stocks being highly efficient and the market for other stocks being highly inefficient. The key factor is the size of the company—the larger the firm, the more analysts tend to follow it and thus the faster new information is likely to be reflected in the stock's price. Also, different companies communicate better with analysts and investors; and the better the communications, the more efficient the market for the stock.

Highly Inefficient	Highly Efficient
Small companies not followed by many analysts. Not much contact with investors.	Large companies followed by many analysts. Good communications with investors.

2-10 **a.** False; derivatives can be used either to reduce risks or to speculate.

b. True; hedge funds have large minimum investments and are marketed to institutions and individuals with high net worths. Hedge funds take on risks that are considerably higher than that of an average individual stock or mutual fund.

c. False; hedge funds are largely unregulated because hedge funds target sophisticated investors.

d. True; the NYSE is a physical location exchange with a tangible physical location that conducts auction markets in designated securities.

e. False; a larger bid-ask spread means the dealer will realize a higher profit.

Integrated Case

2-11
HIJ Financial Services Corporation
Financial Markets and Institutions

Hayley, Irine, and Jimmy recently graduated with a degree in finance and were trying to find jobs. They applied for jobs offered by the HIJ Financial Services Corporation but are interested in working in different institutions: a commercial bank, an investment bank, and a specialized fund, respectively. In their job interviews, the interviewers asked them the following questions. Please help them answer these questions.

A.	All three were asked: Differentiate between the following types of markets: physical assets markets versus financial asset markets, spot markets versus futures markets, money markets versus capital markets, primary markets versus secondary markets, and public markets versus private markets.

Answer: **[Show S2-1 through S2-3 here.]** Physical asset markets are for tangible or real products such as machinery, real estate or agricultural products. Financial asset markets deal with stocks, bonds, notes, and mortgages. Such financial securities represent claims on assets that are traded in the financial markets.

Spot markets are markets in which assets are bought or sold for “on-the-spot” delivery. Futures markets are markets in which participants agree today to buy or sell an asset at some future date.

Money markets are the markets for short-term, highly liquid debt securities. New York, London, and Tokyo are major money market centers. Capital markets are the markets for intermediate- or long-term debt and corporate stocks. The New York Stock Exchange is an example of a capital market, while the New York commercial paper and Treasury bill markets are money markets.

Primary markets are the markets in which corporations raise new capital. Secondary markets are markets in which existing, already outstanding securities are traded among investors.

In private markets, transactions are negotiated directly between two parties. In public markets, standardized contracts are traded on organized exchanges.

B.	All three were asked: Differentiate between commercial and investment banks.

Answer: **[Show S2-4 here.]** Commercial banks are major institutions that serve a variety of savers and borrowers and handle checking accounts. They also provide an ever-widening range of services such as stock brokerage services and insurance.

Investment banks are organizations that (1) help corporations design securities with features that are currently attractive to investors, (2) buy these securities from the corporation, and (3) resell them to savers.

C.	Hayley was asked: What are the three primary ways in which capital is transferred between savers and borrowers?

Answer: **[Show S2-5 and S2-6 here.]** Capital transfer between savers and borrowers:

(1) Direct transfers occur when a business sells its stocks or bonds directly to savers, without going through any type of financial institution. The business borrower receives dollars from the savers, and the savers receive securities (bonds or stock) in return.

(2) Indirect transfers can go through an investment bank which underwrites the issue. Although the securities are sold twice, the two sales constitute one complete transaction in the primary market.

(3) Indirect transfers can be made through a financial intermediary such as a bank, an insurance company, or a mutual fund.

D.	Hayley was asked: What is securitization? Is it important for a bank?

Answer: **[Show S2-7 here.]** The traditional operation of banks' deposits and loans was subject to limited funds and local market, which did not allow banks to diversify their risk. Securitization was created to deal with this problem, in which an agent (e.g., an investment bank) buy a large number of loans from banks and then issues securities backed by the loan payment. In this way, banks no longer had to hold their mortgages, so they could quickly convert the originated loan to cash, enabling them to redeploy their capital to make other loans.

E.	Irine was asked: What are the two leading stock markets in the United States? How much do you know about East Asian stock markets?

Answer: **[Show S2-8 through S2-10 here.]** The two leading U.S. stock markets are the New York Stock Exchange (NYSE) and the Nasdaq stock market.

East Asian stock markets developed at a rapid pace in the 2000s. Here are a few examples:

- Japan: Tokyo Stock Exchange (TSE) is the largest stock exchange in Japan, which separates the listing stocks into the First Section for large companies, the Second Section for mid-sized companies, and the "Mothers" (Market of the high-growth and emerging stocks) section for high-growth startup companies. In July 2012, the merger proposal between TSE and Osaka Securities Exchange was approved by the Japan Fair Trade Commission. The new exchange, the Japan Exchange Group, was launched on January 2013. The most common stock indices are the Nikkei Stock Average and TOPIX. The Nikkei contains 225 listed stocks on the TSE and has been calculated daily by the *Nihon Keizai Shimbun* since 1950. The TOPIX (Tokyo Stock Price Index) is a free-floating adjusted index of all stocks traded on the First Section of the TSE.

- Mainland China: There are two main stock exchanges in China: Shanghai (SSE) and Shenzhen (SZSE), both with two types of stocks; "A" shares and "B" shares. "A" shares are priced in Chinese renminbi, while "B" shares are quoted in U.S. dollars in Shanghai and in Hong Kong dollars in Shenzhen. In December 2002, foreign investors were allowed (with limitations) to trade in "A" shares under the Qualified Foreign Institutional Investor (QFII) program which was officially launched in 2003.
- Hong Kong: The Hong Kong Securities Exchange was formally established in 1891. In March 2000, the Stock Exchange, Futures Exchange, and Securities Clearing House merged to become HKEx. The main stock indicator in Hong Kong is the Hang Seng Index, which was started on November 24, 1969.
- Taiwan: The Taiwan Stock Exchange Corporation (TSEC) was established in 1961 and began operating as a stock exchange on February 9, 1962. Currently, the electronics industry occupies a significant portion of TSEC. The most popular stock market indicator is the Taiwan Stock Index (TAIEX), a capitalization-weighted index for companies traded on the Taiwan Stock Exchange (TWSE).

F.	Irine was asked: What is an initial public offering (IPO)? One of your customers read a number of newspaper articles about a huge IPO being carried out by a leading technology company. She wants to get as many shares in the IPO as possible and would even be willing to buy the shares in the open market immediately are the issue. What advice do you have for her?

Answer: **[Show S2-11 here.]** An initial public offering (IPO) occurs when a company issues stock in the public market for the first time. "Going public" enables a company's owners to raise capital from a wide variety of outside investors. Once issued, the stock trades in the secondary market.

IPO shares are generally sold to dealers using a bookbuilding method. The prices offered to dealers may be lower than aftermarket prices but individual investors are usually unable to obtain shares. Buying aftermarket shares is kind of risky because the prices may be overvalued.

[Show S2-12 and S2-13 here. Use these slides to show market performance in recent years and how to read a stock quote.]

G.	Irine was asked: If Applesauce Computer decided to issue additional common stock and your customers are interested in purchasing one million shares of the stock from the underwriter, would this transaction be a primary or a secondary market transaction?

Answer: **[Show S2-14 here.]** The transaction is an activity of raising new capital, which is a primary market transaction.

H.	Jimmy was asked: What are pension funds, mutual funds, exchange traded funds, hedge funds, and private equity companies?

Answer: **[Show S2-15 here.]** Pension funds are retirement plans funded by corporations or government agencies for their workers and administered primarily by the trust departments of commercial banks or by life insurance companies. Pension funds invest primarily in bonds, stocks, mortgages, and real estate.

Mutual funds are corporations that accept money from savers and then use these funds to buy stocks, long-term bonds, or short-term debt instruments issued by businesses or government units. These organizations pool funds and thus reduce risks by diversification.

Exchange traded funds (ETFs) are similar to regular mutual funds and are often operated by mutual fund companies. ETFs buy a portfolio of stocks of a certain type and then sell their own shares to the public.

Hedge funds accept money from savers and use the funds to buy various securities. Compared to mutual funds, hedge funds are largely unregulated. This difference in regulation stems from the fact that mutual funds typically target small investors, whereas hedge funds typically have large minimum investments (often exceeding $1 million) that are marketed primarily to institutions and individuals with high net worths. These funds received their name because they traditionally were used when an individual was trying to hedge risks.

Private equity companies are organizations that operate much like hedge funds, but rather than purchasing some of the stock of a firm, private equity players buy and then manage entire firms. Most of the money used to buy the target companies is borrowed.

I.	Jimmy was asked: What is an efficient market? How can we explain the events that are inconsistent with the efficient market hypothesis (EMH)?

Answer: **[Show S2-16 here.]** In an efficient market, prices are close to intrinsic values and stocks seem to be in equilibrium. Behavioral finance can help explain the events that are inconsistent with the efficient market hypothesis (EMH). First, psychological reasons such as the prospect theory, conservatism, and self-attribution can induce mispricing. Second, investors may have difficulties in taking advantage of mispricing opportunities, resulting in the persistence of mispricing in the market.

J.	Jimmy was asked: What are derivatives? What is a credit swap? Illustrate how derivatives can be used to reduce risk.

Answer: **[Show S2-17 here.]** A derivative is any security whose value is derived from the price of some other "underlying" asset. Derivatives can be used either to reduce risks or to speculate.

A credit default swap is a contract that offers protection against the default of a particular security.

For an example of risk reduction using derivatives, a wheat processor's costs rise and its net income falls when the price of wheat rises. The processor could reduce its risk by purchasing derivatives—wheat futures—whose value increases when the price of wheat rises.