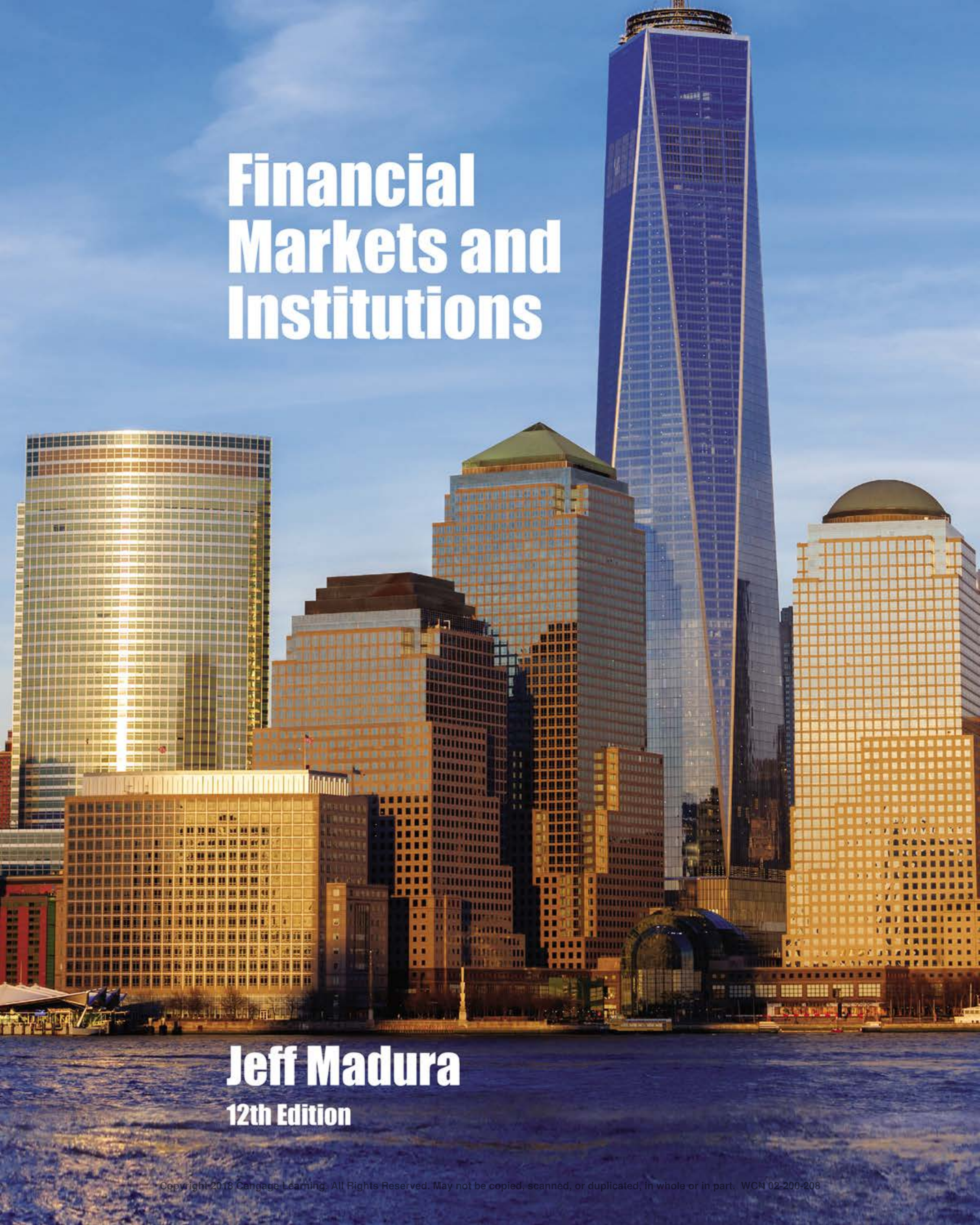

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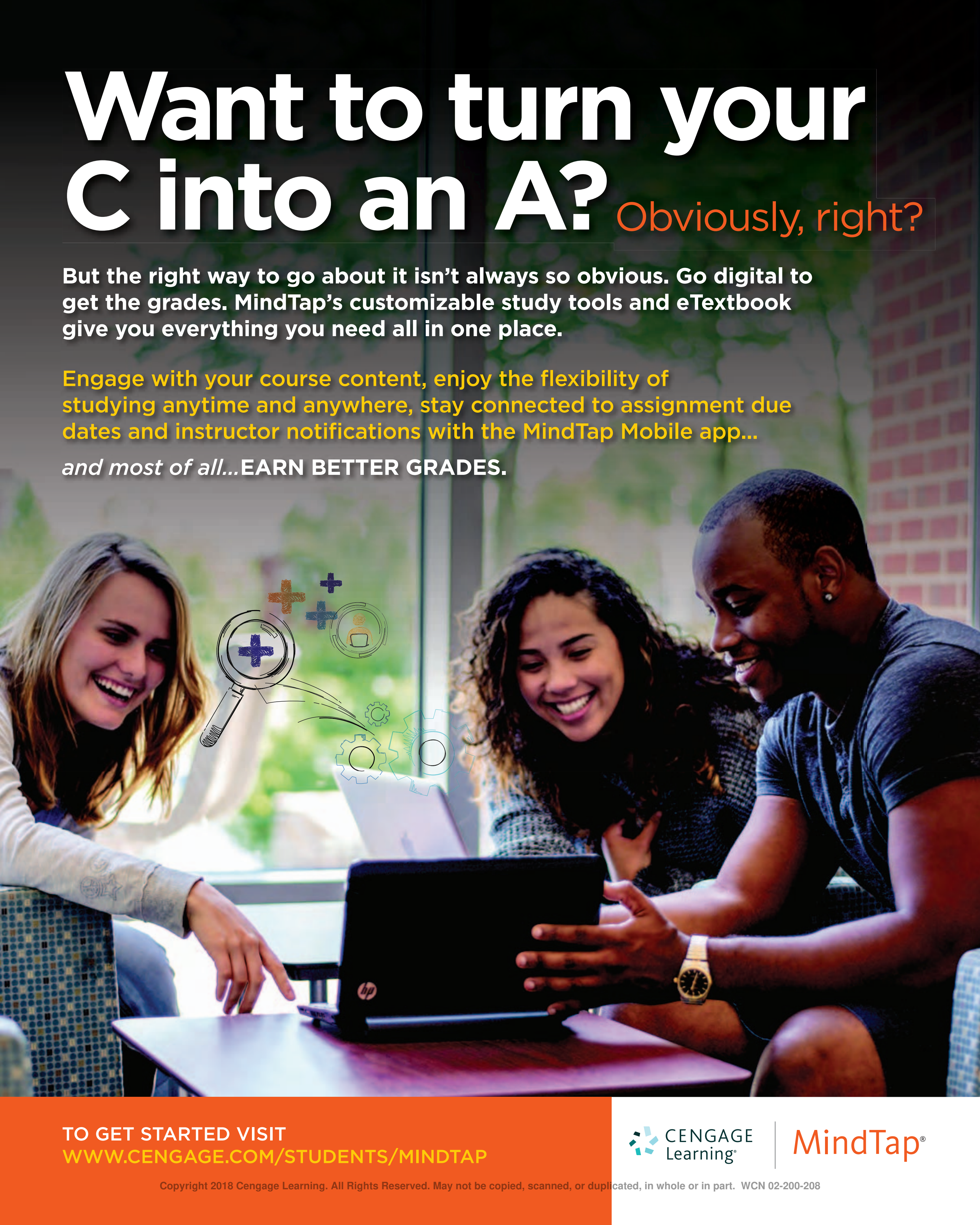
Jeff Madura

12th Edition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Financial Markets and Institutions

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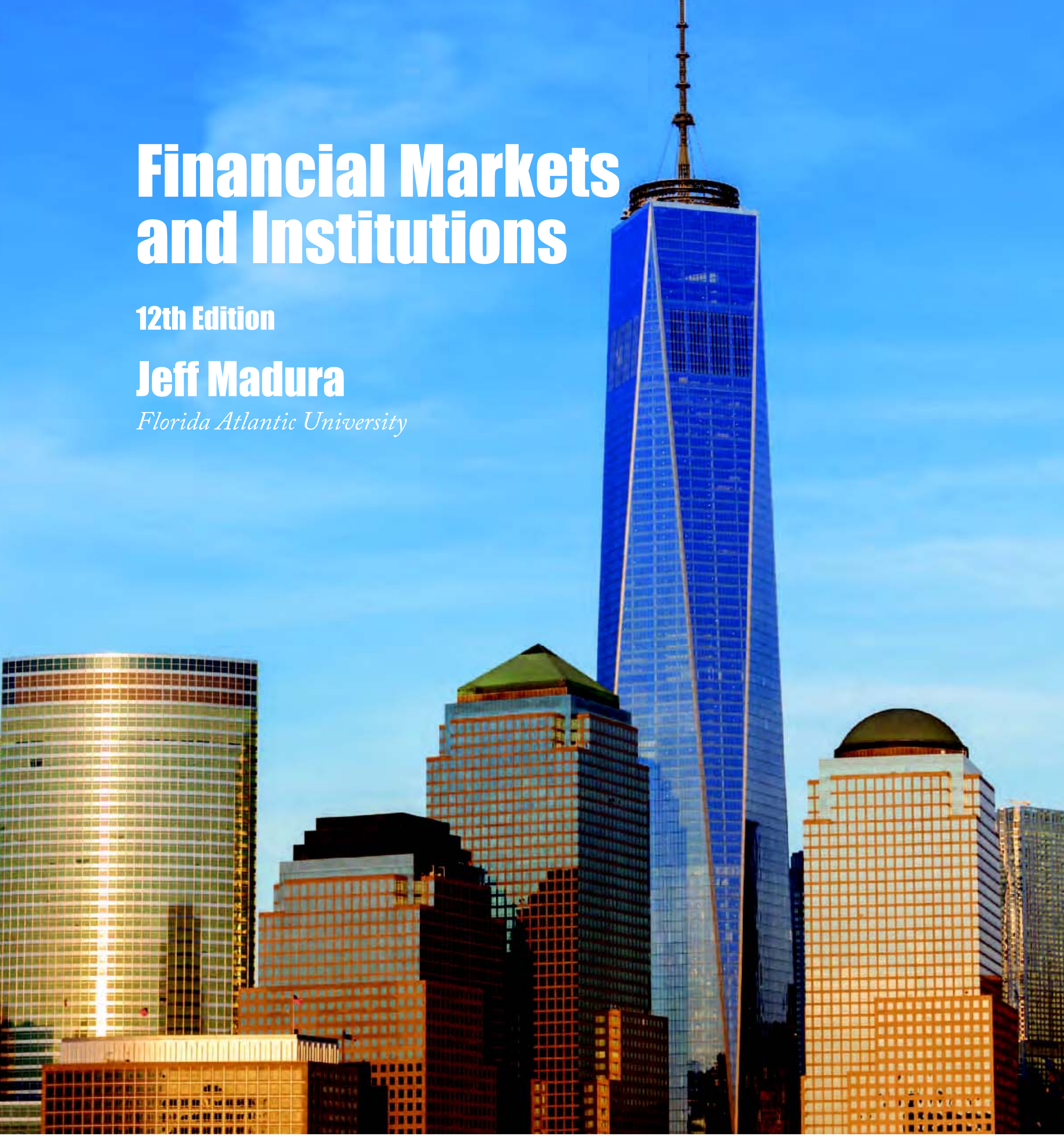
Florida Atlantic University



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This text is dedicated to Best Friends Animal Sanctuary in Kanab, Utah, for its commitment to, compassion for, and care of more than 1,500 animals, many of which were previously homeless. Best Friends has recently taken the initiative to help animal shelters across the country. Most of the royalties the author receives from this text are invested in a fund that will ultimately be donated to Best Friends.

During the 2012–2015 period, this fund donated $275,000 to support a new healthcare facility for Best Friends, and to sponsor a Public Broadcasting Service (PBS) documentary on the efforts of Best Friends to help animal shelters throughout the United States. This fund has also donated more than $100,000 to other animal care societies, including Friends of Greyhounds (Fort Lauderdale, FL), Florida Humane Society (Pompano Beach, FL), Greyhound Pets of America in Central Florida (Melbourne, FL), Tri-County Humane Society (Boca Raton, FL), and Doris Day Animal League (Washington, D.C.).

Brief Contents

Contents

Preface

Financial markets finance much of the expenditures by corporations, governments, and individuals. Financial institutions are the key intermediaries in financial markets because they transfer funds from savers to the individuals, firms, or government agencies that need funds. *Financial Markets and Institutions,* 12th Edition, describes financial markets and the financial institutions that serve those markets. It provides a conceptual framework that can be used to understand why markets exist. Each type of financial market is described with a focus on the securities that are traded and the participation by financial institutions.

Today, many financial institutions offer all types of financial services, such as banking, securities services, mutual fund services, and insurance services. Each type of financial service is unique, however. Therefore, the discussion of financial services in this book is organized by type of financial service that can be offered by financial institutions.

Since the credit crisis, regulatory actions have been taken to prevent another crisis in the future. Accordingly, this text gives special attention to the impact of financial reform on each type of financial market and financial institution.

Intended Market

This text is suitable for undergraduate and master's level courses in financial markets, or financial institutions. To maximize students' comprehension, some of the more difficult questions and problems should be assigned in addition to the special applications at the end of each chapter.

Organization of the Text

Part 1 (Chapters 1 through 3) introduces the key financial markets and financial institutions, explains why interest rates change over time, and explains why yields vary among securities. Part 2 (Chapters 4 and 5) describes the functions of the Federal Reserve System (the Fed) and explains how its monetary policy influences interest rates and other economic conditions. Part 3 (Chapters 6 through 9) covers the major debt security markets, Part 4 (Chapters 10 through 12) describes equity securities markets, and Part 5 (Chapters 13 through 16) covers the derivative security markets. Each chapter in Parts 3 through 5 focuses on a particular market. The integration of each market with other markets is stressed throughout these chapters. Part 6 (Chapters 17 through 20) concentrates on commercial banking, and Part 7 (Chapters 21 through 26) covers all other types of financial services provided by financial institutions.

The organization is similar to the previous edition, except that Chapter 25 of the previous edition (covering insurance companies and pension funds) has been split into two chapters. Chapter 25 still focuses on insurance company operations, while Chapter 26 focuses on pension fund operations. Much new material has been added on pension funds for this edition, which justified a separate chapter on pension funds.

Courses that emphasize financial markets should focus on the first five parts (Chapters 1 through 16); however, some chapters in the section on commercial banking are also relevant. Courses that emphasize financial institutions and financial services should focus on Parts 1, 2, 6, and 7, although some background on securities markets (Parts 3, 4, and 5) may be helpful.

Professors may wish to focus on certain chapters of this book and skip others, depending on the other courses available to their students. For example, if a course on derivative securities is commonly offered, Part 5 of this text may be ignored. Alternatively, if an investments course provides a thorough background on types of securities, Parts 3 and 4 can be given less attention.

Chapters can be rearranged without a loss in continuity. Regardless of the order in which chapters are studied, it is highly recommended that some questions and exercises from each chapter be assigned. These exercises may serve as a focal point for class discussion.

Coverage of Major Concepts and Events

Numerous concepts relating to recent events and current trends in financial markets are discussed throughout the chapters. These include the following:

- Use of high frequency trading and robots ("bots") to trade securities
- "Crowdfunding" as a popular financing method for businesses
- Federal Reserve transparency and communication to financial markets
- Regulatory reform on credit default swaps
- How the JOBS Act facilitated public offerings
- How government pension underfunding may affect government debt ratings
- Increasing popularity of virtual currencies
- New laws applied to bond rating agencies
- Impact of the latest Greece debt crisis on other financial markets
- Increased exposure of municipal bonds to default
- Valuing technology companies that attempt to go public
- Performance of venture capital and private equity funding
- Unusually cheap debt financing for stable corporations in the post-crisis period
- Bank compliance with Basel III framework to satisfy capital requirements
- Behavioral finance
- Emergence of private stock exchanges, such as SecondMarket and SharesPost
- Dark pools used to trade stocks
- New restrictions on proprietary trading by banks
- Influence of subjective accounting decisions on reported earnings of banks
- Governance in financial markets
- Value-at-risk applications
- Valuation of financial institutions
- Regulatory reform in financial services

Each chapter is self-contained, so professors can use classroom time to focus on the more complex concepts and rely on the text to cover the other concepts.

Features of the Text

The features of the text are as follows:

- ***Part-Opening Diagram.*** A diagram is provided at the beginning of each part to illustrate generally how the key concepts in that part are related.
- ***Objectives.*** A bulleted list at the beginning of each chapter identifies the key concepts in that chapter.


FINANCIAL REFORM

- ***Examples.*** Examples are provided to reinforce key concepts.
- ***Financial Reform.*** A Financial Reform icon in the margin indicates a discussion of financial reform as it applies to the topics covered in the chapter.
- ***Global Aspects.*** A Global Aspects icon in the margin indicates international coverage of the topic being discussed.
- ***Summary.*** A bulleted list at the end of each chapter summarizes the key concepts. This list corresponds to the list of objectives at the beginning of the chapter.
- ***Point Counter-Point.*** A controversial issue is introduced along with opposing arguments, and students are asked to determine which argument is correct and to explain why.
- ***Questions and Applications.*** The Questions and Applications section at the end of each chapter tests students' understanding of the key concepts and may serve as homework assignments or study aids in preparation for exams.
- ***Critical Thinking Question*** At the end of each chapter, students are challenged to use their critical thinking skills by writing a short essay on a specific topic that was discussed in the chapter.
- ***Interpreting Financial News.*** At the end of each chapter, students are challenged to interpret comments made in the media about the chapter's key concepts. This gives students practice in interpreting announcements by the financial media.
- ***Managing in Financial Markets.*** At the end of each chapter, students are placed in the position of financial managers and must make decisions about specific situations related to the key concepts in that chapter.
- ***Flow of Funds Exercise.*** A running exercise is provided at the end of each chapter to illustrate how a manufacturing company relies on all types of financial markets and financial services provided by financial institutions.
- ***Internet/Excel Exercises.*** At the end of each chapter, there are exercises that introduce students to applicable information available on various websites, enable the application of Excel to related topics, or a combination of these. For example, the exercises allow students to assess yield curves, risk premiums, and stock volatility.
- ***Problems.*** Selected chapters include problems to test students' computational skills.
- ***WSJ Exercise.*** This exercise appears at the end of selected chapters and gives students an opportunity to apply information provided in *The Wall Street Journal* to specific concepts explained in that chapter.
- ***Integrative Problems.*** An integrative problem at the end of each part integrates the key concepts of chapters within that part.
- ***Comprehensive Project.*** This project, found in Appendix A, requires students to apply real data to several key concepts described throughout the book.
- ***Midterm and Final Self-Examinations.*** At the end of Chapter 16, a midterm self-exam is offered to test students' knowledge of financial markets. At the end of Chapter 26, a final self-exam is offered to test students' knowledge of financial institutions. An answer key is provided so that students can evaluate their answers after they take the exam.

The concepts in each chapter can be reinforced by using one or more of the features just listed. Professors' use of the features will vary depending on the level of their students and the course focus. A course that focuses mostly on financial markets may emphasize tools such as the WSJ Exercises and Part 1 of the Comprehensive Project (on taking positions in securities and derivative instruments). In contrast, a course that focuses on financial institutions may assign an exercise in which students must review recent annual reports (see Part 2 of the Comprehensive Project) to determine how a particular financial institution's performance is affected by its policies, industry regulations, and economic conditions. In addition, the Internet/Excel Exercises on financial institutions give students practice in assessing the operations and performance of financial institutions.

Supplements to the Text

To access the instructor resources, go to **www.cengage.com/login**, log in with your faculty account username and password, and use **ISBN: 9781337099738** to search for and add instructor resources to your account Bookshelf.

- ***Instructor's Manual.*** Revised by the author, the instructor's manual contains the chapter outline for each chapter and a summary of key concepts for discussion as well as answers to the end-of-chapter Questions and Problems.
- ***Test Bank.*** The expanded test bank, which has also been revised by the author, contains a large set of questions in multiple choice or true/false format, including content questions as well as problems.
- ***Cognero*™ Test Bank**. Cengage Learning Testing Powered by Cognero™ is a flexible, online system that allows you to author, edit, and manage test bank content from multiple Cengage Learning solutions; create multiple test versions in an instant; and deliver tests from your LMS, your classroom, or wherever you want. The Cognero™ Test Bank contains the same questions that are in the Microsoft® Word Test Bank. All question content is now tagged according to Tier I (Business Program Interdisciplinary Learning Outcomes) and Tier II (Finance-specific) standards topic, Bloom's Taxonomy, and difficulty level.
- ***PowerPoint Slides.*** The PowerPoint slides clarify content and provide a solid guide for student note-taking. In addition to the regular notes slides, a separate set of exhibit-only PPTs are also available.

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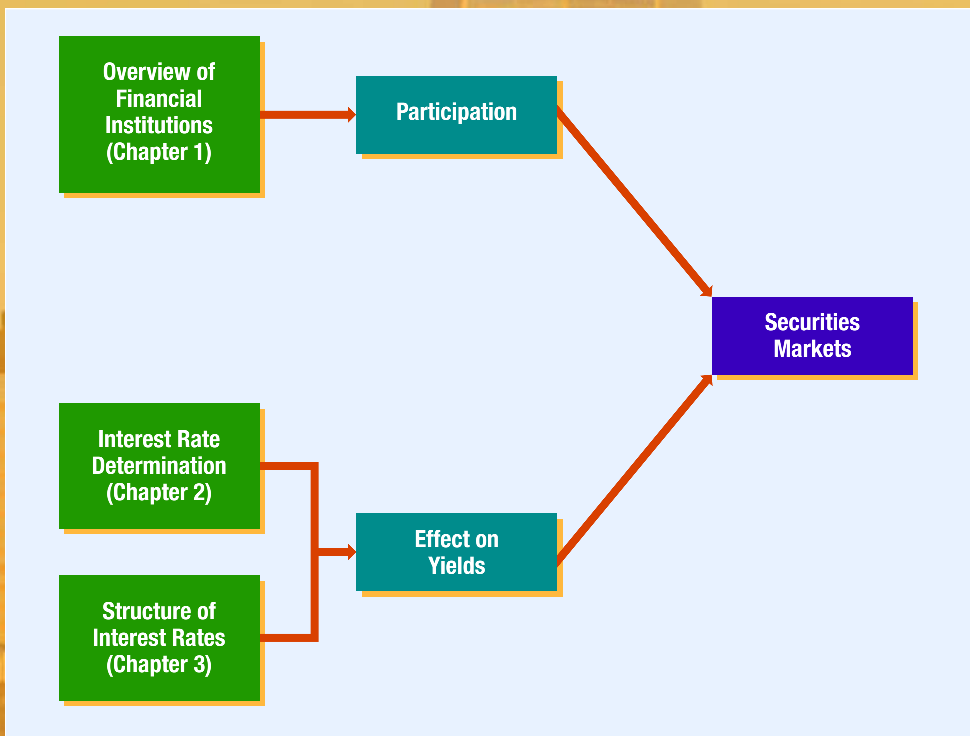
About the Author

Dr. Jeff Madura is presently Emeritus Professor of Finance at Florida Atlantic University. He has written several successful finance texts, including *International Financial Management* (in its 13th edition). His research on financial markets and institutions has been published in numerous journals, including *Journal of Financial and Quantitative Analysis*; *Journal of Banking and Finance*; *Journal of Money, Credit and Banking*; *Financial Management; Journal of Financial Research*; *Journal of Financial Services Research*; and *Financial Review*. Dr. Madura has received multiple awards for excellence in teaching and research, and he has served as a consultant for international banks, securities firms, and other multinational corporations. He has served as a director for the Southern Finance Association and Eastern Finance Association, and he is also former president of the Southern Finance Association.

PART 1

Overview of the Financial Environment

Part 1 of this book focuses on the flow of funds across financial markets, interest rates, and security prices. Chapter 1 introduces the key financial markets and the financial institutions that participate in those markets. Chapter 2 explains how various factors influence interest rates and how interest rate movements in turn affect the values of securities purchased by financial institutions. Chapter 3 identifies factors other than interest rates that influence security prices. Participants in financial markets use this information to value securities and make investment decisions within financial markets.



1

Role of Financial Markets and Institutions

CHAPTER OBJECTIVES

The specific objectives of this chapter are to:

- describe the types of financial markets that facilitate the flow of funds
- describe the types of securities traded within financial markets,
- describe the role of financial institutions within financial markets, and
- explain how financial institutions were exposed to the credit crisis.

A **financial market** is a market in which financial assets (securities) such as stocks and bonds can be purchased or sold. Funds are transferred in financial markets when one party purchases financial assets previously held by another party. Financial markets facilitate the flow of funds and thereby allow financing and investing by households, firms, and government agencies. This chapter provides some background on financial markets and on the financial institutions that participate in them.

1-1 Role of Financial Markets

Financial markets transfer funds from those who have excess funds to those who need funds. They enable college students to obtain student loans, families to obtain mortgages, businesses to finance their growth, and governments to finance many of their expenditures. Many households and businesses with excess funds are willing to supply funds to financial markets because they earn a return on their investment. If funds were not supplied, the financial markets would not be able to transfer funds to those who need them.

Those participants who receive more money than they spend are referred to as **surplus units** (or investors). They provide their net savings to the financial markets. Those participants who spend more money than they receive are referred to as **deficit units**. They access funds from financial markets so that they can spend more money than they receive. Many individuals provide funds to financial markets in some periods and access funds in other periods.

EXAMPLE

College students are typically deficit units, as they often borrow from financial markets to support their education. After they obtain their degree, they earn more income than they spend and thus become surplus units by investing their excess funds. A few years later, they may become deficit units again by purchasing a home. At this stage, they may provide funds to and access funds from financial markets simultaneously. That is, they may periodically deposit savings in a financial institution while also borrowing a large amount of money from a financial institution to buy a home. ●

Many deficit units such as firms and government agencies access funds from financial markets by issuing **securities**, which represent a claim on the issuer. **Debt securities** represent debt (also called *credit* or *borrowed funds*) incurred by the issuer. Deficit units that issue the debt securities are borrowers. The surplus units that purchase debt securities are creditors, and they receive interest on a periodic basis (such as every six months). Debt securities have a maturity date, at which time the surplus units can redeem the securities in order to receive the principal (face value) from the deficit units that issued them.

Equity securities (also called *stocks*) represent equity or ownership in the firm. Some businesses prefer to issue equity securities rather than debt securities when they need funds but might not be financially capable of making the periodic interest payments required for debt securities. For example, a new social media company might want to reinvest all of its profits in the business to support its growth, so it would prefer to sell shares of stock in the company (issue equity securities) rather than make interest payments on debt securities.

1-1a Accommodating Corporate Finance Needs

A key role of financial markets is to accommodate corporate finance activity. Corporate finance (also called financial management) involves corporate decisions such as how much funding to obtain and what types of securities to issue when financing operations. The financial markets serve as the mechanism whereby corporations (acting as deficit units) can obtain funds from investors (acting as surplus units).

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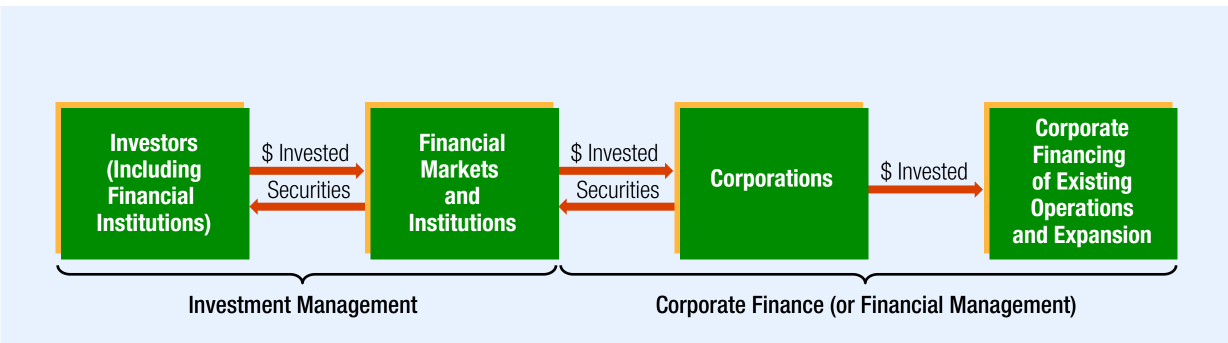
1-1b Accommodating Investment Needs

Another key role of financial markets is accommodating surplus units who want to invest in either debt or equity securities. Investment management involves decisions by investors regarding how to invest their funds. The financial markets offer investors access to a wide variety of investment opportunities, including securities issued by the U.S. Treasury and government agencies as well as securities issued by corporations.

Financial institutions (discussed later in this chapter) serve as intermediaries within the financial markets. They channel funds from surplus units to deficit units. For example, they channel funds received from individuals to corporations. Thus they connect the investment management activity with the corporate finance activity, as shown in Exhibit 1.1. They also commonly serve as investors and channel their own funds to corporations.

Primary versus Secondary Markets **Primary markets** facilitate the issuance of new securities. Thus they allow corporations to obtain new funds, and offer a means by which investors can invest funds. **Secondary markets** facilitate the trading of existing securities, which allows investors to change their ownership of the securities. Many types of debt securities have a secondary market, so that investors who initially purchased them in the primary market do not have to hold them until maturity. Primary market transactions provide funds to the initial issuer of securities; secondary market transactions do not.

Exhibit 1.1 How Financial Markets Facilitate Corporate Finance and Investment Management



EXAMPLE

Last year, Riverto Co. had excess funds and invested in newly issued Treasury debt securities with a 10-year maturity. This year, it will need $15 million to expand its operations. The company decided to sell its holdings of Treasury debt securities in the secondary market even though those securities will not mature for nine more years. It received $5 million from the sale. In also issued its own debt securities in the primary market today in order to obtain an additional $10 million. Riverto's debt securities have a 10-year maturity, so investors that purchase them can redeem them at maturity (in 10 years) or sell them before that time to other investors in the secondary market. ●

An important characteristic of securities that are traded in secondary markets is **liquidity**, which is the degree to which securities can easily be liquidated (sold) without a loss of value. Some securities have an active secondary market, meaning that there are many willing buyers and sellers of the security at a given moment in time. Investors prefer liquid securities so that they can easily sell the securities whenever they want (without a loss in value). If a security is illiquid, investors may not be able to find a willing buyer in the secondary market and may have to sell the security at a large discount just to attract a buyer.

Treasury securities are liquid because they are frequently issued by the Treasury, and there are many investors who want to invest in them. Therefore, investors who previously purchased Treasury securities can sell them at any time. Conversely, debt securities issued by a small firm may be illiquid, as there are not many investors who may want to invest in them. Thus investors who purchase these securities in the primary market may not be able to easily sell them later in the secondary market. Many investors will not even consider purchasing a security that is illiquid.

1-2 Securities Traded in Financial Markets

Securities can be classified as money market securities, capital market securities, or derivative securities.

1-2a Money Market Securities

Money markets facilitate the sale of short-term debt securities by deficit units to surplus units. The securities traded in this market are referred to as **money market securities**, which are debt securities that have a maturity of one year or less. These generally have a relatively high degree of liquidity, not only because of their short-term maturity but also because they are desirable to many investors and therefore commonly have an active secondary market. Money market securities tend to have a low expected return but also a low degree of credit (default) risk. Common types of money market securities include Treasury bills (issued by the U.S. Treasury), commercial paper (issued by corporations), and negotiable certificates of deposit (issued by depository institutions).

1-2b Capital Market Securities

Capital markets facilitate the sale of long-term securities by deficit units to surplus units. The securities traded in this market are referred to as **capital market securities**. Capital market securities are commonly issued to finance the purchase of capital assets, such as buildings, equipment, or machinery. Three common types of capital market securities are bonds, mortgages, and stocks.

WEB

www.investinginbonds.com
Data and other information about bonds.

Bonds Bonds are long-term debt securities issued by the Treasury, government agencies, and corporations to finance their operations. They provide a return to investors in the form of interest income (coupon payments) every six months. Because bonds represent debt, they specify the amount and timing of interest and principal payments to investors who purchase them. At maturity, investors holding the debt securities are paid the principal. Bonds commonly have maturities of between 10 and 20 years.

Treasury bonds are perceived to be free from default risk because they are issued by the U.S. Treasury. In contrast, bonds issued by corporations are subject to default risk because the issuer could default on its obligation to repay the debt. These bonds must offer a higher expected return than Treasury bonds in order to compensate investors for that default risk.

Bonds can be sold in the secondary market if investors do not want to hold them until maturity. Because the prices of debt securities change over time, they may be worth less when sold in the secondary market than when they were purchased.

Mortgages Mortgages are long-term debt obligations created to finance the purchase of real estate. Residential mortgages are obtained by individuals and families to purchase homes. Financial institutions serve as lenders by providing residential mortgages in their role as a financial intermediary. They can pool deposits received from surplus units and lend those funds to an individual who wants to purchase a home. Before granting a mortgage, they assess the likelihood that the borrower will repay the loan based on certain criteria such as the borrower's income level relative to the value of the home. They offer prime mortgages to borrowers who qualify based on these criteria. The home serves as collateral in the event that the borrower is not able to make the mortgage payments.

Subprime mortgages are offered to some borrowers who do not have sufficient income to qualify for prime mortgages or who are unable to make a down payment. Subprime mortgages exhibit a higher risk of default, so the lenders providing these mortgages charge a higher interest rate (and additional up-front fees) to compensate. Subprime mortgages received much attention in 2008 because of their high default rates, which led to the credit crisis. Many lenders are no longer willing to provide subprime mortgages, and recent regulations (described later in this chapter) have raised the minimum qualifications necessary to obtain a mortgage.

Commercial mortgages are long-term debt obligations created to finance the purchase of commercial property. Real estate developers rely on commercial mortgages so that they can build shopping centers, office buildings, or other facilities. Financial institutions serve as lenders by providing commercial mortgages. By channeling funds from surplus units (depositors) to real estate developers, they serve as a financial intermediary and facilitate the development of commercial real estate.

Mortgage-Backed Securities Mortgage-backed securities are debt obligations representing claims on a package of mortgages. There are many forms of mortgage-backed securities. In their simplest form, the investors who purchase these securities receive monthly payments that are made by the homeowners on the mortgages backing the securities.

EXAMPLE

Mountain Savings Bank originates 100 residential mortgages for home buyers and will service the mortgages by processing the monthly payments. However, the bank does not want to use its own funds to finance the mortgages. It issues mortgage-backed securities that represent this package of mortgages to eight financial institutions that are willing to purchase all of these securities. Each month, when Mountain Savings Bank receives interest and principal payments on the mortgages, it passes those payments on to the eight financial institutions that purchased the mortgage-backed securities and thereby provided the financing to the homeowners. If some of the homeowners default on their mortgages, the payments will be reduced, as will the return on investment earned by the financial institutions that purchased the mortgage-backed securities. The securities they purchased are backed (collateralized) by the mortgages.

If Mountain Savings Bank is not experienced at issuing mortgage-backed securities, another financial institution may participate by bundling Mountain's 100 mortgages with mortgages originated by other institutions. Then the financial institution issues mortgage-backed securities that represent all the mortgages in the bundle. Thus any investor that purchases these mortgage-backed securities is partially financing the 100 mortgages at Mountain Savings Bank and all the other mortgages in the bundle that are backing these securities. ●

As housing prices increased in the 2004–2006 period, many financial institutions used their funds to purchase mortgage-backed securities, some of which represented bundles of subprime mortgages. These financial institutions incorrectly presumed that the homes would serve as sufficient collateral if the mortgages defaulted. In 2008, many subprime mortgages defaulted and home prices plummeted, which meant that the collateral was not adequate to cover the credit provided. Consequently, the values of mortgage-backed securities also plummeted, and the financial institutions holding these securities experienced major losses.

Stocks Stocks (or equity securities) represent partial ownership in the corporations that issue them. They are classified as capital market securities because they have no maturity and therefore serve as a long-term source of funds. Investors who purchase stocks (referred to as stockholders) issued by a corporation in the primary market can sell the stocks to other investors at any time in the secondary market. However, stocks of some corporations are more liquid than stocks of others. Millions of shares of stocks of large corporations are traded in the secondary market on any given day, as there are many investors who are willing to buy them. Stocks of small corporations are less liquid, because the secondary market for these stocks is not as active.

Some corporations provide income to their stockholders by distributing a portion of their quarterly earnings in the form of dividends. Other corporations retain and reinvest all of their earnings in their operations, which increase their growth potential.

As corporations grow and increase in value, the value of their stock increases; investors can then earn a capital gain from selling the stock for a higher price than they paid for it. Thus investors can earn a return from stocks in the form of periodic dividends (if there are any) and in the form a capital gain when they sell the stock. However, stocks are subject to risk because their future prices are uncertain. Their prices commonly decline when the firm performs poorly, resulting in negative returns to investors.

1-2c Derivative Securities

WEB

www.cboe.com
Information about derivative securities.

In addition to money market and capital market securities, derivative securities are also traded in financial markets. **Derivative securities** are financial contracts whose values are derived from the values of underlying assets (such as debt securities or equity securities). Many derivative securities enable investors to engage in speculation and risk management.

Speculation Derivative securities allow an investor to speculate on movements in the value of the underlying assets without having to purchase those assets. Some derivative securities allow investors to benefit from an increase in the value of the underlying assets, whereas others allow investors to benefit from a decrease in the assets' value. Investors who speculate in derivative contracts can achieve higher returns than if they had speculated in the underlying assets, but they are also exposed to higher risk.

Risk Management Derivative securities can be used in a manner that will generate gains if the value of the underlying assets declines. Consequently, financial institutions and other firms can use derivative securities to adjust the risk of their existing investments in securities. If a firm maintains investments in bonds, it can take specific positions in derivative securities that will generate gains if bond values decline. In this way, derivative securities can be used to reduce a firm's risk. The loss on the bonds is offset by the gains on these derivative securities.

1-2d Valuation of Securities

Each type of security generates a unique stream of expected cash flows to investors. The valuation of a security is measured as the present value of its expected cash flows, discounted at a rate that reflects the uncertainty surrounding the cash flows.

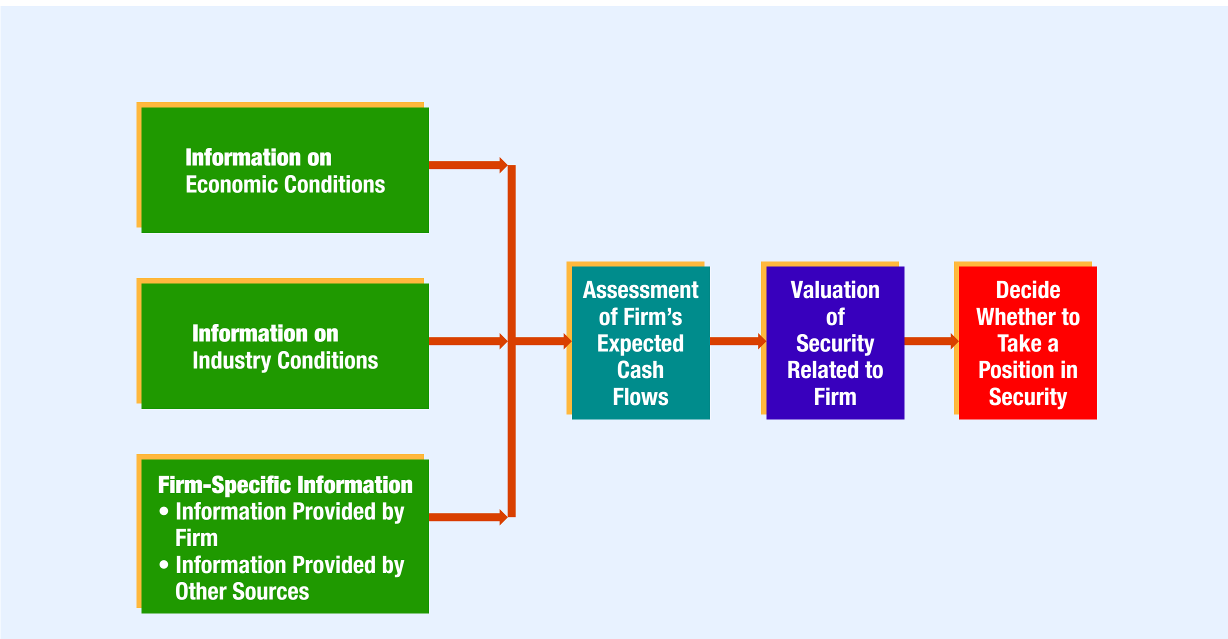
Debt securities are easier to value because they promise to provide investors with specific payments (interest and principal) until they mature. The stream of cash flows generated by stocks is more difficult to estimate because some stocks do not pay dividends, so investors receive cash flow only when they sell the stock, which occurs at different times for different investors. Thus some investors choose to value a stock by valuing the company and then dividing that value by the number of shares of stock.

Impact of Information on Valuation Investors can attempt to estimate the future cash flows that they will receive by obtaining information that may influence a security's future cash flows. The valuation process is illustrated in Exhibit 1.2.

Some investors rely mostly on economic or industry information to value a security, whereas others rely more on financial statements provided by the firm, or published opinions about the firm's management. When investors receive new information about a security that clearly indicates the likelihood of higher cash flows or less uncertainty surrounding the cash flows, they revise their valuations of that security upward. As a result, investors increase the demand for the security. In addition, investors that previously purchased that security and were planning to sell it in the secondary market may decide not to sell. This results in a smaller supply of that security for sale (by investors who had previously purchased it) in the secondary market. Thus the market price of the security rises to a new equilibrium level.

Conversely, when investors receive unfavorable information, they reduce the expected cash flows or increase the discount rate used in valuation. The valuations of the security are revised downward, which results in a lower demand and an increase in the supply of that security for sale in the secondary market. Consequently, there is a decline in the equilibrium price.

Exhibit 1.2 Use of Information to Make Investment Decisions



In an **efficient market**, securities are rationally priced. If a security is clearly undervalued based on public information, some investors will capitalize on the discrepancy by purchasing that security. This strong demand for the security will push the security's price higher until the discrepancy no longer exists. The investors who recognized the discrepancy will be rewarded with higher returns on their investment. Their actions to capitalize on valuation discrepancies typically push security prices toward their proper price levels, based on the information that is available.

Impact of the Internet on Valuation The Internet has improved the valuation of securities in several ways. Prices of securities are quoted online and can be obtained at any given moment by investors. For some securities, investors can track the actual sequence of transactions. Because so much information about the firms that issue securities is available online, securities can be priced accurately within a very short time, often within seconds. Furthermore, orders to buy or sell many types of securities can be submitted online, which expedites the adjustment in security prices to new information.

WEB

finance.yahoo.com
Market quotations and overview of financial market activity.

Impact of Behavioral Finance on Valuation In some cases, a security may be mispriced because of the psychology involved in the decision making. **Behavioral finance** is the application of psychology to financial decision making. It can offer a reason why markets are not always efficient. Behavioral finance can sometimes explain why a security's price moved abruptly, even though public information about the company's expected future cash flows did not change.

EXAMPLE

In 2014, after several states legalized the use of marijuana to treat various illnesses, medical marijuana attracted considerable attention. Some companies with very little experience in any business related to marijuana announced that they were positioned to capitalize on the expected growth in this market. Many investors wanted to benefit from this potential growth and quickly purchased the stocks of companies in the industry. The prices of many medical marijuana stocks initially surged due to hype and strong demand by investors. However, some investors did not carefully check the business plan, operations, or financial condition of these companies. As investors learned that some of these companies had no real business experience or advantage that would allow them to capitalize on growth in the medical marijuana industry, they realized that some medical marijuana stocks were overpriced. Investors sold their holdings of these stocks, causing the stock prices to decline by more than 40 percent within a single day. ●

Behavioral finance can even be used to explain abrupt stock price movements in the entire stock market. In some periods, investors seem to be excessively optimistic about stock market conditions, and their stock-buying frenzy can push the prices of the entire stock market higher. This leads to a stock price bubble that bursts once investors consider fundamental characteristics that affect a firm's expected future cash flows rather than hype when valuing stocks.

Uncertainty Surrounding Valuation of Securities Even if markets are efficient, the valuation of a firm's security is subject to much uncertainty because investors have limited information available to value that security. Much of the information that investors use to value securities issued by firms is provided in the form of financial statements by those firms. In particular, investors rely on accounting reports of a firm's revenue, expenses, and earnings as a basis for estimating its future cash flows. Firms with publicly traded stock are required to disclose financial information and financial statements. However, a firm's managers may possess information about its financial condition that is not available to investors, a situation known as **asymmetric information**. Firms that suffer from much asymmetric information are typically subject to uncertainty surrounding their valuation. Furthermore, although all investors can access the same public information about a firm, they may interpret it in different ways, which leads to different valuations of the firm and uncertainty surrounding the firm's stock price.

The higher the degree of uncertainty about a security's proper valuation, the higher the risk from investing in that security. From the perspective of an investor who purchases a security, risk represents the potential deviation of the security's actual return from what was expected. For any given type of security, risk levels among the issuers of that security can vary.

EXAMPLE

Nike stock provides cash flows to investors in the form of quarterly dividends and capital gains when an investor sells the stock. Both the future dividends and the future stock price are uncertain. Thus the cash flows the Nike stock will provide to investors over a future period are uncertain, which means that the return from investing in Nike stock over that period is uncertain.

Yet the cash flow provided by Nike's stock is less uncertain than that provided by a small, young, publicly traded technology company. Because the return on the technology stock over a particular period is more uncertain than the return on Nike stock, the technology stock has more risk. ●

1-2e Securities Regulations on Financial Disclosure

Many regulations exist that attempt to ensure that businesses disclose accurate financial information, so that investors participating in financial markets can more properly value stocks and debt securities issued by firms. In addition, securities regulations attempt to ensure that the information disclosed by firms is made available to all prospective investors, so that no investors have an unfair information advantage over other investors. The Securities Act of 1933 was intended to ensure complete disclosure of relevant financial information on publicly offered securities and to prevent fraudulent practices in selling these securities.

The Securities Exchange Act of 1934 extended the disclosure requirements to secondary market issues. It also declared illegal a variety of deceptive practices, such as misleading financial statements and trading strategies designed to manipulate the market price. In addition, it established the Securities and Exchange Commission (SEC) to oversee the securities markets, and the SEC has implemented additional regulations over time. Securities laws seek only to ensure full disclosure of information and thereby protect against fraud; they do not prevent investors from making poor investment decisions.

Fraudulent Financial Reporting Although firms that have issued stock and debt securities must hire independent auditors (auditors who are not employees of the companies) to verify that their financial information is accurate, there have been cases where a firm intentionally disclosed misleading information in its financial statements in order to exaggerate its performance. During 2001, several well-known firms, including Enron and WorldCom, misled investors by exaggerating their earnings. They also failed to disclose relevant information that would have adversely affected the prices of their stock and debt securities. The auditors for these firms did not prevent the disclosure of misleading information.

ETHICS

Although financial markets are intended to effectively facilitate the flow of funds, unethical behavior can disrupt the flow of funds. Managers who engage in fraudulent financial reporting by exaggerating earnings or hiding debt may be attempting to boost the prices of their company's securities. This strategy is unfair to investors who trust the financial reports and may overpay when purchasing securities issued by such companies. Furthermore, if investors do not trust financial disclosures by companies, they may be unwilling to participate in financial markets. The lack of trust can cause markets to be less liquid due to very limited investor participation.

Sarbanes-Oxley Act In response to several well-documented cases of fraudulent financial reporting, including Enron and WorldCom, the Sarbanes-Oxley Act was enacted to require firms to provide more complete and accurate financial information. It imposed restrictions to ensure proper auditing by auditors and proper oversight by the firm's board of directors. It also required key executives of the company to sign off on the financial statements, and imposed penalties on them if financial fraud was detected. These rules were intended to regain the trust of investors who supply the funds to the financial markets. With these rules, regulators tried to eliminate or at least reduce the amount of asymmetric information surrounding each publicly traded firm.

Although the Sarbanes-Oxley Act discouraged fraudulent financial reporting, it did not completely eliminate the use of questionable accounting methods designed to manipulate earnings. During the financial crisis in 2008, Lehman Brothers (a very large financial institution at the time) had been performing well based on its financial statements and had a positive outlook for its future. Yet in April and May of 2008, some institutional investors voiced concerns that Lehman Brothers might be overstating the valuations of some of its assets and its earnings. Lehman Brothers initially defended its financial reporting. But in June 2008, Lehman reduced the valuation of its assets by $4.1 billion. It also reported a quarterly earnings loss of $2.8 billion, its first quarterly loss ever. In its next quarterly report in September 2008, Lehman Brothers reduced the valuation of its assets by $5.6 billion, and reported a quarterly earnings loss of $3.9 billion. Five days later, Lehman Brothers filed for bankruptcy.

Had Lehman Brothers revealed its financial problems before the last two quarters of its life, it might have been able to correct some of its operational problems. The announcement of Lehman's bankruptcy triggered concerns by investors that some other financial institutions might not be fully disclosing their financial problems in the middle of the financial crisis. This fear caused investors to dump stocks of financial institutions, which caused an abrupt decline in their stock prices.

Despite regulators' efforts, cases of fraudulent financial reporting continue to occur. In 2011 and 2012, Groupon Inc. used accounting methods that inflated its reported earnings. When these accounting methods were reported by the financial media during 2012, Groupon's stock price declined by about 85 percent. In 2014, Diamond Foods, the maker of Kettle Chips and Pop Secret, paid a $5 million fine after the SEC found that it had engaged in fraudulent accounting designed to increase its earnings. Diamond Foods' stock price plummeted after the accounting irregularities were reported.

GLOBAL ASPECTS

1-2f Government Intervention in Financial Markets

In recent years, the government has increased its role in financial markets. Consider the following examples.

1. During the credit crisis, the Federal Reserve purchased various types of debt securities. The intervention was intended to ensure more liquidity in the debt securities markets and encourage investors to purchase debt securities.
2. New government regulations changed the manner in which the credit risk of bonds was assessed. The new regulations were issued because of criticisms that the previous process for rating bonds did not effectively warn investors about the credit risk of bonds during the credit crisis.
3. The government increased its monitoring of stock trading and prosecuted cases where investors traded based on inside information about firms that was not available to other investors. These efforts were intended to ensure that no investor had an unfair advantage when trading in financial markets.

These examples illustrate how the government has increased its efforts to ensure fair and orderly financial markets, which could encourage more investors to participate in the markets and therefore could increase liquidity.

1-2g International Financial Markets

Financial markets are continuously being developed throughout the world to improve the transfer of securities between surplus and deficit units. The financial markets are much more developed in some countries than in others, and they also vary in terms of their liquidity.

The level of liquidity in each country's financial markets is influenced by local securities laws regarding financial disclosure. In general, countries that require more financial disclosure tend to have more liquid financial markets, as investors are more willing to participate when they can obtain more information about the firms whose securities they trade.

Each country has its own laws regarding shareholder rights. Investors may be more willing to participate in their country's financial markets if they have the right to take civil action against a local firm that engaged in fraudulent financial disclosure.

Each country also has its own level of enforcement of securities laws. Investors may be more willing to participate in their country's financial markets if they believe that the securities laws are being enforced. Conversely, investors may avoid participation in their country's markets if the local government fails to enforce the laws to protect investors.

International Integration among Financial Markets Under favorable economic conditions, the international integration of financial markets allows governments and corporations easier access to funding from creditors or investors in other countries to support their growth. In addition, investors and creditors in any country can benefit from the investment opportunities in other countries.

However, under unfavorable economic conditions, the international integration of financial markets allows one country's financial problems to adversely affect other countries. The U.S. financial markets allow foreign investors to pursue investment opportunities in the United States, but during the U.S. financial crisis, many foreign investors who invested in U.S. securities experienced severe losses. Thus the U.S. financial crisis spread beyond the United States. Many European governments borrow funds from creditors in many different countries, but as the governments of Greece, Portugal, and Spain struggled to repay their loans, they caused financial problems for some creditors in other countries.

Role of Foreign Exchange Market International financial transactions normally require the exchange of currencies. When U.S. investors purchase German stock, their U.S. dollars are converted to euros. When they sell the stock, the euros they receive will be converted back to dollars. The **foreign exchange market** facilitates the exchange between currencies. Many financial institutions serve as intermediaries in the foreign exchange market by matching up participants who want to exchange one currency for another. Some of these financial institutions also serve as dealers by taking positions in currencies to accommodate foreign exchange requests.

Like securities, most currencies have a market-determined price (exchange rate) that changes in response to supply and demand. If there is a sudden shift in the aggregate demand by corporations, government agencies, and individuals for a given currency, or a shift in the aggregate supply of that currency for sale (to be exchanged for another currency), the price of the currency (exchange rate) will change. The exchange rate of a currency can change substantially over time and therefore can affect the return that is earned by investors who invest in securities in international financial markets.

1-3 Role of Financial Institutions

Because financial markets are **imperfect**, securities buyers and sellers do not have full access to information. Individuals with available funds normally are not capable of identifying creditworthy borrowers to whom they could lend those funds. In addition, they do not have the expertise to assess the creditworthiness of potential borrowers. Financial institutions are needed to resolve the limitations caused by market imperfections. They accept funds from surplus units and channel the funds to deficit units. Without financial institutions, the information and transaction costs of financial market transactions would be excessive. Financial institutions can be classified as depository and nondepository institutions.

1-3a Role of Depository Institutions

Depository institutions accept deposits from surplus units and provide credit to deficit units through loans and purchases of securities. They are popular financial institutions for the following reasons.

- They offer deposit accounts that can accommodate the amount and liquidity characteristics desired by most surplus units.
- They repackage funds received from deposits to provide loans of the size and maturity desired by deficit units.
- They are willing to accept the risk of default on loans that they provide.
- They have more expertise than individual surplus units in evaluating the creditworthiness of prospective deficit units.
- They diversify their loans among numerous deficit units and therefore can absorb defaulted loans better than individual surplus units could.

To appreciate these advantages, consider the flow of funds from surplus units to deficit units if depository institutions did not exist. Each surplus unit would have to identify a deficit unit desiring to borrow the precise amount of funds available for the precise time period in which funds would be available. Furthermore, each surplus unit would have to perform the credit evaluation and incur the risk of default. Under these conditions, many surplus units would likely hold their funds rather than channel them to deficit units. Hence, the flow of funds from surplus units to deficit units would be disrupted.

When a depository institution offers a loan, it is acting as a creditor, just as if it had purchased a debt security. The more personalized loan agreement is less marketable in the secondary market than a debt security, however, because the loan agreement contains detailed provisions that can differ significantly among loans. Potential investors would need to review all provisions before purchasing loans in the secondary market.

A more specific description of each depository institution's role in the financial markets follows.

Commercial Banks In aggregate, commercial banks are the most dominant depository institution. They serve surplus units by offering a wide variety of deposit accounts, and they transfer deposited funds to deficit units by providing direct loans or purchasing debt securities. Commercial bank operations are exposed to risk because their loans and many of their investments in debt securities are subject to the risk of default by the borrowers.

Commercial banks serve both the private and public sectors; their deposit and lending services are utilized by households, businesses, and government agencies. Some commercial banks (including Bank of America, J.P. Morgan Chase, Citigroup, and SunTrust Banks) have more than $100 billion in assets.

Some commercial banks receive more funds from deposits than they need to make loans or invest in securities. Other commercial banks need more funds to accommodate customer requests than the amount of funds that they receive from deposits. The **federal funds market** facilitates the flow of funds between depository institutions (including banks). A bank that has excess funds can lend to a bank with deficient funds for a short-term period, such as one to five days. In this way, the federal funds market facilitates the flow of funds from banks that have excess funds to banks that are in need of funds.

WEB

www.fdic.gov
Information and news about banks and savings institutions.

Commercial banks are subject to regulations that are intended to limit their exposure to the risk of failure. In particular, banks are required to maintain a minimum level of capital, relative to their size, so that they have a cushion to absorb possible losses from defaults on some loans provided to households or businesses. The Federal Reserve ("the Fed") serves as a regulator of banks.

Savings Institutions Savings institutions, which are sometimes referred to as thrift institutions, are another type of depository institution. Savings institutions include savings and loan associations (S&Ls) and savings banks. Like commercial banks, savings institutions offer deposit accounts to surplus units and then channel these deposits to deficit units. Savings banks are similar to S&Ls except that they have more diversified uses of funds. Over time, however, this difference has narrowed. Savings institutions can be owned by shareholders, but most are mutual (depositor owned). Like commercial banks, savings institutions rely on the federal funds market to lend their excess funds or to borrow funds on a short-term basis.

Whereas commercial banks concentrate on commercial (business) loans, savings institutions concentrate on residential mortgage loans. Normally, mortgage loans are perceived to exhibit a relatively low level of risk, but many mortgages defaulted in 2008 and 2009. This led to the credit crisis and caused financial problems for many savings institutions.

Credit Unions Credit unions differ from commercial banks and savings institutions in that they (1) are nonprofit and (2) restrict their business to credit union members, who share a common bond (such as a common employer or union). Like savings institutions, they are sometimes classified as thrift institutions in order to distinguish them from commercial banks. Because of the "common bond" characteristic, credit unions tend to be much smaller than other depository institutions. They use most of their funds to provide loans to their members. Some of the largest credit unions (e.g., the Navy Federal Credit Union, the State Employees Credit Union of North Carolina, the Pentagon Federal Credit Union) have assets of more than $5 billion.

1-3b Role of Nondepository Financial Institutions

Nondepository institutions generate funds from sources other than deposits but also play a major role in financial intermediation. These institutions are briefly described here and are covered in more detail in Part 7.

Finance Companies Most finance companies obtain funds by issuing securities and then lend the funds to individuals and small businesses. The functions of finance companies and depository institutions overlap, although each type of institution concentrates on a particular segment of the financial markets (explained in the chapters devoted to these institutions).

Mutual Funds Mutual funds sell shares to surplus units and use the funds received to purchase a portfolio of securities. They are the dominant nondepository financial institution when measured in total assets. Some mutual funds concentrate their investment in

WEB

finance.yahoo.com/funds
Information about mutual funds.

capital market securities, such as stocks or bonds. Others, known as **money market mutual funds**, concentrate in money market securities. Typically, mutual funds purchase securities in minimum denominations that are larger than the savings of an individual surplus unit. By purchasing shares of mutual funds and money market mutual funds, small savers are able to invest in a diversified portfolio of securities with a relatively small amount of funds.

Securities Firms Securities firms provide a wide variety of functions in financial markets. Some securities firms act as a **broker**, executing securities transactions between two parties. The broker's fee for executing a transaction is reflected in the difference (or **spread**) between the **bid quote** and the **ask quote**. The markup as a percentage of the transaction amount will likely be higher for less common transactions, because more time is needed to match up buyers and sellers. The markup will also likely be higher for transactions involving relatively small amounts so that the broker will be adequately compensated for the time required to execute the transaction.

Furthermore, securities firms often act as **dealers**, making a market in specific securities by maintaining an inventory of securities. Although a broker's income is mostly based on the markup, the dealer's income is influenced by the performance of the security portfolio maintained. Some dealers also provide brokerage services and therefore earn income from both types of activities.

In addition to brokerage and dealer services, securities firms also provide underwriting and advising services. The underwriting and advising services are commonly referred to as *investment banking*, and the securities firms that specialize in these services are sometimes referred to as *investment banks*. Some securities firms place newly issued securities for corporations and government agencies; this task differs from traditional brokerage activities because it involves the primary market. When securities firms **underwrite** newly issued securities, they may sell the securities for a client at a guaranteed price or may simply sell the securities at the best price they can get for their client.

Some securities firms offer advisory services on mergers and other forms of corporate restructuring. In addition to helping a company plan its restructuring, the securities firm executes the change in the client's capital structure by placing the securities issued by the company.

Insurance Companies Insurance companies provide individuals and firms with insurance policies that reduce the financial burden associated with death, illness, and damage to property. These companies charge premiums in exchange for the insurance that they provide. They invest the funds received in the form of premiums until the funds are needed to cover insurance claims. Insurance companies commonly invest these funds in stocks or bonds issued by corporations or in bonds issued by the government. In this way, they finance the needs of deficit units and thus serve as important financial intermediaries. Their overall performance is linked to the performance of the stocks and bonds in which they invest. Large insurance companies include State Farm Group, Allstate Insurance, Travelers Group, CNA Financial, and Liberty Mutual.

Pension Funds Many corporations and government agencies offer pension plans to their employees. The employees and their employers (or both) periodically contribute funds to the plan. Pension funds provide an efficient way for individuals to save for their retirement. The pension funds manage the money until the individuals withdraw the funds from their retirement accounts. The money that is contributed to individual retirement accounts is commonly invested by the pension funds in stocks or bonds issued by corporations or in bonds issued by the government. Thus pension funds are important financial intermediaries that finance the needs of deficit units.

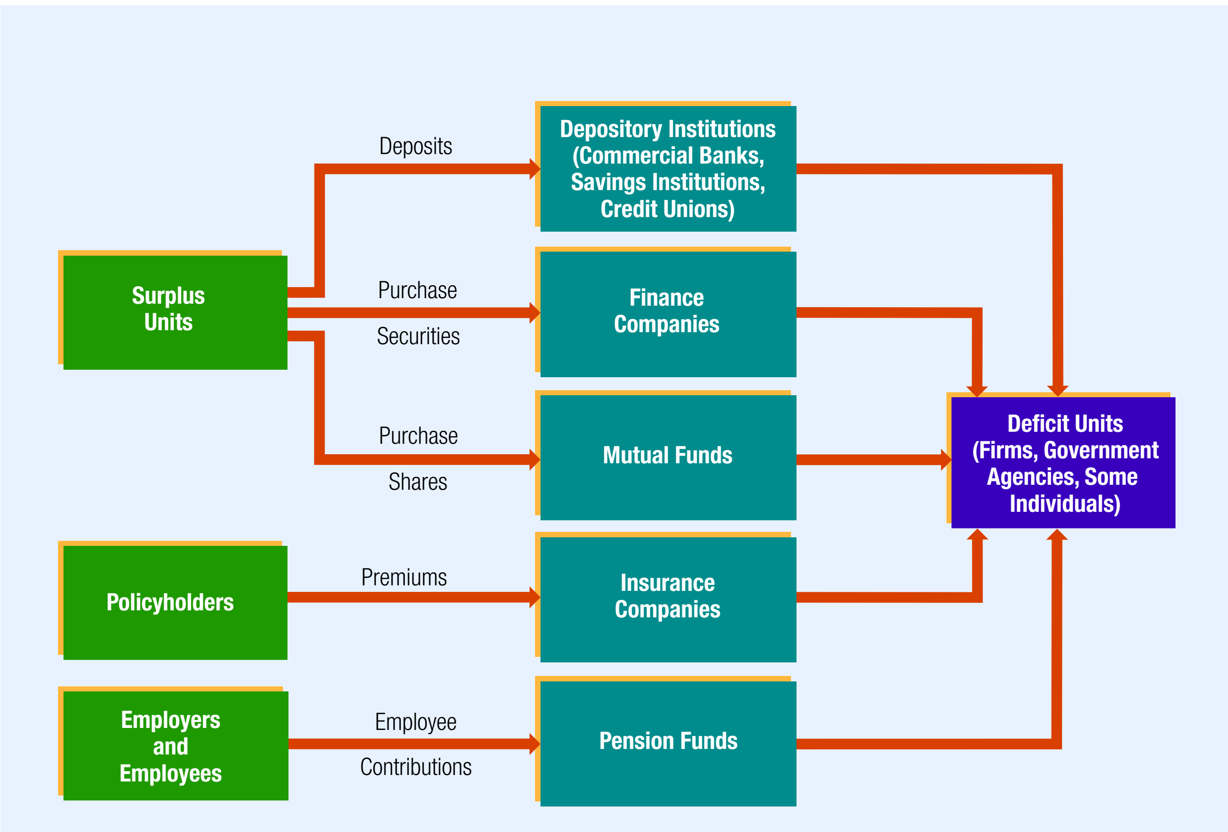
1-3c Comparison of Roles among Financial Institutions

The role of financial institutions in facilitating the flow of funds from individual surplus units (investors) to deficit units is illustrated in Exhibit 1.3. Surplus units are shown on the left side of the exhibit, and deficit units are shown on the right. Three different flows of funds from surplus units to deficit units are shown in the exhibit. One set of flows represents deposits from surplus units that are transformed by depository institutions into loans for deficit units. A second set of flows represents purchases of securities (commercial paper) issued by finance companies that are transformed into finance company loans for deficit units. A third set of flows reflects the purchases of shares issued by mutual funds, which are used by the mutual funds to purchase debt and equity securities of deficit units.

The deficit units also receive funding from insurance companies and pension funds. Because insurance companies and pension funds purchase massive amounts of stocks and bonds, they finance much of the expenditures made by large deficit units, such as corporations and government agencies. Financial institutions such as commercial banks, insurance companies, mutual funds, and pension funds serve the role of investing funds that they have received from surplus units, so they are often referred to as *institutional investors*.

Securities firms are not shown in Exhibit 1.3, but they play an important role in facilitating the flow of funds. Many of the transactions between the financial institutions and deficit units are executed by securities firms. Furthermore, some funds flow directly from surplus units to deficit units as a result of security transactions, with securities firms serving as brokers.

Exhibit 1.3 Comparison of Roles among Financial Institutions



Institutional Role as a Monitor of Publicly Traded Firms In addition to the roles of financial institutions described in Exhibit 1.3, financial institutions also serve as monitors of publicly traded firms. Because insurance companies, pension funds, and some mutual funds are major investors in stocks, they can influence the management of publicly traded firms. In recent years, many large institutional investors have publicly criticized the management of specific firms, which has resulted in corporate restructuring or even the firing of executives in some cases. Thus institutional investors not only provide financial support to companies but also exercise some degree of corporate control over them. By serving as activist shareholders, they can help ensure that managers of publicly held corporations are making decisions that are in the best interests of the shareholders.

1-3d How the Internet Facilitates Roles of Financial Institutions

The Internet has enabled financial institutions to perform their roles more efficiently. Some commercial banks have been created solely as online entities. Because they have lower costs, they can offer higher interest rates on deposits and lower rates on loans. Other banks and depository institutions also offer online services, which can reduce costs, increase efficiency, and intensify competition. Many mutual funds allow their shareholders to execute buy or sell transactions online. Some insurance companies conduct much of their business online, which reduces their operating costs and forces other insurance companies to price their services competitively. Some brokerage firms also conduct much of their business online, which reduces their operating costs; because these firms can lower the fees they charge, they force other brokerage firms to price their services competitively.

Peer-to-Peer Lending over the Internet The Internet has also made it possible for surplus units to lend to deficit units without a traditional financial intermediary. Peer-to-peer lending (P2PL) websites enable persons with excess money to make loans to persons needing funds without going through a financial institution. The website verifies information about a potential borrower such as employment, income, and credit rating and assigns the borrower a risk score. Lenders then offer loans with the interest rate based on the borrower's risk. Borrowers with better ratings are offered loans at lower rates, whereas those with poor credit histories pay higher rates. Lenders can offer as little as $25 or as much as several thousand dollars, and they can spread their investments among several loans to reduce their risk. The P2PL website charges a fee to both the lender and the borrower, but even with the fees, interest rates earned by lenders are generally higher than those offered on deposits at traditional financial institutions because overhead costs are low. Similarly, the rates charged to borrowers tend to be lower than those charged by financial institutions. P2PL websites now originate more than $2 billion in loans each year.

1-3e Relative Importance of Financial Institutions

Financial institutions hold assets equal to about $45 trillion. Among depository institutions, commercial banks hold the most assets, with about $12 trillion in aggregate. Among nondepository institutions, mutual funds hold the largest amount of assets, with about $11 trillion in aggregate.

Exhibit 1.4 summarizes the main sources and uses of funds for each type of financial institution. Households with savings are served by depository institutions. Households with deficient funds are served by depository institutions and finance companies. Large corporations and governments that issue securities obtain financing from all types of financial institutions. Several agencies regulate the various types of financial institutions,

Exhibit 1.4 Summary of Institutional Sources and Uses of Funds

FINANCIAL INSTITUTIONS	MAIN SOURCES OF FUNDS	MAIN USES OF FUNDS
Commercial banks	Deposits from households, businesses, and government agencies	Purchases of government and corporate securities; loans to businesses and households
Savings institutions	Deposits from households, businesses, and government agencies	Purchases of government and corporate securities; mortgages and other loans to households; some loans to businesses
Credit unions	Deposits from credit union members	Loans to credit union members
Finance companies	Securities sold to households and businesses	Loans to households and businesses
Mutual funds	Shares sold to households, businesses, and government agencies	Purchases of long-term government and corporate securities
Money market funds	Shares sold to households, businesses, and government agencies	Purchases of short-term government and corporate securities
Insurance companies	Insurance premiums and earnings from investments	Purchases of long-term government and corporate securities
Pension funds	Employer/employee contributions	Purchases of long-term government and corporate securities

and the various regulations may give some financial institutions a comparative advantage over others.

1-3f Consolidation of Financial Institutions

In recent years, commercial banks have acquired other commercial banks so that a given infrastructure can generate and support a higher volume of business. By increasing the volume of services produced, the average cost of providing the services (such as loans) can be reduced. Savings institutions have consolidated to achieve economies of scale for their mortgage lending business. Insurance companies have consolidated so that they can reduce the average cost of providing insurance services.

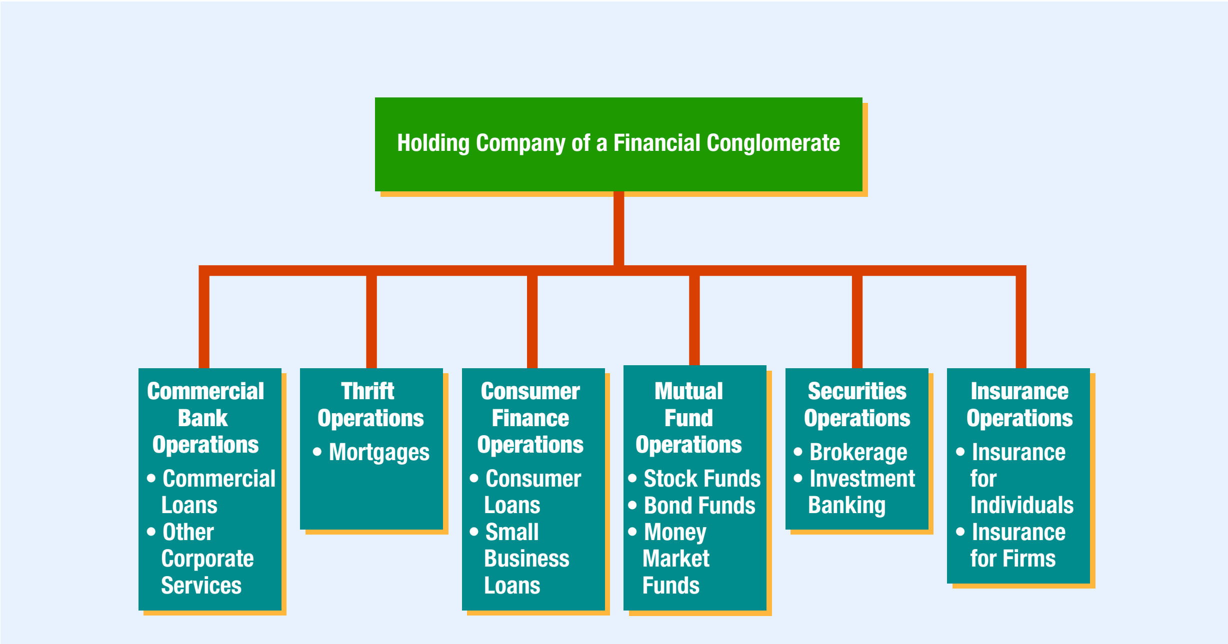
During the last 15 years, regulators have allowed different types of financial institutions to expand the types of services they offer and capitalize on economies of scope. Commercial banks merged with savings institutions, securities firms, finance companies, mutual funds, and insurance companies. Although the operations of each type of financial institution are commonly managed separately, a financial conglomerate offers advantages to customers who prefer to obtain all of their financial services from a single financial institution. Because a financial conglomerate is more diversified, it may be less exposed to a possible decline in customer demand for any single financial service.

EXAMPLE

Wells Fargo is a classic example of the evolution in financial services. It originally focused on commercial banking but has expanded its nonbank services to include mortgages, small business loans, consumer loans, real estate, brokerage, investment banking, online financial services, and insurance. In a recent annual report, Wells Fargo stated: "Our diversity in businesses makes us much more than a bank. We're a diversified financial services company. We're competing in a highly fragmented and fast growing industry: Financial Services. This helps us weather downturns that inevitably affect any one segment of our industry." ●

Typical Structure of a Financial Conglomerate A typical organizational structure of a financial conglomerate is shown in Exhibit 1.5. Historically, each of the financial services (such as banking, mortgages, brokerage, and insurance) had significant

Exhibit 1.5 Organizational Structure of a Financial Conglomerate



barriers to entry, so only a limited number of firms competed in that industry. The barriers prevented most firms from offering a wide variety of these services. As these barriers to entry were reduced, firms that had specialized in one service expanded into other financial services. Many firms expanded by acquiring other financial services firms. Thus many financial conglomerates are composed of various financial institutions that were originally independent but are now units (or subsidiaries) of the conglomerate.

Impact of Consolidation on Competition As financial institutions spread into other financial services, the competition for customers desiring the various types of financial services increased. Prices of financial services declined in response to the competition. In addition, consolidation has provided more convenience. Individual customers can rely on the financial conglomerate for convenient access to life and health insurance, brokerage services, mutual funds, investment advice and financial planning, bank deposits, and personal loans. A corporate customer can turn to the financial conglomerate for property and casualty insurance, health insurance plans for employees, business loans, advice on restructuring its businesses, issuing new debt or equity securities, and management of its pension plan.

GLOBAL ASPECTS

Global Consolidation of Financial Institutions Many financial institutions have expanded internationally to capitalize on their expertise. Commercial banks, insurance companies, and securities firms have expanded through international mergers. An international merger between financial institutions enables the merged company to offer the services of both entities to its entire customer base. For example, a U.S. commercial bank may specialize in lending while a European securities firm specializes in services such as underwriting securities. A merger between the two entities allows the U.S. bank to provide its services to the European customer base (clients of the European securities firm) and allows the European securities firm to offer its services to the U.S. customer base. By combining specialized skills and customer bases, the