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Essentials of Corporate Finance

Eleventh Edition

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Mc Graw Hill

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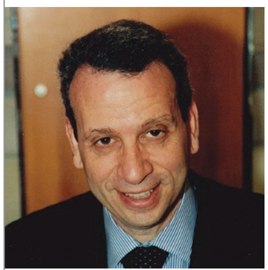
About the Authors



Stephen A. Ross

Stephen A. Ross was the Franco Modigliani Professor of Finance and Economics at the Sloan School of Management, Massachusetts Institute of Technology. One of the most widely published authors in finance and economics, Professor Ross was widely recognized for his work in developing the Arbitrage Pricing Theory and his substantial contributions to the discipline through his research in signaling, agency theory, option pricing, and the theory of the term structure of interest rates, among other topics. A past president of the American Finance Association, he also served as an associate editor of several academic and practitioner journals. He was a trustee of CalTech. He passed away unexpectedly in 2017.

Randolph W. Westerfield
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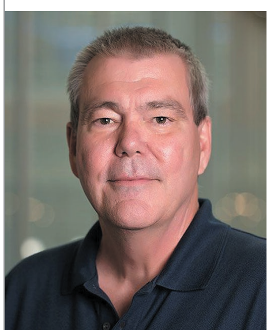
Randolph W. Westerfield is Dean Emeritus of the University of Southern California's Marshall School of Business and is the Charles B. Thornton Professor of Finance Emeritus. Professor Westerfield came to USC from the Wharton School, University of Pennsylvania, where he was the chairman of the finance department and member of the finance faculty for 20 years. He is a member of the Board of Trustees of Oak Tree Capital Mutual Funds. His areas of expertise include corporate financial policy, investment management, and stock market price behavior.



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Bradford D. Jordan is Visiting Scholar at the University of Florida. He previously held the duPont Endowed Chair in Banking and Financial Services at the University of Kentucky, where he was department chair for many years. He specializes in corporate finance and securities valuation. He has published numerous articles in leading finance journals, and he has received a variety of research awards, including the Fama/DFA Award in 2010.

Dr. Jordan is coauthor of *Corporate Finance* 13/e, *Corporate Finance: Core Principles and Applications* 6/e, *Fundamentals of Corporate Finance* 13/e, and *Essentials of Corporate Finance* 11/e, which collectively are the most widely used business finance textbooks in the world, along with *Fundamentals of Investments: Valuation and Management* 9/e, a popular investments text.

From the Authors

When we first wrote *Essentials of Corporate Finance,* we thought there might be a small niche for a briefer book that really focused on what students with widely varying backgrounds and interests needed to carry away from an introductory finance course. We were wrong. There was a huge niche! What we learned is that our text closely matches the needs of instructors and faculty at hundreds of schools across the country. As a result, the growth we have experienced through the first ten editions of *Essentials* has far exceeded anything we thought possible.

With the eleventh edition of *Essentials of Corporate Finance,* we have continued to refine our focus on our target audience, which is the undergraduate student taking a core course in business or corporate finance. This can be a tough course to teach. One reason is that the class is usually required of all business students, so it is not uncommon for a majority of the students to be nonfinance majors. In fact, this may be the only finance course many of them will ever have. With this in mind, our goal in *Essentials* is to convey the most important concepts and principles at a level that is approachable for the widest possible audience.

To achieve our goal, we have worked to distill the subject down to its bare essentials (hence, the name of this book), while retaining a decidedly modern approach to finance. We always have maintained that the subject of corporate finance can be viewed as the workings of a few very powerful intuitions. We also think that understanding the "why" is just as important, if not more so, than understanding the "how"—especially in an introductory course. Based on the gratifying market feedback we have received from our previous editions, as well as from our other text, *Fundamentals of Corporate Finance* (now in its thirteenth edition), many of you agree.

By design, this book is not encyclopedic. As the table of contents indicates, we have a total of 18 chapters. Chapter length is about 30 pages, so the text is aimed squarely at a single-term course, and most of the book can be realistically covered in a typical semester or quarter. Writing a book for a one-term course necessarily means some picking and choosing, with regard to both topics and depth of coverage. Throughout, we strike a balance by introducing and covering the essentials (there's that word again!) while leaving some more specialized topics to follow-up courses.

The other things we always have stressed, and have continued to improve with this edition, are readability and pedagogy. *Essentials* is written in a relaxed, conversational style that invites the students to join in the learning process rather than being a passive information absorber. We have found that this approach dramatically increases students' willingness to read and learn on their own. Between larger and larger class sizes and the ever-growing demands on faculty time, we think this is an essential (!) feature for a text in an introductory course.

Throughout the development of this book, we have continued to take a hard look at what is truly relevant and useful. In doing so, we have worked to downplay purely theoretical issues and minimize the use of extensive and elaborate calculations to illustrate points that are either intuitively obvious or of limited practical use.

As a result of this process, three basic themes emerge as our central focus in writing *Essentials of Corporate Finance:*

An Emphasis on Intuition We always try to separate and explain the principles at work on a commonsense, intuitive level before launching into any specifics. The underlying ideas are discussed first in very general terms and then by way of examples that illustrate in more concrete terms how a financial manager might proceed in a given situation.

A Unified Valuation Approach We treat net present value (NPV) as the basic concept underlying corporate finance. Many texts stop well short of consistently integrating this important principle. The most basic and important notion, that NPV represents the excess of market value over cost, often is lost in an overly mechanical approach that emphasizes computation at the expense of comprehension. In contrast, every subject we cover is firmly rooted in valuation, and care is taken throughout to explain how particular decisions have valuation effects.

A Managerial Focus Students shouldn't lose sight of the fact that financial management concerns management. We emphasize the role of the financial manager as decision maker, and we stress the need for managerial input and judgment. We consciously avoid "black box" approaches to finance, and, where appropriate, the approximate, pragmatic nature of financial analysis is made explicit, possible pitfalls are described, and limitations are discussed.

Today, as we prepare once again to enter the market, our goal is to stick with and build on the principles that have brought us this far. However, based on an enormous amount of feedback we have received from you and your colleagues, we have made this edition and its package even more flexible than previous editions. We offer flexibility in coverage and pedagogy by providing a wide variety of features in the book to help students learn about corporate finance. We also provide flexibility in package options by offering the most extensive collection of teaching, learning, and technology aids of any corporate finance text. Whether you use just the textbook, or the book in conjunction with other products, we believe you will find a combination with this edition that will meet your needs.

Randolph W. Westerfield
Bradford D. Jordan

Organization of the Text

We designed *Essentials of Corporate Finance* to be as flexible and modular as possible. There are a total of nine parts, and, in broad terms, the instructor is free to decide the particular sequence. Further, within each part, the first chapter generally contains an overview and survey. Thus, when time is limited, subsequent chapters can be omitted. Finally, the sections placed early in each chapter are generally the most important, and later sections frequently can be omitted without loss of continuity. For these reasons, the instructor has great control over the topics covered, the sequence in which they are covered, and the depth of coverage.

Just to get an idea of the breadth of coverage in the eleventh edition of *Essentials,* the following grid presents for each chapter some of the most significant new features, as well as a few selected chapter highlights. Of course, in every chapter, figures, opening vignettes, boxed features, and in-chapter illustrations and examples using real companies have been thoroughly updated as well. In addition, the end-of-chapter material has been completely revised.

Chapters	Selected Topics	Benefits to Users
PART ONE	**Overview of Financial Management**	
Chapter 1	New opener discussing WeWork	
	New Finance and other disciplines, including fintech.	A Discusses how finance interacts with other business disciplines. Also includes a discussion of fintech.
	New Discussion of benefit corporation.	A discussion of a new type of corporation that has a public benefit at its core.
	Updated information on executive and celebrity compensation	Highlights important developments regarding the very current question of appropriate executive compensation.
	Updated Work the Web box on stock quotes	
	Goal of the firm and agency problems	Stresses value creation as the most fundamental aspect of management and describes agency issues that can arise.
	Ethics, financial management, and executive compensation	Brings in real-world issues concerning conflicts of interest and current controversies surrounding ethical conduct and management pay.
	New proxy fight example involving Elliott Management and Starboard Value with eBay	
	New takeover battle discussion involving Eldorado and Caesars Entertainment	
PART TWO	**Understanding Financial Statements and Cash Flow**	
Chapter 2	New opener discussing the Tax Cuts and Jobs Act of 2017	
	Cash flow versus earnings	Clearly defines cash flow and spells out the differences between cash flow and earnings.
	Market values versus book values	Emphasizes the relevance of market values over book values.
	New discussion of corporate taxes in light of the TCJA	

Chapters	Selected Topics	Benefits to Users
Chapter 3	Additional explanation of alternative formulas for sustainable and internal growth rates	Expanded explanation of growth rate formulas clears up a common misunderstanding about these formulas and the circumstances under which alternative formulas are correct.
	New Discussion of PEG ratio, forward PE, and PEs in practice	A discussion of using historic or forward earnings in calculating the PE ratio, as well as an introduction to the PEG ratio.
	Updated examples on Amazon vs. Alibaba	
	Updated Work the Web box on financial ratios	Discusses how to find and analyze profitability ratios.
	Updated Finance Matters box on financial ratios	Describes how to interpret ratios.
PART THREE	**Valuation of Future Cash Flows**	
Chapter 4	First of two chapters on time value of money	Relatively short chapter introduces just the basic ideas on time value of money to get students started on this traditionally difficult topic.
	Updated Finance Matters box on collectibles	
Chapter 5	Second of two chapters on time value of money	Covers more advanced time value topics with numerous examples, calculator tips, and Excel spreadsheet exhibits. Contains many real-world examples.
	Updated opener on professional athletes' salaries	Provides a real-world example of why it's important to properly understand how to value costs incurred today versus future cash inflows.
	Updated Finance Matters box on lotteries	
	Updated Finance Matters box on student loans	
PART FOUR	**Valuing Stocks and Bonds**	
Chapter 6	New opener on negative interest on various sovereign bonds	Discusses the importance of interest rates and how they relate to bonds.
	Bond valuation	Thorough coverage of bond price/yield concepts.
	Updated bond features example using Alphabet issue	
	Interest rates and inflation	Highly intuitive discussion of inflation, the Fisher effect, and the term structure of interest rates.
	New Examination of corporate default rates by credit rating	Using information from S&P Global ratings, we discuss the default rates for various credit ratings.
	"Clean" vs. "dirty" bond prices and accrued interest	Clears up the pricing of bonds between coupon payment dates and also bond market quoting conventions.
	Updated Treasury quotes exhibit and discussion	
	Updated historic interest rates figure	
	FINRA's TRACE system and transparency in the corporate bond market	Up-to-date discussion of new developments in fixed income with regard to price, volume, and transactions reporting.
	New Added discussion of sukuk.	A new discussion of sukuk, debt financing that is consistent with Islamic law.

Chapters	Selected Topics	Benefits to Users
Chapter 7	Stock valuation	Thorough coverage of constant and nonconstant growth models.
	New discussion of EV/EBITDA to value stocks	A brief discussion of using EV/EBITDA to value stocks, as well as PE, PS, and EV/EBITDA ratios in practice.
	Updated Finance Matters box on the OTCBB and the Pink Sheets markets	Up-to-date description of major stock market operations.
PART FIVE	**Capital Budgeting**	
Chapter 8	New opener on SpaceX's Starlink project	Discusses the importance of investment opportunities.
	First of two chapters on capital budgeting	Relatively short chapter introduces key ideas on an intuitive level to help students with this traditionally difficult topic.
	NPV, IRR, MIRR, payback, discounted payback, and accounting rate of return	Consistent, balanced examination of advantages and disadvantages of various criteria.
Chapter 9	Project cash flow	Thorough coverage of project cash flows and the relevant numbers for a project analysis.
	New opener on project failures and successes	Shows the importance of properly evaluating net present value.
	New discussion of bonus depreciation	Discussion of how bonus depreciation affects project cash flows.
	Scenario and sensitivity "what-if" analyses	Illustrates how to actually apply and interpret these tools in a project analysis.
PART SIX	**Risk and Return**	
Chapter 10	Updated opener on stock market performance	Discusses the relationship between risk and return as it relates to personal investing.
	Capital market history	Extensive coverage of historical returns, volatilities, and risk premiums. New discussion of 2020 COVID-19 market reaction.
	Market efficiency	Efficient markets hypothesis discussed along with common misconceptions.
	Geometric vs. arithmetic returns	Discusses calculation and interpretation of geometric returns. Clarifies common misconceptions regarding appropriate use of arithmetic vs. geometric average returns.
	Updated Finance Matters box on professional fund management and performance	
Chapter 11	Diversification, systematic, and unsystematic risk	Illustrates basics of risk and return in a straightforward fashion.
	Updated opener on stock price reactions to announcements	
	Updated beta coefficients exhibit and associated discussion	Develops the security market line with an intuitive approach that bypasses much of the usual portfolio theory and statistics.
PART SEVEN	**Long-Term Financing**	
Chapter 12	Cost of capital estimation	Intuitive development of the WACC and a complete, web-based illustration of cost of capital for a real company.
	Updated WACC calculations for Eastman Chemical	
	Geometric vs. arithmetic growth rates	Both approaches are used in practice. Clears up issues surrounding growth rate estimates.
	Updated section on company valuation with the WACC	Explores the difference between valuing a project and valuing a company.

Chapters	Selected Topics	Benefits to Users
Chapter 13	Basics of financial leverage	Illustrates effect of leverage on risk and return.
	Optimal capital structure	Describes the basic trade-offs leading to an optimal capital structure.
	Discussion of the effects of the TCJA on corporate taxes	
	Financial distress and bankruptcy	Briefly surveys the bankruptcy process.
Chapter 14	Updated opener with Tempur Sealy dividend and buyback announcements	Raises questions about why raising dividends and repurchasing stock would please investors.
	Updated figures on aggregate dividends, stock repurchases, and proportion of firms paying dividends	Brings students the latest thinking and evidence on dividend policy.
	Dividends and dividend policy	Describes dividend payments and the factors favoring higher and lower payout policies. Includes recent survey results on setting dividend policy.
	Updated examples and Finance Matters box covering buyback activity	Explores the reasons that buybacks are gaining in popularity now, following the recent recession.
Chapter 15	New Discussion of entrepreneurship and venture capital	Discussion of entrepreneurship, the types of of venture capital, and venture capital providers.
	IPO valuation	Extensive, up-to-date discussion of IPOs, including the 1999–2000 period and the recent Alibaba IPO.
	Dutch auctions	Explains uniform price (“Dutch”) auctions using Google IPO as an example.
	New Discussion of SPACS	Explains how SPACS work.
	Subsection on crowdfunding	Discusses the JOBS Act and crowdfunding.
	Subsection on initial coin offerings	
	Discussion of direct listing	
	Updated tables and figures on IPO initial returns and number of offerings	
PART EIGHT	**Short-Term Financial Management**	
Chapter 16	Operating and cash cycles	Stresses the importance of cash flow timing.
	Short-term financial planning	Illustrates the creation of cash budgets and the potential need for financing.
	Updated Finance Matters box discussing operating and cash cycles	Explores how comparing the cash cycles of companies can reveal whether a company is performing well.
Chapter 17	Cash collection and disbursement	Examination of systems used by firms to handle cash inflows and outflows.
	Credit management	Analysis of credit policy and implementation.
	Inventory management	Brief overview of important inventory concepts.
PART NINE	**Topics in Business Finance**	
Chapter 18	Updated opener on corporate cash held in international accounts	Raises questions about how currency appreciation affects the broader economy.
	Foreign exchange	Covers essentials of exchange rates and their determination.
	International capital budgeting	Shows how to adapt the basic DCF approach to handle exchange rates.
	Updated discussion of exchange rates and political risk	Discusses hedging and issues surrounding sovereign risk.
	Discussion of the Tax Cuts and Jobs Act	Discusses how U.S. legislation changes the way that corporations manage their profits to minimize taxes.

Learning Solutions

In addition to illustrating relevant concepts and presenting up-to-date coverage, *Essentials of Corporate Finance* strives to present the material in a way that makes it engaging and easy to understand. To meet the varied needs of the intended audience, *Essentials of Corporate Finance* is rich in valuable learning tools and support.

Each feature can be categorized by the benefit to the student:

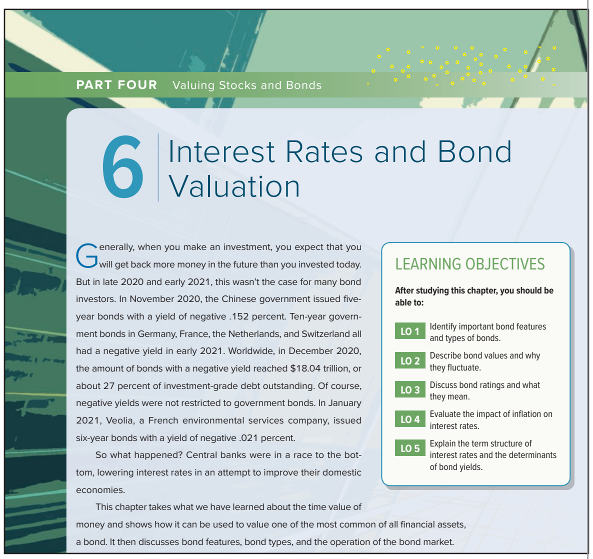
- Real financial decisions
- Application tools
- Study aids

REAL FINANCIAL DECISIONS

We have included two key features that help students connect chapter concepts to how decision makers use this material in the real world.

▼ CHAPTER-OPENING VIGNETTES

Each chapter begins with a contemporary real-world event to introduce students to chapter concepts.


PART FOUR Valuing Stocks and Bonds

6 Interest Rates and Bond Valuation

Generally, when you make an investment, you expect that you will get back more money in the future than you invested today. But in late 2020 and early 2021, this wasn't the case for many bond investors. In November 2020, the Chinese government issued five-year bonds with a yield of negative .152 percent. Ten-year government bonds in Germany, France, the Netherlands, and Switzerland all had a negative yield in early 2021. Worldwide, in December 2020, the amount of bonds with a negative yield reached $18.04 trillion, or about 27 percent of investment-grade debt outstanding. Of course, negative yields were not restricted to government bonds. In January 2021, Veolia, a French environmental services company, issued six-year bonds with a yield of negative .021 percent.

So what happened? Central banks were in a race to the bottom, lowering interest rates in an attempt to improve their domestic economies.

This chapter takes what we have learned about the time value of money and shows how it can be used to value one of the most common of all financial assets, a bond. It then discusses bond features, bond types, and the operation of the bond market.

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

LO 1 Identify important bond features and types of bonds.

LO 2 Describe bond values and why they fluctuate.

LO 3 Discuss bond ratings and what they mean.

LO 4 Evaluate the impact of inflation on interest rates.

LO 5 Explain the term structure of interest rates and the determinants of bond yields.


FINANCE MATTERS

Exotic Bonds

Bonds come in many flavors. The unusual types are called "exotics" and can range from the fairly simple to the truly esoteric. Take the case of mortgage-backed securities (MBss). MBss are a type of securitized financial instrument. In securitization, cash flows from financial assets are pooled together into securities, and the securities are sold to investors. With an MBS, banks or mortgage brokers who originate mortgages sell the mortgages to a trust. The trust pools the mortgages and sells bonds to investors. Bondholders receive payments based on the mortgage payments made by homeowners. During 2008, problems with MBss skyrocketed due to the precipitous drop in real estate values and the sharply increased default rates on the underlying mortgages.

The reverse convertible is a relatively new type of structured note. One type generally offers a high coupon rate, but the redemption at maturity can be paid in cash at par value or paid in shares of stock. For example, one recent General Motors (GM) reverse convertible had a coupon rate of 16 percent, which is a very high coupon rate in today's interest rate environment. However, at maturity, if GM's stock declined sufficiently, bondholders would receive a fixed number of GM shares that were worth less than par value. So, while the income portion of the bond return would be high, the potential loss in par value easily could erode the extra return.

Catastrophe (CAT) bonds are issued to cover insurance companies against natural catastrophes. The type of natural catastrophe is outlined in the bond. For example, about 30 percent of all CAT bonds protect against a North issues, each worth $100 million, were triggered due to an unusually active tornado season, and a CAT bond was triggered due to the 2017 earthquake in Mexico. This bond was issued on August 4th and the earthquake occurred on September 7th.

In 2019, Conservation Capital issued rhino impact bonds (RIB). The bonds are designed to increase the population of black rhinos in Kenya and South Africa, which has fallen from 65,000 in the 1970s to about 5,500 today. Bondholders receive payments based on the "outcome payments" model. In this case, payments will be based on the population of black rhinos in five years. An independent evaluator will determine whether the RIB target has been achieved, and bondholders will receive a return relative to the RIB target. Depending on how successful these bonds are, look for more bonds based on environmental goals.

During the COVID-19 pandemic, a new bond type, coronavirus bonds, came to market. The proceeds of the bonds were to go toward work linked to the pandemic. Between February and May 2020, more than $150 billion of these bonds were issued. For example, Bank of America issued $1 billion in coronavirus bonds that would be used to support the health care industry. Of course, what is or isn't a coronavirus bond is a gray area. Pfizer issued $1.25 billion in bonds that were classified as coronavirus bonds by an outside agency. Pfizer disagreed with the categorization.

Perhaps the most unusual bond (and certainly the most ghoulish) is the "death bond." Companies such as Stone

▲ FINANCE MATTERS BOXES

Most chapters include at least one *Finance Matters* box, which takes a chapter issue and shows how it is being used right now in everyday financial decision making.

APPLICATION TOOLS

Because there is more than one way to solve problems in corporate finance, we include many sections that encourage students to learn or brush up on different problem-solving methods, including financial calculator and Excel spreadsheet skills.

▼ CHAPTER CASES

Located at the end of most chapters, these cases focus on hypothetical company situations that embody corporate finance topics. Each case presents a new scenario, data, and a dilemma. Several questions at the end of each case require students to analyze and focus on all of the material they learned from the chapters in that part. These are great for homework or in-class exercises and discussions!

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CHAPTER CASE

Financing S&S Air's Expansion Plans with a Bond Issue

Mark Sexton and Todd Story, the owners of S&S Air, have decided to expand their operations. They instructed their newly hired financial analyst, Chris Guthrie, to enlist an underwriter to help sell $20 million in new 10-year bonds to finance construction. Chris has entered into discussions with Renata Harper, an underwriter from the firm of Crowe & Mallard, about which bond features S&S Air should consider and what coupon rate the issue will likely have.

Although Chris is aware of the bond features, he is uncertain as to the costs and benefits of some features, so he isn't clear on how each feature would affect the coupon rate of the bond issue. You are Renata's assistant, and she has asked you to prepare a memo to Chris describing the effect of each of the following bond features on the coupon rate of the bond. She also would like you to list any advantages or disadvantages of each feature.

QUESTIONS

1. The security of the bond—that is, whether the bond has collateral.
2. The seniority of the bond.
3. The presence of a sinking fund.
4. A call provision with specified call dates and call prices.
5. A deferred call accompanying the preceding call provision.
6. A make-whole call provision.
7. Any positive covenants. Also, discuss several possible positive covenants S&S Air might consider.
8. Any negative covenants. Also, discuss several possible negative covenants S&S Air might consider.
9. A conversion feature (note that S&S Air is not a publicly traded company).
10. A floating-rate coupon.

▼ WORK THE WEB

These in-chapter boxes show students how to research financial issues using the web and how to use the information they find to make business decisions. All the *Work the Web* boxes also include interactive follow-up questions and exercises.

WORK THE WEB

Bond quotes have become more available with the rise of the web. One site where you can find current bond prices (from TRACE) is finra-markets.morningstar.com/BondCenter. We went to the site and entered "AZO" for AutoZone, the well-known auto parts company. We found a total of 14 bond issues outstanding. Here you see some of the information we pulled up.

						Ratings		Last Sale	
Issuer Name	Symbol	Callable	Sub-Product Type	Coupon	Maturity	Moody's®	S&P	Price	Yield
AUTOZONE INC	AZO3844612	Yes	Corporate Bond	3.700	04/15/2022	Baa1	BBB	103.240	0.359
AUTOZONE INC	AZO3925874	Yes	Corporate Bond	2.875	01/15/2023	Baa1	BBB	104.337	0.343
AUTOZONE INC	AZO3996669	Yes	Corporate Bond	3.125	07/15/2023	Baa1	BBB	105.916	0.444
AUTOZONE INC	AZO4235546	Yes	Corporate Bond	2.500	04/15/2021	Baa1	BBB	100.324	0.166
AUTOZONE INC	AZO4235610	Yes	Corporate Bond	3.250	04/15/2025	Baa1	BBB	109.377	0.843
AUTOZONE INC	AZO4354812	Yes	Corporate Bond	3.125	04/21/2026	Baa1	BBB	109.751	1.109
AUTOZONE INC	AZO4482985	Yes	Corporate Bond	3.750	06/01/2027	Baa1	BBB	114.658	1.246
AUTOZONE INC	AZO4818643	Yes	Corporate Bond	3.125	04/18/2024	Baa1	BBB	107.916	0.583
AUTOZONE INC	AZO4818553	Yes	Corporate Bond	3.750	04/18/2029	Baa1	BBB	113.895	1.867
AUTOZONE INC	AZO4971753	Yes	Corporate Bond	3.625	04/15/2025	Baa1	BBB	111.248	0.852

Most of the information is self-explanatory. The Price and Yield columns show the price and yield to maturity of the issues based on their most recent sales. If you need more information about a particular issue, clicking on it will give you more details such as coupon dates and call dates.

QUESTIONS

1. *Go to this website and find the last bond shown in the accompanying table. When was this bond issued? What was the size of the bond issue? What were the yield to maturity and price when the bond was issued?*
2. *When you search for Chevron bonds (CVX), you will find bonds for several companies listed. Why do you think Chevron has bonds issued with different corporate names?*

EXPLANATORY WEB LINKS ▶

These web links are provided in the margins of the text. They are specifically selected to accompany text material and provide students and instructors with a quick way to check for additional information using the internet.

trading volume. On the New York Stock Exchange, for example, it is possible to see the price and quantity for every single transaction. In contrast, in the bond market, historically it was not possible to observe either. Transactions are privately negotiated between parties, and there is little or no centralized reporting of transactions.

Although the total volume of trading in bonds far exceeds that in stocks, only a very small fraction of the total bond issues that exist actually trade on a given day. This means that getting up-to-date prices on individual bonds is often difficult or impossible, particularly for smaller corporate or municipal issues. Instead, a variety of sources of estimated prices exist and are very commonly used.

Bond Price Reporting

In 2002, transparency in the corporate bond market began to improve dramatically. Under new regulations, corporate bond dealers are now required to report trade information through what is known as the Trade Reporting and Compliance Engine (TRACE). A nearby *Work the Web* box shows how to get TRACE prices.

To learn more about TRACE, visit www.finra.org.

As we mentioned before, the U.S. Treasury market is the largest securities market in the world. As with bond markets in general, it is an OTC market, so there is limited transparency. However, unlike the situation with bond markets in general, trading in Treasury issues, particularly recently issued ones, is very heavy. Each day, representative prices for outstanding Treasury issues are reported.

WHAT'S ON THE WEB? ▶

These end-of-chapter activities show students how to use and learn from the vast amount of financial resources available on the internet.

WHAT'S ON THE WEB?

6.1 Bond Quotes You can find current bond prices at finra-markets.morningstar.com/BondCenter. You want to find the bond prices and yields for bonds issued by Pfizer. Enter the ticker symbol "PFE" to do a search. What is the shortest-maturity bond issued by Pfizer that is outstanding? What is the longest-maturity bond? What is the credit rating for Pfizer's bonds? Do all of the bonds have the same credit rating? Why do you think this is?

6.2 Default Premiums The Federal Reserve Bank of St. Louis has files listing historical interest rates on its website www.stlouisfed.org. Find your way to the "FRED®" data,

CALCULATOR HINTS

HOW TO CALCULATE BOND PRICES AND YIELDS USING A FINANCIAL CALCULATOR

Many financial calculators have fairly sophisticated built-in bond valuation routines. However, these vary quite a lot in implementation, and not all financial calculators have them. As a result, we will illustrate a simple way to handle bond problems that will work on just about any financial calculator.

To begin, of course, we first remember to clear out the calculator! Next, for Example 6.3, we have two bonds to consider, both with 12 years to maturity. The first one sells for $935.08 and has a 10 percent coupon rate. To find its yield, we can do the following:

	N	I/Y	PMT	PV	FV
Enter	12		100	−935.08	1,000
Solve for		11			

Notice that here we have entered both a future value of $1,000, representing the bond's face value, and a payment of 10 percent of $1,000, or $100, per year, representing the bond's annual coupon. Also notice that we have a negative sign on the bond's price, which we have entered as the present value.

◀ CALCULATOR HINTS

Calculator Hints is a self-contained section occurring in various chapters that first introduces students to calculator basics and then illustrates how to solve problems with the calculator. Appendix D goes into more detailed instructions by solving problems with two specific calculators.

EXCEL MASTER ICONS ▶

Topics covered in the comprehensive Excel Master supplement (found in Connect) are indicated by an icon in the margin.

6.1 BONDS AND BOND VALUATION

Excel Master coverage online

When a corporation (or government) wishes to borrow money from the public on a long-term basis, it usually does so by issuing, or selling, debt securities that are generically called bonds. In this section, we describe the various features of corporate bonds and some of the terminology associated with bonds. We then discuss the cash flows associated with a bond and how bonds can be valued using our discounted cash flow procedure.

SPREADSHEET STRATEGIES ▶

The unique *Spreadsheet Strategies* feature is also in a self-contained section, showing students how to set up spreadsheets to solve problems—a vital part of every business student's education.

SPREADSHEET STRATEGIES

HOW TO CALCULATE BOND PRICES AND YIELDS USING A SPREADSHEET

Like financial calculators, most spreadsheets have fairly elaborate routines available for calculating bond values and yields; many of these routines involve details that we have not discussed. However, setting up a simple spreadsheet to calculate prices or yields is straightforward, as our next two spreadsheets show:

	A	B	C	D	E	F	G	H
1								
2	Using a spreadsheet to calculate bond yields							
3								
4	Suppose we have a bond with 22 years to maturity, a coupon rate of 8 percent, and a price of							
5	$960.17. If the bond makes semiannual payments, what is its yield to maturity?							
6								
7	Settlement date:	1/1/20						
8	Maturity date:	1/1/42						
9	Annual coupon rate:	.08						
10	Bond price (% of par):	96.017						
11	Face value (% of par):	100						
12	Coupons per year:	2						
13	Yield to maturity:	.084						
14								
15	The formula entered in cell B13 is = YIELD(B7, B8, B9, B10, B11, B12); notice that face value and bond							
16	price are entered as a percentage of face value.							

INTERMEDIATE (Questions 18–33)

LO 2 **18. Bond Price Movements** Bond X is a premium bond making semiannual payments. The bond has a coupon rate of 6.8 percent, a YTM of 6.2 percent, and 13 years to maturity. Bond Y is a discount bond making semiannual payments. This bond has a coupon rate of 6.2 percent, a YTM of 6.8 percent, and also 13 years to maturity. What are the prices of these bonds today assuming both bonds have a $1,000 par value? If interest rates remain unchanged, what do you expect the prices of these bonds to be in 1 year? In 3 years? In 8 years? In 12 years? In 13 years? What's going on here? Illustrate your answers by graphing bond prices versus time to maturity.

LO 2 **19. Interest Rate Risk** Both Bond Sam and Bond Dave have 7.1 percent coupons, make semiannual payments, and are priced at par value. Bond Sam

◀ EXCEL SIMULATIONS

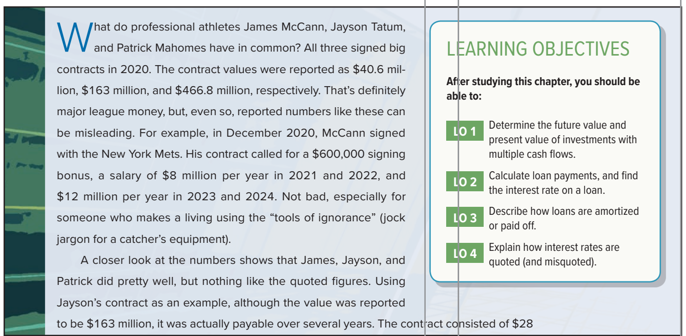
Indicated by an Excel icon next to applicable end-of-chapter questions and problems, Excel simulation exercises are available for selected problems in Connect. For even more spreadsheet practice, check out Excel Master, also available in Connect.

STUDY AIDS

We want students to get the most from this book and this course, and we realize that students have different learning styles and study needs. We therefore present a number of study features to appeal to a wide range of students.

▼ LEARNING OBJECTIVES

Each chapter begins with a number of learning objectives that are key to the student's understanding of the chapter. Learning objectives also are linked to end-of-chapter problems and test bank questions.


What do professional athletes James McCann, Jayson Tatum, and Patrick Mahomes have in common? All three signed big contracts in 2020. The contract values were reported as $40.6 million, $163 million, and $466.8 million, respectively. That's definitely major league money, but, even so, reported numbers like these can be misleading. For example, in December 2020, McCann signed with the New York Mets. His contract called for a $600,000 signing bonus, a salary of $8 million per year in 2021 and 2022, and $12 million per year in 2023 and 2024. Not bad, especially for someone who makes a living using the "tools of ignorance" (jock jargon for a catcher's equipment).

A closer look at the numbers shows that James, Jayson, and Patrick did pretty well, but nothing like the quoted figures. Using Jayson's contract as an example, although the value was reported to be $163 million, it was actually payable over several years. The contract consisted of $28

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

LO 1 Determine the future value and present value of investments with multiple cash flows.

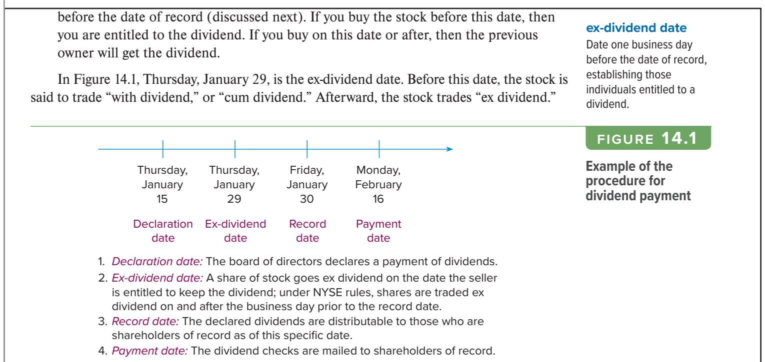
LO 2 Calculate loan payments, and find the interest rate on a loan.

LO 3 Describe how loans are amortized or paid off.

LO 4 Explain how interest rates are quoted (and misquoted).

▼ PEDAGOGICAL USE OF COLOR

We continue to use a full-color palette in *Essentials* not only to make the text more inviting, but, more important, as a functional element to help students follow the discussion. In almost every chapter, color plays an important, largely self-evident role.


before the date of record (discussed next). If you buy the stock before this date, then you are entitled to the dividend. If you buy on this date or after, then the previous owner will get the dividend.

In Figure 14.1, Thursday, January 29, is the ex-dividend date. Before this date, the stock is said to trade "with dividend," or "cum dividend." Afterward, the stock trades "ex dividend."

ex-dividend date
Date one business day before the date of record, establishing those individuals entitled to a dividend.

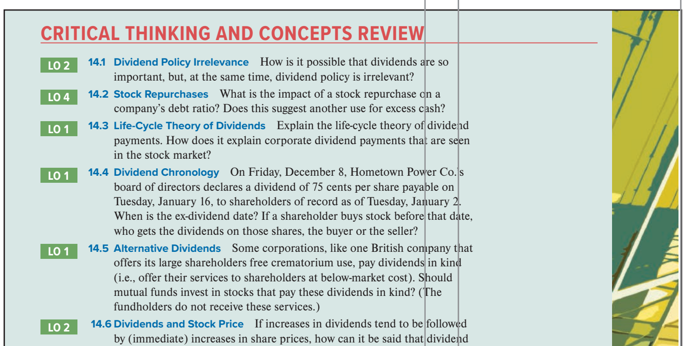
FIGURE 14.1

Example of the procedure for dividend payment

1. *Declaration date:* The board of directors declares a payment of dividends.
2. *Ex-dividend date:* A share of stock goes ex dividend on the date the seller is entitled to keep the dividend; under NYSE rules, shares are traded ex dividend on and after the business day prior to the record date.
3. *Record date:* The declared dividends are distributable to those who are shareholders of record as of this specific date.
4. *Payment date:* The dividend checks are mailed to shareholders of record.

CRITICAL THINKING QUESTIONS ▶

Every chapter ends with a set of critical thinking questions that challenge the students to apply the concepts they learned in the chapter to new situations.


CRITICAL THINKING AND CONCEPTS REVIEW

LO 2 14.1 **Dividend Policy Irrelevance** How is it possible that dividends are so important, but, at the same time, dividend policy is irrelevant?

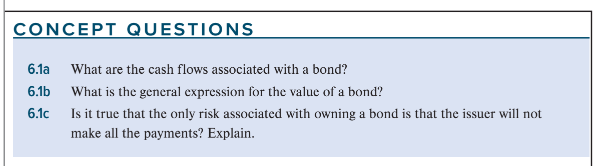
LO 4 14.2 **Stock Repurchases** What is the impact of a stock repurchase on a company's debt ratio? Does this suggest another use for excess cash?

LO 1 14.3 **Life-Cycle Theory of Dividends** Explain the life-cycle theory of dividend payments. How does it explain corporate dividend payments that are seen in the stock market?

LO 1 14.4 **Dividend Chronology** On Friday, December 8, Hometown Power Co.'s board of directors declares a dividend of 75 cents per share payable on Tuesday, January 16, to shareholders of record as of Tuesday, January 2. When is the ex-dividend date? If a shareholder buys stock before that date, who gets the dividends on those shares, the buyer or the seller?

LO 1 14.5 **Alternative Dividends** Some corporations, like one British company that offers its large shareholders free crematorium use, pay dividends in kind (i.e., offer their services to shareholders at below-market cost). Should mutual funds invest in stocks that pay these dividends in kind? (The fundholders do not receive these services.)

LO 2 14.6 **Dividends and Stock Price** If increases in dividends tend to be followed by (immediate) increases in share prices, how can it be said that dividend


CONCEPT QUESTIONS

6.1a What are the cash flows associated with a bond?

6.1b What is the general expression for the value of a bond?

6.1c Is it true that the only risk associated with owning a bond is that the issuer will not make all the payments? Explain.

◀ CONCEPT QUESTIONS

Chapter sections are intentionally kept short to promote a step-by-step, building-block approach to learning. Each section is then followed by a series of short concept questions that highlight the key ideas just presented. Students use these questions to make sure they can identify and understand the most important concepts as they read.

EXAMPLE 11.4 Portfolio Variance and Standard Deviation

In Example 11.3, what are the standard deviations on the two portfolios? To answer, we first have to calculate the portfolio returns in the two states. We will work with the second portfolio, which has 50 percent in Stock A and 25 percent in each of Stocks B and C. The relevant calculations can be summarized as follows:

State of Economy	Probability of State	Returns: Stock A	Stock B	Stock C	Portfolio
Boom	.40	10%	15%	20%	13.75%
Bust	.60	8	4	0	5.00

◀ NUMBERED EXAMPLES

Separate numbered and titled examples are extensively integrated into the chapters. These examples provide detailed applications and illustrations of the text material in a step-by-step format. Each example is completely self-contained so that students don't have to search for additional information. Based on our classroom testing, these examples are among the most useful learning aids because they provide both detail and explanation.

SUMMARY TABLES ▶

These tables succinctly restate key principles, results, and equations. They appear whenever it is useful to emphasize and summarize a group of related concepts.

TABLE 3.10 Summary of internal and sustainable growth rates

I. Internal growth rate

$$\text{Internal growth rate} = \frac{\text{ROA} \times b}{1 - \text{ROA} \times b}$$

where:

ROA = Return on assets = Net income/Total assets
b = Plowback (retention) ratio
= Addition to retained earnings/Net income
= 1 − Dividend payout ratio

The internal growth rate is the maximum growth rate that can be achieved with no external financing of any kind.

II. Sustainable growth rate

$$\text{Sustainable growth rate} = \frac{\text{ROE} \times b}{1 - \text{ROE} \times b}$$

where:

ROE = Return on equity = Net income/Total equity
b = Plowback (retention) ratio
= Addition to retained earnings/Net income
= 1 – Dividend payout ratio

The sustainable growth rate is the maximum growth rate that can be achieved with no external equity financing while maintaining a constant debt-equity ratio.

3.2 RATIO ANALYSIS

Excel Master coverage online

financial ratios
Relationships determined from a firm's financial information and used for comparison purposes.

Another way of avoiding the problems involved in comparing companies of different sizes is to calculate and compare **financial ratios**. Such ratios are ways of comparing and investigating the relationships between different pieces of financial information. We cover some of the more common ratios next, but there are many others that we don't touch on.

One problem with ratios is that different people and different sources frequently don't compute them in exactly the same way, and this leads to much confusion. The specific definitions we use here may or may not be the same as ones you have seen or will see elsewhere. If you are ever using ratios as a tool for analysis, you should be careful to document how you

◀ KEY TERMS

These are printed in blue the first time they appear and are defined within the text and in the margin.

Total Debt Ratio The *total debt ratio* takes into account all debts of all maturities to all creditors. It can be defined in several ways, the easiest of which is:

$$\begin{aligned}\text{Total debt ratio} &= \frac{\text{Total assets} - \text{Total equity}}{\text{Total assets}} \\ &= \frac{\$3{,}630 - 2{,}625}{\$3{,}630} = .28 \text{ times}\end{aligned} \quad [3.4]$$

In this case, an analyst might say that Prufrock uses 28 percent debt.[1] Whether this is high or low or whether it even makes any difference depends on whether or not capital structure matters, a subject we discuss in a later chapter.

Prufrock has \$.28 in debt for every \$1 in total assets. Therefore, there is \$.72 in equity (= \$1 − .28) for every \$.28 in debt. With this in mind, we can define two useful variations on the total debt ratio, the *debt-equity ratio* and the *equity multiplier:*

$$\begin{aligned}\text{Debt-equity ratio} &= \text{Total debt}/\text{Total equity} \\ &= \$.28/\$.72 = .38 \text{ times}\end{aligned} \quad [3.5]$$

$$\begin{aligned}\text{Equity multiplier} &= \text{Total assets Total equity} \\ &= \$1/\$.72 = 1.38 \text{ times}\end{aligned} \quad [3.6]$$

The fact that the equity multiplier is 1 plus the debt-equity ratio is not a coincidence:

$$\begin{aligned}\text{Equity multiplier} &= \text{Total assets}/\text{Total equity} = \$1/\$\,.72 = 1.38 \text{ times} \\ &= (\text{Total equity} + \text{Total debt})/\text{Total equity} \\ &= 1 + \text{Debt-equity ratio} = 1.38 \text{ times}\end{aligned}$$

The thing to notice here is that given any one of these three ratios, you can immediately calculate the other two, so they all say exactly the same thing.

Times Interest Earned Another common measure of long-term solvency is the *times interest earned* (TIE) *ratio.* Once again, there are several possible (and common) definitions, but we'll stick with the most traditional:

$$\begin{aligned}\text{Times interest earned ratio} &= \frac{\text{EBIT}}{\text{Interest}} \\ &= \frac{\$741}{\$141} = 5.26 \text{ times}\end{aligned} \quad [3.7]$$

As the name suggests, this ratio measures how well a company has its interest obliga-

KEY EQUATIONS ▶

These are called out in the text and identified by equation numbers. Appendix B shows the key equations by chapter.

Maximize the market value of the existing owners' equity.

◀ HIGHLIGHTED PHRASES

Throughout the text, important ideas are presented separately and printed in boxes to indicate their importance to the students.

SUMMARY AND CONCLUSIONS

This chapter has described how to go about putting together a discounted cash flow analysis and evaluating the results. In it, we covered:

1. The identification of relevant project cash flows. We discussed project cash flows and described how to handle some issues that often come up, including sunk costs, opportunity costs, financing costs, net working capital, and erosion.
2. Preparing and using pro forma, or projected, financial statements. We showed how pro forma financial statement information is useful in coming up with projected cash flows.
3. The use of scenario and sensitivity analysis. These tools are widely used to evaluate the impact of assumptions made about future cash flows and NPV estimates.
4. Additional issues in capital budgeting. We examined the managerial options implicit in many capital budgeting situations. We also discussed the capital rationing problem.

The discounted cash flow analysis we've covered here is a standard tool in the business

CHAPTER SUMMARY AND CONCLUSIONS ▲

These paragraphs review the chapter's key points and provide closure to the chapter.

CHAPTER REVIEW AND SELF-TEST PROBLEMS

9.1 Calculating Operating Cash Flow Mater Pasta, Inc., has projected a sales volume of $1,432 for the second year of a proposed expansion project. Costs normally run 70 percent of sales, or about $1,002 in this case. The depreciation expense will be $80, and the tax rate is 22 percent. What is the operating cash flow? (See Problem 9.)

◀ CHAPTER REVIEW AND SELF-TEST PROBLEMS

Review and self-test problems appear after the chapter summaries. Detailed answers to the self-test problems immediately follow. These questions and answers allow students to test their abilities in solving key problems related to the content of the chapter. These problems are mapped to similar problems in the end-of-chapter material. The aim is to help students work through difficult problems using the authors' work as an example.

END-OF-CHAPTER QUESTIONS AND PROBLEMS ▶

We have found that many students learn better when they have plenty of opportunity to practice. We therefore provide extensive end-of-chapter questions and problems linked to Learning Objectives. The questions and problems are generally separated into three levels—Basic, Intermediate, and Challenge. All problems are fully annotated so that students and instructors can readily identify particular types. Throughout the text, we have worked to supply interesting problems that illustrate real-world applications of chapter material. Answers to selected end-of-chapter problems appear in Appendix C.

QUESTIONS AND PROBLEMS

connect — Select problems are available in McGraw-Hill *Connect*. Please see the packaging options section of the Preface for more information.

BASIC (Questions 1–22)

LO 1 **1. Calculating Payback** What is the payback period for the following set of cash flows?

Year	Cash Flow
0	−$7,700
1	1,900
2	3,000
3	2,300
4	1,700

LO 1 **2. Calculating Payback** An investment project provides cash inflows of $835 per year for eight years. What is the project payback period if the initial cost is $1,900? What if the initial cost is $3,600? What if it is $7,400?

LO 1 **3. Calculating Payback** Kara, Inc., imposes a payback cutoff of three years for its international investment projects. If the company has the following two projects available, should it accept either of them?

Year	Cash Flow (A)	Cash Flow (B)

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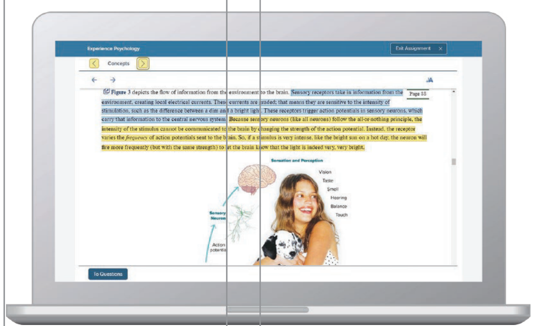

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Comprehensive Teaching and Learning Package

This edition of *Essentials* has more options than ever in terms of the textbook, instructor supplements, student supplements, and multimedia products. Mix and match to create a package that is perfect for your course!

Assurance of Learning Ready

Assurance of learning is an important element of many accreditation standards. *Essentials of Corporate Finance,* eleventh edition, is designed specifically to support your assurance of learning initiatives. Each chapter in the book begins with a list of numbered learning objectives that appear throughout the end-of-chapter problems and exercises. Every test bank question also is linked to one of these objectives, in addition to level of difficulty, topic area, Bloom's Taxonomy level, and AACSB skill area. Connect, McGraw Hill's online homework solution, and Test Builder can search the test bank by these and other categories, providing an engine for targeted Assurance of Learning analysis and assessment.

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The statements contained in *Essentials of Corporate Finance,* eleventh edition, are provided only as a guide for the users of this text. The AACSB leaves content coverage and assessment within the purview of individual schools, the mission of the school, and the faculty. While *Essentials of Corporate Finance,* eleventh edition, and the teaching package make no claim of any specific AACSB qualification or evaluation, we have, within the test bank, labeled selected questions according to the six general knowledge and skills areas.

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Instructor Supplements

- **Instructor's Manual (IM)**

  Prepared by Joshua Spizman, Loyola Marymount University

  A great place to find new lecture ideas! This annotated outline for each chapter includes Lecture Tips, Real-World Tips, Ethics Notes, suggested PowerPoint slides, and, when appropriate, a video synopsis.

- **Solutions Manual (SM)**

  Prepared by Bradford D. Jordan, University of Florida and Joseph Smolira, Belmont University.

  The *Essentials* Solutions Manual provides detailed solutions to the extensive end-of-chapter material, including concept review questions, quantitative problems, and cases. Select chapters also contain calculator solutions.

- **Test Bank**

  Prepared by Joseph Hegger, University of Missouri

  Great format for a better testing process! All questions closely link with the text material, listing section number, Learning Objective, Bloom's Taxonomy Question Type, and AACSB topic when applicable. Each chapter covers a breadth of topics and types of questions, including questions that test the understanding of the key terms; questions patterned after the learning objectives, concept questions, chapter-opening vignettes, boxes, and highlighted phrases; multiple-choice and true/false problems patterned after the end-of-chapter questions, in basic, intermediate, and challenge levels; and essay questions to test problem-solving skills and more advanced understanding of concepts. Each chapter also includes new problems that pick up questions directly from the end-of-chapter material and converts them into parallel test bank questions. For your reference, each test bank question in this part is linked with its corresponding question in the end-of-chapter section.

- **Test Builder**
  Available within Connect, Test Builder is a cloud-based tool that enables instructors to format tests that can be printed or administered within an LMS. Test Builder offers a modern, streamlined interface for easy content configuration that matches course needs, without requiring a download.

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Blog

Our blog at https://essentialsofcorporatefinance.blogspot.com/ has current real-world events that relate to topics discussed in the textbook.

Student Supplements

- **Excel Resources**
  A great resource for those seeking additional practice, students can access Excel template problems and the Excel Master tutorial designed by Brad Jordan and Joe Smolira.
- **Narrated Lecture Videos**
  Updated for this edition, the Narrated Lecture Videos provide real-world examples accompanied by step-by-step instructions and explanations for solving problems presented in the chapter. The Concept Checks from the text also are integrated into the slides to reinforce the key topics in the chapter. Designed specifically to appeal to different learning styles, the videos provide a visual and audio explanation of topics and problems.

Teaching Support

Along with having access to all of the same material your students can view through Connect, you also have password-protected access to the Instructor's Manual, solutions to end-of-chapter problems and cases, Instructor's Excel Master, PowerPoint, Excel template solutions, video clips, and video projects and questions.

Acknowledgments

Clearly, our greatest debt is to our many colleagues (and their students) around the world who, like us, wanted to try an alternative to what they were using and made the switch to our text. Our plan for developing and improving *Essentials,* eleventh edition, revolved around the detailed feedback we received from many of our colleagues over the years who had an interest in the book and regularly teach the introductory course. These dedicated scholars and teachers to whom we are very grateful are:

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Throughout the development of this edition, we have taken great care to discover and eliminate errors. Our goal is to provide the best textbook available on the subject. To ensure that future editions are error-free, we will gladly offer $10 per arithmetic error to the first individual reporting it as a modest token of our appreciation. More than this, we would like to hear from instructors and students alike. Please send your comments to Dr. Brad Jordan, c/o Editorial—Finance, McGraw Hill, 120 S. Riverside Drive, 12th Floor, Chicago, IL 60606.

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FINANCE MATTERS

1 Introduction to Financial Management

In 2010, Adam Neumann and a business partner opened the first WeWork space in New York's Little Italy. WeWork provided shared office space for businesses, who would rent space as needed, sometimes only for a day. By 2019, WeWork operated in more than 111 cities in 29 countries. Revenues had grown to about $3 billion, but the company was still losing money. Early in 2019, the giant tech investor SoftBank made a major bet on WeWork, which valued the company at $47 billion.

Unfortunately, everything was not rosy at WeWork. In the middle of 2019, the company filed to go public in an IPO, but then changed its mind. In late 2019, SoftBank agreed to another major investment, but it pulled the deal in 2020. What happened? Among other things, the COVID-19 pandemic hit, calling into question the company's entire business model of shared, face-to-face meeting spaces. But in a surprise to many, in July 2020, Marcelo Claure, who was brought in to revitalize WeWork, announced the company should be profitable by 2021.

LEARNING OBJECTIVES

After studying this chapter, you should be able to:

LO 1 Discuss the basic types of financial management decisions and the role of the financial manager.

LO 2 Identify the goal of financial management.

LO 3 Compare the financial implications of the different forms of business organizations.

LO 4 Describe the conflicts of interest that can arise between managers and owners.

Understanding WeWork's story as it progressed from a startup to a multi-billion-dollar enterprise and its subsequent struggles takes us into issues involving the corporate form of organization, corporate goals, and corporate control, all of which we discuss in this chapter.

Please visit us at essentialsofcorporatefinance.blogspot.com for the latest developments in the world of corporate finance.

To begin our study of financial management, we address two central issues. First: What is corporate, or business, finance, and what is the role of the financial manager? Second: What is the goal of financial management?

Final PDF to printer

1.1 FINANCE: A QUICK LOOK

Before we plunge into our study of "corp. fin.," we think a quick overview of the finance field might be a good idea. Our goal is to clue you in on some of the most important areas in finance and some of the career opportunities available in each. We also want to illustrate some of the ways finance fits in with other areas such as marketing, management, and accounting.

The Five Basic Areas

Traditionally, financial topics are grouped into five main areas:

1. Corporate finance
2. Investments
3. Financial institutions
4. International finance
5. Fintech

We discuss each of these next.

For job descriptions in finance and other areas, visit corporatefinanceinstitute.com/resources/careers/jobs/.

Corporate Finance The first of these five areas, corporate finance, is the main subject of this book. We begin covering this subject in our next section, so we will wait until then to get into any details. One thing we should note is that the term *corporate finance* seems to imply that what we cover is only relevant to corporations, but the truth is that almost all of the topics we consider are much broader than that. Maybe *business finance* would be a little more descriptive, but even this is too narrow because at least half of the subjects we discuss in the pages ahead are really basic financial ideas and principles applicable across all the various areas of finance and beyond.

Investments Broadly speaking, the investments area deals with financial assets such as stocks and bonds. Some of the more important questions include:

1. What determines the price of a financial asset, such as a share of stock?
2. What are the potential risks and rewards associated with investing in financial assets?
3. What is the best mixture of financial assets to hold?

Students who specialize in the investments area have various career opportunities. Being a stockbroker is one of the most common. Stockbrokers often work for large companies such as Merrill Lynch, advising customers on what types of investments to consider and helping them make buy and sell decisions. Financial advisors play a similar role but are not necessarily brokers.

Portfolio management is a second investments-related career path. Portfolio managers, as the name suggests, manage money for investors. For example, individual investors frequently buy into mutual funds. Such funds are a means of pooling money that is then invested by a portfolio manager. Portfolio managers also invest and manage money for pension funds, insurance companies, and many other types of institutions.

Security analysis is a third area. A security analyst researches individual investments, such as stock in a particular company, and makes a determination as to whether the price is right. To do so, an analyst delves deeply into company and industry reports, along with a variety of other information sources. Frequently, brokers and portfolio managers rely on security analysts for information and recommendations.

These investments-related areas, like many areas in finance, share an interesting feature. If jobs in this area are done well, they can be very rewarding financially (translation: You

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can make a lot of money). The bad news, of course, is that they can be very demanding and very competitive, so they are definitely not for everybody.

Financial Institutions Financial institutions are basically businesses that deal primarily in financial matters. Banks and insurance companies would probably be the most familiar to you. Institutions such as these employ people to perform a wide variety of finance-related tasks. For example, a commercial loan officer at a bank would evaluate whether a particular business has a strong enough financial position to warrant extending a loan. At an insurance company, an analyst would decide whether a particular risk was suitable for insuring and what the premium should be.

International Finance International finance isn't so much an area as it is a specialization within one of the main areas we described earlier. In other words, careers in international finance generally involve international aspects of corporate finance, investments, or financial institutions. For example, some portfolio managers and security analysts specialize in non-U.S. companies. Similarly, many U.S. businesses have extensive overseas operations and need employees familiar with such international topics as exchange rates and political risk. Banks frequently are asked to make loans across country lines, so international specialists are needed there as well.

Fintech Finance has always been an early adopter of faster, cheaper technologies. The combination of technology and finance is called *fintech.* Fintech is a broad term for a company that uses the internet, mobile phones, software, and/or cloud services to provide a financial service. We discuss fintech in more detail in the next section.

Why Study Finance?

Who needs to know finance? In a word, you. In fact, there are many reasons you need a working knowledge of finance even if you are not planning a career in finance. We explore some of these reasons next.

Marketing and Finance If you are interested in marketing, you need to know finance because, for example, marketers constantly work with budgets, and they need to understand how to get the greatest payoff from marketing expenditures and programs. Analyzing costs and benefits of projects of all types is one of the most important aspects of finance, so the tools you learn in finance are vital in marketing research, the design of marketing and distribution channels, and product pricing, to name a few areas.

Financial analysts rely heavily on marketing analysts, and the two frequently work together to evaluate the profitability of proposed projects and products. As we will see in a later chapter, sales projections are a key input in almost every type of new product analysis, and such projections are often developed jointly between marketing and finance.

Beyond this, the finance industry employs marketers to help sell financial products such as bank accounts, insurance policies, and mutual funds. Financial services marketing is one of the most rapidly growing types of marketing, and successful financial services marketers are very well compensated. To work in this area, you obviously need to understand financial products.

Accounting and Finance For accountants, finance is required reading. In smaller businesses in particular, accountants often are required to make financial decisions as well as perform traditional accounting duties. Further, as the financial world continues to grow more complex, accountants have to know finance to understand the implications of many of the newer types of financial contracts and the impact they have on financial statements. Beyond this, cost accounting and business finance are particularly closely related, sharing many of the same subjects and concerns.

Financial analysts make extensive use of accounting information; they are some of the most important end users. Understanding finance helps accountants recognize what types of information are particularly valuable and, more generally, how accounting information is actually used (and abused) in practice.

Management and Finance One of the most important areas in management is strategy. Thinking about business strategy without simultaneously thinking about financial strategy is an excellent recipe for disaster, and, as a result, management strategists must have a very clear understanding of the financial implications of business plans.

In broader terms, management employees of all types are expected to have a strong understanding of how their jobs affect profitability, and they also are expected to be able to work within their areas to improve profitability. This is precisely what studying finance teaches you: What are the characteristics of activities that create value?

Technology and Finance STEM (science, technology, engineering, and math) classes have become more important in recent years. Finance is considered a STEM discipline, especially at the graduate level. As we discussed, fintech is the area in finance that focuses on the STEM side of things. We'll consider a few examples next. As we'll see, fintech companies can often provide cheaper, faster, and more convenient services than brick-and-mortar setups.

Banking Fintech Fintech companies are beginning to compete with traditional bank roles. Mobile payments are a fast-growing form of fintech. Companies such as Venmo and PayPal permit users to transfer money directly from one person to another. These companies have reduced the need for more traditional payment methods, such as checks. In 2019, more than $1 trillion was transferred by mobile payment companies.

Crowdfunding companies like Kickstarter and GoFundMe allow users to raise money directly from other people. Variations exist in these crowdfunding companies: Kickstarter participants are often buying a product before it comes to market, while GoFundMe is used to raise money for a cause.

Fintechs such as Kabbage, Lendio, and Accion have been created to establish marketplaces to provide companies with working capital. These companies have a more streamlined process compared to banks and are willing to fund working capital for startups, which are often unable to find funding through more traditional means.

Other fintech companies, such as Upstart and Prosper, have become marketplaces for direct lending to consumers. Customers of these companies apply for loans, which are funded directly by other participants, usually individuals. In a traditional bank loan, much of the decision is determined by a credit score and previous credit history. These marketplaces allow for loans to be funded based off other factors.

A fast-growing fintech area is buy now, pay later (BNPL). One large BNPL company, Affirm, went public in 2021. Affirm works with retailers like Peloton, adidas, and Swatch to fund purchases made by customers. The financing for purchases made at these companies is done through Affirm, which allows the customers to repay the loans in installments. BNPL loans tend to be more personalized than a credit card loan, and often carry a lower interest rate than a credit card.

Blockchain and Cryptocurrency Blockchain is at the heart of many new fintech services. Blockchain is a list of records, called blocks, that are used to record transactions. Each block contains a cryptographic hash of the previous block, a time stamp, and transaction data. By design, blockchain is resistant to alteration and thus provides an accurate record of transactions.

Cryptocurrency is a digital asset designed to act like currency but is not controlled by any centralized monetary authority. Bitcoin, the first cryptocurrency, was released in 2009. Since then, more than 4,000 variations have been released.

Insurance Insurance technology, or *insurtech,* allows customers to research, compare, and purchase insurance online without physically visiting an insurance agent. Insurtech has streamlined the processes of claims management and evaluating and pricing risks, which has driven down costs. Insurtech companies are expanding into all areas of insurance, from Lemonade, which offers homeowners and renters insurance, and Oscar Health, which specializes in health insurance, to Trōv, which allows you to insure a single item for any time period right from your mobile phone.

Robo-advising and Stock Trading Traditionally, if you invested through a broker, the broker would advise you on a good asset allocation. Robo-advisors provide investment advice based on mathematical rules or algorithms. This means there is minimal human interaction between the investor and an advisor.

Stock trading apps, such as Robinhood, allow investors to trade stocks commission free. Other apps, like Acorns, allow investors to invest small amounts, often as low as $1. These apps allow small investors to participate in the stock market much more easily (and cheaply).

Budgeting Apps Perhaps the most common use of fintech is through budgeting apps used by consumers. Budgeting apps allow people to keep track of income, monthly payments, expenditures, and more, right on a mobile phone. These apps allow people more insight into their finances and help with creating financial plans for the future.

You and Finance Perhaps the most important reason to know finance is that you will have to make financial decisions that will be very important to you personally. Today, for example, when you go to work for almost any type of company, you will be asked to decide how you want to invest your retirement funds. We'll see in a later chapter that what you choose to do can make an enormous difference in your future financial well-being. On a different note, is it your dream to start your own business? Good luck if you don't understand basic finance before you start; you'll end up learning it the hard way. Want to know how big your student loan payments are going to be before you take out that next loan? Maybe not, but we'll show you how to calculate them anyway.

These are just a few of the ways that finance will affect your personal and business lives. Whether you want to or not, you are going to have to examine and understand financial issues, and you are going to have to make financial decisions. We want you to do so wisely, so keep reading.

CONCEPT QUESTIONS

1.1a What are the major areas in finance?

1.1b Besides wanting to pass this class, why do you need to understand finance?

1.2 BUSINESS FINANCE AND THE FINANCIAL MANAGER

Now we proceed to define business finance and the financial manager's job.

What Is Business Finance?

Imagine you were to start your own business. No matter what type of business you started, you would have to answer the following three questions in some form or another:

1. What long-term investments should you take on? That is, what lines of business will you be in, and what sorts of buildings, machinery, and equipment will you need?
2. Where will you get the long-term financing to pay for your investments? Will you bring in other owners, or will you borrow the money?
3. How will you manage your everyday financial activities, such as collecting from customers and paying suppliers?

For current issues facing CFOs, see www.cfo.com.

These are not the only questions, but they are among the most important. Business finance, broadly speaking, is the study of ways to answer these three questions. We'll be looking at each of them in the chapters ahead.

The Financial Manager

The financial management function is usually associated with a top officer of the firm, often called the chief financial officer (CFO) or vice president of finance. Figure 1.1 is a simplified organizational chart that highlights the finance activities in a large firm. As shown, the vice president of finance coordinates the activities of the treasurer and the controller. The controller's office handles cost and financial accounting, tax payments, and management information systems. The treasurer's office is responsible for managing the firm's cash and credit, its financial planning, and its capital expenditures. These treasury activities are all related to the three general questions raised above, and the chapters ahead deal primarily with these issues. Our study thus bears mostly on activities usually associated with the treasurer's office. In a smaller firm, the treasurer and controller might be the same person, and there would be only one office.

Financial Management Decisions

As our preceding discussion suggests, the financial manager must be concerned with three basic types of questions. We consider these in greater detail next.

capital budgeting
The process of planning and managing a firm's long-term investments.

Capital Budgeting The first question concerns the firm's long-term investments. The process of planning and managing a firm's long-term investments is called **capital budgeting**. In capital budgeting, the financial manager tries to identify investment opportunities that are worth more to the firm than they cost to acquire. Loosely speaking, this means that the value of the cash flow generated by an asset exceeds the cost of that asset.

Regardless of the specific investment under consideration, financial managers must be concerned with how much cash they expect to receive, when they expect to receive it, and how likely they are to receive it. Evaluating the *size, timing,* and *risk* of future cash flows is the essence of capital budgeting. In fact, whenever we evaluate a business decision, the size, timing, and risk of the cash flows will be, by far, the most important things we will consider.

Capital Structure The second question for the financial manager concerns how the firm obtains the financing it needs to support its long-term investments. A firm's **capital structure** (or financial structure) refers to the specific mixture of long-term debt and equity the firm uses to finance its operations. The financial manager has two concerns in this area. First: How much should the firm borrow? Second: What are the least expensive sources of funds for the firm?

In addition to deciding on the financing mix, the financial manager has to decide exactly how and where to raise the money. The expenses associated with raising long-term financing can be considerable, so different possibilities must be evaluated carefully. Also, businesses borrow money from a variety of lenders in a number of different ways. Choosing among lenders and among loan types is another job handled by the financial manager.

capital structure
The mixture of debt and equity maintained by a firm.

Working Capital Management The third question concerns **working capital** management. The term *working capital* refers to a firm's short-term assets, such as inventory, and its short-term liabilities, such as money owed to suppliers. Managing the firm's working capital is a day-to-day activity that ensures the firm has sufficient resources to continue its operations and avoid costly interruptions. This involves a number of activities related to the firm's receipt and disbursement of cash.

working capital
A firm's short-term assets and liabilities.

Some questions about working capital that must be answered are the following: (1) How much cash and inventory should we keep on hand? (2) Should we sell on credit to our customers? (3) How will we obtain any needed short-term financing? (4) If we borrow in

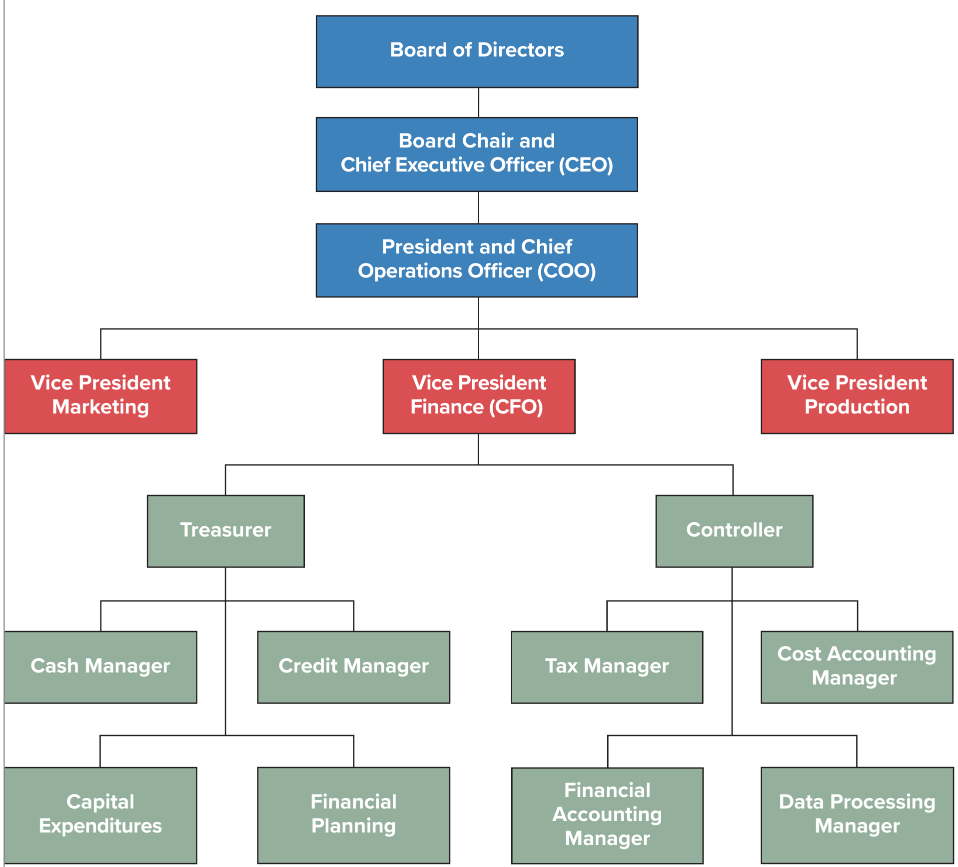


FIGURE 1.1

A simplified organizational chart
The exact titles and organization differ from company to company.

the short term, how and where should we do it? This is just a small sample of the issues that arise in managing a firm's working capital.

Conclusion The three areas of corporate financial management we have described—capital budgeting, capital structure, and working capital management—are very broad categories. Each includes a rich variety of topics, and we have indicated only a few of the questions that arise in the different areas. The chapters ahead contain greater detail.

CONCEPT QUESTIONS

1.2a What is the capital budgeting decision?

1.2b What do you call the specific mixture of long-term debt and equity that a firm chooses to use?

1.2c Into what category of financial management does cash management fall?

1.3 FORMS OF BUSINESS ORGANIZATION

Large firms in the United States, such as IBM and Apple, are almost all organized as corporations. We examine the three different legal forms of business organization—sole proprietorship, partnership, and corporation—to see why this is so.

Sole Proprietorship

sole proprietorship
A business owned by a single individual.

For more information on forms of business organization, visit www.nolo.com.

A **sole proprietorship** is a business owned by one person. This is the simplest type of business to start and is the least regulated form of organization. For this reason, there are more proprietorships than any other type of business, and many businesses that later become large corporations start out as small proprietorships.

The owner of a sole proprietorship keeps all the profits. That's the good news. The bad news is that the owner has *unlimited liability* for business debts. This means that creditors can look to the proprietor's personal assets for payment. Similarly, there is no distinction between personal and business income, so all business income is taxed as personal income.

The life of a sole proprietorship is limited to the owner's life span, and, importantly, the amount of equity that can be raised is limited to the proprietor's personal wealth. This limitation often means that the business is unable to exploit new opportunities because of insufficient capital. Ownership of a sole proprietorship may be difficult to transfer because this requires the sale of the entire business to a new owner.

Partnership

partnership
A business formed by two or more individuals or entities.

A **partnership** is similar to a proprietorship, except that there are two or more owners (partners). In a *general partnership,* all the partners share in gains or losses, and all have unlimited liability for all partnership debts, not just some particular share. The way partnership gains (and losses) are divided is described in the *partnership agreement.* This agreement can be an informal oral agreement, such as "let's start a lawn mowing business," or a lengthy, formal written document.

In a *limited partnership,* one or more *general partners* will run the business and have unlimited liability, but there will be one or more *limited partners* who do not actively participate in the business. A limited partner's liability for business debts is limited to the amount that partner contributes to the partnership. This form of organization is common in real estate ventures, for example.

The advantages and disadvantages of a partnership are basically the same as those for a proprietorship. Partnerships based on a relatively informal agreement are easy and inexpensive to form. General partners have unlimited liability for partnership debts, and the partnership terminates when a general partner wishes to sell out or dies. All income is taxed as personal income to the partners, and the amount of equity that can be raised is limited to the partners' combined wealth. Ownership by a general partner is not easily transferred because a new partnership must be formed. A limited partner's interest can be sold without dissolving the partnership, but finding a buyer may be difficult.

Because a partner in a general partnership can be held responsible for all partnership debts, having a written agreement is very important. Failure to spell out the rights and duties of the partners frequently leads to misunderstandings later on. Also, if you are a limited partner, you must not become deeply involved in business decisions unless you are willing to assume the obligations of a general partner. The reason is that if things go badly, you may be deemed to be a general partner even though you say you are a limited partner.

Based on our discussion, the primary disadvantages of sole proprietorships and partnerships as forms of business organization are (1) unlimited liability for business debts on the part of the owners, (2) limited life of the business, and (3) difficulty of transferring ownership. These three disadvantages add up to a single, central problem: The ability of such businesses to grow can be seriously limited by an inability to raise cash for investment.

Corporation

The **corporation** is the most important form (in terms of size) of business organization in the United States. A corporation is a legal "person" separate and distinct from its owners, and it has many of the rights, duties, and privileges of an actual person. Corporations can borrow money and own property, can sue and be sued, and can enter into contracts. A corporation can even be a general partner or a limited partner in a partnership, and a corporation can own stock in another corporation.

corporation
A business created as a distinct legal entity owned by one or more individuals or entities.

Not surprisingly, starting a corporation is somewhat more complicated than starting the other forms of business organization. Forming a corporation involves preparing *articles of incorporation* (or a charter) and a set of *bylaws*. The articles of incorporation must contain a number of things, including the corporation's name, its intended life (which can be forever), its business purpose, and the number of shares that can be issued. This information must normally be supplied to the state in which the firm will be incorporated. For most legal purposes, the corporation is a "resident" of that state.

The bylaws are rules describing how the corporation regulates its own existence. For example, the bylaws describe how directors are elected. The bylaws may be amended or extended from time to time by the stockholders.

In a large corporation, the stockholders and the managers are usually separate groups. The stockholders elect the board of directors, who then select the managers. Management is charged with running the corporation's affairs in the stockholders' interests. In principle, stockholders control the corporation because they elect the directors.

As a result of the separation of ownership and management, the corporate form has several advantages. Ownership (represented by shares of stock) can be readily transferred, and the life of the corporation is, therefore, not limited. The corporation borrows money in its own name. As a result, the stockholders in a corporation have limited liability for corporate debts. The most they can lose is what they have invested.

The relative ease of transferring ownership, the limited liability for business debts, and the unlimited life of the business are the reasons the corporate form is superior when it comes to raising cash. If a corporation needs new equity, it can sell new shares of stock and attract new investors. The number of owners can be huge; larger corporations have many thousands or even millions of stockholders. For example, the General Electric Company (better known as GE) has about 8.8 billion shares outstanding and 4 million shareholders.

The corporate form has a significant disadvantage. Because a corporation is a legal person, it must pay taxes. Moreover, money paid out to stockholders in the form of dividends is taxed again as income to those stockholders. This is *double taxation,* meaning that corporate profits are taxed twice: at the corporate level when they are earned and again at the personal level when they are paid out.

Today, all 50 states have enacted laws allowing for the creation of a relatively new form of business organization, the limited liability company (LLC). The goal of this entity is to operate and be taxed like a partnership but retain limited liability for owners. Thus, an LLC is essentially a hybrid of a partnership and a corporation. Although states have differing definitions for LLCs, the more important scorekeeper is the Internal Revenue Service (IRS). The IRS will consider an LLC a corporation, thereby subjecting it to double taxation, unless it meets certain specific criteria. In essence, an LLC cannot be too corporation-like, or it will be treated as one by the IRS. LLCs have become common. For example, Goldman Sachs, one of Wall Street's last remaining partnerships, decided to convert from a private partnership to an LLC (it later "went public," becoming a publicly held corporation). Large accounting firms and law firms by the score have converted to LLCs.

A Corporation by Another Name . . .

You can find the translation for any business type at www.corporateinformation.com.

The corporate form has many variations around the world. Exact laws and regulations differ, of course, but the essential features of public ownership and limited liability remain. These firms are often called *joint-stock companies, public limited companies,* or *limited liability companies.*

Table 1.1 gives the names of a few well-known international corporations, their country of origin, and a translation of the abbreviation that follows the company name.

For more about benefit corporations, check out benefitcorp.net.

Benefit Corporation As of early 2021, 37 states have enacted laws for a new type of company called a benefit corporation. A benefit corporation is for-profit, but it has three additional legal attributes: accountability, transparency, and purpose. *Accountability* refers to the fact that a benefit corporation must consider how an action will affect shareholders, employees, customers, the community, and the environment. *Transparency* means that, in addition to standard corporate reports, a benefit corporation must provide an annual report

TABLE 1.1

International corporations

Company	Country of Origin	Type of Company	Translation
Bayerische Motoren Werke (BMW) AG	Germany	Aktiengesellschaft	Corporation
Montblanc GmbH	Germany	Gesellschaft mit beschränkter Haftung	Limited liability company
Rolls-Royce PLC	United Kingdom	Public limited company	Public limited company
Shell UK Ltd.	United Kingdom	Limited	Corporation
Unilever NV	Netherlands	Naamloze Vennootschap	Limited liability company
Fiat SpA	Italy	Società per Azioni	Public limited company
Saab AB	Sweden	Aktiebolag	Joint stock company
Peugeot SA	France	Société Anonyme	Joint stock company

detailing how the company pursued a public benefit during the year, or any factors that inhibited the pursuit of this goal. Finally, *purpose* refers to the idea that a benefit corporation must provide a public benefit, either to society as a whole or to the environment.

CONCEPT QUESTIONS

1.3a What are the three forms of business organization?

1.3b What are the primary advantages and disadvantages of sole proprietorships and partnerships?

1.3c What is the difference between a general and a limited partnership?

1.3d Why is the corporate form superior when it comes to raising cash?

1.4 THE GOAL OF FINANCIAL MANAGEMENT

To study financial decision making, we first need to understand the goal of financial management. Such an understanding is important because it leads to an objective basis for making and evaluating financial decisions.

Profit Maximization

Profit maximization would probably be the most commonly cited business goal, but this is not a very precise objective. Do we mean profits this year? If so, then actions such as deferring maintenance, letting inventories run down, and other short-run, cost-cutting measures will tend to increase profits now, but these activities aren't necessarily desirable.

The goal of maximizing profits may refer to some sort of "long-run" or "average" profits, but it's unclear exactly what this means. First, do we mean something like accounting net income or earnings per share? As we will see, these numbers may have little to do with what is good or bad for the firm. Second, what do we mean by the long run? As a famous economist once remarked: "In the long run, we're all dead!" More to the point, this goal doesn't tell us the appropriate trade-off between current and future profits.

The Goal of Financial Management in a Corporation

The financial manager in a corporation makes decisions for the stockholders of the firm. Given this, instead of listing possible goals for the financial manager, we really need to answer a more fundamental question: From the stockholders' point of view, what is a good financial management decision?

If we assume stockholders buy stock because they seek to gain financially, then the answer is obvious: Good decisions increase the value of the stock, and poor decisions decrease it.

Given our observations, it follows that the financial manager acts in the shareholders' best interests by making decisions that increase the value of the stock. The appropriate goal for the financial manager in a corporation can thus be stated quite easily:

The goal of financial management is to maximize the current value per share of the existing stock.

FINANCE MATTERS

Corporate Ethics

Large companies are sometimes guilty of unethical behavior. Often, this unethical behavior takes the form of false or misleading financial statements. In one of the largest corporate fraud cases in history, energy giant Enron Corporation was forced to file for bankruptcy in December 2001 amid allegations that the company's financial statements were deliberately misleading and false. Enron's bankruptcy destroyed not only that company, but its auditor Arthur Andersen as well.

Often, unethical behavior is also illegal and can result in a jail sentence for an individual or fines for a corporation. For example, in October 2020, investment bank Goldman Sachs reached a settlement of $2.8 billion with the U.S. Department of Justice (DOJ). Goldman Sachs admitted wrongdoing in the Malaysian 1MDB scandal in which a number of individuals were responsible for embezzling from the fund, including two Goldman bankers. In response, Goldman sought clawbacks, a repayment of salary and bonuses, from several individuals. The list included $76 million from three former employees, $67 million from five former executives, including former CEO Lloyd Blankfein, and another $31 million from current executives, including CEO David Solomon.

The difference between ethical and unethical behavior can sometimes be murky. For example, many U.S. companies have relocated to Bermuda for reasons beyond the beautiful pink beaches; namely, Bermuda has no corporate income taxes. With a population of less than 65,000, the island is home to more than 13,000 international companies. Stanley Black & Decker, the well-known maker of Stanley tools, was among the U.S. corporations that considered a move to the island paradise. By doing so, Stanley estimated that it would save $30 million per year in taxes. Stanley ultimately decided against the move, but two of its rivals, Cooper and Ingersoll-Rand, did move to Bermuda. Because the goal of the corporation is to maximize shareholder wealth, this would seem like a good move, and the practice is entirely legal. But is it ethical? What are the issues?

Another corporate activity that has generated much controversy is the practice of outsourcing, or offshoring, jobs to other countries. U.S. corporations engage in this practice when labor costs in another country are substantially lower than they are domestically. Again, this is done to maximize shareholder wealth. But the ethical dilemma in this case is even trickier. Some U.S. workers do lose jobs when offshoring occurs. On the other hand, the Milken Institute estimated that every $1 spent on offshoring a service job to India generated a net value to the United States of $1.13, along with another $.33 to India. And it gets even more complicated: What about foreign companies such as BMW and Toyota that "insource" jobs by building plants in the United States? Is it unethical to outsource U.S. jobs while, at the same time, insourcing jobs from other countries?

The goal of maximizing the value of the stock avoids the problems associated with the different goals we discussed earlier. There is no ambiguity in the criterion, and there is no short-run versus long-run issue. We explicitly mean that our goal is to maximize the *current* stock value. Of course, maximizing stock value is the same thing as maximizing the market price per share.

A More General Financial Management Goal

Given our goal as stated earlier (maximize the value of the stock), an obvious question comes up: What is the appropriate goal when the firm has no traded stock? Corporations are certainly not the only type of business, and the stock in many corporations rarely changes hands, so it's difficult to say what the value per share is at any given time.

As long as we are dealing with for-profit businesses, only a slight modification is needed. The total value of the stock in a corporation is equal to the value of the owners' equity. Therefore, a more general way of stating our goal is:

Maximize the market value of the existing owners' equity.

With this goal in mind, it doesn't matter whether the business is a proprietorship, a partnership, or a corporation. For each of these, good financial decisions increase the market value of the owners' equity and poor financial decisions decrease it.

Business ethics are considered at www.business-ethics.com.

Finally, our goal does not imply that the financial manager should take illegal or unethical actions in the hope of increasing the value of the equity in the firm. What we mean is that the financial manager best serves the owners of the business by identifying goods and services that add value to the firm because they are desired and valued in the free marketplace. Our nearby *Finance Matters* box discusses some recent ethical issues and problems faced by well-known corporations.

Sarbanes-Oxley Act

In response to corporate scandals involving companies such as Enron, WorldCom, Tyco, and Adelphia, Congress enacted the Sarbanes-Oxley Act in 2002. The act, which is better known as "SOX," is intended to strengthen protection against corporate accounting fraud and financial malpractice. Key elements of SOX took effect on November 15, 2004.

To find out more about Sarbanes-Oxley, go to www.soxlaw.com.

SOX contains a number of requirements designed to ensure that companies tell the truth in their financial statements. For example, the officers of a public corporation must review and sign the annual report. They must attest that the annual report does not contain false statements or material omissions and also that the financial statements fairly represent the company's financial results. In essence, SOX makes management personally responsible for the accuracy of a company's financial statements.

Because of its extensive requirements, compliance with SOX can be very costly, which has led to some unintended results. Since its implementation, hundreds of public firms have chosen to "go dark," meaning that their shares are no longer traded in the major stock markets, in which case SOX does not apply. Most of these companies stated that their reason was to avoid the cost of compliance. Ironically, in such cases, the law had the effect of eliminating public disclosure instead of improving it.

SOX also probably has affected the number of companies going public in the United States. Recently, many U.S.-based companies have chosen to go public on the London Stock Exchange's Alternative Investment Market (AIM) instead. The cost savings can be enormous, especially for small companies. For example, Protonex Technologies, a fuel cell developer based in Southborough, Massachusetts, estimated that it costs about $1 million per year in compliance costs and mailings to stockholders to be listed on the AIM. In contrast, the annual cost to be listed on the Nasdaq would be about $3 million, with a large part of the increase due to SOX compliance costs.

CONCEPT QUESTIONS

1.4a What is the goal of financial management?

1.4b What are some shortcomings of the goal of profit maximization?

1.5 THE AGENCY PROBLEM AND CONTROL OF THE CORPORATION

We've seen that the financial manager in a corporation acts in the best interests of the stockholders by taking actions that increase the value of the firm's stock. However, we've also seen that in large corporations, ownership can be spread over a huge number of stockholders. This dispersion of ownership arguably means that management effectively controls the firm. In this case, will management necessarily act in the best interests of the stockholders?

Put another way, might not management pursue its own goals at the stockholders' expense? We briefly consider some of the arguments in this section.

Agency Relationships

The relationship between stockholders and management is called an *agency relationship*. Such a relationship exists whenever someone (the principal) hires another (the agent) to represent his or her interest. For example, you might hire someone (an agent) to sell a car that you own while you are away at school. In all such relationships, there is a possibility of conflict of interest between the principal and the agent. Such a conflict is called an **agency problem**.

agency problem
The possibility of conflict of interest between the owners and management of a firm.

Suppose you hire someone to sell your car and you agree to pay her a flat fee when she sells the car. The agent's incentive in this case is to make the sale, not necessarily to get you the best price. If you paid a commission of, say, 10 percent of the sales price instead of a flat fee, then this problem might not exist. This example illustrates that the way an agent is compensated is one factor that affects agency problems.

Management Goals

To see how management and stockholder interests might differ, imagine that a corporation is considering a new investment. The new investment is expected to favorably affect the stock price, but it is also a relatively risky venture. The owners of the firm will wish to take the investment (because the share value will rise), but management may not because there is the possibility that things will turn out badly and management jobs will be lost. If management does not take the investment, then the stockholders may lose a valuable opportunity. This is one example of an *agency cost.*

It is sometimes argued that, left to themselves, managers would tend to maximize the amount of resources over which they have control, or, more generally, business power or wealth. This goal could lead to an overemphasis on business size or growth. For example, cases where management is accused of overpaying to buy another company just to increase the size of the business or to demonstrate corporate power are not uncommon. Obviously, if overpayment does take place, such a purchase does not benefit the owners of the purchasing company.

Our discussion indicates that management may tend to overemphasize organizational survival to protect job security. Also, management may dislike outside interference, so independence and corporate self-sufficiency may be important goals.

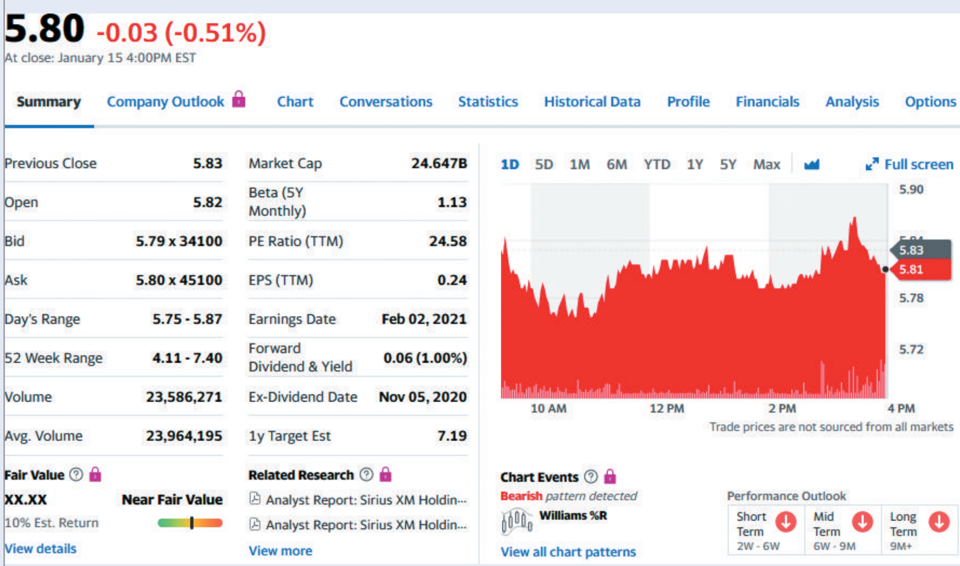
Do Managers Act in the Stockholders' Interests?

Whether managers will, in fact, act in the best interests of stockholders depends on two factors. First, how closely are management goals aligned with stockholder goals? This question relates to the way managers are compensated. Second, can management be replaced if they do not pursue stockholder goals? This issue relates to control of the firm. As we will discuss, there are a number of reasons to think that, even in the largest firms, management has a significant incentive to act in the interests of stockholders.

Managerial Compensation Management will frequently have a significant economic incentive to increase share value for two reasons. First, managerial compensation, particularly at the top, is usually tied to financial performance in general and oftentimes to share value in particular. For example, managers are frequently given the option to buy stock at a fixed price. The more the stock is worth, the more valuable is this option. The second incentive managers have relates to job prospects. Better performers within the firm

WORK THE WEB

The web is a great place to learn about individual companies, and there are a slew of sites available to help you. Try visiting finance.yahoo.com. Once there, you should see a box with "Quote Lookup." To look up a company, you need its "ticker symbol" (or ticker for short), which is a unique one-to-five-letter identifier. Or you can type in a company's name to find the ticker. For example, we typed in "SIRI," which is the ticker symbol for Sirius XM Holdings, the satellite radio provider. Here is a portion of what we found:



There is a lot of information here and a lot of other links for you to explore, so have at it. By the end of the term, we hope it all makes sense to you!

QUESTIONS

1. *Go to finance.yahoo.com and find the current stock prices for Southwest Airlines (LUV), Harley-Davidson (HOG), and International Business Machines (IBM).*
2. *Get a quote for American Express (AXP) and follow the "Statistics" link. What information is available on this link? What do "mrq," "ttm," "yoy," and "lfy" mean?*

will tend to get promoted. More generally, those managers who are successful in pursuing stockholder goals will be in greater demand in the labor market and thus command higher salaries.

In fact, managers who are successful in pursuing stockholder goals can reap enormous rewards. For example, according to *The Wall Street Journal,* Paycom founder and CEO Chad Richison's compensation for 2020 was $211 million, which is less than Kylie Jenner ($590 million), but more than Kanye West ($170 million). Information on executive compensation, along with a ton of other information, can be easily found on the web for almost any public company. Our nearby *Work the Web* box shows you how to get started.

Control of the Firm Control of the firm ultimately rests with stockholders. They elect the board of directors, who, in turn, hires and fires management. The mechanism by which unhappy stockholders can act to replace existing management is called a *proxy fight.* A proxy is the authority to vote someone else's stock. A proxy fight develops when a group solicits proxies in order to replace the existing board, and thereby replace existing management.

For example, in January 2019, activist hedge fund Elliott Management announced plans for a proxy fight with eBay. Elliott was joined by fellow activist investor Starboard Value. Elliott and Starboard wanted eBay to sell Stubhub and the company's Classifieds business. The funds eventually pushed for four seats on eBay's board. In response, eBay sold Stubhub for about $4 billion in November 2019. The proxy fight for four seats on the board ended in April 2020 when eBay hired Jamie Iannone as the new CEO of e-commerce. Even though the proxy fight had ended, eBay sold its Classifieds business in July 2020 for $9.2 billion.

Another way that management can be replaced is by takeover. Firms that are poorly managed are more attractive as acquisitions than well-managed firms because a greater profit potential exists. Thus, avoiding a takeover by another firm gives management another incentive to act in the stockholders' interests. Unhappy prominent shareholders can suggest different business strategies to a firm's top management. For example, in July 2020, Eldorado completed its $17.3 billion acquisition of Caesars Entertainment, creating the largest gambling company in the United States. And, even though the new company kept the Caesars name and ticker symbol, the management of Caesars was let go, and Eldorado management took over the merged company.

Conclusion The available theory and evidence are consistent with the view that stockholders control the firm and that stockholder wealth maximization is the relevant goal of the corporation. Even so, there will undoubtedly be times when management goals are pursued at the expense of the stockholders, at least temporarily.

Agency problems are not unique to corporations; they exist whenever there is a separation of ownership and management. This separation is most pronounced in corporations, but it certainly exists in partnerships and proprietorships as well.

Stakeholders

Our discussion thus far implies that management and stockholders are the only parties with an interest in the firm's decisions. This is an oversimplification, of course. Employees, customers, suppliers, and even the government all have a financial interest in the firm.

These various groups are called **stakeholders** in the firm. In general, a stakeholder is someone other than a stockholder or creditor who potentially has a claim on the cash flows of the firm. Such groups also will attempt to exert control over the firm, perhaps to the detriment of the owners.

stakeholder
Someone other than a stockholder or creditor who potentially has a claim on the cash flows of the firm.

CONCEPT QUESTIONS

1.5a What is an agency relationship?

1.5b What are agency problems, and how do they arise? What are agency costs?

1.5c What incentives do managers in large corporations have to maximize share value?

1.6 FINANCIAL MARKETS AND THE CORPORATION

We've seen that the primary advantages of the corporate form of organization are that ownership can be transferred more quickly and easily than with other forms and that money can be raised more readily. Both of these advantages are significantly enhanced by the existence of financial markets, and financial markets play an extremely important role in corporate finance.

Cash Flows to and from the Firm

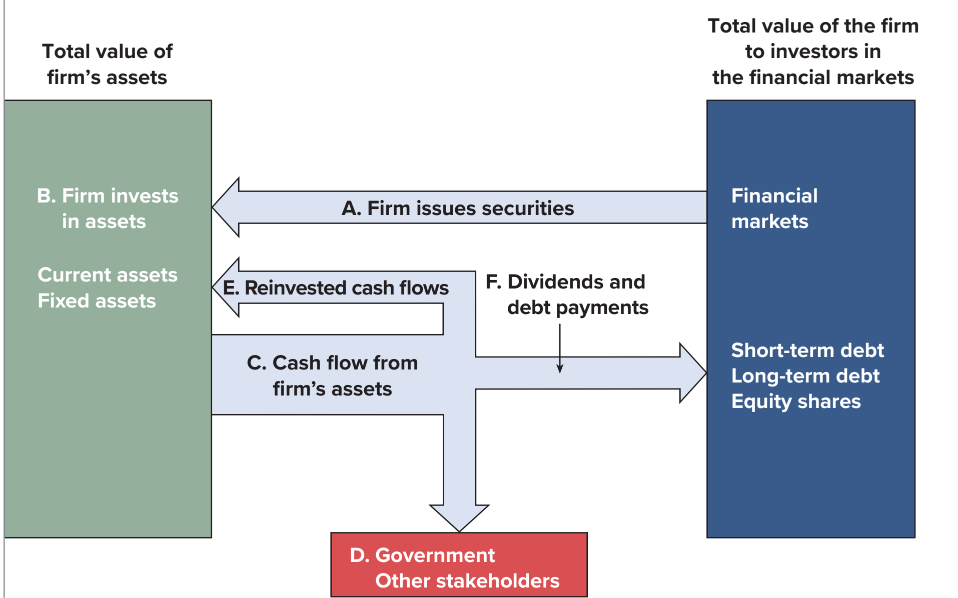
The interplay between the corporation and the financial markets is illustrated in Figure 1.2. The arrows in Figure 1.2 trace the passage of cash from the financial markets to the firm and from the firm back to the financial markets.

Suppose we start with the firm selling shares of stock and borrowing money to raise cash. Cash flows to the firm from the financial markets (A). The firm invests the cash in current and fixed (or long-term) assets (B). These assets generate some cash (C), some of which goes to pay corporate taxes (D). After taxes are paid, some of this cash flow is reinvested in the firm (E). The rest goes back to the financial markets as cash paid to creditors and shareholders (F).

A financial market, like any market, is a way of bringing buyers and sellers together. In financial markets, it is debt and equity securities that are bought and sold. Financial markets differ in detail, however. The most important differences concern the types of securities that

FIGURE 1.2

Cash flows between the firm and the financial markets



A. Firm issues securities to raise cash.
B. Firm invests in assets.
C. Firm's operations generate cash flow.
D. Cash is paid to government as taxes. Other stakeholders may receive cash.
E. Reinvested cash flows are plowed back into firm.
F. Cash is paid out to investors in the form of interest and dividends.

are traded, how trading is conducted, and who the buyers and sellers are. Some of these differences are discussed next.

Primary versus Secondary Markets

Financial markets function as both primary and secondary markets for debt and equity securities. The term *primary market* refers to the original sale of securities by governments and corporations. The *secondary markets* are those in which these securities are bought and sold after the original sale. Equities are, of course, issued solely by corporations. Debt securities are issued by both governments and corporations. In the discussion that follows, we focus on corporate securities only.

To learn more about the SEC, visit www.sec.gov.

Primary Markets In a primary market transaction, the corporation is the seller, and the transaction raises money for the corporation. Corporations engage in two types of primary market transactions: public offerings and private placements. A public offering, as the name suggests, involves selling securities to the general public, whereas a private placement is a negotiated sale involving a specific buyer.

To learn more about stock exchanges, visit www.nyse.com and www.nasdaq.com.

By law, public offerings of debt and equity must be registered with the Securities and Exchange Commission (SEC). Registration requires the firm to disclose a great deal of information before selling any securities. The accounting, legal, and selling costs of public offerings can be considerable.

Partly to avoid the various regulatory requirements and the expense of public offerings, debt and equity often are sold privately to large financial institutions such as life insurance companies or mutual funds. Such private placements do not have to be registered with the SEC and do not require the involvement of underwriters (investment banks that specialize in selling securities to the public).

Secondary Markets A secondary market transaction involves one owner or creditor selling to another. It is, therefore, the secondary markets that provide the means for transferring ownership of corporate securities. Although a corporation is only directly involved in a primary market transaction (when it sells securities to raise cash), the secondary markets are still critical to large corporations. The reason is that investors are much more willing to purchase securities in a primary market transaction when they know that those securities can be resold later if desired.

Dealer versus Auction Markets There are two kinds of secondary markets: *auction* markets and *dealer* markets. Generally speaking, dealers buy and sell for themselves, at their own risk. A car dealer, for example, buys and sells automobiles. In contrast, brokers and agents match buyers and sellers, but they do not actually own the commodity that is bought or sold. A real estate agent, for example, does not normally buy and sell houses.

Dealer markets in stocks and long-term debt are called *over-the-counter* (OTC) markets. Most trading in debt securities takes place over the counter. The expression *over the counter* refers to days of old when securities were literally bought and sold at counters in offices around the country. Today, a significant fraction of the market for stocks and almost all of the market for long-term debt have no central location; the many dealers are connected electronically.

Auction markets differ from dealer markets in two ways. First, an auction market, or exchange, has a physical location (like Wall Street). Second, in a dealer market, most of the buying and selling is done by the dealer. The primary purpose of an auction market, on the other hand, is to match those who wish to sell with those who wish to buy. Dealers play a limited role.

Trading in Corporate Securities The equity shares of most of the large firms in the United States trade in organized auction markets. The largest such market is the New York Stock Exchange (NYSE), which accounts for more than 85 percent of all the shares traded in auction markets.

In addition to the stock exchanges, there is a large OTC market for stocks. In 1971, the National Association of Securities Dealers (NASD) made available to dealers and brokers an electronic quotation system called Nasdaq (NASD Automated Quotations system, pronounced "naz-dak"). There are more companies listed on Nasdaq than there are on the NYSE, but they tend to be much smaller in size and trade less actively. There are exceptions, of course. Both Microsoft and Apple trade OTC, for example. Nonetheless, the total value of Nasdaq stocks is significantly less than the total value of NYSE stocks.

Visit the Tokyo Stock Exchange in English: www.jpx.co.jp/english/.

There are many large and important financial markets outside the United States, of course, and U.S. corporations are increasingly looking to these markets to raise cash. The Tokyo Stock Exchange and the London Stock Exchange (TSE and LSE, respectively) are two well-known examples. The fact that OTC markets have no physical location means that national borders do not present a great barrier, and there is now a huge international OTC debt market. Because of globalization, financial markets have reached the point where trading in many instruments never stops; it just travels around the world.

Visit the London Stock Exchange: www.londonstockexchange.com.

Listing Stocks that trade on an organized exchange (or market) are said to be *listed* on that exchange. In order to be listed, firms must meet certain minimum criteria concerning, for example, asset size and number of shareholders. These criteria differ for different exchanges.

The NYSE has the most stringent requirements of the stock markets in the United States. There are minimums on earnings, assets, and number and market value of shares outstanding.

CONCEPT QUESTIONS

1.6a What is a dealer market? How do dealer and auction markets differ?

1.6b What is the largest auction market in the United States?

1.6c What does OTC stand for? What is the large OTC market for stocks called?

SUMMARY AND CONCLUSIONS

This chapter has introduced you to some of the basic ideas in business finance. In it, we saw that:

1. Business finance has three main areas of concern:
   - **a.** *Capital budgeting.* What long-term investments should the firm take?
   - **b.** *Capital structure.* Where will the firm get the long-term financing to pay for its investments? In other words, what mixture of debt and equity should we use to fund our operations?
   - **c.** *Working capital management.* How should the firm manage its everyday financial activities?
2. The goal of financial management in a for-profit business is to make decisions that increase the value of the stock, or, more generally, increase the market value of the equity.

3. The corporate form of organization is superior to other forms when it comes to raising money and transferring ownership interests, but it has the significant disadvantage of double taxation.
4. There is the possibility of conflicts between stockholders and management in a large corporation. We called these conflicts agency problems and discussed how they might be controlled and reduced.

Of the topics we've discussed thus far, the most important is the goal of financial management. Throughout the text, we will be analyzing many different financial decisions, but we always ask the same question: How does the decision under consideration affect the value of the equity in the firm?

POP QUIZ!

Can you answer the following questions? If your class is using *Connect,* log on to SmartBook to see if you know the answers to these and other questions, check out the study tools, and find out what topics require additional practice!

Section 1.2 What are the three main questions to be addressed if you wanted to start your own business?

Section 1.3 What characteristics are important when considering a partnership?

Section 1.4 What does the Sarbanes-Oxley Act require of corporate officers?

Section 1.5 Who are the stakeholders in a firm?

Section 1.6 What are the defining features of a primary market?

CRITICAL THINKING AND CONCEPTS REVIEW

LO 1 **1.1 The Financial Management Decision Process** What are the three types of financial management decisions? For each type of decision, give an example of a business transaction that would be relevant.

LO 3 **1.2 Sole Proprietorships and Partnerships** What are the four primary disadvantages to the sole proprietorship and partnership forms of business organization? What benefits are there to these types of business organization as opposed to the corporate form?

LO 3 **1.3 Corporations** What is the primary disadvantage of the corporate form of organization? Name at least two of the advantages of corporate organization.

LO 3 **1.4 Corporate Finance Organization** In a large corporation, what are the two distinct groups that report to the chief financial officer? Which group is the focus of corporate finance?

LO 2 **1.5 Goal of Financial Management** What goal should always motivate the actions of the firm's financial manager?

LO 4 **1.6 Agency Problems** Who owns a corporation? Describe the process whereby the owners control the firm's management. What is the main reason that an agency relationship exists in the corporate form of organization? In this context, what kinds of problems can arise?

LO 3 **1.7 Primary versus Secondary Markets** You've probably noticed coverage in the financial press of an initial public offering (IPO) of a company's securities. The social networking company Snapchat is a relatively recent example. Is an IPO a primary market transaction or a secondary market transaction?

LO 3 **1.8 Auction versus Dealer Markets** What does it mean when we say the New York Stock Exchange is an auction market? How are auction markets different from dealer markets? What kind of market is Nasdaq?

LO 2 **1.9 Not-for-Profit Firm Goals** Suppose you were the financial manager of a not-for-profit business (a not-for-profit hospital, perhaps). What kinds of goals do you think would be appropriate?

LO 2 **1.10 Ethics and Firm Goals** Can our goal of maximizing the value of the stock conflict with other goals, such as avoiding unethical or illegal behavior? In particular, do you think subjects such as customer and employee safety, the environment, and the general good of society fit in this framework, or are they essentially ignored? Try to think of some specific scenarios to illustrate your answer.

LO 2 **1.11 International Firm Goal** Would our goal of maximizing the value of the stock be different if we were thinking about financial management in a foreign country? Why or why not?

LO 4 **1.12 Agency Problems** Suppose you own stock in a company. The current price per share is $25. Another company has just announced that it wants to buy your company and will pay $35 per share to acquire all the outstanding stock. Your company's management immediately begins fighting off this hostile bid. Is management acting in the shareholders' best interests? Why or why not?

LO 4 **1.13 Agency Problems and Corporate Ownership** Corporate ownership varies around the world. Historically, individuals have owned the majority of shares in public corporations in the United States. In Germany and Japan, however, banks, other large financial institutions, and other companies own most of the stock in public corporations. Do you think agency problems are likely to be more or less severe in Germany and Japan than in the United States? Why? In recent years, large financial institutions such as mutual funds and pension funds have become the dominant owners of stock in the United States, and these institutions are becoming more active in corporate affairs. What are the implications of this trend for agency problems and corporate control?

LO 4 **1.14 Executive Compensation** Critics have charged that compensation to top management in the United States is too high and should be cut back. For example, focusing on large corporations, in 2020, General Electric CEO Larry Culp made about $73 million and Nike CEO John Donahoe made about $54 million. Are such amounts excessive? In answering, it might be helpful to recognize that superstar athletes such as Cristiano Ronaldo, top entertainers such as Dwayne Johnson, and many others at the top of their respective fields earn at least as much, if not more.

LO 4 **1.15 Sarbanes-Oxley** In response to the Sarbanes-Oxley Act, many small firms in the United States have opted to "go dark" and delist their stock. Why might a company choose this route? What are the costs of "going dark"?

WHAT'S ON THE WEB?

1.1 Listing Requirements This chapter discussed some of the listing requirements for the NYSE and Nasdaq. Find the complete listing requirements for the NYSE at www.nyse.com and Nasdaq at www.nasdaq.com. Which has more stringent listing requirements? Why don't they have the same listing requirements?

1.2 Business Formation As you may (or may not) know, many companies incorporate in Delaware for a variety of reasons. Visit BizFilings at www.bizfilings.com to find out why. Which state has the highest fee for incorporation? For an LLC? While at the site, look at the FAQ section regarding corporations and LLCs.

CHAPTER CASE

The McGee Cake Company

In early 2016, Doc and Lyn McGee formed the McGee Cake Company. The company produced a full line of cakes, and its specialties included chess cake,* lemon pound cake, and double-iced, double-chocolate cake. The couple formed the company as an outside interest, and both continued to work at their current jobs. Doc did all the baking, and Lyn handled the marketing and distribution. With good product quality and a sound marketing plan, the company grew rapidly. In early 2021, the company was featured in a widely distributed entrepreneurial magazine. Later that year, the company was featured in *Gourmet Desserts,* a leading specialty food magazine. After the article appeared in *Gourmet Desserts,* sales exploded, and the company began receiving orders from all over the world.

*Chess cake is quite delicious and distinct from cheesecake. The origin of the name is obscure.

Because of the increased sales, Doc left his other job, followed shortly by Lyn. The company hired additional workers to meet demand. Unfortunately, the fast growth experienced by the company led to cash flow and capacity problems. The company is currently producing as many cakes as possible with the assets it owns, but demand for its cakes is still growing. Further, the company has been approached by a national supermarket chain with a proposal to put four of its cakes in all of the chain's stores, and a national restaurant chain has contacted the company about selling McGee cakes in its restaurants. The restaurant would sell the cakes without a brand name.

Doc and Lyn have operated the company as a sole proprietorship. They have approached you to help manage and direct the company's growth. Specifically, they have asked you to answer the following questions:

QUESTIONS

1. What are the advantages and disadvantages of changing the company organization from a sole proprietorship to an LLC?
2. What are the advantages and disadvantages of changing the company organization from a sole proprietorship to a corporation?
3. Ultimately, what action would you recommend the company undertake? Why?