# Fundamentals of FINANCIAL MANAGEMENT

CONCISE

9e

BRIGHAM HOUSTON

# FREQUENTLY USED SYMBOLS/ABBREVIATIONS

| | |
|---|---|
| ACP | Average collection period |
| ADR | American depository receipt |
| AFN | Additional funds needed |
| AMT | Alternative minimum tax |
| APR | Annual percentage rate |
| b | Beta coefficient, a measure of an asset's riskiness |
| $b_L$ | Levered beta |
| $b_U$ | Unlevered beta |
| BEP | Basic earning power |
| BVPS | Book value per share |
| CAPEX | Capital expenditures |
| CAPM | Capital Asset Pricing Model |
| CCC | Cash conversion cycle |
| CF | Cash flow; $CF_t$ is the cash flow in Period t |
| CV | Coefficient of variation |
| $D_p$ | Dividend of preferred stock |
| $D_t$ | Dividend in Period t |
| DCF | Discounted cash flow |
| D/E | Debt-to-equity ratio |
| DEP | Depreciation |
| $D_1/P_0$ | Expected dividend yield |
| DPS | Dividends per share |
| DRIP | Dividend reinvestment plan |
| DRP | Default risk premium |
| DSO | Days sales outstanding |
| EAR | Effective annual rate, EFF% |
| EBIT | Earnings before interest and taxes; operating income |
| EBITDA | Earnings before interest, taxes, depreciation, and amortization |
| EPS | Earnings per share |
| EVA | Economic value added |
| F | (1) Fixed operating costs |
| | (2) Flotation cost |
| FCF | Free cash flow |
| $FV_N$ | Future value for Year N |
| $FVA_N$ | Future value of an annuity for N years |
| g | Growth rate in earnings, dividends, and stock prices |
| GAAP | U.S. Generally Accepted Accounting Principles |
| $HV_N$ | Firm's horizon value at $t = N$ |
| I | Interest rate; also referred to as r |
| IFRS | International Financial Reporting Standards |
| $I_{PER}$ | Periodic interest rate |
| I/YR | Interest rate key on some calculators |
| INT | Interest payment in dollars |
| IP | Inflation premium |
| IPO | Initial public offering |
| IRR | Internal rate of return |
| LIBOR | London Interbank Offered Rate |
| LP | Liquidity premium |
| M | Maturity value of a bond |
| M/B | Market-to-book ratio |
| MIRR | Modified internal rate of return |
| MRP | Maturity risk premium |
| MVA | Market value added |
| N | Calculator key denoting number of periods |
| NOPAT | Net operating profit after taxes, EBIT(1 − T) |
| NOWC | Net operating working capital |
| NPV | Net present value |
| P | Sales price per unit of product sold |
| $P_f$ | Price of good in foreign country |
| $P_h$ | Price of good in home country |
| $P_t$ | Price of a share of stock in Period t; $P_0$ = price of the stock today |
| P/E | Price-to-earnings ratio |

| | |
|---|---|
| PMT | Payment of an annuity |
| PPP | Purchasing power parity |
| PV | Present value |
| $PVA_N$ | Present value of an annuity for N years |
| Q | Quantity produced or sold |
| $Q_{BE}$ | Break-even quantity |
| r | (1) A percentage discount rate, or cost of capital; also referred to as I |
| | (2) Nominal risk-adjusted required rate of return |
| $\bar{r}$ | "r bar," historic, or realized, rate of return |
| $\hat{r}$ | "r hat," an expected rate of return |
| $r^*$ | Real risk-free rate of return |
| $r_d$ | Before-tax cost of debt |
| $r_d(1 - T)$ | After-tax cost of debt |
| $r_e$ | Cost of new common stock (external equity) |
| $r_f$ | Interest rate in foreign country |
| $r_h$ | Interest rate in home country |
| $r_i$ | Required return for an individual firm or security |
| $r_M$ | Return on "the market," or on an "average" stock |
| $r_{NOM}$ | Nominal rate of interest; also referred to as $I_{NOM}$ |
| $r_p$ | (1) Cost of preferred stock |
| | (2) Portfolio's return |
| $r_{RF}$ | Rate of return on a risk-free security, equal to $r^* + IP$ |
| $r_s$ | (1) Cost of retained earnings |
| | (2) Required return on common stock |
| $\rho$ | Correlation coefficient; also denoted as R when using historical data |
| ROA | Return on assets |
| ROE | Return on equity |
| ROIC | Return on invested capital |
| RP | Risk premium |
| $RP_M$ | Market risk premium |
| S | (1) Sales |
| | (2) Estimated standard deviation for sample data |
| SML | Security Market Line |
| $\Sigma$ | Summation sign |
| $\sigma$ | Standard deviation |
| t | Time period |
| T | Marginal income tax rate |
| TIE | Times interest earned |
| V | (1) Variable cost per unit<br>(2) Current value of a call option |
| $V_B$ | Bond value |
| $V_p$ | Value of preferred stock |
| VC | Total variable costs |
| WACC | Weighted average cost of capital |
| $w_c$ | Percentage of common stock in capital structure |
| $w_d$ | Percentage of debt in capital structure |
| $w_p$ | Percentage of preferred stock in capital structure |
| YTC | Yield to call |
| YTM | Yield to maturity |

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CENGAGE Learning

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**Fundamentals of Financial Management: Concise, Ninth Edition**
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Internal Designer: Imbue Design/Kim Torbeck

Cover Designer: Imbue Design/Kim Torbeck

Cover Image: olaser/Getty Images

Intellectual Property Analyst: Brittani Morgan

Project Manager: Erika Mugavin



Library of Congress Control Number: 2015943331

ISBN 13: 978-1-305-63593-7

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Printed in Canada
Print Number: 01 Print Year: 2015

# Brief Contents

# Contents

# Preface

When the first edition of *Fundamentals* was published 38 years ago, we wanted to provide an introductory text that students would find interesting and easy to understand. *Fundamentals* immediately became the leading undergraduate finance text, and it has maintained that position ever since. However, over the years as *Fundamentals* got larger and larger, we heard more and more often that it was difficult to cover the entire book in a single term. These concerns led us to create *Fundamentals of Financial Management Concise* 21 years ago. When designing *Concise*, we had in mind those instructors who wanted to retain *Fundamentals'* depth and level but eliminate some less essential topics. As is the case with *Fundamentals*, our continuing goal is to produce a book and ancillary package that sets a new standard for finance textbooks.

Finance is an exciting and continually changing field. Since the last edition, many important changes have occurred within the global financial environment. In the midst of this changing environment, it is certainly an interesting time to be a finance student. In this latest edition, we highlight and analyze the events leading to these changes from a financial perspective. Although the financial environment is ever changing, the tried-and-true principles that the book has emphasized for nearly four decades are now more important than ever.

## Structure of the Book

Our target audience is a student taking his or her first, and perhaps only, finance course. Some of these students will decide to major in finance and go on to take courses in investments, money and capital markets, and advanced corporate finance. Others will choose marketing, management, or some other nonfinance business major. Still others will major in areas other than business and take finance plus a few other business courses to gain information that will help them in law, real estate, or other fields.

Our challenge has been to provide a book that serves all of these audiences well. We concluded that we should focus on the core principles of finance, including the basic topics of time value of money, risk analysis, and valuation. Moreover, we concluded that we should address these topics from two points of view: (1) that of an investor who is seeking to make intelligent investment choices and (2) that of a business manager trying to maximize the value of his or her firm's stock. Both investors and managers need to understand the same set of principles, so the core topics are important to students regardless of what they choose to do after they finish the course.

In planning the book's structure, we first listed the core topics in finance that are important to virtually everyone. Included were an overview of financial markets, methods used to estimate the cash flows that determine asset values, the time value of money, the determinants of interest rates, the basics of risk analysis, and the basics of bond and stock valuation procedures. We cover these core topics in the first nine chapters. Next, because most students in the course will probably work for a business firm, we want to show them how the core ideas are implemented in practice. Therefore, we go on to discuss cost of capital, capital budgeting, capital structure, dividend policy, working capital management, financial forecasting, and international operations.

Nonfinance majors sometimes wonder why they need to learn finance. As we have structured the book, it quickly becomes obvious to everyone why they need to understand time value, risk, markets, and valuation. Virtually all students enrolled in the basic course expect at some point to have money to invest, and they quickly realize that the knowledge gained from Chapters 1 through 9 will help them make better investment decisions. Moreover, students who plan to go into the business world soon realize that their own success requires that their firms be successful, and the topics covered in Chapters 10 through 17 will be helpful here. For example, good capital budgeting decisions require accurate forecasts from people in sales, marketing, production, and human resources, and nonfinancial people need to understand how their actions affect the firm's profits and future performance.

## Organization of the Chapters: A Valuation Focus

As we discuss in Chapter 1, in an enterprise system such as that of the United States, the primary goal of financial management is to maximize their firms' values. At the same time, we stress that managers should not do "whatever it takes" to increase the firm's stock price. Managers have a responsibility to behave ethically, and when striving to maximize value, they must abide by constraints such as not polluting the environment, not engaging in unfair labor practices, not breaking the antitrust laws, and the like. In Chapter 1, we discuss the concept of valuation, explain how it depends on future cash flows and risk, and show why value maximization is good for society in general. This valuation theme runs throughout the text.

Stock and bond values are determined in the financial markets, so an understanding of those markets is essential to anyone involved with finance. Therefore, Chapter 2 covers the major types of financial markets, the rates of return that investors have historically earned on different types of securities, and the risks inherent in these securities. This information is important for anyone working in finance, and it is also important for anyone who has or hopes to own any financial assets. In this chapter, we also highlight how this environment has changed in the aftermath of the financial crisis.

Asset values depend in a fundamental way on earnings and cash flows as reported in the accounting statements. Therefore, we review those statements in Chapter 3 and then, in Chapter 4, show how accounting data can be analyzed and used to measure how well a company has operated in the past and how well it is likely to perform in the future.

Chapter 5 covers the time value of money (TVM), perhaps the most fundamental concept in finance. The basic valuation model, which ties together cash flows, risk, and interest rates, is based on TVM concepts, and these concepts are used throughout the remainder of the book. Therefore, students should allocate plenty of time to studying Chapter 5.

Chapter 6 deals with interest rates, a key determinant of asset values. We discuss how interest rates are affected by risk, inflation, liquidity, the supply of and demand for capital in the economy, and the actions of the Federal Reserve. The discussion of interest rates leads directly to the topics of bonds in Chapter 7 and stocks in Chapters 8 and 9, where we show how these securities (and all other financial assets) are valued using the basic TVM model.

The background material provided in Chapters 1 through 9 is essential to both investors and corporate managers. These are "Finance" topics, not "Business" or "Corporate Finance" topics as those terms are commonly used. Thus, Chapters 1 through 9 concentrate on the concepts and models used to establish values, whereas Chapters 10 through 17 focus on specific actions managers can take to maximize their firms' values.

Because most business students don't plan to specialize in finance, they might think the "business finance" chapters are not particularly relevant to them. This is most decidedly not true, and in the later chapters we show that all really important business decisions involve every one of a firm's departments—marketing, accounting, production, and so on. Thus, although a topic such as capital budgeting can be thought of as a financial issue, marketing people provide inputs on likely unit sales and sales prices; manufacturing people provide inputs on costs; and so on. Moreover, capital budgeting decisions influence the size of the firm, its products, its profits, and its stock price, and those factors affect all of the firm's employees, from the CEO to the mail room staff.

## Innovations for the Ninth Edition

A great deal has happened in the financial markets and corporate America since the 8th edition was published. In this 9th edition, we have made several important changes to reflect this dynamic environment. Below, we provide a brief summary of the more significant changes.

1. Today's students are tomorrow's business and government leaders, and it is essential that they understand the key principles of finance, and the important role that financial markets and institutions have on our economy. Since the last edition, a number of key events have significantly influenced the financial markets and finance in general. Over the last few years, we have witnessed continued weakness in the economy following the global financial crisis of 2007 through 2009, the European debt crisis, Greece's continued financial difficulties, and growing unrest overseas. At the same time, the Federal Reserve's aggressive policy of quantitative easing (resulting in the injection of $4.5 trillion into the economy over a 5-year period) pushed interest rates to the lowest levels in years and is partially responsible for the dramatic run-up in the U.S. stock market that began in 2009. Throughout the 9th edition, we discuss these events and their implications for financial markets and corporate managers, and we use these examples to illustrate the importance of the key concepts covered in *Concise* for investors, businesses, and even government officials.
2. In the 9th edition, we also continue to highlight the important influences of increased globalization and changing technology. These influences have created new opportunities, but they have also generated new sources of risk for individuals and businesses. Since the last edition, we have seen, for example, Facebook, Twitter, Shake Shack, Uber, and Alibaba's initial public offerings, the rise of Bitcoin, several high-profile mergers, and the rise of corporate inversions—where U.S. companies pursue strategies to move their headquarters to lower-tax countries.
3. Instructors and students continually impress upon us the importance of having interesting and relevant real-world examples. Throughout the 9th edition, we have added several new examples where recent events help illustrate the key concepts covered in the text. We have added a number of new boxes discussing chapter concepts impacting real-world companies, such as: Chapter 2: "Initial Buzz Surrounding IPOs Doesn't Always Translate into Long-Lasting Success"; Chapter 6: "European Banks Confront the Reality of Negative Interest Rates"; Chapter 9: "Are 'Smart Beta' Funds a Smart Idea?"; and Chapter 12: "Google Puts a Time Limit on Its R&D Projects." We have also expanded and updated the many tables where we present real-world data, and we have revised the old Thomson One problems so that they can now be used with general Internet financial websites. To reflect this change, these problems are now called Taking a Closer Look. New Internet problems have been added in Chapters 6, 7, and 17. Finally, as is always the case, we have also made significant changes to many of the opening vignettes that precede each chapter.

4. We updated the tax discussion in Chapter 3 to reflect 2015 tax rates and tax law changes for tax returns due April 15, 2016. Impacts of these changes are discussed throughout the text, especially in the capital structure and dividend chapters. In addition, we have added discussion on Traditional and Roth IRAs. Finally, we added a few end-of-chapter problems on personal taxes.
5. To better reflect current market conditions, the interest rates in Section 8-4 (Relationship between Risk and Return) and in Section 9-6 (Valuing Nonconstant Growth Stocks) have been lowered, so the accompanying figures in those sections have been updated accordingly.
6. In Chapter 14, we added some current discussion on DRIPS for companies comprising the Dow Jones Industrial Average. In addition, we updated the discussion regarding the current stock repurchasing activity.
7. We updated the exchange rate data in Chapter 17 to reflect what's currently going on in the world. All figures and text discussion have been updated accordingly including "The Debt Crisis Hits Europe," "Hungry for a Big Mac?," "Measuring Country Risk," and "Investing in International Stocks" boxes.
8. Instructors and students have impressed upon us the importance of revising the end-of-chapter problems to facilitate the learning process. To this end, we have revised over 40%–50% of the end-of-chapter problems throughout the text. In addition, we revised the Integrated Cases for Chapters 8 and 9 to reflect lower returns currently existing in the market.

When revising the text, we always rely heavily on a team of reviewers who offer suggestions for making the text more readable and relevant to students. We give special thanks to these reviewers later in the preface; their comments and recommendations certainly helped us improve this 9th edition.

# Digital Solutions for the Ninth Edition

Changing technology and new ideas have had an exciting and dramatic influence on the ways we teach finance. Innovative instructors are developing and utilizing different classroom strategies, and new technology has allowed us to present key material in a more interesting and interactive fashion. As textbook authors, we think these new developments are tremendously exciting, and we have worked closely with our publisher's top team of innovative content and media developers, who have created a whole new set of revolutionary products for the 9th edition.

## MINDTAP™

MindTap™, Cengage Learning's fully online, highly personalized learning experience combines readings, multimedia activities, and assessments into a singular Learning Path. MindTap™ guides students through their course with ease and engagement with a Learning Path that includes an Interactive Chapter Reading, Problem Demonstrations, Blueprint Problems, and the Online Homework Assignment. Instructors can personalize the Learning Path for their students by customizing the robust suite of the *Concise* Ninth Edition resources and adding their own content via apps that integrate into the MindTap™ framework seamlessly with Learning Management Systems.

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Written by the authors and located within CengageNOW™, Aplia™, and MindTap™, Blueprints teach students the fundamental finance concepts and their associated building blocks—going beyond memorization. By going through the problem step by step, they reinforce foundational concepts and allow students to demonstrate their understanding of the problem-solving process and business impact of each topic. Blueprints include rich feedback and explanations, providing students with an excellent learning resource to solidify their understanding.

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Embedded throughout the new interactive eReader, finance ConceptClips present fundamental key topics to students in an entertaining and memorable way via short animated video clips. Developed by Mike Brandl of The Ohio State University, these vocabulary animations provide students with a memorable auditory and visual representation of the important terminology for the course.

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# Acknowledgments

The book reflects the efforts of a great many people, both those who worked on *Concise* and our related books in the past and those who worked specifically on this 9th edition. First, we would like to thank Dana Aberwald Clark, who worked closely with us at every stage of the revision—her assistance was absolutely invaluable. Second, Susan Whitman provided great typing and logistical support.

Our colleagues John Banko, Roy Crum, Jim Keys, Andy Naranjo, M. Nimalendran, Jay Ritter, Mike Ryngaert, Craig Tapley, and Carolyn Takeda Brown have given us many useful suggestions over the years regarding the ancillaries and many parts of the book, including the integrated cases. We also benefited from the work of Mike Ehrhardt and Phillip Daves of the University of Tennessee, who worked with us on companion books.

We would also like to thank the following professors, whose reviews and comments on this and our earlier books contributed to this edition:

Rebecca Abraham
Robert Abraham
Joe Adamo
Robert Adams
Mike Adler
Cyrus Aleseyed
Sharif Ahkam
Syed Ahmad
Ed Altman
Bruce Anderson
Ron Anderson
Tom Anderson
John Andrews
Bob Angell
Vince Apilado
Harvey Arbalaez
Kavous Ardalan
Henry Arnold
Tom Arnold
Bob Aubey
Gil Babcock
Peter Bacon
Chung Baek
Bruce Bagamery
Kent Baker
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Special thanks are due to Shirley Love, Idaho State University, who wrote some chapter boxes relating to small-business issues; to Emery Trahan and Paul Bolster, Northeastern University, for their contributions; to Dilip Shome, Virginia Polytechnic Institute, who helped greatly with the capital structure chapter; to Dave Brown and Mike Ryngaert, University of Florida, who helped us with the bankruptcy material; to Roy Crum, Andy Naranjo, and Subu Venkataraman, who worked with us on the international materials; to Scott Below, East Carolina University, who developed the website information and references; to Laurie and Stan Eakins of East Carolina, who developed the Excel tutorial materials on the website; to Larry Wolken, Texas A&M University, who offered his hard work and advice for the development of the Lecture Presentation Software; and to Christopher Buzzard who helped us develop the Excel models, the website, and the PowerPoint presentations. Finally, we also want to acknowledge the contributions of the late Chris Barry, who wrote some of the chapter boxes in earlier editions.

Finally, the Cengage Learning staff, especially Mike Reynolds, Jana Lewis, Jessica Robbe, Scott Fidler, Adele Scholtz, Brad Sullender, and Heather Mooney, helped greatly with all phases of the book's development and production.

## Errors in the Textbook

At this point, most authors make a statement such as this: "We appreciate all the help we received from the people listed above; but any remaining errors are, of course, our own responsibility." And generally there are more than enough remaining errors! Having experienced difficulties with errors ourselves, both as students and instructors, we resolved to avoid this problem in *Concise*. As a result of our detection procedures, we are convinced that few errors remain, but primarily because we want to detect any errors that may have slipped by so that we can correct them in subsequent printings, we decided to offer a reward of $10 per error to the first person who reports it to us. For the purpose of this reward, errors are defined as misspelled words, nonrounding numerical errors, incorrect statements, and any other error that inhibits comprehension. Typesetting problems such as irregular spacing and differences of opinion regarding grammatical or punctuation conventions do not qualify for this reward. Given the ever-changing nature of the World Wide Web, changes in web addresses also do not qualify as errors, although we would like to learn about them. Finally, any qualifying error that has follow-through effects is counted as two errors only. Please report any errors to Joel Houston through e-mail at Concise@joelhouston.com or by regular mail at the address below.

## Conclusion

Finance is, in a real sense, the cornerstone of the enterprise system—good financial management is vitally important to the economic health of all firms and hence to the nation and the world. Because of its importance, finance should be widely and thoroughly understood, but this is easier said than done. The field is complex, and it undergoes constant change due to shifts in economic conditions. All of this makes finance stimulating and exciting, but challenging and sometimes perplexing. We sincerely hope that this 9th Edition of *Concise* will meet its own challenge by contributing to a better understanding of our financial system.

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November 2015

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Joel F. Houston is the John B. Hall Professor of Finance at the University of Florida. He received his MA and PhD from the Wharton School at the University of Pennsylvania, and his undergraduate degree from Franklin and Marshall College. Prior to his appointment at the University of Florida, Dr. Houston was an economist at the Federal Reserve Bank of Philadelphia. His research is primarily in the areas of corporate finance and financial institutions, and his work has been published in a number of top journals including the *Journal of Finance, Journal of Financial Economics, Journal of Business, Journal of Financial and Quantitative Analysis*, and *Financial Management*. Professor Houston also currently serves as an associate editor for the *Journal of Money, Credit and Banking, The Journal of Financial Services Research*, and *The Journal of Financial Economic Policy*. Since arriving at the University of Florida in 1987, he has received 20 teaching awards and has been actively involved in both undergraduate and graduate education. In addition to co-authoring leading textbooks in financial management, Dr. Houston has participated in management education programs for the PURC/World Bank Program, Southern Company, Exelon Corporation, and Volume Services America. He enjoys playing golf, working out, and spending time with his wife (Sherry), two children (Chris and Meredith), and daughter-in-law (Renae). He is an avid sports fan who follows the Florida Gators and the Pittsburgh Steelers, Pirates, and Penguins.

part

1

# Introduction to Financial Management

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## CHAPTER

# An Overview of Financial Management

CHAPTER 1


Helen Sessions/Alamy

## Striking the Right Balance

In 1776, Adam Smith described how an "invisible hand" guides companies as they strive for profits, and that hand leads them to decisions that benefit society. Smith's insights led him to conclude that profit maximization is the right goal for a business and that the free enterprise system is best for society. But the world has changed since 1776. Firms today are much larger, they operate globally, they have thousands of employees, and they are owned by millions of stockholders. This makes us wonder if the "invisible hand" still provides reliable guidance: Should companies still try to maximize profits, or should they take a broader view and more balanced actions designed to benefit customers, employees, suppliers, and society as a whole?

Many academics and finance professionals today subscribe to the following modified version of Adam Smith's theory:

- A firm's principal financial goal should be to maximize the wealth of its stockholders, which means maximizing the value of its stock.
- Free enterprise is still the best economic system for society as a whole. Under the free enterprise framework, companies develop products and services that people want and that benefit society.
- However, some constraints are needed—firms should not be allowed to pollute the air and water, to engage in unfair employment practices, or to create monopolies that exploit consumers.

These constraints take a number of different forms. The first set of constraints is the costs that are assessed on companies if they take actions that harm society. Another set of constraints arises through the political process, where society imposes a wide range of regulations that are designed to keep companies from engaging in practices that are harmful to society. Properly imposed, these costs fairly transfer value to suffering parties and help create incentives that help prevent similar events from occurring in the future.

The recent financial crisis dramatically illustrates these points. We witnessed many Wall Street firms engaging in extremely risky activities that pushed the financial system to the brink of collapse in 2007 and 2008. Saving the financial system required a bailout of the banks and other financial companies, and that bailout imposed huge costs on taxpayers and helped push the economy into a deep recession. Apart from the huge costs imposed on society, the financial firms also paid a heavy price—a number of leading financial institutions saw a huge drop in their stock price, some failed and went out of business, and many Wall Street executives lost their jobs.

Arguably, these costs are not enough to prevent another financial crisis from occurring. Many maintain that the events surrounding the financial crisis illustrate that markets don't always work the way they should and that there is a need for stronger regulation of the financial sector. For example, in his recent books, Nobel Laureate Joseph Stiglitz makes a strong case for enhanced regulation. At the same time, others with a different political persuasion continue to express concerns about the costs of excessive regulation.

Beyond the financial crisis, there is a broader question of whether laws and regulations are enough to compel firms to act in society's interest. An increasing number of companies continue to recognize the need to maximize shareholder value, but they also see their mission as more than just making money for shareholders. Google's well-known corporate motto is "Don't Be Evil." Consistent with this mission, the company has its own in-house foundation that has made large investments in a wide range of philanthropic ventures worldwide.

Looking at another industry, Chipotle Mexican Grill has sought to balance societal and shareholder objectives. In the first paragraph of the company's letter to shareholders in its 2013 annual report, the company's co-CEOs Steve Ells and Monty Moran stated the company's mission:

> Chipotle's mission is to change the way people think about and eat fast food. At the heart of this lofty goal are two deeply held commitments. Our unique food culture results in our constant effort to find higher quality, more sustainable ingredients, along with better cooking techniques to prepare and serve the best tasting food possible. And our special people culture, which focuses on attracting and building teams of top performers empowered to achieve high standards, allows us to create an extraordinary dining experience for our customers and internally develop our future leaders to sustain our growth. Not coincidentally, these characteristics of our business are the primary drivers of our success and helped us deliver very strong results in 2013.

Later in the letter, Ells and Moran highlight the company's mission to provide "Food with Integrity"—this refers in part to their efforts to rely on organic food and sources where animals are treated respectfully. They also emphasize the high value they place on their employees and the efforts they impose to create a desirable work environment.

Over the past several years, consumers and investors alike have flocked to Chipotle. Between 2010 and 2014, the company's sales more than doubled and they now exceed $4 billion. Likewise, the company's stock price went from around $90 a share in early 2010 to above $700 a share in January 2015.

However, there have been some recent bumps in the road. Chipotle's stock price fell nearly 7% in February 2015, after the company reported weaker than expected sales growth for the fourth quarter of 2014. Some investors are also concerned that higher food prices and the company's push for quality ingredients have driven up their costs of production. So far, at least, Chipotle has been able to pass along some (but not all) of these costs to their customers in the form of higher prices.

Despite this recent setback, the company's outstanding performance during the last few years suggests that Chipotle's efforts to improve the welfare of its customers, employees, and surrounding communities has not compromised its ability to also increase shareholder value. Realistically, however, there will still be cases where companies face conflicts between their various constituencies—for example, a company may enhance shareholder value by laying off some workers, or a change in policy may improve the environment but reduce shareholder value. In these instances, managers have to balance these competing interests and different managers will clearly make different choices. At the end of the day, all companies struggle to find the right balance. Enlightened managers recognize that there is more to life than money, but it often takes money to do good things.

Sources: Kevin J. Delaney, "Google: From 'Don't Be Evil' to How to Do Good," *The Wall Street Journal*, January 18, 2008, pp. B1–B2; Joseph E. Stiglitz, *FreeFall: America, Free Markets, and the Sinking of the World Economy* (New York: W.W. Norton & Company, 2010); Joseph E. Stiglitz, *The Price of Inequality* (New York: W.W. Norton & Company, 2012); Spencer Jakab, "Ahead of the Tape: Chipotle Is an Expensive Burrito," *The Wall Street Journal* (online.wsj.com), February 2, 2015; and Chipotle Mexican Grill 2013 Annual Report and Proxy Statement (ir.chipotle.com/phoenix.zhtml?c=194775&p=irol-reportsAnnual).

## PUTTING THINGS IN PERSPECTIVE

**This chapter will give you an idea of what financial management is all about. We begin the chapter by describing how finance is related to the overall business environment, by pointing out that finance prepares students for jobs in different fields of business, and by discussing the different forms of business organization. For corporations, management's goal should be to maximize shareholder wealth, which means maximizing the value of the stock. When we say "maximizing the value of the stock," we mean the "true, long-run value," which may be different from the current stock price. In the chapter, we discuss how firms must provide the right incentives for managers to focus on long-run value maximization. Good managers understand the importance of ethics, and they recognize that maximizing long-run value is consistent with being socially responsible.**

**When you finish this chapter, you should be able to:**

- **Explain the role of finance and the different types of jobs in finance.**
- **Identify the advantages and disadvantages of different forms of business organization.**
- **Explain the links between stock price, intrinsic value, and executive compensation.**
- **Identify the potential conflicts that arise within the firm between stockholders and managers and between stockholders and bondholders, and discuss the techniques that firms can use to mitigate these potential conflicts.**
- **Discuss the importance of business ethics and the consequences of unethical behavior.**

# 1-1 What Is Finance?

Finance is defined by *Webster's Dictionary* as "the system that includes the circulation of money, the granting of credit, the making of investments, and the provision of banking facilities." Finance has many facets, which makes it difficult to provide one concise definition. The discussion in this section will give you an idea of what finance professionals do and what you might do if you enter the finance field after you graduate.

## 1-1A AREAS OF FINANCE

Finance as taught in universities is generally divided into three areas: (1) financial management, (2) capital markets, and (3) investments.

*Financial management,* also called corporate finance, focuses on decisions relating to how much and what types of assets to acquire, how to raise the capital needed to purchase assets, and how to run the firm so as to maximize its value. The same principles apply to both for-profit and not-for-profit organizations; and as the title suggests, much of this book is concerned with financial management.

*Capital markets* relate to the markets where interest rates, along with stock and bond prices, are determined. Also studied here are the financial institutions that supply capital to businesses. Banks, investment banks, stockbrokers, mutual funds, insurance companies, and the like bring together "savers" who have money to invest and businesses, individuals, and other entities that need capital for various purposes. Governmental organizations such as the Federal Reserve System, which regulates banks and controls the supply of money, and the Securities and Exchange Commission (SEC), which regulates the trading of stocks and bonds in public markets, are also studied as part of capital markets.

*Investments* relate to decisions concerning stocks and bonds and include a number of activities: (1) *Security analysis* deals with finding the proper values of individual securities (i.e., stocks and bonds). (2) *Portfolio theory* deals with the best way to structure portfolios, or "baskets," of stocks and bonds. Rational investors want to hold diversified portfolios in order to limit risks, so choosing a properly balanced portfolio is an important issue for any investor. (3) *Market analysis* deals with the issue of whether stock and bond markets at any given time are "too high," "too low," or "about right." Included in market analysis is *behavioral finance*, where investor psychology is examined in an effort to determine whether stock prices have been bid up to unreasonable heights in a speculative bubble or driven down to unreasonable lows in a fit of irrational pessimism.

Although we separate these three areas, they are closely interconnected. Banking is studied under capital markets, but a bank lending officer evaluating a business' loan request must understand corporate finance to make a sound decision. Similarly, a corporate treasurer negotiating with a banker must understand banking if the treasurer is to borrow on "reasonable" terms. Moreover, a security analyst trying to determine a stock's true value must understand corporate finance and capital markets to do his or her job. In addition, financial decisions of all types depend on the level of interest rates; so all people in corporate finance, investments, and banking must know something about interest rates and the way they are determined. Because of these interdependencies, we cover all three areas in this book.

## 1-1B FINANCE WITHIN AN ORGANIZATION

Most businesses and not-for-profit organizations have an organization chart similar to the one shown in Figure 1.1. The board of directors is the top governing body, and the chairperson of the board is generally the highest-ranking individual. The CEO comes next, but note that the chairperson of the board often also serves as the CEO. Below the CEO comes the chief operating officer (COO), who is often also designated as a firm's president. The COO directs the firm's operations, which include marketing, manufacturing, sales, and other operating departments. The chief financial officer (CFO), who is generally a senior vice president and the third-ranking officer, is in charge of accounting, finance, credit policy, decisions regarding asset acquisitions, and investor relations, which involves communications with stockholders and the press.

*The duties of the CFO have broadened over the years. CFO magazine's online service, **cfo.com**, is an excellent source of timely finance articles intended to help the CFO manage those new responsibilities.*

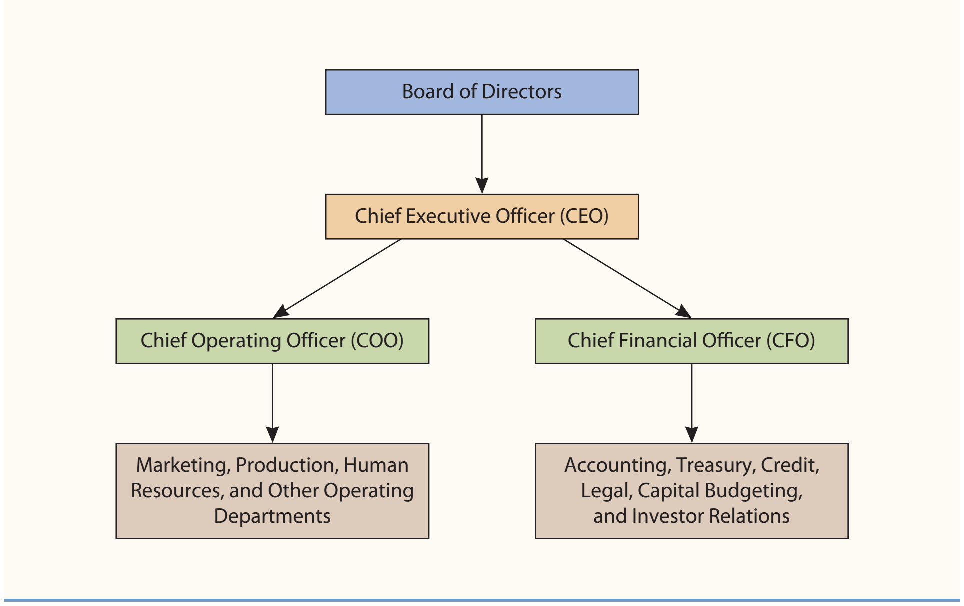
If the firm is publicly owned, the CEO and the CFO must both certify to the SEC that reports released to stockholders, and especially the annual report, are accurate. If inaccuracies later emerge, the CEO and the CFO could be fined or even jailed. This requirement was instituted in 2002 as a part of the **Sarbanes-Oxley Act**. The Act was passed by Congress in the wake of a series of corporate scandals involving now-defunct companies such as Enron and WorldCom, where investors, workers, and suppliers lost billions of dollars due to false information released by those companies.

***Sarbanes-Oxley Act***
A law passed by Congress that requires the CEO and CFO to certify that their firm's financial statements are accurate.

## 1-1C FINANCE VERSUS ECONOMICS AND ACCOUNTING

Finance, as we know it today, grew out of economics and accounting. Economists developed the notion that an asset's value is based on the future cash flows the asset will provide, and accountants provided information regarding the likely size of those cash flows. People who work in finance need knowledge of both economics and accounting. Figure 1.1 illustrates that in the modern corporation, the accounting

**FIGURE 1.1** Finance within the Organization




department typically falls under the control of the CFO. This further illustrates the link among finance, economics, and accounting.

## Self*Test*

What three areas of finance does this book cover? Are these areas independent of one another, or are they interrelated in the sense that someone working in one area should know something about each of the other areas? Explain.

Who is the CFO, and where does this individual fit into the corporate hierarchy? What are some of his or her responsibilities?

Does it make sense for not-for-profit organizations such as hospitals and universities to have CFOs? Why or why not?

What is the relationship among economics, finance, and accounting?

## 1-2 Jobs in Finance

*To find information about different finance careers, go to* ***allbusinessschools.com/business-careers/finance/job-description****. This website provides information about different finance areas.*

Finance prepares students for jobs in banking, investments, insurance, corporations, and government. Accounting students need to know marketing, management, and human resources; they also need to understand finance, for it affects decisions in all those areas. For example, marketing people propose advertising programs, but those programs are examined by finance people to judge the effects of the advertising on the firm's profitability. So to be effective in marketing, one needs to have a basic knowledge of finance. The same holds for management—indeed, most important management decisions are evaluated in terms of their effects on the firm's value.

It is also worth noting that finance is important to individuals regardless of their jobs. Some years ago most employees received pensions from their employers upon retirement, so managing one's personal investments was not critically important. That's no longer true. Most firms today provide "defined contribution" pension plans, where each year the company puts a specified amount of money into an account that belongs to the employee. The employee must decide how those funds are to be invested—how much should be divided among stocks, bonds, or money funds—and how much risk they're willing to take with their stock and bond investments. These decisions have a major effect on people's lives, and the concepts covered in this book can improve decision-making skills.

***efinancialcareers.com*** *provides finance career news and advice including information on who's hiring in finance and accounting fields.*

## 1-3 Forms of Business Organization

The basics of financial management are the same for all businesses, large or small, regardless of how they are organized. Still, a firm's legal structure affects its operations and thus should be recognized. There are four main forms of business organizations: (1) proprietorships, (2) partnerships, (3) corporations, and (4) limited liability companies (LLCs) and limited liability partnerships (LLPs). In terms of numbers, most businesses are proprietorships. However, based on the dollar value of sales, more than 80% of all business is done by corporations.[1] Because corporations conduct the most business and because most successful businesses eventually convert to corporations, we focus on them in this book. Still, it is important to understand the legal differences between types of firms.

***Proprietorship***
An unincorporated business owned by one individual.

A **proprietorship** is an unincorporated business owned by one individual. Going into business as a sole proprietor is easy—a person begins business operations. Proprietorships have three important advantages: (1) They are easy and inexpensive to form. (2) They are subject to few government regulations. (3) They are subject to lower income taxes than are corporations. However, proprietorships also have three important limitations: (1) Proprietors have unlimited personal liability for the business' debts, so they can lose more than the amount of money they invested in the company. You might invest $10,000 to start a business but be sued for $1 million if, during company time, one of your employees runs over someone with a car. (2) The life of the business is limited to the life of the individual who created it; and to bring in new equity, investors require a change in the structure of the business. (3) Because of the first two points, proprietorships have difficulty obtaining large sums of capital; hence, proprietorships are used primarily for small businesses. However, businesses are frequently started as proprietorships and then converted to corporations when their growth results in the disadvantages outweighing the advantages.

***Partnership***
An unincorporated business owned by two or more persons.

A **partnership** is a legal arrangement between two or more people who decide to do business together. Partnerships are similar to proprietorships in that they can be established relatively easily and inexpensively. Moreover, the firm's income is allocated on a pro rata basis to the partners and is taxed on an individual basis. This allows the firm to avoid the corporate income tax. However, all of the partners are generally subject to unlimited personal liability, which means that if a partnership goes bankrupt and any partner is unable to meet his or her pro rata share of the firm's liabilities, the remaining partners will be responsible for making good on the unsatisfied claims. Thus, the actions of a Texas partner can bring ruin to a millionaire New York partner who had nothing to do with the actions that led to the downfall of the company. Unlimited liability makes it difficult for partnerships to raise large amounts of capital.[2]

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[1]Refer to *ProQuest Statistical Abstract of the United States: 2015*, Table 762: Number of Tax Returns, Receipts, and Net Income by Type of Business: 1990 to 2011, p. 515.

[2]Originally, there were just straightforward partnerships; but over the years, lawyers have created a number of variations. We leave the variations to courses on business law, but we note that the variations are generally designed to limit the liabilities of some of the partners. For example, a *limited partnership* has a general partner, who has unlimited liability, and one or more limited partners, whose liability is limited to the amount of their investment. This sounds great from the standpoint of limited liability; but the limited partners must cede sole control to the general partner, which means that they have almost no say in the way the firm is managed. With a corporation, the owners (stockholders) have limited liability, but they also have the right to vote and thus change management if they think that a change is in order. Note too that LLCs and LLPs, discussed later in this section, are increasingly used in lieu of partnerships.

***Corporation***
A legal entity created by a state, separate and distinct from its owners and managers, having unlimited life, easy transferability of ownership, and limited liability.

A **corporation** is a legal entity created by a state, and it is separate and distinct from its owners and managers. It is this separation that limits stockholders' losses to the amount they invested in the firm—the corporation can lose all of its money, but its owners can lose only the funds that they invested in the company. Corporations also have unlimited lives, and it is easier to transfer shares of stock in a corporation than one's interest in an unincorporated business. These factors make it much easier for corporations to raise the capital necessary to operate large businesses. Thus, companies such as Hewlett-Packard and Microsoft generally begin as proprietorships or partnerships, but at some point they find it advantageous to become a corporation.

***S Corporations***
A special designation that allows small businesses that meet qualifications to be taxed as if they were a proprietorship or a partnership rather than a corporation.

A major drawback to corporations is taxes. Most corporations' earnings are subject to double taxation—the corporation's earnings are taxed; and then when its after-tax earnings are paid out as dividends, those earnings are taxed again as personal income to the stockholders. However, as an aid to small businesses, Congress created **S corporations**, which are taxed as if they were proprietorships or partnerships; thus, they are exempt from the corporate income tax. To qualify for S corporation status, a firm can have no more than 100 stockholders, which limits their use to relatively small, privately owned firms. Larger corporations are known as *C corporations.* The vast majority of small corporations elect S status and retain that status until they decide to sell stock to the public, at which time they become C corporations.

***Limited Liability Company (LLC)***
A popular type of organization that is a hybrid between a partnership and a corporation.

***Limited Liability Partnership (LLP)***
Similar to an LLC but used for professional firms in the fields of accounting, law, and architecture. It provides personal asset protection from business debts and liabilities but is taxed as a partnership.

A **limited liability company (LLC)** is a popular type of organization that is a hybrid between a partnership and a corporation. A **limited liability partnership (LLP)** is similar to an LLC. LLPs are used for professional firms in the fields of accounting, law, and architecture, while LLCs are used by other businesses. Similar to corporations, LLCs and LLPs provide limited liability protection, but they are taxed as partnerships. Further, unlike limited partnerships, where the general partner has full control of the business, the investors in an LLC or LLP have votes in proportion to their ownership interest. LLCs and LLPs have been gaining in popularity in recent years, but large companies still find it advantageous to be C corporations because of the advantages in raising capital to support growth. LLCs/LLPs were dreamed up by lawyers; they are often structured in very complicated ways, and their legal protections often vary by state. So, it is necessary to hire a good lawyer when establishing one.

When deciding on its form of organization, a firm must trade off the advantages of incorporation against a possibly higher tax burden. However, for the following reasons, the value of any business other than a relatively small one will probably be maximized if it is organized as a corporation:

1. Limited liability reduces the risks borne by investors; and other things held constant, the lower the firm's risk, the higher its value.
2. A firm's value is dependent on its growth opportunities, which are dependent on its ability to attract capital. Because corporations can attract capital more easily than other types of businesses, they are better able to take advantage of growth opportunities.
3. The value of an asset also depends on its liquidity, which means the time and effort it takes to sell the asset for cash at a fair market value. Because the stock of a corporation is easier to transfer to a potential buyer than is an interest in a proprietorship or partnership, and because more investors are willing to invest in stocks than in partnerships (with their potential unlimited liability), a corporate investment is relatively liquid. This too enhances the value of a corporation.

**Self*Test***

What are the key differences among proprietorships, partnerships, and corporations?

How are LLCs and LLPs related to the other forms of organization?

What is an S corporation, and what is its advantage over a C corporation? Why don't firms such as IBM, GE, and Microsoft choose S corporation status?

What are some reasons why the value of a business other than a small one is generally maximized when it is organized as a corporation?

Suppose you are relatively wealthy and are looking for a potential investment. You do not plan to be active in the business. Would you be more interested in investing in a partnership or in a corporation? Why?

## 1-4 The Main Financial Goal: Creating Value for Investors

In public corporations, managers and employees work on behalf of the shareholders who own the business, and therefore they have an obligation to pursue policies that promote stockholder value. While many companies focus on maximizing a broad range of financial objectives, such as growth, earnings per share, and market share, these goals should not take precedence over the main financial goal, which is to create value for investors. Keep in mind that a company's stockholders are not just an abstract group—they represent individuals and organizations who have chosen to invest their hard-earned cash into the company and who are looking for a return on their investment in order to meet their long-term financial goals, which might be saving for retirement, a new home, or a child's education.

If a manager is to maximize stockholder wealth, he or she must know how that wealth is determined. Throughout this book, we shall see that the value of any asset is the present value of the stream of cash flows that the asset provides to its owners over time. We discuss stock valuation in depth in Chapter 9, where we see that stock prices are based on cash flows expected in future years, not just in the current year. Thus, stock price maximization requires us to take a long-run view of operations. At the same time, managerial actions that affect a company's value may not immediately be reflected in the company's stock price.

### 1-4A DETERMINANTS OF VALUE

Figure 1.2 illustrates the situation. The top box indicates that managerial actions, combined with the economy, taxes, and political conditions, influence the level and riskiness of the company's future cash flows, which ultimately determine the company's stock price. As you might expect, investors like higher expected cash flows, but they dislike risk; so the larger the expected cash flows and the lower the perceived risk, the higher the stock's price.

The second row of boxes differentiates what we call "true" expected cash flows and "true" risk from "perceived" cash flows and "perceived" risk. By "true," we mean the cash flows and risk that investors would expect if they had all of the information that existed about a company. "Perceived" means what investors expect, given the limited information they have. To illustrate, in early 2001, investors had information that caused them to think Enron was highly profitable and would enjoy high and rising future profits. They also thought that actual results would be close to