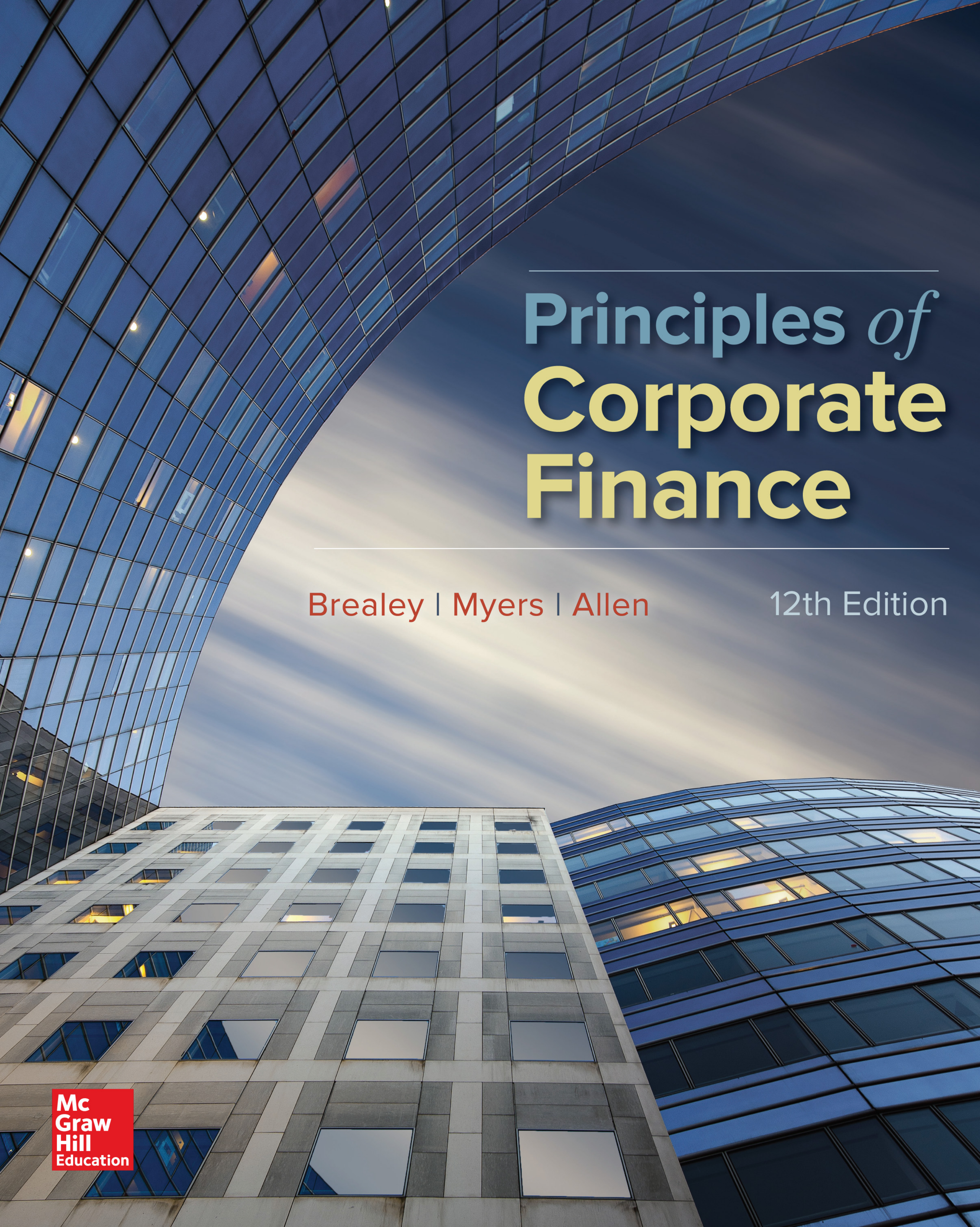

Principles *of* Corporate Finance

Brealey | Myers | Allen

12th Edition

McGraw Hill Education

Principles *of* Corporate Finance

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Principles *of* Corporate Finance

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PRINCIPLES OF CORPORATE FINANCE, TWELFTH EDITION

Published by McGraw-Hill Education, 2 Penn Plaza, New York, NY 10121.

This book is printed on acid-free paper.

1 2 3 4 5 6 7 8 9 0 DOW/DOW 1 0 9 8 7 6

ISBN 978-1-259-14438-7
MHID 1-259-14438-0

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Compositor: *SPi Global*
Printer: *R. R. Donnelley*

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Library of Congress Cataloging-in-Publication Data

Brealey, Richard A., author.
Principles of corporate finance / Richard A. Brealey, Stewart C. Myers, Franklin Allen. — Twelfth edition.
pages cm
ISBN 978-1-259-14438-7 (alk. paper)
1. Corporations—Finance. I. Myers, Stewart C., author. II. Allen, Franklin, 1956- author. III. Title.
HG4026.B667 2017
658.15—dc23 2015025071

www.mhhe.com

For Maureen McGuire Myers
1941–2014

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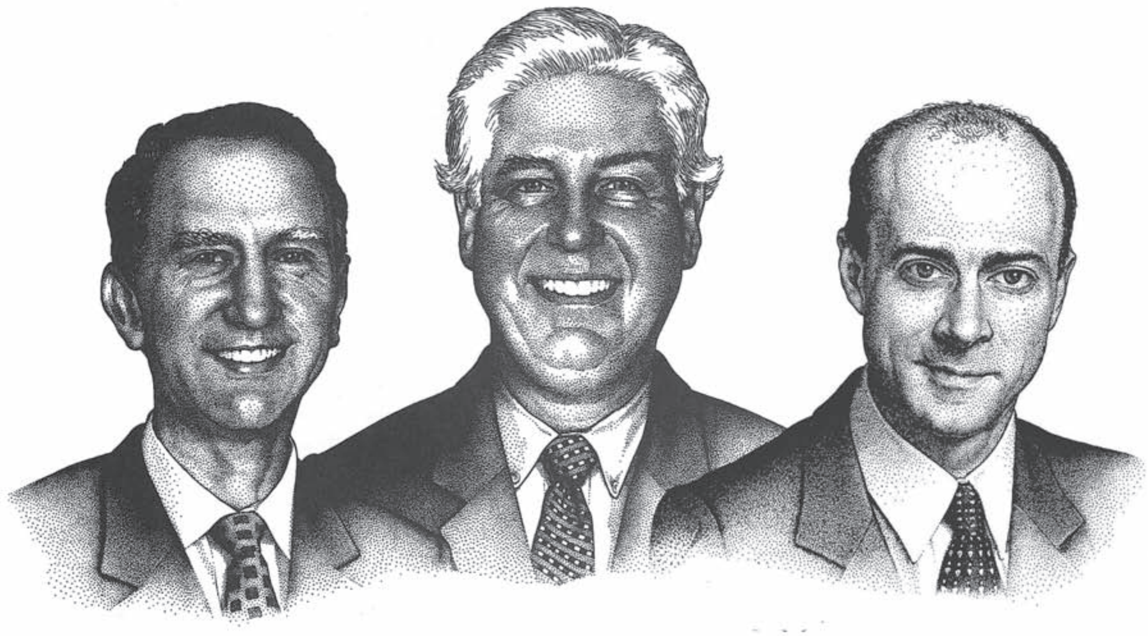

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Preface

This book describes the theory and practice of corporate finance. We hardly need to explain why financial managers have to master the practical aspects of their job, but we should spell out why down-to-earth managers need to bother with theory.

Managers learn from experience how to cope with routine problems. But the best managers are also able to respond to change. To do so you need more than time-honored rules of thumb; you must understand *why* companies and financial markets behave the way they do. In other words, you need a *theory* of finance.

Does that sound intimidating? It shouldn't. Good theory helps you to grasp what is going on in the world around you. It helps you to ask the right questions when times change and new problems need to be analyzed. It also tells you which things you do *not* need to worry about. Throughout this book we show how managers use financial theory to solve practical problems.

Of course, the theory presented in this book is not perfect and complete—no theory is. There are some famous controversies where financial economists cannot agree. We have not glossed over these disagreements. We set out the arguments for each side and tell you where we stand.

Much of this book is concerned with understanding what financial managers do and why. But we also say what financial managers *should* do to increase company value. Where theory suggests that financial managers are making mistakes, we say so, while admitting that there may be hidden reasons for their actions. In brief, we have tried to be fair but to pull no punches.

This book may be your first view of the world of modern finance theory. If so, you will read first for new ideas, for an understanding of how finance theory translates into practice, and occasionally, we hope, for entertainment. But eventually you will be in a position to make financial decisions, not just study them. At that point you can turn to this book as a reference and guide.

Changes in the Twelfth Edition

We are proud of the success of previous editions of *Principles,* and we have done our best to make the twelfth edition even better.

Users of previous editions of this book will not find dramatic changes in either the material or the ordering of topics, but throughout we have tried to make the book more up-to-date and easier to read. In many cases, the changes consist of some updated data here and a new example there. Often these additions reflect some recent development in the financial markets or company practice. For instance, you will find brief references to peer-to-peer lending (Chapter 14), crowdfunding (Chapter 15), and tax inversion (Chapter 31).

In other cases, we have removed clutter that has accumulated over successive editions. For example, we have pruned our discussion of market efficiency in Chapter 13, both to make it simpler and also more up-to-date. Behavioral economists often stress the importance of investor sentiment in determining stock prices. We have therefore expanded our discussion of behavioral finance to cover the role of sentiment, which we illustrate with a chart of the varying levels of investor optimism and pessimism. The discussions of short-term financial planning and working capital in Chapters 29 and 30 provide another instance where some rewriting has helped to simplify and remove overlap.

Some important topics get more emphasis than in previous editions. For example, recent events have highlighted the need for ethical behavior. We therefore expanded our discussion of ethical issues in Chapter 1. There is a tendency to focus on blatantly illegal activities as examples of unethical behavior, but for most companies the difficult and important decisions are those that involve gray areas. So we illustrate with a discussion of three gray areas—aggressive tax avoidance, asset stripping, and short selling. We also highlight a key question: Does unethical activity simply result from a few bad apples, or is it more likely the result of a business culture that condones poor behavior?

Another issue that deserved more emphasis is hidden leverage. We introduce this topic in Chapter 14. We return to it in Chapter 17, with the example of Reeby Sports' equipment purchase and a new mini-case, and again in Chapters 18 and 22, when we discuss the leverage created by growth options.

In the last edition, we added digital extensions through our Beyond the Page features, or apps as we call them. This extra material can allow us to escape from some of the constraints of the printed page by providing more explanation for readers who need it and additional material for those who would like to dig deeper. The Beyond the Page features include extra examples and spreadsheet programs, as well as some interesting anecdotes.

There are now over 150 of these apps, including many new ones in this edition. They are all seamlessly available with a click on the e-versions of the book, but they are also readily accessible from the traditional hard copy of the text through the shortcut URLs. Check out **mhhe.com/brealey12e** to learn more.

Examples of these applications include:

- **Chapter 2** Do you need to learn how to use a financial calculator? The Beyond the Page financial calculator application shows how to do so.
- **Chapter 3** Would you like to calculate a bond's duration, see how it predicts the effect of small interest rate changes on bond price, calculate the duration of a common stock, or learn how to measure convexity? The duration application for Figure 3.2 allows you to do so.
- **Chapter 5** Want more practice in valuing annuities? There is an application that provides worked examples and hands-on practice.
- **Chapter 9** How about measuring the betas of the Fama-French three-factor model for U.S. stocks? The Beyond the Page beta estimation application does this.
- **Chapter 14** Ever wondered why Google split its stock into A and C shares? An app provides the answer.
- **Chapter 15** There was not space in the chapter to include a real IPO prospectus, but you can go Beyond the Page to view Twitter's prospectus.
- **Chapter 19** The book briefly describes the flow-to-equity method for valuing businesses, but using the method can be tricky. We provide an application that guides you through the procedure.
- **Chapter 20** The Black-Scholes Beyond the Page application provides an option calculator. It also shows how to estimate the option's sensitivity to changes in the inputs and how to measure an option's risk.
- **Chapter 28** Would you like to view the most recent financial statements for different U.S. companies and calculate their financial ratios? There is an application that will do this for you.

We believe that the opportunity to add additional content and applications such as these will increasingly widen the type of material that can be made available and help the reader to decide how deeply he or she wishes to explore a topic.

We realize the importance that instructors place on having access to a comprehensive and accurate set of questions and answers. Therefore, much of the effort in creating this new edition has gone into improving the set of assignments and ensuring that the answers to these assignments are error-free. We have added to the end-of-chapter questions in the text, but the principal additions are available online through McGraw-Hill's Connect.

Making Learning Easier

Each chapter of the book includes an introductory preview, a summary, and an annotated list of suggested further reading. The list of possible candidates for further reading is now voluminous. Rather than trying to include every important article, we largely list survey articles or general books. We give more specific references in footnotes.

Each chapter is followed by a set of basic problems, intermediate problems on both numerical and conceptual topics, and a few challenge problems. Answers to the odd-numbered basic problems appear in the Appendix at the end of the book.

We included a Finance on the Web section in chapters where it makes sense to do so. This section now houses a number of Web Projects, along with new Data Analysis problems. These exercises seek to familiarize the reader with some useful websites and to explain how to download and process data from the Web.

The book also contains 13 end-of-chapter Mini-Cases. These include specific questions to guide the case analyses. Answers to the mini-cases are available to instructors on the book's website.

Spreadsheet programs such as Excel are tailor-made for many financial calculations. Several chapters include boxes that introduce the most useful financial functions and provide some short practice questions. We show how to use the Excel function key to locate the function and then enter the data. We think that this approach is much simpler than trying to remember the formula for each function.

We conclude the book with a glossary of financial terms.

The 34 chapters in this book are divided into 11 parts. Parts 1 to 3 cover valuation and capital investment decisions, including portfolio theory, asset pricing models, and the cost of capital. Parts 4 to 8 cover payout policy, capital structure, options (including real options), corporate debt, and risk management. Part 9 covers financial analysis, planning, and working-capital management. Part 10 covers mergers and acquisitions, corporate restructuring, and corporate governance around the world. Part 11 concludes.

We realize that instructors will wish to select topics and may prefer a different sequence. We have therefore written chapters so that topics can be introduced in several logical orders. For example, there should be no difficulty in reading the chapters on financial analysis and planning before the chapters on valuation and capital investment.

Acknowledgments

We have a long list of people to thank for their helpful criticism of earlier editions and for assistance in preparing this one. They include Faiza Arshad, Aleijda de Cazenove Balsan, Kedran Garrison, Robert Pindyck, Donna Cheung, and Gretchen Slemmons at MIT; Elroy Dimson, Paul Marsh, Mike Staunton, and Stefania Uccheddu at London Business School; Lynda Borucki, Marjorie Fischer, Larry Kolbe, Michael Vilbert, Bente Villadsen, and Fiona Wang at The Brattle Group, Inc.; Alex Triantis at the University of Maryland; Adam Kolasinski at the University of Washington; Simon Gervais at Duke University; Michael Chui at Bank for International Settlements; Pedro Matos at the University of Southern California; Yupana Wiwattanakantang at National University of Singapore; Nickolay Gantchev, University of North Carolina Chapel Hill; Tina Horowitz, Lin Shen, and Chenying Zhang at the University of Pennsylvania; Julie Wulf at Harvard University; Jinghua Yan at SAC Capital; Douglas Dwyer at Moody's Analytics; Bennett Stewart at EVA Dimensions; and James Matthews at Towers Perrin.

We would also like to thank the dedicated experts who have helped with updates to the instructor materials and online content in Connect and LearnSmart, including Kay Johnson, Blaise Roncagli, Deb Bauer, Mishal Rawaf, Marc-Anthony Isaacs, Frank Ryan, Peter Crabb, Victoria Mahan, Nicholas Racculia, Angela Treinen, and Kent Ragan.

We want to express our appreciation to those instructors whose insightful comments and suggestions were invaluable to us during the revision process:

Ibrahim Affaneh *Indiana University of Pennsylvania*
Neyaz Ahmed *University of Maryland*
Alexander Amati *Rutgers University, New Brunswick*
Anne Anderson *Lehigh University*
Noyan Arsen *Koc University*
Anders Axvarn *Gothenburg University*
John Banko *University of Florida, Gainesville*
Michael Barry *Boston College*
Jan Bartholdy *ASB, Denmark*
Penny Belk *Loughborough University*
Omar Benkato *Ball State University*
Eric Benrud *University of Baltimore*
Ronald Benson *University of Maryland, University College*
Peter Berman *University of New Haven*
Tom Boulton *Miami University of Ohio*
Edward Boyer *Temple University*
Alon Brav *Duke University*
Jean Canil *University of Adelaide*
Robert Carlson *Bethany College*
Chuck Chahyadi *Eastern Illinois University*
Fan Chen *University of Mississippi*
Celtin Ciner *University of North Carolina, Wilmington*
John Cooney *Texas Tech University*
Charles Cuny *Washington University, St. Louis*
John Davenport *Regent University*
Ray DeGennaro *University of Tennessee, Knoxville*
Adri DeRidder *Gotland University*
William Dimovski *Deakin University, Melbourne*
David Ding *Nanyang Technological University*
Robert Duvic *University of Texas at Austin*
Alex Edmans *London Business School*
Susan Edwards *Grand Valley State University*
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Felix Goltz *Edhec Business School*
Ning Gong *Melbourne Business School*
Levon Goukasian *Pepperdine University*
Gary Gray *Pennsylvania State University*
C. J. Green *Loughborough University*
Mark Griffiths *Thunderbird, American School of International Management*
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Kathleen Kahle *University of Arizona*
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Dag Michalson *Bl, Oslo*
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Peter Moles *University of Edinburgh*
Katherine Morgan *Columbia University*
James Nelson *East Carolina University*
James Owens *West Texas A&M University*
Darshana Palkar *Minnesota State University, Mankato*
Claus Parum *Copenhagen Business School*
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Raghavendra Rau *Purdue University*
Joshua Raugh *University of Chicago*
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Thomas Rhee *California State University, Long Beach*
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Bob Wood *Tennessee Tech University*
Fei Xie *George Mason University*
Minhua Yang *University of Central Florida*
David Zalewski *Providence College*
Chenying Zhang *University of Pennsylvania*

This list is surely incomplete. We know how much we owe to our colleagues at the London Business School, MIT's Sloan School of Management, Imperial College London, and the University of Pennsylvania's Wharton School. In many cases, the ideas that appear in this book are as much their ideas as ours.

We would also like to thank all those at McGraw-Hill Education who worked on the book, including Chuck Synovec, Executive Brand Manager; Noelle Bathurst, Senior Product Developer; Melissa Caughlin, Executive Marketing Manager; Dave O'Donnell, Marketing Specialist; Kathryn Wright and Kristin Bradley, Project Managers; Laurie Entringer, Designer; and Kevin Shanahan, Digital Product Analyst.

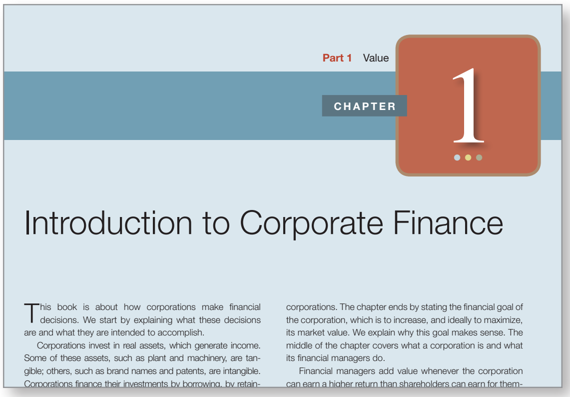
Richard A. Brealey
Stewart C. Myers
Franklin Allen

Guided Tour

Pedagogical Features

Chapter Overview

Each chapter begins with a brief narrative and outline to explain the concepts that will be covered in more depth. Useful websites related to material for each Part are provided in the Connect library.



Part 1 Value

CHAPTER 1

Introduction to Corporate Finance

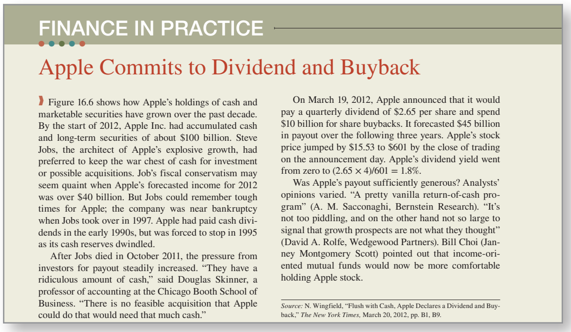
This book is about how corporations make financial decisions. We start by explaining what these decisions are and what they are intended to accomplish.

Corporations invest in real assets, which generate income. Some of these assets, such as plant and machinery, are tangible; others, such as brand names and patents, are intangible. Corporations finance their investments by borrowing, by retain- corporations. The chapter ends by stating the financial goal of the corporation, which is to increase, and ideally to maximize, its market value. We explain why this goal makes sense. The middle of the chapter covers what a corporation is and what its financial managers do.

Financial managers add value whenever the corporation can earn a higher return than shareholders can earn for them-

Finance in Practice Boxes

Relevant news articles, often from financial publications, appear in various chapters throughout the text. Aimed at bringing real-world flavor into the classroom, these boxes provide insight into the business world today.



FINANCE IN PRACTICE

Apple Commits to Dividend and Buyback

Figure 16.6 shows how Apple's holdings of cash and marketable securities have grown over the past decade. By the start of 2012, Apple Inc. had accumulated cash and long-term securities of about $100 billion. Steve Jobs, the architect of Apple's explosive growth, had preferred to keep the war chest of cash for investment or possible acquisitions. Job's fiscal conservatism may seem quaint when Apple's forecasted income for 2012 was over $40 billion. But Jobs could remember tough times for Apple; the company was near bankruptcy when Jobs took over in 1997. Apple had paid cash dividends in the early 1990s, but was forced to stop in 1995 as its cash reserves dwindled.

After Jobs died in October 2011, the pressure from investors for payout steadily increased. "They have a ridiculous amount of cash," said Douglas Skinner, a professor of accounting at the Chicago Booth School of Business. "There is no feasible acquisition that Apple could do that would need that much cash."

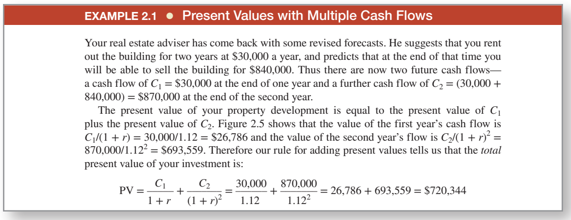
On March 19, 2012, Apple announced that it would pay a quarterly dividend of $2.65 per share and spend $10 billion for share buybacks. It forecasted $45 billion in payout over the following three years. Apple's stock price jumped by $15.53 to $601 by the close of trading on the announcement day. Apple's dividend yield went from zero to $(2.65 \times 4)/601 = 1.8\%$.

Was Apple's payout sufficiently generous? Analysts' opinions varied. "A pretty vanilla return-of-cash program" (A. M. Sacconaghi, Bernstein Research). "It's not too piddling, and on the other hand not so large to signal that growth prospects are not what they thought" (David A. Rolfe, Wedgewood Partners). Bill Choi (Janney Montgomery Scott) pointed out that income-oriented mutual funds would now be more comfortable holding Apple stock.

Source: N. Wingfield, "Flush with Cash, Apple Declares a Dividend and Buyback," *The New York Times,* March 20, 2012, pp. B1, B9.

Numbered Examples

Numbered and titled examples are called out within chapters to further illustrate concepts. Students can learn how to solve specific problems step-by-step and apply key principles to answer concrete questions and scenarios.



EXAMPLE 2.1 • Present Values with Multiple Cash Flows

Your real estate adviser has come back with some revised forecasts. He suggests that you rent out the building for two years at $30,000 a year, and predicts that at the end of that time you will be able to sell the building for $840,000. Thus there are now two future cash flows—a cash flow of $C_1 = \$30{,}000$ at the end of one year and a further cash flow of $C_2 = (30{,}000 + 840{,}000) = \$870{,}000$ at the end of the second year.

The present value of your property development is equal to the present value of C_1 plus the present value of C_2. Figure 2.5 shows that the value of the first year's cash flow is $C_1/(1 + r) = 30{,}000/1.12 = \$26{,}786$ and the value of the second year's flow is $C_2/(1 + r)^2 = 870{,}000/1.12^2 = \$693{,}559$. Therefore our rule for adding present values tells us that the *total* present value of your investment is:

$$\text{PV} = \frac{C_1}{1+r} + \frac{C_2}{(1+r)^2} = \frac{30{,}000}{1.12} + \frac{870{,}000}{1.12^2} = 26{,}786 + 693{,}559 = \$720{,}344$$

Beyond the Page Interactive Content and Applications

Additional resources and hands-on applications are just a click away. Students can use the Web address or click on the icon in the eBook to learn more about key concepts and try out calculations, tables, and figures when they go Beyond the Page.

Excel Treatment

Spreadsheet Functions Boxes

These boxes provide detailed examples of how to use Excel spreadsheets when applying financial concepts. Questions that apply to the spreadsheet follow for additional practice.

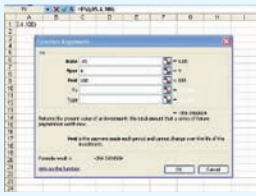
USEFUL SPREADSHEET FUNCTIONS

Discounting Cash Flows

Spreadsheet programs such as Excel provide built-in functions to solve discounted-cash-flow (DCF) problems. You can find these functions by pressing *fx* on the Excel toolbar. If you then click on the function that you wish to use, Excel asks you for the inputs that it needs. At the bottom left of the function box there is a Help facility with an example of how the function is used.

Here is a list of useful functions for DCF problems and some points to remember when entering data:

- **FV:** Future value of single investment or annuity.
- **PV:** Present value of single future cash flow or annuity.
- **RATE:** Interest rate (or rate of return) needed to produce given future value or annuity.
- **NPER:** Number of periods (e.g., years) that it takes an investment to reach a given future value or series of future cash flows.
- **PMT:** Amount of annuity payment with a given present or future value.
- **NPV:** Calculates the value of a stream of negative and positive cash flows. (When using this function, note the warning below.)
- **XNPV:** Calculates the net present value at the date of the first cash flow of a series of cash flows occurring at uneven intervals.
- **EFFECT:** The effective annual interest rate, given the quoted rate (APR) and number of interest payments in a year.
- **NOMINAL:** The quoted interest rate (APR) given the effective annual interest rate.



All the inputs in these functions can be entered directly as numbers or as the addresses of cells that contain the numbers.

Three warnings:

1. PV is the amount that needs to be invested today to produce a given future value. It should therefore be entered as a negative number. Entering both PV and FV with the same sign when solving for RATE results in an error message.
2. Always enter the interest or discount rate as a decimal value (e.g., .05 rather than 5%).
3. Use the NPV function with care. Better still, don't use it at all. It gives the value of the cash flows one period *before* the first cash flow and not the value at the date of the first cash flow.

Spreadsheet Questions

The following questions provide opportunities to practice each of the Excel functions.

1. (FV) In 1880, five aboriginal trackers were each promised the equivalent of 100 Australian dollars for helping to capture the notorious outlaw Ned Kelly. One hundred and thirteen years later the granddaughters of two of the trackers claimed that this reward had not been paid. If the interest rate over this period averaged about 4.5%, how much would the A$100 have accumulated to?
2. (PV) Your adviser has produced revised figures for your office building. It is forecasted to produce a cash flow of $40,000 in year 1, but only $850,000 in year 2, when you come to sell it. If the cost of capital is 12%, what is the value of the building?
3. (PV) Your company can lease a truck for $10,000 a year (paid at the end of the year) for six years, or it can buy the truck today for $50,000. At the end of the six years the truck will be worthless. If the interest rate is 6%, what is the present value of the lease payments? Is the lease worthwhile?
4. (RATE) Ford Motor stock was one of the victims of the 2008 credit crisis. In June 2007, Ford stock price stood at $9.42. Eighteen months later it was $2.72. What was the annual rate of return over this period to an investor in Ford stock?

Excel Exhibits

Select tables are set as spreadsheets, and the corresponding Excel files are also available in Connect and through the Beyond the Page features.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2							Product of
3				Deviation	Deviation	Squared	deviations
4				from	from average	deviation	from average
5		Market	Anchovy Q	average	Anchovy Q	from average	returns
6	Month	return	return	market return	return	market return	(cols 4 × 5)
7	1	−8%	−11%	−10	−13	100	130
8	2	4	8	2	6	4	12
9	3	12	19	10	17	100	170
10	4	−6	−13	−8	−15	64	120
11	5	2	3	0	1	0	0
12	6	8	6	6	4	36	24
13	Average	2	2		Total	304	456
14				Variance = σ_m^2 = 304/6 = 50.67			
15				Covariance = σ_{im} = 456/6 = 76			
16				Beta (β) = σ_{im}/σ_m^2 = 76/50.67 = 1.5			

TABLE 7.7 Calculating the variance of the market returns and the covariance between the returns on the market and those of Anchovy Queen. Beta is the ratio of the variance to the covariance (i.e., $\beta = \sigma_{im}/\sigma_m^2$).

End-of-Chapter Features

Problem Sets

For the twelfth edition, we continue to use topic labels for each end-of-chapter problem to enable easy assignment creation for instructors and reinforcement for students. These end-of-chapter problems give students hands-on practice with the key concepts. The content is organized by level of difficulty: Basic, Intermediate, and Challenge. Answers to the odd-numbered basic problems are included at the back of the book.

PROBLEM SETS

Select problems are available in McGraw-Hill's *Connect*. Please see the preface for more information.

connect

BASIC

1. **Prices and yields** A 10-year bond is issued with a face value of $1,000, paying interest of $60 a year. If yields to maturity increase shortly after the T-bond is issued, what happens to the bond's
   a. Coupon rate?
   b. Price?
   c. Yield to maturity?
2. **Prices and yields** The following statements are true. Explain why.
   a. If a bond's coupon rate is higher than its yield to maturity, then the bond will sell for more than face value.
   b. If a bond's coupon rate is lower than its yield to maturity, then the bond's price will increase over its remaining maturity.

INTERMEDIATE

15. **Prices and yields** Here are the prices of three bonds with 10-year maturities:

Bond Coupon (%)	Price (%)
2%	81.62%
4	98.39
8	133.42

If coupons are paid annually, which bond offered the highest yield to maturity? Which had the lowest? Which bonds had the longest and shortest durations?

16. **Prices and yields** A 10-year U.S. Treasury bond with a face value of $1,000 pays a coupon of 5.5% (2.75% of face value every six months). The reported yield to maturity is 5.2% (a six-month discount rate of 5.2/2 = 2.6%).
   a. What is the present value of the bond?
   b. Generate a graph or table showing how the bond's present value changes for semiannually

CHALLENGE

31. **Prices and yields** Write a spreadsheet program to construct a series of bond tables that show the present value of a bond given the coupon rate, maturity, and yield to maturity. Assume that coupon payments are semiannual and yields are compounded semiannually.
32. **Price and spot interest rates** Find the arbitrage opportunity (opportunities?). Assume for simplicity that coupons are paid annually. In each case the face value of the bond is $1,000.

Bond	Maturity (years)	Coupon ($)	Price ($)
A	3	0	751.30
B	4	50	842.30
C	4	120	1,065.28
D	4	100	980.57
E	3	140	1,120.12
F	3	70	1,001.62
G	2	0	834.00

Excel Problems

Most chapters contain problems, denoted by an icon, specifically linked to Excel spreadsheets that are available in Connect and through the Beyond the Page features.

BEYOND THE PAGE

Try it! The guano spreadsheets

mhhe.com/brealey12e

15. **Sensitivity analysis** Use the spreadsheet for the guano project in Chapter 6 to undertake a sensitivity analysis of the project. Make whatever assumptions seem reasonable to you. What are the critical variables? What should the company's response be to your analysis?
16. **Operating leverage** Suppose that the expected variable costs of Otobai's project are ¥33 billion a year and that fixed costs are zero. How does this change the degree of operating leverage? Now recompute the operating leverage assuming that the entire ¥33 billion of costs are fixed.

Finance on the Web Section

Featured in select chapters, this section includes Web exercises that give students the opportunity to explore financial websites on their own to gain familiarity and apply chapter concepts. These problems provide an easy method of including current, real-world data into the classroom.

FINANCE ON THE WEB

You can download data for the following questions from **finance.yahoo.com**.

1. Look at the companies listed in Table 8.2. Calculate monthly rates of return for two successive five-year periods. Calculate betas for each subperiod using the Excel SLOPE function. How stable was each company's beta? Suppose that you had used these betas to estimate expected rates of return from the CAPM. Would your estimates have changed significantly from period to period?

2. Identify a sample of food companies. For example, you could try Campbell Soup (CPB), General Mills (GIS), Kellogg (K), Mondelez International (MDLZ), and Tyson Foods (TSN).

   a. Estimate beta and R^2 for each company, using five years of monthly returns and Excel functions SLOPE and RSQ.

   b. Average the returns for each month to give the return on an equally weighted portfolio of the stocks. Then calculate the industry beta using these portfolio returns. How does the R^2 of this portfolio compare with the average R^2 of the individual stocks?

   c. Use the CAPM to calculate an average cost of equity (r_{equity}) for the food industry. Use current interest rates—take a look at the end of Section 9-2—and a reasonable estimate of the market risk premium.

Mini-Cases

To enhance concepts discussed within a chapter, mini-cases are included in select chapters so students can apply their knowledge to real-world scenarios.

MINI-CASE

Claxton Drywall Comes to the Rescue

A law firm (not Dewey, Cheatem, and Howe) is expanding rapidly and must move to new office space. Business is good, and the firm is encouraged to purchase an entire building for $10 million. The building offers first-class office space, is conveniently located near their most important corporate clients, and provides space for future expansion. The firm is considering how to pay for it.

Claxton Drywall, a consultant, encourages the firm not to buy the building but to sign a long-term lease for the building instead. "With lease financing, you'll save $10 million. You won't have to put up any equity investment," Drywall explains.

The senior law partner asks about the terms of the lease. "I've taken the liberty to check," Drywall says. "The lease will provide 100% financing. It will commit you to 20 fixed annual payments of $950,000, with the first payment due immediately."

"The initial payment of $950,000 sounds like a down payment to me," the senior partner observes sourly.

"Good point," Drywall says amiably, "but you'll still save $9,050,000 up front. You can earn a handsome rate of return on that money. For example, I understand you are considering branch offices in London and Brussels. The $9 million would pay the costs of setting up the new offices, and the cash flows from the new offices should more than cover the lease payments. And there's no financial risk—the cash flows from the expansion will cover the lease payments with a safety cushion. There's no reason for you or your partners to worry or to demand a higher-than-normal rate of return."

Supplements

In this edition, we have gone to great lengths to ensure that our supplements are equal in quality and authority to the text itself.

MCGRAW-HILL'S *CONNECT*

Less Managing. More Teaching. Greater Learning.

McGraw-Hill's *Connect* is an online assignment and assessment solution that connects students with the tools and resources they'll need to achieve success.

McGraw-Hill's *Connect* helps prepare students for their future by enabling faster learning, more efficient studying, and higher retention of knowledge.

McGraw-Hill's *Connect* Features

Connect offers a number of powerful tools and features to make managing assignments easier, so faculty can spend more time teaching. With *Connect,* students can engage with their coursework anytime and anywhere, making the learning process more accessible and efficient. *Connect* offers the features described here.

Simple Assignment Management

With *Connect,* creating assignments is easier than ever, so you can spend more time teaching and less time managing. The assignment management function enables you to

- Create and deliver assignments easily with selectable end-of-chapter questions and test bank items.
- Streamline lesson planning, student progress reporting, and assignment grading to make classroom management more efficient than ever.
- Go paperless with the eBook and online submission and grading of student assignments.

Automatic Grading

When it comes to studying, time is precious. *Connect* helps students learn more efficiently by providing feedback and practice material when they need it, where they need it. When it comes to teaching, your time also is precious. The grading function enables you to

- Have assignments scored automatically, giving students immediate feedback on their work and side-by-side comparisons with correct answers.
- Access and review each response, manually change grades, or leave comments for students to review.
- Reinforce classroom concepts with practice tests and instant quizzes.

Instructor Library

The *Connect* Instructor Library is your repository for additional resources to improve student engagement in and out of class. You can select and use any asset that enhances your lecture.

This library contains information about the book and the authors, as well as all of the instructor supplements for this text, including:

- **Instructor's Manual** The Instructor's Manual was extensively revised and updated by Matthew Will, University of Indianapolis. It contains an overview of each chapter, teaching tips, learning objectives, challenge areas, key terms, and an annotated outline that provides references to the PowerPoint slides.
- **Solutions Manual** The Solutions Manual, carefully revised by Kay Johnson, contains solutions to all basic, intermediate, and challenge problems found at the end of each chapter.
- **Test Bank** The Test Bank, revised by Deb Bauer of the University of Oregon, contains hundreds of multiple-choice and short answer/discussion questions, updated based on the revisions of the authors. The level of difficulty varies, as indicated by the easy, medium, or difficult labels.
- **PowerPoint Presentations** Matthew Will also prepared the PowerPoint presentations, which contain exhibits, outlines, key points, and summaries in a visually stimulating collection of slides. You can edit, print, or rearrange the slides to fit the needs of your course.
- **Beyond the Page Content** The authors have created a wealth of additional examples, explanations, and applications, available for quick access by instructors and students. Each Beyond the Page feature is called out in the text with an icon that links directly to the content.

- **Excel Solutions and Templates** There are templates for select exhibits, as well as various end-of-chapter problems that have been set as Excel spreadsheets—all denoted by an icon. They correlate with specific concepts in the text and allow students to work through financial problems and gain experience using spreadsheets. Also refer to the valuable Useful Spreadsheet Functions Boxes that are sprinkled throughout the text for some helpful prompts on working in Excel.

Diagnostic and Adaptive Learning of Concepts: LearnSmart and SmartBook

LEARNSMART® Students want to make the best use of their study time. The LearnSmart adaptive self-study technology within *Connect* provides students with a seamless combination of practice, assessment, and remediation for every concept in the textbook. LearnSmart's intelligent software adapts to every student response and automatically delivers concepts that advance students' understanding while reducing time devoted to the concepts already mastered. The result for every student is the fastest path to mastery of the chapter concepts. LearnSmart:

- Applies an intelligent concept engine to identify the relationships between concepts and to serve new concepts to each student only when he or she is ready.
- Adapts automatically to each student, so students spend less time on the topics they understand and practice more those they have yet to master.
- Provides continual reinforcement and remediation, but gives only as much guidance as students need.
- Integrates diagnostics as part of the learning experience.
- Enables you to assess which concepts students have efficiently learned on their own, thus freeing class time for more applications and discussion.

SMARTBOOK® SmartBook®, powered by LearnSmart, is the first and only adaptive reading experience designed to change the way students read and learn. It creates a personalized reading experience by highlighting the most impactful concepts a student needs to learn at that moment in time. As a student engages with SmartBook, the reading experience continuously adapts by highlighting content based on what the student knows and doesn't know. This ensures that the focus is on the content he or she needs to learn, while simultaneously promoting long-term retention of material. Use SmartBook's real-time reports to quickly identify the concepts that require more attention from individual students—or the entire class. The end result? Students are more engaged with course content, can better prioritize their time, and come to class ready to participate.

Student Study Center

The *Connect* Student Study Center is the place for students to access additional resources. The Student Study Center

- Offers students quick access to the Beyond the Page features, Excel files and templates, lectures, practice materials, eBooks, and more.
- Provides instant practice material and study questions, easily accessible on-the-go.

Student Progress Tracking

Connect keeps instructors informed about how each student, section, and class is performing, allowing for more productive use of lecture and office hours. The progress-tracking function enables you to

- View scored work immediately and track individual or group performance with assignment and grade reports.
- Access an instant view of student or class performance relative to learning objectives.

Lecture Capture through Tegrity Campus

For an additional charge Lecture Capture offers new ways for students to focus on the in-class discussion, knowing they can revisit important topics later. This can be delivered through *Connect* or separately. See below for more details.

TEGRITY CAMPUS: LECTURES 24/7

Tegrity Campus is a service that makes class time available 24/7 by automatically capturing every lecture in a searchable format for students to review when they study and complete assignments. With a simple one-click start-and-stop process, you capture all computer screens and corresponding audio. Students can replay any part of any class with easy-to-use browser-based viewing on a PC or Mac.

Educators know that the more students can see, hear, and experience class resources, the better they learn. In fact, studies prove it. With Tegrity Campus, students quickly recall key moments by using Tegrity Campus's unique search feature. This search helps students efficiently find what they need, when they need it, across an entire semester of class recordings. Help turn all your students' study time into learning moments immediately supported by your lecture.

To learn more about Tegrity, watch a two-minute Flash demo at **http://tegritycampus.mhhe.com**.

MCGRAW-HILL CUSTOMER CARE CONTACT INFORMATION

At McGraw-Hill, we understand that getting the most from new technology can be challenging. That's why our services don't stop after you purchase our products. You can e-mail our Product Specialists 24 hours a day to get product-training online. Or you can search our knowledge bank of Frequently Asked Questions on our support website.

For Customer Support, call **800-331-5094** or visit www.mhhe.com/support. One of our Technical Support Analysts will be able to assist you in a timely fashion.

Brief Contents

Contents

Note: Present value tables are available in Connect.

Part 1 Value

CHAPTER 1

Introduction to Corporate Finance

This book is about how corporations make financial decisions. We start by explaining what these decisions are and what they are intended to accomplish.

Corporations invest in real assets, which generate income. Some of these assets, such as plant and machinery, are tangible; others, such as brand names and patents, are intangible. Corporations finance their investments by borrowing, by retaining and reinvesting cash flow, and by selling additional shares of stock to the corporation's shareholders. Thus the corporation's financial manager faces two broad financial questions: First, what investments should the corporation make? Second, how should it pay for those investments? The investment decision involves spending money; the financing decision involves raising it.

A large corporation may have hundreds of thousands of shareholders. These shareholders differ in many ways, including their wealth, risk tolerance, and investment horizon. Yet we shall see that they usually share the same financial objective. They want the financial manager to increase the value of the corporation and its current stock price.

Thus the secret of success in financial management is to increase value. That is easy to say, but not very helpful. Instructing the financial manager to increase value is like advising an investor in the stock market to "buy low, sell high." The problem is how to do it.

There may be a few activities in which one can read a textbook and then just "do it," but financial management is not one of them. That is why finance is worth studying. Who wants to work in a field where there is no room for judgment, experience, creativity, and a pinch of luck? Although this book cannot guarantee any of these things, it does cover the concepts that govern good financial decisions, and it shows you how to use the tools of the trade of modern finance.

This chapter begins with specific examples of recent investment and financing decisions made by well-known corporations. The chapter ends by stating the financial goal of the corporation, which is to increase, and ideally to maximize, its market value. We explain why this goal makes sense. The middle of the chapter covers what a corporation is and what its financial managers do.

Financial managers add value whenever the corporation can earn a higher return than shareholders can earn for themselves. The shareholders' investment opportunities *outside* the corporation set the standard for investments *inside* the corporation. Financial managers therefore refer to the *opportunity cost* of the capital contributed by shareholders.

Managers are, of course, human beings with their own interests and circumstances; they are not always the perfect servants of shareholders. Therefore, corporations must combine governance rules and procedures with appropriate incentives to make sure that all managers and employees—not just the financial managers—pull together to increase value.

Good governance and appropriate incentives also help block out temptations to increase stock price by illegal or unethical means. Thoughtful shareholders do not want the maximum possible stock price. They want the maximum honest stock price.

This chapter introduces five themes that recur again and again, in various forms and circumstances, throughout the book:

1. Corporate finance is all about maximizing value.
2. The opportunity cost of capital sets the standard for investment decisions.
3. A safe dollar is worth more than a risky dollar.
4. Smart investment decisions create more value than smart financing decisions.
5. Good governance matters.