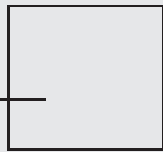


# APPLIED CORPORATE FINANCE



THIRD EDITION

**ASWATH DAMODARAN**

STERN SCHOOL OF BUSINESS  
NEW YORK UNIVERSITY



**JOHN WILEY & SONS, INC.**

## DEDICATION

*To Michele, who keeps me sane,  
and to my children, Ryan, Brendan, Kendra  
and Kiran, for grounding me in reality.*

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He has written three books on equity valuation (*Damodaran on Valuation*, *Investment Valuation*, *The Dark Side of Valuation*) and two on corporate finance (*Corporate Finance: Theory and Practice*, *Applied Corporate Finance: A User's Manual*) and has coedited a book on investment management with Peter Bernstein (*Investment Management*) and a book on investment philosophies (*Investment Philosophies*). His book *Investment Fables* was released in 2004, and his book on risk management and measurement, *Strategic Risk Taking*, was published in 2006.

He was a visiting lecturer at the University of California, Berkeley, from 1984 to 1986, where he received the Earl Cheit Outstanding Teaching Award in 1985. He has been at NYU since 1986, received the Stern School of Business Excellence in Teaching Award (awarded by the graduating class) in 1988, 1991, 1992, 1999, 2001, 2006, 2007, and 2008, and was the youngest winner of the University-wide Distinguished Teaching Award (in 1990). He was profiled in *Business Week* as one of the top twelve business school professors in the United States in 1994.

# PREFACE

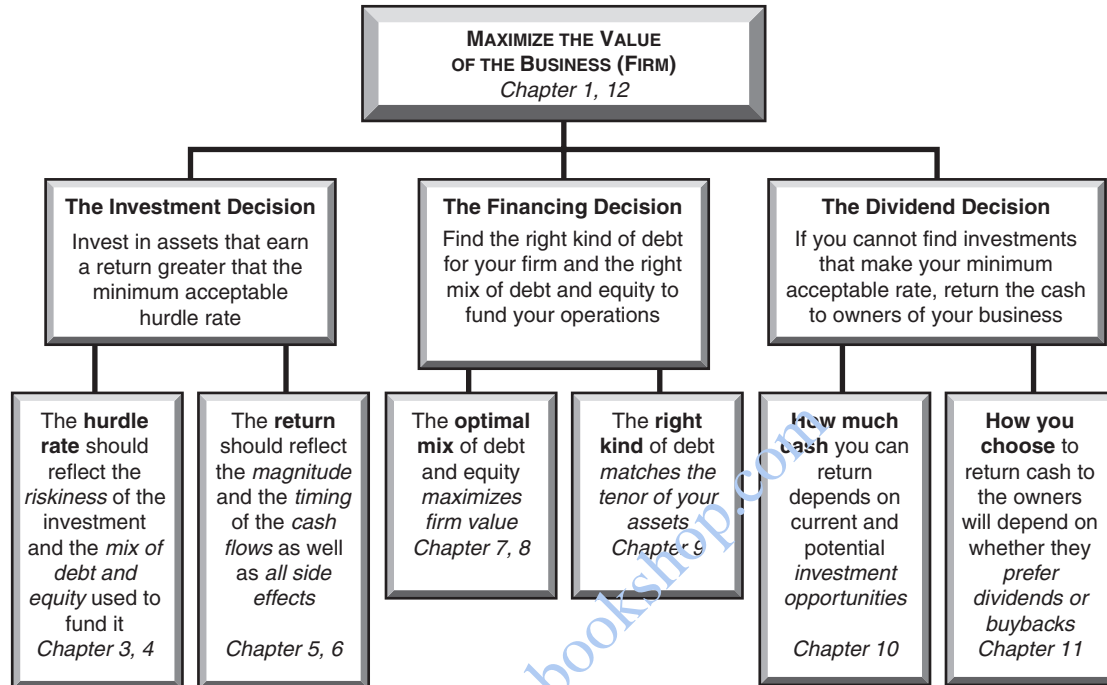
Let me begin this preface with a confession of a few of my own biases. First, I believe that theory and the models that flow from it should provide the tools to understand, analyze, and solve problems. The test of a model or theory then should not be based on its elegance, but on its usefulness in problem solving. Second, there is little in corporate financial theory that is new and revolutionary. The core principles of corporate finance are grounded in common sense and have changed little over time. That should not be surprising. Corporate finance is only a few decades old, and people have been running businesses for thousands of years; it would be exceedingly presumptuous of us to believe that they were in the dark until corporate finance theorists came along and told them what to do. To be fair, it is true that corporate financial theory has made advances in taking commonsense principles and providing structure, but these advances have primarily had to do with the details. The storyline in corporate finance has remained remarkably consistent over time.

*Talking about storylines* allows me to set the first theme of this book. This book tells a story that essentially summarizes the corporate finance view of the world. It classifies all decisions made by any business into three groups—decisions of where to invest the resources or funds that the business has raised, either internally or externally (the investment decision); decisions of where and how to raise funds to finance these investments (the financing decision); and decisions of to what extent, and in what form, to return funds back to the owners (the dividend decision). As I see it, the first principles of corporate finance can be summarized in Figure 1, which also lays out a site map for the book. Every section of this book relates to some part of this picture, and each chapter is introduced with it, with emphasis on that portion that will be analyzed in that chapter. (Note the chapter numbers below each section.) Put another way, there are no sections of this book that are not traceable to this framework.

As you look at the chapter outline for the book, you are probably wondering where the chapters on present value, option pricing, and bond pricing are, as well as the chapters on short-term financial management, working capital, and international finance. The first set of chapters, which we can classify as “tools” chapters, are now contained in the appendices—and I relegated them there not because I think that they are unimportant, but because I want the focus to stay on the storyline. It is important that we understand the concept of time value of money, but only in the context of measuring returns on investments better and valuing business. Option pricing theory is elegant and provides impressive insights, but only in the context of looking at options embedded in projects and financing instruments like convertible bonds.

The second set of chapters I excluded for a very different reason. As I see it, the basic principles of whether and how much you should invest in inventory, or how generous your credit terms should be, are no different than the basic principles that apply if you are building a plant, buying equipment, or opening a new store. Put another way, there is no logical basis for the differentiation between investments in the latter (which in most corporate finance books is covered in the capital budgeting chapters) and the

Figure 1 Corporate Finance: First Principles



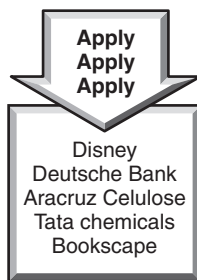
The principles are universal

Big and small Firms  
U.S. Firms  
Foreign Firms  
Private Firms  
Public Firms

former (which are considered in the working capital chapters). You should invest in either if—and only if—the returns from the investment exceed the hurdle rate from the investment; the fact that one is short-term and the other is long-term is irrelevant. The same thing can be said about international finance. Should the investment or financing principles be different just because a company is considering an investment in Thailand and the cash flows are in Thai baht instead of in the United States, where the cash flows are in dollars? I do not believe so, and in my view separating the decisions only leaves readers with that impression. Finally, most corporate finance books that have chapters on small firm management and private firm management use them to illustrate the differences between these firms and the more conventional large publicly traded firms used in the other chapters. Although such differences exist, the commonalities between different types of firms vastly overwhelm the differences, providing a testimonial to the internal consistency of corporate finance. In summary, the second theme of this book is the emphasis on the *universality of corporate financial principles* across different firms, in different markets, and across different types of decisions.

The way I have tried to bring this universality to life is by using five firms through the book to illustrate each concept; they include a large, publicly traded U.S. corporation (Disney), a small, emerging market commodity company (Aracruz Celulose, a Brazilian paper and pulp company), an Indian manufacturing company that is part of a family group (Tata Chemicals), a financial service firm (Deutsche Bank), and a small private

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business (Bookscape, an independent New York City bookstore). Although the notion of using real companies to illustrate theory is neither novel nor revolutionary, there are two key differences in the way they are used in this book. First, these companies are analyzed on every aspect of corporate finance introduced here, rather than just selectively in some chapters. Consequently, the reader can see for himself or herself the similarities and the differences in the way investment, financing, and dividend principles are applied to five very different firms. Second, I do not consider this to be a book where applications are used to illustrate theory, but a book where the theory is presented as a companion to the illustrations. In fact, reverting back to my earlier analogy of theory providing the tools for understanding problems, this is a book where the problem solving takes center stage and the theory stays in the background.

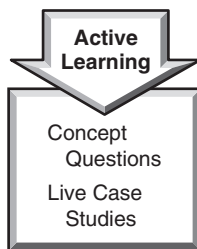
Reading through the theory and the applications can be instructive and even interesting, but there is no substitute for actually trying things out to bring home both the strengths and weaknesses of corporate finance. There are several ways I have made this book a tool for active learning. One is to introduce *concept questions* at regular intervals that invite responses from the reader. As an example, consider the following illustration from Chapter 7:



#### 2.1 THE EFFECTS OF DIVERSIFICATION ON VENTURE CAPITALIST

You are comparing the required returns of two venture capitalists who are interested in investing in the same software firm. One has all of his capital invested in only software firms, whereas the other has invested her capital in small companies in a variety of businesses. Which of these two will have the higher required rate of return?

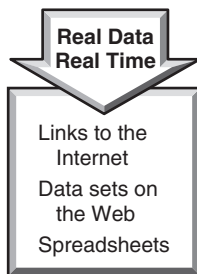
- The venture capitalist who is invested only in software companies.
- The venture capitalist who is invested in a variety of businesses.
- Cannot answer without more information.



This question is designed to check on a concept introduced in an earlier chapter on risk and return on the difference between risk that can be eliminated by holding a diversified portfolio and risk that cannot, then connecting it to the question of how a business seeking funds from a venture capitalist might be affected by this perception of risk. The answer to this question, in turn, will expose the reader to more questions about whether venture capital in the future will be provided by diversified funds, and what a specialized venture capitalist (who invests in one sector alone) might need to do to survive in such an environment. This will allow readers to see what—to me, at least—is one of the most exciting aspects of corporate finance: its capacity to provide a framework that can be used to make sense of the events that occur around us every day, and to make reasonable forecasts about future directions.

The second active experience in this book is found in the live case studies at the end of each chapter. These case studies essentially take the concepts introduced in the chapter and provide a framework for applying them to any company the reader chooses. Guidelines on where to get the information to answer the questions are also provided.

Although corporate finance provides an internally consistent and straightforward template for the analysis of any firm, information is clearly the lubricant that allows us to do the analysis. There are three steps in the information process—acquiring the



information, filtering what is useful from what is not, and keeping the information updated. Accepting the limitations of the printed page on all of these aspects, I have put the power of online information to use in several ways.

1. The case studies that require the information are accompanied by links to Web sites that carry this information.
2. The data sets that are difficult to get from the Internet or that are specific to this book, such as the updated versions of the tables, are available on my own Web site ([www.damodaran.com](http://www.damodaran.com)) and are integrated into the book. As an example, the table that contains the dividend yields and payout ratios by industry sectors for the most recent quarter is referenced in Chapter 9 as follows:



There is a data set online that summarizes dividend yields and payout ratios for U.S. companies, categorized by sector.

You can get to this table by going to the website for the book (on [damodaran.com](http://damodaran.com)) and checking for datasets under Chapter 9.

3. The spreadsheets used to analyze the firms in the book are also available on my Web site and are referenced in the book. For instance, the spreadsheet used to estimate the optimal debt ratio for Disney in Chapter 8 is referenced as follows:



*Capstru.xls*: This spreadsheet allows you to compute the optimal debt ratio firm value for any firm, using the same information used for Disney. It has updated interest coverage ratios and spreads built in.

As with the dataset listing above, you can get this spreadsheet by going to the Web site for the book and checking under spreadsheets under Chapter 8.

For those of you between you and have: who have read the first two editions of this book, much of what I have said in this preface should be familiar. But there are two places where you will find this book to be different:

1. For better or insert between or and worse: for worse, the banking and market crisis of 2008 has left lasting wounds on our psyches as investors and shaken some of our core beliefs in how to estimate key numbers and approach fundamental tradeoffs. I have tried to adapt some of what I have learned about equity risk premiums and the distress costs of debt into the discussion.
2. I have always been skeptical about behavioral finance, but I think that the area has some very interesting insights on how managers behave that we ignore at our own peril. I have made my first foray into incorporating some of the work in behavioral financing into investing, financing, and dividend decisions.

As I set out to write this book, I had two objectives in mind. One was to write a book that not only reflects the way I teach corporate finance in a classroom but, more



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important, one that conveys the fascination and enjoyment I get out of the subject matter. The second was to write a book for practitioners that students would find useful, rather than the other way around. I do not know whether I have fully accomplished either objective, but I do know I had an immense amount of fun with this volume. I hope you do, too!

<http://www.pbookshop.com>

# ACKNOWLEDGMENTS

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