HAIM LEVY

PRINCIPLES OF CORPORATE FINANCE

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Principles of Corporate Finance

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SOUTH-WESTERN College Publishing

An International Thomson Publishing Company

Publisher/Team Director: Jack W. Calhoun
Acquisitions Editor: Christopher Will
Development Editor: Dennis Hanseman
Production Editor: Peggy K. Buskey
Marketing Manager: Lisa L. Lysne
Production House: Pre-Press Company, Inc.
Cover Design: Paul Neff Design
Internal Design: Craig LaGesse Ramsdell

Library of Congress Cataloging-in-Publication Data

Levy, Haim.
Principles of corporate finance/Haim Levy.
p. cm.
Includes index.
ISBN 0-538-84741-7
1. Corporations—Finance. I. Title.
HG4026.L474 1997
658. 15—dc21 97-36159
CIP

2 3 4 5 6 7 8 D1 4 3 2 1 0 9 8

Printed in the United States of America

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International Thomson Publishing
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PREFACE

Financial markets have been changing rapidly over the last decade. New financial instruments have evolved and the task of the firm's chief financial officer (CFO) has changed. *Principles of Corporate Finance* explains recent innovations in capital markets along with the proven theories and techniques of corporate finance. It is designed to help students focus on the foundations of corporate finance and to help them prepare for their duties in their first job. Students who study this book will learn and understand the principles of finance and will be able to discuss them intelligently with supervisors and peers "in their own words."

The text emphasizes the most widely used financial innovations—the ones that occupy most of the CFO's time. To reinforce this point, I have made extensive use of quotes and citations from the financial media. These materials help the student "listen" to corporate finance specialists as they describe the issues they face and how to solve them. The CFO's arguments are woven into the text and provide a bridge between the classroom and the executive suite.

DISTINCTIVE FEATURES

Principles of Corporate Finance includes a number of useful and distinctive features:

1. It provides precise analysis that is relevant to the firm. It avoids financial models of limited usefulness.
2. Arguments are presented logically, then buttressed by intuitive explanations. Numerical and graphical illustrations complement this approach. Mathematical formulas are avoided unless they are necessary; in many cases they are relegated to footnotes or appendices.
3. Every chapter includes at least one application with a complete solution. Such applications—which use actual data or a quote from a CFO—show students the relevance of the key issues studied in that chapter. Knowing that they are dealing with real issues increases students' motivation and enthusiasm.
4. At least one mini–case study (reflecting a real issue described in the financial media or a firm's financial statements) appears at the end of each chapter.
5. Each chapter ends with a large, rich set of problems and exercises. These range from simple numerical problems, to more challenging decision-making exercises, to actual problems taken from the financial media.
6. Applying Theory to Practice boxes, which appear in all chapters, contain additional material from the financial press. They pinpoint the financial issues faced by CFOs and motivate the students to study the issues discussed in the chapter.
7. Many solved problems are interspersed within the chapter text. Reading through the solved problems enhances students' understanding of the issues discussed in the chapter.
8. The Internet is a new and useful source of financial information. Each chapter in this book contains one or more boxes that briefly describe how to use the Internet to enrich the study of finance. In addition, Professor Russ Ray, of the University of Louisville, has contributed an appendix at the end of the book that describes how to use the Internet.

EMPHASIZING RELEVANCE

The following are a few examples of how this book emphasizes relevance:

- Chapter 1 presents excerpts from the daily diary of Ken Matlock, the CFO of Walter Industries. These excerpts give students a flavor of what CFOs actually do.
- Economic Value Added (EVA) and Market Value Added (MVA) are hot ideas among CEOs and CFOs. Because these two ideas are widely employed by practitioners, they are introduced in Chapter 1 and contrasted with the traditional goal of stock value maximization.
- Modern finance advocates using the weighted average cost of capital (WACC) in capital budgeting. Financial executives favor the Economic Value Added principle. Chapter 10 demonstrates that the two ideas amount to basically the same thing.

- Chapter 14 illustrates the decision to "go public" by studying Robert Mondavi, the owner/manager of the famous Napa Valley winery.
- Options and optionlike securities have traditionally been taught in the investments course. Today, however, corporations such as IBM, Merck, and Intel successfully employ options and other derivatives to reduce risk. They can be challenged in court if they do not use derivatives to reduce risk.

  *It's beginning to become an expectation that if the capacity to hedge exists and it can be done safely, there will be criticism, and possibly litigation, if advantage isn't taken of that opportunity (*Fortune, *25 July 1994).*

  Therefore, Chapter 11 emphasizes derivatives as a tool for the financial executive.

STRUCTURE OF THE BOOK

Principles of Corporate Finance has been designed as a flexible teaching tool. Here is a brief description of what you will find within it:

- Part 1 discusses the financial environment, the goal of the firm, and the task of the CFO. Because many subsequent chapters use accounting concepts, Chapter 3 reviews the basics of financial statement analysis. If you do not wish to teach financial statements early in the course, you can simply discuss the basic accounting definitions and skip most of this chapter.
- Part 2 is devoted to project evaluation with emphasis on the NPV criterion. It shows how proper use of this investment rule helps the firm meet its financial goals.
- Part 3 introduces risk. It reviews the historical record on the mean return and variability of stocks, bonds, and other assets; defines risk; and shows how firms should apply risk measures in capital budgeting. The difference between the project cost of capital, which varies according to the project's unique risk characteristics, and the firm's cost of capital is emphasized.
- Part 4 discusses long-term financing, the economic features of bonds and stocks, and the process of going public.
- Part 5 is devoted to capital structure and dividend policy. It focuses on three important questions: Should a firm finance its projects by debt or equity, is there an optimum mix of financing, and, if so, what economic factors determine this mix?
- Part 6 discusses long- and short-term financial planning.
- The final part, Part 7, deals with short-term financial management, including managing cash asssets, and accounts receivable and inventory.

This text does not contain separate chapters on leasing, mergers, or international finance. Instead, these topics are integrated into the relevant chapters. The lease-versus-buy decision appears as an application in Chapter 7, where students learn how to construct a project's cash flows. After all, the incremental cash flow is the key issue in the lease-buy decision. Mergers and acquisitions are covered in

Chapters 5 and 9. There we see that the economic evaluation of a merger, in principle, is no different from evaluation of any other project.

International finance is crucial as the financial world becomes more and more global. To reflect this growing importance, international financial management issues are integrated throughout the book. For example, *Principles of Corporate Finance* covers such issues as Japanese and American executives' attitudes, responsibilities, and compensation; the price/earnings multiples in various countries; and the cost of capital of firms operating in various countries (in particular, the United States and Japan) and its effect on international competition. The text also shows how firms involved in international trade can use derivatives to hedge the foreign currency risk.

INTENDED AUDIENCE

This text is designed for a first course in finance. No previous course work in finance is assumed. Although the book is self-contained, some basic algebra is helpful. The text is appropriate for majors and nonmajors alike.

SUPPLEMENTARY ITEMS

Experience shows that students really learn the basics of corporate finance by working numerous, realistic problems and exercises. As mentioned, many of the pedagogical features of this text were designed to provide a real-world flavor. The *Solutions Manual* includes worked-out solutions to these problems. In addition, short answers to some of the end-of-chapter problems appear at the end of the text itself. These answers help students see if they are on the right track.

Professor Joseph Vu of DePaul University has written a *Test Bank* that will be useful in devising class examinations. He has also developed a *Study Guide* that provides additional support materials and contains additional problems for students to work on.

Thomson Investor's Network is an Internet-based, online financial service that offers up-to-the-minute financial information. Four-month subscriptions are available with qualified adoptions of this text. Learn more at http://www.thomsoninvest.net.

Professor Steven Wyatt of the University of Cincinnati has developed a CD-ROM that helps students explore financial management in a uniquely interactive way. His *Finance: An Interactive Approach* combines hands-on practice, exercises, simulations, animated exhibits, and a built-in calculator.

REVIEWERS

In writing this text, I have benefited from the helpful comments of many reviewers. I would like to thank the following instructors for taking time to help me improve the book:

Michael Alderson
St. Louis University

Yakov Amihud
New York University

George Aragon
Boston College

Robert Balik
Western Michigan University

Keqian Bi
University of San Francisco

Gerald Bierwag
Florida International University

Arthur Cox
University of Northern Iowa

Charles Cox
Brigham Young University

Shreesh Deshpande
University of San Diego

Jeanette Diamond
University of Nebraska, Omaha

Edward Dyl
University of Arizona

John Ellis
Colorado State University

Daniel Falkowski
Canisius College

Sharon Garrison
East Tennessee University

James Gentry
University of Illinois

Deborah Gregory
Bentley College

Alan Grunewald
Michigan State University

Deborah Gunthorpe
University of Tennessee

Thomas Hamilton
St. Mary's University

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Oklahoma State University

Stanley Jacobs
Central Washington University

Vahan Janjigian
Northeastern University

Hazel Johnson
University of Louisville

Michael Keenan
New York University

James Keys
Florida International University

Richard Kish
Lehigh University

Ladd Kochman
Kennesaw State University

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George Racette
University of Oregon

Meir Schneller
Virginia Polytechnic Institute

Ronald Shrieves
University of Tennessee

Keith Smith
Purdue University

Jonathan Sokobin
Southern Methodist University

Jill Wetmore
Saginaw Valley State University

Steve Wyatt
University of Cincinnati

David Yamoah
Kean College

James Yoder
West Georgia College

J. Kenton Zumwalt
Colorado State University

I also wish to thank Natalie Elisof, Yael Ben-David, Eitan Goldman, Boaz Libovitz and, in particular, Allon Cohen, who provided excellent research assistance. Mike Alderson made many important contributions to the text and the supplementary items. Thank you, Mike. In addition, I wish to thank Dennis Hanseman, Peggy Buskey, and Ann Torbert, whose many suggestions and skillful handling greatly improved this book.

Finally, I would like to thank Maya Landau, who edited this book in its early stages, and Hyla Berkowitz for an excellent typing job.

Haim Levy

Applying Theory to Practice: List of Applications

Chapter	Application
1	The Economic Value Added (EVA) Principle
2	Service Comes First in the U.S.A.
3	Vehicle with Value: Ford's Finance Unit Could Drive the Stock Higher
4	The $67 Million Ivax Buyout
5	NPV, Market Value Added (MVA), and the Invested Capital
5	Creating Positive NPV by Merger
6	Using the Payback Method: The Americans versus the Japanese
7	The Golden Pond Company
7	Lease-versus-Buy Decisions
8	Firm's Foreign Currency Risk Management: A Portfolio Approach
9	Coca-Cola and PepsiCo: The Gain from Merger
10	Intel's Investment Abroad: Country Risk
10	The Capital Budget of Chrysler Corporation
11	Using Options to Reduce Foreign Risk
12	The Bond Market: Risk and Reward
13	Estimating Meditronic, Inc.'s Cost of Equity
14	IPOs and the Cost of Equity: Boston Chicken
15	Leverage and Regulation: Oklahoma Gas and Electric Corporation
16	Boeing Corporation's Capital Structure
17	Gerber Products' Dividend Policy
18	PACCAR, Inc.'s Pro Forma Statements
19	J.C. Penney's Working Capital Management
20	Cash Assets Management at Toys 'R' Us
21	The Cost of J.C. Penney's Credit Card

Your Turn: Applying Theory to Practice List of Mini–Case Studies

Chapter	Mini–Case Study
1	Outcry over CEO Pay
2	Business Ethics: The Mercedes-Benz Case
3	Accounting Earnings versus Cash Flows
3	IBM's Financial Crisis
4	Student Loans
5	The Largest Wealth Creators and Wealth Destroyers
6	Timesharing for Sale
7	Premium Cut for Projects with High Risk
8	Asset Allocation: And the Winner Is . . . Stocks, by Several Lengths
9	Using the Efficient Frontier
10	Competition with the Japanese
11	GAO Terms "Derivative" Market Risk
12	Yield and Risk: The International Bond Market Basks in the Best of All Worlds
13	Stock Valuation, Inflation, and Stock Multipliers
14	New Breed of Preferred Issues Offers Tax Breaks
15	Intel Corporation: Company Leverage and Homemade Leverage
16	Archer Daniels Midland Company: Leverage and Earnings per Share
17	Norwegian Banks Clash over Dividends
18	Coca-Cola's External Financial Needs
19	Fruit of the Loom: Working Capital, Earnings per Share, and Stock Price
20	Cash Management at Luria & Son
21	Mounting Inventories

A NOTE TO THE STUDENT

Why study corporate finance? There are several reasons why it is worthwhile. First, finance is a challenging, dynamic profession. Most big financial transactions, mergers, acquisitions, and spinoffs are orchestrated by firms' Chief Financial Officers. Without a good knowledge of corporate finance, it is unlikely that you would be involved in such fascinating transactions.

The excitement—and the rewards—of a career in finance are captured in the following excerpt from a recent *Fortune* article:

Once glorified bookkeepers, the best chief financial officers are now rounded players who orchestrate megadeals, fix troubled companies, and hatch creative ideas. The pantheon encompasses Stephen Bollenbach, an architect of Disney's $19 billion acquisition of Capital Cities/ABC; Judy C. Lewent of Merck, a math wizard with a formula for handicapping R&D projects; and GE's Dennis Dammerman, a master of building businesses for the 21st century . . . .

Disney, for instance, lured Bollenbach with a signing bonus package estimated at $20 million, $7 million more than Deion Sanders pocketed for jumping to the Dallas Cowboys.

One reason companies don't mind paying these millions is that such stars can save millions in fees, especially on big deals. Super-CFOs are nimble, original dealmakers who don't always need Wall Street types to handle acquisitions and spinoffs for them. Bollenbach and his staff, for *instance, conceived and negotiated the Disney acquisition of Cap Cities without the help of a single securities firm, saving their company at least $20 million in fees. The trend worries prominent investment bankers, one of whom complains: "The CFOs absolutely compete with us. That's why our fees are going down."*

"Source: Shawn Tully, "Super CFOs: They Can't Jump . . . ," *Fortune,* 13 November 1995.

Second, a job as a CFO is becoming a springboard to even bigger jobs—in particular, president and CEO of a firm.

Third, no matter whether you are the firm's CFO or CEO, statistics reveal that the reward is very high. For example, in 1994, in a survey of 549 companies, the CFOs earned an average of $898,000 in total annual compensation. Compensation for super CFOs and CEOs is even greater—Michael Eisner of Walt Disney earned more than $200 million in 1993!

Who said no one wants to be a statistic? So, what's the catch? To earn such high salaries, you need corporate finance experience. To get that experience, you need that all-important first job. That's where this course—and this textbook—come in. Their aim is to give you enough knowledge that you can get your first job—even without experience. Pay careful attention to the many examples, applications, and mini-cases. They employ actual examples and actual data and provide a close approximation to the kinds of situations you will encounter on the job.

By studying this book and becoming a CFO, you may soon be part of the salary statistics reported in the financial press.

BRIEF CONTENTS

CONTENTS

PART 1 THE FINANCIAL ENVIRONMENT

PART 2 PROJECT EVALUATION