

The background of the book cover is a dark, marbled pattern with swirling veins of light brown and grey. The title is centered in a large, orange-red rectangular box.

BASIC FINANCIAL MANAGEMENT

Martin

Petty

Keown

Scott

FIFTH EDITION

5th Edition

BASIC FINANCIAL MANAGEMENT

John D. Martin

University of Texas at Austin
Margaret and Eugene McDermott
Professor of Banking and Finance

J. William Petty

Baylor University
W. W. Caruth Endowed Chair
of Finance and Entrepreneurship

Arthur J. Keown

Virginia Polytechnic Institute
and State University
R. B. Pamplin Professor of Finance

David F. Scott, Jr.

University of Central Florida
Holder, Phillips-Schenck Chair
in American Private Enterprise



PRENTICE HALL, INC., Englewood Cliffs, NJ 07632

Library of Congress Cataloging-in-Publication Data

Basic financial management / John D. Martin. . . [et al.].—5th ed.
p. cm.
Includes bibliographical references.
ISBN 0-13-060807-6
1. Business enterprises—Finance. 2. Corporations—Finance.
I. Martin, John D.
HG4026.B318 1991
658.15—dc20 90-7178
CIP

Editorial/production supervision: Rachel J. Witty, Letter Perfect, Inc.
Interior design/page layout: Maureen Eide
Cover design: Computer Graphic Resources, Inc.
Manufacturing buyer: Robert Anderson
Prepress buyer: Trudy Piscioti



© 1991 by Prentice-Hall, Inc.
A Division of Simon & Schuster
Englewood Cliffs, New Jersey 07632

All rights reserved. No part of this book may be
reproduced, in any form or by any means
without permission in writing from the publisher.

Printed in the United States of America

10 9 8 7 6 5 4 3 2

ISBN 0-13-060807-6

Prentice-Hall International (UK) Limited, *London*
Prentice-Hall of Australia Pty. Limited, *Sydney*
Prentice-Hall Canada Inc., *Toronto*
Prentice-Hall Hispanoamericana, S.A., *Mexico*
Prentice-Hall of India Private Limited, *New Delhi*
Prentice-Hall of Japan, Inc., *Tokyo*
Simon & Schuster Asia Pte. Ltd., *Singapore*
Editora Prentice-Hall do Brasil, Ltda., *Rio de Janeiro*

The fifth edition of
Basic Financial Management
is dedicated to
Sally, Donna, Barbara, and Peggy

PREFACE

Historical circumstances are a driving force underlying the development and practice of financial management. For example, in the 1970s volatile energy prices, interest rates, and exchange rates dominated both the financial press and the economic environment within which financial decisions were made. These factors led to the development of new commodity and financial futures markets in which firms could hedge their risk exposure and speculate on the directions of anticipated price movements. Similarly, in the 1980s corporate control contests have resulted in the restructuring of corporate America. This unprecedented wave of transactions has included corporate divestitures, leveraged buyouts, joint ventures, spin-offs, split-ups, employee stock option plans (ESOPs), partial public offerings, project financings, and a host of other types of transactions which have filled the financial press during the 1980s.

Some have characterized this latest wave of corporate control contests simply as evidence of the continual tug-of-war between the capital market and corporate managements for control over financial resources. If this be true, then it would appear that the 1980s have been a time of unprecedented victory for the capital markets. Many of the largest corporations have fallen victim to the "bust-up merger" as they have been bought up and their assets sold to the highest bidder. This, in turn, means that the investment and financing decisions of even the very largest firms are subject to an unprecedented level of scrutiny by the capital markets.

Some practicing financial managers have cried foul, saying that investors in the capital markets are too short-term oriented or myopic. This, they argue, has placed undue pressure on the corporate manager to produce short-term profits to the exclusion of making long-term commitments. The evidence from the academic community, however, has not supported this contention. Furthermore, as the pressures of international competition continue unabated, serious consideration must be given to the impact the capital markets have on the firm's competitiveness in world markets through its influence on the firm's investment and financing choices. Consequently, it is our belief that the events of the 1980s have *heightened* the importance of corporate finance in the overall formula for corporate competitiveness and success.

In this text we have endeavored to provide the introduction to financial decision making, which is rooted in both the current state of our understanding of financial theory and in current world economic conditions. This focus is evident in a number of ways in the fifth edition of *Basic Financial Management*. The most obvious is the rearrangement of the chapter sequence, which is designed to place an increased prominence on the capital market's influence on corporate financial decisions. We have moved our discussion of the concepts of valuation and the related notion of opportunity costs forward in the text presentation. We would hasten to add that we have not eliminated any of our previous discussions of managerial issues such as short-term forecasting, planning, and budgeting. The new chapter sequence is consistent with what we feel to be the increasingly more prominent role of the capital markets in the making of corporate financial decisions.

Pedagogy and Target Audience

Basic Financial Management provides the reader with an overview of financial management as intended for an introductory course in the subject. Such a course might be taught in one semester or two quarters. The orientation continues to be managerial with an emphasis on the identification and solution of the financial problems confronting the business enterprise. Decision making within an enterprise valuation framework is stressed throughout the text, and thereby, provides a unifying theme across all discussions. In the preparation of the manuscript, three primary standards were used. First, we have made a strong effort to offer *completeness* in the treatment of each topic. Second, we have given *readability* a high priority. We have taken extra care to use a clear and concise writing style, especially in the treatment of concepts requiring the use of mathematics. Third, complete, *step-by-step* examples are frequently used to increase clarity and to crystallize the critical issues in the student's mind. In summary, the pedagogical approach taken, particularly for the more difficult topics, progresses from an intuitive presentation of the problem to the introduction and illustration of the appropriate decision-making framework.

The Fifth Edition

A number of other changes have been made in the fifth edition. In addition to the revised chapter sequence, whereby valuation and related concepts are moved up, thereby placing emphasis on the role of the capital markets in corporate financial decision making, we have also made a number of significant changes throughout the text which might not be so obvious.

1. We have worked to add life to the presentations by increasing the number of *Basic Financial Management in Practice* inserts. Because these practical application inserts proved to be a very popular feature of the fourth edition, we have expanded them in this edition.
2. A new feature, which we refer to as *Readings in Financial Management*, has been added. In these readings we provide more in-depth discussion of key topics. We have sampled readings from a wide range of academic and popular press sources with an eye toward bringing the subject matter to life.
3. Also, given the continued ethical questions being addressed in the press, we have, on several occasions, offered the student value orientations we believe will be helpful. The basic notion of what constitutes ethical behavior is not clear-cut. However, we have tried to provide some definitions, which will provide a fundamental starting point for considering the issues as they relate to financial decision making.

We believe these additions will add value to the students' learning and reduce the chance that the student will perceive the presentation as sterile.

Significant changes have also been made in the individual chapters. The following list includes ten major additions that are new to *Basic Financial Management* in the fifth edition:

1. Chapter 1 incorporates consideration for business ethics through the use of an article by Milton Friedman. In addition, we discuss stockholder-manager conflicts and arbitrage in an efficient market.
2. In Chapter 2, we have added an introductory section on the capital markets. This material provides background information needed to help

the student better understand the valuation process used throughout the text. Also, we updated the section on taxes to reflect the most current tax provisions at the time of the revision. Here we also added an international dimension by comparing some of the basic differences in taxes across foreign borders. Lastly, we developed a more complete introduction into the legal forms of organization by providing an overview of the significance of the respective forms before evaluating each type of organization.

3. In Chapter 4, when dealing with systematic risk and beta, we thought the student's understanding would be improved by observing firsthand, through an example, how beta is actually computed. Also, given the importance of the growth factor in valuing common stock, we expanded the explanation of what is meant by the term "growth" in a valuation context. Finally, we added a section to clarify the relationship between value and earnings, which is often times misunderstood.
4. The introduction to capital budgeting found in Chapter 5 has been expanded to include a new section titled "Competitive Markets and Profitable Projects—Where Do Profitable Projects Exist in Competitive Markets?" In addition, we have incorporated a number of readings which enhance the realism of the treatment of the capital-budgeting decision. Finally, we include a brief case-study reading of the ethical issues that arose out of Beech-Nut's selling sugar water for apple juice.
5. In Chapter 6 we have added a section which discusses the alternative methods that can be used to estimate a project's systematic risk. We discuss the use of accounting data as well as the proxy or pure play method.
6. In Chapter 7 the presentation of the weighted cost of capital has been simplified so that the student is not required to spend an inordinate amount of time on computational detail. Also, a major section has been incorporated into the chapter to develop the concept of the required rate of return for individual projects, as opposed to a company-wide cost of capital.
7. In coming to understand the importance or relevance of a firm's dividend policy in Chapter 10, we are required to look carefully at the empirical evidence available to us. In this edition, we have expanded this evidence to include both (1) surveys of management opinions about dividend policy, and (2) the latest empirics regarding the link between stock price and dividend policy.
8. We updated the discussion of the capital markets in Chapter 19 to include discussions of junk bonds, Eurobonds, and dual-class recapitalizations.
9. In Chapter 21 we look at the restructuring of firms, which has become a predominant issue in the media. To bring the chapter up to date, we have added a section on why mergers and acquisitions might create value, an important question with no easy answer for those managers contemplating such a decision. We also look at the more recent approaches used in valuing a firm, which include what we refer to as the *chop-shop* approach and the free-cash flow valuation model.
10. We made two major revisions in Chapter 24. A section was added on the relevance of capital budgeting techniques for the owner-manager of the small firm. Small firms have been criticized for not joining the bandwagon of the discounted cash flow models. Maybe there is a rationale for such actions on the part of the small-firm managements. This issue is now addressed in the chapter. Second, the discussion of the valuation of the small firm, whose stock is not publicly traded, was expanded. This latter topic is of considerable interest to small-firm owners.

This list does not completely describe even the major changes made to the fifth edition. However, it highlights the types of changes we have committed ourselves to making in order that *Basic Financial Management* will reflect the very best thinking that financial scholars have to offer.

Acknowledgments

We gratefully acknowledge the assistance, support, and encouragement of those individuals who have contributed to the successful completion and revision of *Basic Financial Management*. Specifically, we wish to recognize the very helpful insights provided by colleagues at our respective universities. For their careful review of the text, we are indebted to:

Hadi Alwan
Northern Illinois University
Dwight C. Anderson
Louisiana Tech University
Gary Benesh
Florida State University
Sam G. Berry
Virginia Commonwealth University
Randy Billingsley
*Virginia Polytechnic Institute
and State University*
Russell P. Boisjoly
Simmons College
Virgil L. Brewer
Eastern Kentucky University
Jozelle Brister
Abilene Christian University
Don M. Chance
*Virginia Polytechnic Institute
and State University*
Albert H. Clark
Georgia State University
David W. Cole
Ohio State University
Bernard C. Dill
Bloomsburg University
Mark Dorfman
University of Arkansas—Little Rock
Majorie Evert
Xavier University
Sidney R. Finkel
Canisius College
Lyn Fraser
Texas A&M University
John Gilster
University of Illinois
Sharon S. Graham
University of Central Florida

Dennis A. Gribenas
Data Systems International, Inc.
Samuel C. Hadaway
Financo, Inc.
Nancy Lee Halford
Madison Area Technical College
William R. Henry
Georgia State University
Jamie T. Holland
University of Central Florida
Keith Howe
Depaul University
Charles R. Idol
Idaho State University
Vahan Janjigian
Northeastern University
Nancy Jay
University of Central Florida
William Jens
Stetson University
Djavad Kashefinejad
California State Polytechnic University
David R. Klock
University of Central Florida
Howard C. Launstein
Marquette University
Leonard T. Long
American International College
Abbas Mamoozadeh
Slippery Rock University
Terry S. Maness
Baylor University
Barry Marks
University of Houston at Clearlake
James A. Miller
University of Arkansas
Naval Modani
University of Central Florida

Shalini Perumpral
Radford University
John M. Pinkerton
*Virginia Polytechnic Institute
and State University*
Jack H. Rubens
Cleveland State University
Peter A. Sharp
*California State University
at Sacramento*
Raymond F. Spudeck
University of Central Florida

Suresh Srivastava
University of Maryland
Donald L. Stevens
University of Colorado—Denver
L. E. Sweeney
Ball State University
John G. Thatcher
Marquette University
Gary L. Trennepohl
Texas A&M University
Kenneth L. Westby
University of North Dakota

In addition we'd like to express our appreciation to George W. Kutner for his assistance in preparing the Annotated Instructor's Edition and the second set of problems.

Finally, we thank the Prentice Hall staff who were a treat to work with, including Jeanne Hoeting, Whitney Blake, Rachel J. Witty (Letter Perfect, Inc.), Dennis Hogan, Rachel Nelson, Teresa Fernandez, Diane de Castro, Maureen Eide, Jenny Kletzin, Rob McCarey, and Rick Harrison. Their extraordinary patience and fine support throughout the writing, production, and marketing of the text were extremely valuable. Their guidance and help has had a significant and positive impact on the quality of the text.

Even with the very fine efforts of all involved in preparing the fifth edition of *Basic Financial Management*, some errors inevitably will exist. For these, the authors, must accept final responsibility.

J.D.M
J.W.P
A.J.K
D.F.S

CONTENTS IN BRIEF

PART 1

SCOPE AND ENVIRONMENT OF FINANCIAL MANAGEMENT

- 1 The Role of Financial Management 1
- 2 Financial Markets, Organizational
Forms, and the Tax Environment 24
- 3 Mathematics of Finance 58

PART 2

VALUATION AND THE MANAGEMENT OF LONG-TERM INVESTMENTS

- 4 Valuation and Rates of Return 91
- 5 Capital Budgeting 151
- 6 Capital Budgeting Under Uncertainty 212
- 7 Cost of Capital 252

PART 3

FINANCIAL STRUCTURE AND DIVIDEND POLICY DECISIONS

- 8 Analysis and Impact of Leverage 295
- 9 Planning the Firm's Financing Mix 337
- 10 Dividend Policy and Internal
Financing 387

PART 4

FINANCIAL ANALYSIS, PLANNING, AND CONTROL

- 11** Evaluating Financial Performance 421
- 12** Financial Forecasting, Planning,
 and Budgeting 469

PART 5

WORKING CAPITAL MANAGEMENT

- 13** Introduction to Working Capital
 Management 506
- 14** Cash and Marketable Securities
 Management 528
- 15** Accounts Receivable
 and Inventory Management 599
- 16** Short-Term Financing 629

PART 6

LONG-TERM FINANCING

- 17** Raising Funds in the Capital Market 654
- 18** Term Loans and Leases 686
- 19** Long-Term Debt, Preferred Stock,
 and Common Stock 710
- 20** Convertibles, Warrants, Options,
 and Futures 743

PART 7

SPECIAL TOPICS IN FINANCIAL MANAGEMENT

- 21 Corporate Restructuring:
Combinations and Divestitures 782
- 22 Failure and Reorganization 813
- 23 International Business Finance 839
- 24 Small Business Finance 873

Appendices 909

Glossary 931

Index 943

CONTENTS

Preface *xix*

PART 1

SCOPE AND ENVIRONMENT OF FINANCIAL MANAGEMENT

1

The Role of Financial Management 1

- Development of Financial Thought 1
- Goal of the Firm 2
- Financial Decisions and Risk-Return Relationships 6
- Why Prices Reflect Value 6
- Overview of the Text 8

Appendix 1A

The Language of Finance 12

- Basic Financial Statements 13
- Basic Accounting Principles 17
- Accounting for Inventories and Cost of Goods Sold 20
- Depreciation of Fixed Assets 21

Appendix 1B

Glossary of Accounting Terms 21

2

Financial Markets, Organizational Forms, and the Tax Environment 24

- The Financial Markets: An Introduction 25
- Legal Forms of Business Organization 29
- Federal Income Taxation 41

3

Mathematics of Finance

- Compound Interest 58
- Compound Interest with Nonannual Periods 62
- Present Value 65
- Annuities 68
- Present Values of an Uneven Stream 73
- Perpetuities 75
- Bond Value: An Illustration of the Time Value of Money 76

PART 2

VALUATION AND THE MANAGEMENT OF LONG-TERM INVESTMENTS

4

Valuation and Rates of Return 91

- Definitions of Value 92
- The Basics of Valuation 94
- Summary of the General Valuation Process 109
- Bond Valuation 110
- Preferred Stock Valuation 114
- Common Stock Valuation 116
- The Relationship Between Value and Earnings 120
- Expected Rates of Return 125

Appendix 4A

More on Bond Valuation: Understanding Key Relationships 143

- First Relationship 143
- Second Relationship 145
- Third Relationship 145
- Fourth Relationship 146
- Fifth Relationship 148

5

Capital Budgeting 151

- Introduction to Capital Budgeting 151
- Measuring Cash Flows 152

Competitive Markets and Profitable Projects—Where Do
Profitable Projects Exist in Competitive Markets? 160
Nondiscounted Cash Flow Criteria for Capital-Budgeting Decisions 163
Discounted Cash Flow Criteria for Capital-Budgeting Decisions 165
A Glance at Actual Capital Budgeting Practices 180
Advanced Topics in Capital Budgeting 181
Inflation and Capital-Budgeting Decisions 187

6

Capital Budgeting Under Uncertainty 212

Risk and the Investment Decision 212
Review of Probability Distributions and Descriptive Statistics 214
Methods for Incorporating Risk into Capital Budgeting 218
The Risk Adjusted Discount Rate and Measuring
a Project's Systematic Risk 225
Other Approaches to Risk in Capital Budgeting 226
Other Sources and Measures of Risk 231

7

Cost of Capital 252

The Concept of the Cost of Capital 253
Factors Determining the Cost of Capital 255
Assumptions of the Cost of Capital Model 258
Computing the Weighted Cost of Capital 259
Marginal Cost of Capital: A Comprehensive Example 270
Required Rate of Return for Individual Projects:
An Alternative Approach 275
Effect of Diversification 278
A Firm's Cost of Capital: Some Recent Evidence 280

PART 3

FINANCIAL STRUCTURE AND DIVIDEND POLICY DECISIONS

8

Analysis and Impact of Leverage 295

Business Risk and Financial Risk 296
Breakeven Analysis 299
Operating Leverage 308
Financial Leverage 313
Combining Operating and Financial Leverage 316

9

Planning the Firm's Financing Mix 337

A Glance at Capital-Structure Theory 339

Basic Tools of Capital-Structure Management 356

A Glance at Actual Capital-Structure Management 365

International Perspective 371

10

Dividend Policy and Internal Financing 387

Key Terms 388

Does Dividend Policy Affect Stock Prices? 388

The Dividend Decision in Practice 403

Dividend Payment Procedures 408

Stock Dividends and Stock Splits 409

Stock Repurchases 411

PART 4

FINANCIAL ANALYSIS, PLANNING, AND CONTROL

11

Evaluating Financial Performance 421

Basic Financial Statements 422

Financial Ratios 429

An Integrated Form of Financial Analysis

Based on Earning Power 444

12

Financial Forecasting, Planning, and Budgeting 469

Financial Forecasting 469

Financial Planning and Budgeting 475

Computerized Financial Planning 484

Appendix 12A

Alternative Forecast Methods 500

PART 5

WORKING CAPITAL MANAGEMENT

13

Introduction to Working Capital Management 506

Managing Current Assets 507

Managing the Firm's Use of Current Liabilities 508

Appropriate Level of Working Capital 510

Appendix 13A

A Numerical Illustration of the Hedging Principle 522

14

Cash and Marketable Securities Management 528

Why a Company Holds Cash 529

Variations in Liquid Asset Holdings 532

Cash Management Objectives and Decisions 534

Collection and Disbursement Procedures 535

Electronic Funds Transfer 548

Evaluating Costs of Cash-Management Services 549

Composition of Marketable Securities Portfolio 550

A Glance at Actual Cash-Management Practices 566

Appendix 14A

Cash Management Models: The Split Between Cash and Near Cash 588

Liquid Assets: Cash Versus Marketable Securities 588

15

Accounts Receivable and Inventory Management 599

Accounts Receivable Management 600

Inventory Management 606

Just-in-Time Inventory Control 613