FUNDAMENTALS OF INVESTMENTS



JOHN M. CHENEY

EDWARD A. MOSES



PRODUCTION CREDITS

Copyediting • Patricia Lewis

Text Design • Katherine Townes

Illustrations • Miyake Illustration and Design

Composition and film • G&S Typesetters, Inc.

Cover Image • David McGlynn,

FPG International

Production, Prepress, Printing and Binding by West Publishing Company.

PHOTO CREDITS

2, 3, 5, 27 Ed Pritchard, Tony Stone Worldwide; 60, 61, 63, 89, 119, 161, 195 Doug Armand, Tony Stone Worldwide; 220, 221, 223, 265 Peter Gridley, FPG International; 310, 311, 313, 347 Telegraph Colour Library, FPG International; 400, 401, 403, 431, 455 George Hall, Woodfin Camp & Associates; iv, v, 488, 489, 491, 529, 565, 613 Mark Segal, Tony Stone Worldwide; 644, 645, 647, 685, 729 Ken Biggs, Tony Stone Worldwide; 770, 771, 773 Jeremy Walker, Tony Stone Worldwide.

COPYRIGHT

© 1992 by West Publishing Company 610 Opperman Drive P.O. Box 64526 St. Paul, MN 55164–0526

All rights reserved
Printed in the United States of America
99 98 97 96 95 94 93
8 7 6 5 4 3 2 1

LIBRARY OF CONGRESS
CATALOGING-IN-PUBLICATION DATA
Cheney, John M.

Fundamentals of investments / John M. Cheney, Edward A. Moses,

p. cm.

Includes bibliographical references. ISBN 0-314-93360-3 (hard)

ISBN 0-314-93360-3 (hard)
1. Investments. 2. Portfolio
management. 3. Stocks. 4. Bonds.
I. Moses, Edward A. II. Title.
HG4521.C45354 1992
332.6—dc20

91-35170 CIP

Preface

Students usually begin their first course in investments with great expectations and are excited and interested in the subject matter. It is the responsibility of the professor and the selected textbook not to disappoint the student. Our overriding objective in writing *Fundamentals of Investments* was to provide the student and professor with a comprehensive book that is readable, presents complex concepts in an understandable manner, incorporates the latest advances in theory and practice, and is organized in such a way that the student's expectations of gaining insightful and usable investment information are met.

The dramatic changes the securities markets have undergone in recent years have added significantly to the complexities of personal and institutional investment management. As a result of what is known as financial engineering, new investment products have proliferated. In addition, specialized mutual funds, innovative insurance products, and the emergence of international financial markets have made new alternatives available to the individual investor. Increasing volatility in the securities markets and the continuing changes in the tax code are examples of additional factors investors must consider in developing and implementing investment strategies.

Accompanying these changes has been the ongoing development and empirical testing of investment theories and techniques. These include hypothesis related to the efficiency of financial markets, portfolio and capital market theory, arbitrage pricing theory, option pricing models, program trading, and portfolio insurance to name just a few. The necessity to cover these developments, along with the need to provide investors with an understanding of investment basics, creates quite a challenge for the student of investments, the professor, and, we might add, the authors of investment books.

The purpose of this book is to provide information and procedures that will enable individual investors to make informed investment decisions. The strategies of practicing investment professionals as well as results from theoretical and empirical research are used to introduce students to the practical aspects of investing. The techniques and procedures for active investment strategies presented in this book recognize that there is strong evidence that financial markets are efficient. An underlying proposition throughout the book is that investors should appreciate the pitfalls and complications that occur in pursuing an active investment strategy in an efficient market.

Fundamentals of Investments is intended for use in a first course in investments. While the topics are covered in a comprehensive fashion, the book presents material requiring quantitative analysis in an easily understandable

manner. The intended prerequisite for an investments course using this book is the introductory managerial finance course.

DISTINGUISHING PEDAGOGICAL FEATURES

The book has been designed to make the study of investments a meaningful and interesting learning experience for the student. To achieve this goal, we have included a number of pedagogical features, including a somewhat distinctive and flexible organization, the most up-to-date information available, knowledge-level objectives for each chapter, Interest and Research Boxes, numerous examples, tables, and figures, a rich set of end-of-chapter materials, a Glossary of Key Terms, and some very helpful appendixes.

Organization

Careful consideration was given to the sequencing of chapters in the book, while at the same time allowing the professor flexibility in the design of the course. An examination of the Contents reveals the logic of the organization. This text begins with a discussion of investment fundamentals, including a case example that outlines the challenges facing the individual investor, and an introduction to risk and return. The next two parts examine the investment environment and introduce valuation concepts and analysis. The next three parts present the fundamental analysis of bonds, preferred and common stocks, and alternative investments. The seventh part explores portfolio and capital market theory in detail as well as the analysis of portfolio performance and market efficiency. The book concludes with a separate section on personal investment management that reexamines the personal investment case study presented in Chapter 1.

Several aspects of the organization deserve special mention. The early presentation of risk and return in Chapter 2 includes an overview of portfolio and capital market theory. This overview is sufficient to enable students to understand the use of these concepts in the ensuing chapters. Professors who desire a more detailed treatment of these topics may wish to assign Chapters 19 and 20 early on in the course.

In Part II, The Investment Environment, we have included separate chapters on mutual funds and investing internationally. We feel these topics are important to the individual investor and deserve their location and emphasis in the book. These topics are also further examined throughout the book in appropriate chapters.

A separate chapter on investment strategies is also presented in Part II. This chapter describes the different investment approaches an investor can employ and provides an anchor point for assessing how the different investment alternatives can fit into an individualized investment strategy.

Finally, because the book is written with the investment decision-making process of the individual investor in mind, personal investment management is treated as a separate part at the end of the book.

Timeliness

Advances in investment theory, practice, and products are occurring at an almost dizzying pace. Although theory precedes practice by a considerable interval of time (sometimes forever) in many disciplines, this is not the case in the area of investments. With the so-called rocket scientists with strong academic credentials in heavy demand on Wall Street, the distinction between theory and practice is not so clear. We have made every effort to include the most up-to-date information possible in the book. The currency of the material is reflected in the examples, tables, and figures throughout the book as well as in the Interest Boxes, Research Boxes, and references at the end of the chapters.

Knowledge-Level Objectives

Each chapter begins with a list of knowledge-level objectives. This pedagogical feature is designed to give the student an immediate awareness of the important concepts presented in the chapter as well as an overview of the contents of the chapter.

Interest Boxes

The Interest Boxes discuss contemporary, real-world situations or events relevant to the surrounding text. These boxes, which are sometimes humorous as well as informative, can be assigned at the option of the professor.

Research Boxes

The Research Boxes present the results of interesting research on a particular topic discussed in the surrounding text. We have carefully selected and summarized this material to provide students with additional information on topics of special interest. These boxes can be assigned at the option of the professor.

Examples, Tables, and Figures

We have used numerous examples, tables, and figures throughout the book. These illustrations have been selected to enhance the student's understanding of a particular topic. Whenever possible, we have used real-world data to make the illustrations as realistic as possible.

End-of-Chapter Features

A number of important pedagogical features are included in the end-of-chapter material. These features should help students test their understanding of the chapter material and assist them in applying the investment concepts presented in the chapter.

- *Summary*. Each chapter contains a summary that briefly discusses the key concepts presented in the chapter. Reading the chapter summary and the knowledge-level objectives prior to reading the chapter will provide the student with a complete overview of the chapter's contents.
- Key terms. The key terms, which are set in boldface type when they are introduced in a chapter, are also listed in alphabetical order at the end of the chapter. The Glossary of Key Terms at the end of the book contains definitions of these terms.
- Concept applications. Consistent with the applications orientation of the book, this feature lists the important investment concepts presented in the chapter and explains how the individual investor can apply each concept.
- Questions and problems. Each chapter contains a number of questions and problems that can be assigned by the professor. These questions and problems are designed to test the students' understanding of the concepts and applications presented in the chapter. In many instances, the problems employ data and situations from publicly traded companies.
- Key to the Investment Analysis Software. This feature summarizes the access procedures for performing the calculations in a chapter using the Investment Analysis Software (IAS) that accompanies this book. Each of the calculations for which a template is available in IAS is indicated by a computer symbol (as shown to the left) in the text preceding the equation for the calculation. This section also includes a page reference to Appendix A-1, The Investment Analysis Software, which provides a detailed description of the access procedures for a particular calculation. IAS can be helpful in solving many of the end-of-chapter problems.
- End-of-chapter references. We have provided the interested student and professor with a broad selection of references at the end of each chapter. These references range from academic journals to the more popular investment-related periodicals. They include "classic" academic articles as well as recent articles from publications such as Barron's, the Wall Street Journal, Fortune, the Journal of Portfolio Management, and Financial Analysts Journal, to name just a few.

End-of-Chapter Appendixes

At the end of several chapters we have included material in an appendix. While this practice is not widespread throughout the book, we felt that professors might wish to exclude certain topics from the assigned readings. Thus, placing this material in an appendix adds to the flexibility of the book.

End-of-Book Appendixes

Five appendixes that should be quite useful to the student appear at the end of the book. Appendix A-1 contains a complete description of the Investment Analysis Software that accompanies the book. The appendix provides a step-



by-step guide for the use of the software. Appendix A-2 contains a brief review of analytical techniques used in the book. This summary of analytical techniques provides a quick refresher for statistical and other analytical calculations. Appendix A-3 presents the mathematical terms, symbols, and key formulas used in the book. It provides a quick reference for the student who has forgotten the meaning of a previously defined term or symbol or the equation for a particular calculation. Appendixes A-4 and A-5 contain the compound value and present value financial tables as well as tables for the standard normal cumulative probability distribution and a table for the student *t* distribution for hypothesis testing.

EDUCATIONAL AIDS AND SUPPLEMENTS

Fundamentals of Investments and its ancillary materials are designed to maximize the learning experience of the student and assist the professor in using the book.

Study Guide

The Study Guide to Accompany Fundamentals of Investments, written by Phillip T. Kolbe of Memphis State University, and the authors of the book, is designed to enrich the student's learning experience. The study guide contains a chapter outline and a discussion of the key points in the outline. In addition, multiple-choice and true-false tests, with answers, enable the student to assess his or her knowledge. Further, the study guide contains problems with solutions as well as a matching exercise involving the key terms.

• The Investment Analysis Software

The Investment Analysis Software that accompanies the book was written specifically for *Fundamentals of Investments* by Carol J. Billingham of Central Michigan University. It is designed for IBM personal computers and compatibles. The software, using Lotus 1-2-3 templates, may be run from either a floppy disk drive or a hard disk drive.



All equations in the book preceded with a computer symbol are included in the software. In addition, the Investment Analysis Software contains Personal Financial Planning and Analysis programs that can be used for preparing personal financial statements, maintaining records for analyzing personal portfolios, and performing a rent-versus-buy analysis for a personal residence.

Instructor's Manual

The Instructor's Manual, written by the authors, is designed to help professors prepare and teach a course in investments using *Fundamentals of Investments*. The manual contains suggested syllabi for courses taught in both the quarter

and semester systems. Outlines for possible class projects on economic, industry, and security analysis are also included. Each chapter in the Instructor's Manual includes a detailed outline for the corresponding chapter in the book, teaching suggestions with appropriate class discussion questions, suggested answers to end-of-chapter questions, and solutions to end-of-chapter problems. The manual also contains a test bank consisting of true-false and multiple-choice questions and problems.

Transparency Masters

A separate pack of transparency masters of key tables and figures in the book is available on a complimentary basis to adopters of the book.

ACKNOWLEDGMENTS

The authors gratefully acknowledge the significant efforts of the many contributors to this book. Without their expertise, suggestions, and support, this book would not have been possible.

Working from first draft to final manuscript requires the help of reviewers who not only have expertise in the area of investments but also have the classroom experience to improve the clarity of the presentation. We are deeply indebted for the excellent reviews of a portion or all of the manuscript provided by the following individuals:

Carol J. Billingham, Central Michigan University; Paul J. Bolster, Northeastern University; Carroll Broome, DePaul University; Richard A. DeFusco, University of Nebraska, Lincoln; Richard J. Dowen, Northern Illinois University; Hassan B. Ehsani, Suffolk University; Thomas H. Eyssell, University of Missouri, St. Louis; James F. Feller, Middle Tennessee State University; George L. Granger, East Tennessee State University; Robert T. Kleiman, Oakland University; Phillip T. Kolbe, Memphis State University; Steven T. Mann, University of South Carolina; Joel Morse, University of Baltimore; Philip Pfaff, Canisius College; Grady Perdue, University of Houston, Clear Lake; Richard PonArul, California State University, Chico; Gary E. Powell, American University; Thomas V. Schwarz, Southern Illinois University at Carbondale; Howard E. Van Auken, Iowa State University; Herbert J. Weinraub, University of Toledo; Richard E. Williams, Wright State University; Tony R. Wingler, University of North Carolina, Greensboro.

A book such as *Fundamentals of Investments* covers a wide range of topics. In order to ensure that we covered the topics accurately and completely, we used the expertise of a number of our colleagues. We would like to thank Stan Atkinson, Wallace Reiff, and Sharon Graham of the University of Central Florida; Jeff Madura of Florida Atlantic University; and Richard White and Charles Jones of the University of North Florida.

We are deeply appreciative of the expertise and loving care for details demonstrated by Florence Rendulic in typing the entire manuscript. Sue Crabill's help in typing the appendixes for the book and the Instructor's Manual is

To my wife Anne and my daughter Cheryl—JMC

To my wife Susan and my children, Lynne and Daniel—EAM

Brief Contents

Preface	xxii
,	

PART I	Investment Fundamentals 2
	1 • An Overview of Investments 5
	2 • Investment Risk and Return 27
PART II	The Investment Environment 60
	3 • Security Markets: Operations and Regulations 63
	4 • Investment Information 89
	5 • Investing in Mutual Funds 119
	6 • Investing Internationally 161
	7 • Investment Strategies 195
	ÿ
PART III	Valuation Concepts and Analysis 220
	8 • Economic, Market, and Industry Analysis 223
	9 • Analyzing Financial Statements 265
PART IV	Fundamental Analysis of Bonds 310
	10 • Bond Fundamentals 313
	11 • Bond Analysis: Returns, Risk, and Strategies 347
PART V	Fundamental Analysis of Preferred and Common Stocks 400
	12 • Preferred and Common Stock Basics 403
	13 • Analyzing and Forecasting Company Earnings 431
	14 • Preferred and Common Stock Valuation 455
PART VI	Analysis of Alternative Investments 488
	15 ° Options 491

16 • Convertibles and Warrants 529

17		Commodity	and	Financial	Futures	565
	-	Community	unu	I minitum	Luinics	

18 • Precious Metals, Real Estate, and Collectibles 613

PART VII Portfolio Theory and Analysis 644

- 19 Portfolio Theory 647
- 20 Capital Market and Arbitrage Pricing Theories 685
- 21 Analysis of Portfolio Performance and Market Efficiency 729

PART VIII Individual Investment Decision Making 770

22 • Personal Investment Management 773

Appendixes

- A-1 The Investment Analysis Software A-2
- A-2 Review of Analytical Techniques A-15
- A-3 Mathematical Terms, Symbols, and Key Formulas A-24
- A-4 Compound and Present Value Tables A-31
- A-5 Standard Normal Cumulative Probability Distribution and Student t Distribution A-40

Glossary G-1 Corporation and Organization Name Index I-1 Name Index I-5 Subject Index I-11

Contents

Preface xxii	Required Rate of Return 33 Expected Rate of Return 34
	Investment Risk 38
PART I	Sources of Investment Risk 38 Measures of Investment Risk 40 Coefficient of Variation 41
Investment Fundamentals 2	Beta: Another Measure of Investment
1 • An Overview of Investments 5	Risk 43
Introduction 6	Relating Beta and the Required Return 46
The Decision to Invest: A Case Study 6	Application: The Young Investors 49
Overview of Investment Alternatives 8	Summary 52
Factors to Consider in Choosing among	Concept Applications 53
Investment Alternatives 13	Key Terms 54
Investment Objective 13	Questions 54
Rate of Return 14 Risk 15	Key to the Investment Analysis
Taxes 16	Software 55
Investment Horizon 16	Problems 56
Investment Strategies 17	References 58
The Evolution of the Investment Environment and Process 21	
The 1950s and 1960s 21	PART II
The 1970s 21 The 1980s 22 The 1990s 23	The Investment Environment 60
Organization and Features of the Book 24	3 • Security Markets: Operations and
Summary 25	Regulations 63
Key Terms 26	Introduction 64
Questions 26	Primary Markets 64
Questions 20	Role of the Investment Banker 65
2 • Investment Risk and Return 27	Investment Bankers and Banking in the 1980s: A Decade of Innovations and
Introduction 28	Ethical Problems 69
Investment Return 30	Investment Banking in the 1990s 71
Single-Period Measure of Return 30 Measures of Return over Several	Secondary Markets 72
Periods 31	New York Stock Exchange 72 American Stock Exchange 74
Annualized Holding Period Returns 31	Regional Exchanges 76

Over-the-Counter Market 77 Third and Fourth Markets 78	Comparison of Market Indexes over Time 112
Trading Mechanics 79	Summary 114
Overview 79	•
Types of Orders 80	Key Terms 115
Regulation of Securities Markets 82	Questions 115
Securities Act of 1933 83	Problem 116
Securities Exchange Act of 1934 83 Maloney Act of 1936 85	References 116
Insider Trading and Securities Fraud	5 • Investing in Mutual Funds 119
Enforcement Act of 1988 85	Introduction 120
Other Regulations 85	Closed-End Companies 120
Summary 85	Closed-End Funds 120
Concept Applications 86	Other Types of Closed-End
Key Terms 87	Companies 123
Questions 87	Overview of Mutual Funds 124
References 88	Historical Development of Mutual Funds 126
4 • Investment Information 89	Regulation of Mutual Funds 127
Introduction 90	Ex-Post Holding Period Return for Mutual
Analysis of Economic Conditions 91	Funds 128
Industry Analysis 92	Mutual Fund Characteristics 131
Company Information 94	Load versus No-Load Mutual Funds 131 Other Types of Fees and Expenses 132
Investment Advisory Services 94	Investment Objectives of Mutual
Standard & Poor's Corporation 95	Funds 135
Moody's Investor Service 95	Investing in Mutual Funds 140
Value Line 100	Sources of Information 140
Investment Newsletter and Chart Services 103	Determining an Investment
Computerized Data Bases 103	Objective 143
Overview 103	Services Provided by Mutual Funds 143 Key Decision Variables 145
Compustat 104	Investment Strategies for Mutual
CRSP 104	Funds 149
ISL 104	Passive Strategies 149
Value Line Data Base 104	Active Strategies 153
Compact Disks 104 On-Line Services 105	Summary 154
Market Indexes 105	Concept Applications 155
The Dow Jones Averages 106	Key Terms 156
Standard & Poor's Stock Indexes 109	Questions 156
New York Stock Exchange Indexes 111	Key to the Investment Analysis
American Stock Exchange Indexes 111	Software 157
NASDAQ Indexes 111	Problems 157
Value Line Index 111 The Wilshire 5000 Equity Index 112	References 159

6 • Investing Internationally 161	Summary 214
Introduction 162	Key Terms 215
International Assets and Markets 162	Questions 215
The World Investable Market Portfolio 162	Problems 216
Background on Financial Markets 162	References 217
Comparing Risk and Return 166	
Size of International Companies 167	
Diversifying Internationally 169	PART III
Evidence on the Benefits of Diversifying Internationally 169	Valuation Concepts and Analysis 220
Factors Influencing Security Prices	
Globally 172	8 • Economic, Market, and Industry
International Diversification with Floating	Analysis 223
Exchange Rates 174 International Investments for the	Introduction 224
Individual Investor 179	Stock Prices and the Economy 224 The Business Cycle 227
International Money Market	Key Economic Variables 228
Investments 185	Professional Economic Forecasts 236
Concept Applications 189	Relating an Economic Forecast to the
Summary 189	Stock Market 240
Key Terms 190	Technical Analysis 241
Questions 190	Breadth of the Market 241 The Confidence Index 242
Key to the Investment Analysis	Mutual Funds' Cash Position 242
Software 191	Put-Call Ratio 243
Problems 191	Short Interest 243
References 192	Industry Analysis 243
7 - Laurenten aut Christianian 107	Importance of Industry Analysis 249 Key Industry Fundamentals 250
7 • Investment Strategies 195	Industry Selection 253
Introduction 196	Illustration of an Industry Analysis 255
Speculation versus Investing 196 Taxes 197	Summary 255
Trading Strategies 198	Key Terms 255
Long versus Short Position 198	Concept Applications 256
Margin Trading 200	Questions 256
Hedging 201	Key to the Investment Analysis
Arbitrage 204	Software 257
Analysis Strategies 204 Technical Analysis 205	Problems 258
Fundamental Analysis 205	References 260
Investment Strategies in an Efficient	Appendix 8A: Illustration of Basic Industry
Market 206	Analysis: Automobiles 262
Passive Strategies 207	
Active Strategies 208	
Conclusions 214	a a

9 • Analyzing Financial Statements 265	Changing Investor Attitudes Toward
Introduction 266	Bonds 316
The First Steps in Company Analysis 268	Types of Bonds 319
Selecting the Company for Analysis 269	U.S. Government Securities 319 U.S. Savings Bonds 320
Obtaining Company Information 270	Federal Agency and Miscellaneous
Analysis of Financial Statements 270	Securities 322
Return on Equity 271 Ratio Analysis and Return on Equity 271	Municipal Securities 323
Other Ratios 273	Corporate Bonds 326
Interpreting the Ratios 275	Comparison of Yields by Types of Bonds 326
Quality of Financial Statements 278	Basic Features of Bond Issues and
The Impact of Accounting Changes 278	Individual Bonds 328
Economic versus Accounting	Issuer Characteristics 329
Measurement of Income 280	Bond Characteristics 330
Other Key Fundamentals in Company	Bond Ratings 332
Analysis 281	Bond Markets 338
Illustration of Company Financial Analysis:	Primary Market 338
The Procter & Gamble Company 282 Company Background 283	Secondary Market 339 Quotations 339
Analysis of Procter & Gamble's Financial	Transaction Costs 339
Statements 283	Indexes 340
Summary 291	Summary 342
Concept Applications 292	Concept Applications 343
Key Terms 292	Key Terms 344
Questions 293	Questions 344
Key to the Investment Analysis	Key to the Investment Analysis
Software 294	Software 345
Problems 294	Problems 345
References 298	References 346
Appendix 9A: The Procter & Gamble	The Book of the Prince Prince I
Company and Subsidiaries: Notes to Consolidated Financial Statements 300	11 • Bond Analysis: Returns, Risk, and Strategies 347
	Bond Valuation 348
	Basic Equation 348
PART IV	Consols, Zeros, OIDs, and LYONs 350
Fundamental Analysis of Bonds 310	Investment Decision Making 351
1 minutes of Derivatives of Derivati	Bond Return Measures 354
10 • Bond Fundamentals 313	Current Yield 354
Introduction 314	Yield to Maturity 354 Vield to Maturity for Callable Bonds 356
Comparing Bonds with Other Types of	Yield to Maturity for Callable Bonds 356 Holding Period Return 357
Investments 314	Expected Rate of Return 358
Return Comparison: HPRs 314	An Illustration and Comparison of Return

Measures 360

Return Comparison: HPRs 314 Risk Comparison 316

Bond Risk Analysis 361 Systematic Sources of Bond Risk 361 Unsystematic Sources of Bond Risk 366 Empirical Measures of Bond Risk 367 An Illustration and Comparison of Risk Measures 371 Bond Investment Strategies 372 Passive Strategies 373 Active Strategies 374 Bond Portfolio Diversification 383 Naïve Diversification 383 Concept Applications 385 Summary 385 Key Terms 386 Questions 386 Key to the Investment Analysis Software 388 Problems 388 References 391 Appendix 11A: Bond Swaps 393 Appendix 11B: Immunization 396

PART V

Fundamental Analysis of Preferred and Common Stocks 400

Classical Immunization 396 Contingent Immunization 399

12 • Preferred and Common Stock Basics 403

Introduction 404

Preferred Stock 404

Debt or Equity? 405

Dividends 406

Taxes 407

Call Feature 408

Convertibility 408

Adjustable Dividend Rates 409

Marketability 410

Common Stock 411

Control 411
Preemptive Right 414
Liquidation Rights 414
Right to Income and Distribution of Additional Shares 415
Common Stock Values 417
Ouotations 418

Classifications of Common Stock 419

Blue-Chip Stocks 419
Growth Stocks 420
Income Stocks 420
Cyclical and Defensive Stocks 421
Speculative Stocks 421
Small Stocks 422
Treasury Stock 422
Quality Ratings 422

Summary 423

Concept Applications 424

Key Terms 425 Questions 425 Problems 426 References 428

13 • Analyzing and Forecasting Company Earnings 431

nings 431 Introduction 432

Definitions of Earnings per Share 432

Earnings Forecasts 434

Difficulty of Forecasting Earnings 434 Professional Earnings Forecasts 436 Accuracy of Earnings Forecasts 437 Methods of Forecasting Earnings 439

Cash Flow per Share 441
Unexpected Earnings 442
An Illustration of Analyzing and
Forecasting EPS 445
Summary 448
Concept Applications 449
Key Terms 449
Questions 449