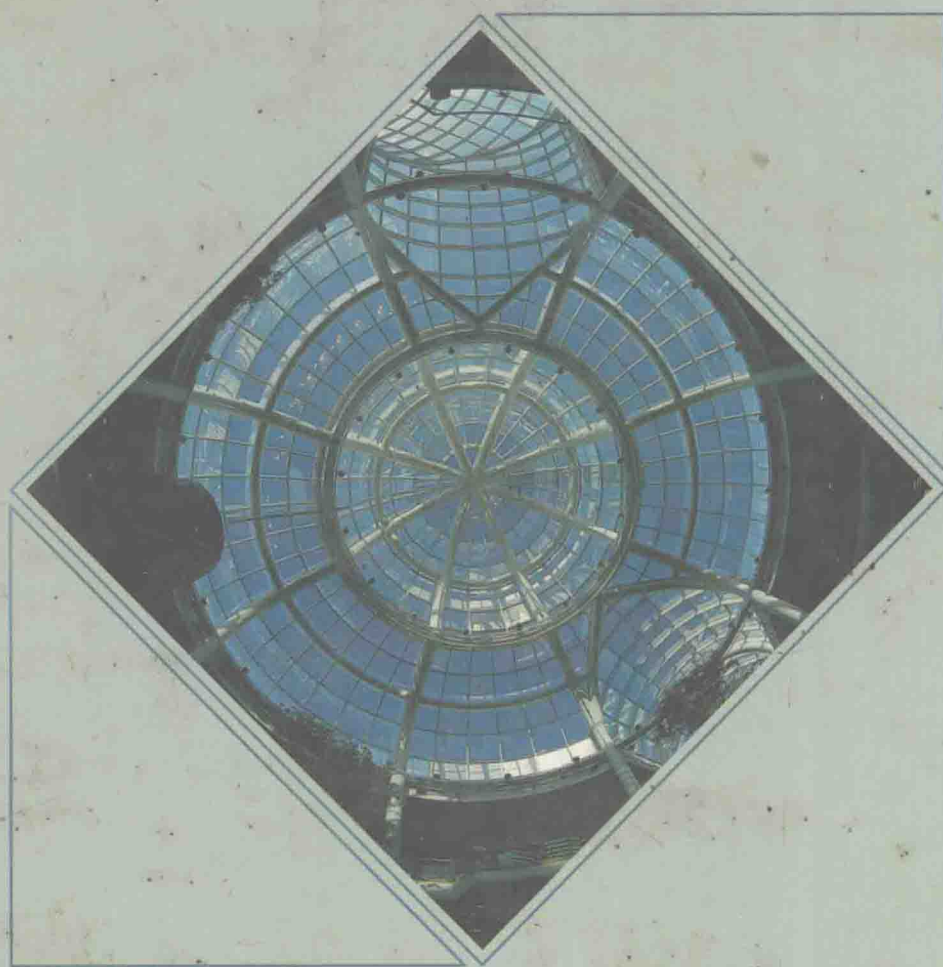


Second Edition

FUNDAMENTALS OF INVESTMENTS



Alexander ♦ Sharpe ♦ Bailey

SECOND EDITION

Fundamentals of Investments

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Preface

Writing a textbook is never easy. For a subject as diverse as investments, the task is particularly difficult. The undisciplined writer could fill volumes and never finish. How does an author best go about organizing the many topics that constitute the field of investments? We chose to start by establishing a basic set of principles that would guide our development of Fundamentals of Investments.

We sincerely believe that the serious student of investments, even a neophyte undergraduate, should acquire a balanced knowledge of both investment theory and practice. Granted, someone desiring only an introductory exposure to investment practice could get by with a minimal discussion of theory and focus almost exclusively on institutional details and personal finance applications. That approach, however, would leave the student unable to appreciate the many subtle and important issues faced daily by the investment professional.

We have structured Fundamentals to present students taking their first course in investments with the basic building blocks of modern investment thought. While the text is meant to present a thorough discussion of investments, we have constantly tried to remain faithful to three principles:

1. Keep the material practical and relevant.
2. Make the text easy to comprehend.
3. Design the text to permit a modular use by instructors.

First, we have written Fundamentals to give students a working knowledge of the financial instruments available to investors and the ways in which markets for these instruments operate. We have avoided tangential discussions of issues not germane to the primary subject at hand. Second, we want the text to be accessible to students unfamiliar with investments. Therefore, we have tried to write in a clear, concise style, keeping mathematical notation to a minimum, and including numerous examples to explain the concepts presented. Finally, we want instructors to be able to use the text in a modular fashion. While we have organized the text in what we believe to be a logical order, some instructors may wish to change that order or skip over certain sections entirely. The organization of the text accommodates such preferences.

This is the second edition of Fundamentals. As any textbook author will attest, a previous work can always be improved. After the first edition was published, we received many helpful suggestions from instructors and reviewers regarding ways in which we could make Fundamentals better. In response, we have made a number of changes that we believe substantially enhance Fundamentals in terms of our goals of practicality, ease of comprehension, and flexibility. Specifically, the second edition contains the following differences from the first:

- More international content. The globalization of investments is occurring at a rapid pace. It is imperative that students become familiar with an increasingly broad array of international investing concepts. Chapter 26 deals directly with international investing. Moreover, throughout the text, we have considerably expanded the discussions of data and research on international securities and security markets.
- Expanded coverage of options and futures. The use of these types of securities has increased dramatically in just the last few years. Accordingly, Chapters 24 and 25 have been extended in order to more fully present the basic concepts behind them.
- Updated material. Where appropriate, we have updated the text to keep students abreast of the latest developments in investments. We have revised tables and graphs to incorporate current information. Further, we have added discussions of recent important academic research.
- Additional end-of-chapter problems. We have roughly doubled the number of questions and problems at the end of each chapter.
- CFA examination questions. To give students a sense of some of the knowledge required of certified investment professionals, we have added questions from recent Chartered Financial Analyst examinations, where appropriate.
- Answers to selected problems. Students often wish to know if they are working in the right direction when solving end-of-chapter problems. At the end of the text, we have included answers to selected problems.
- Redesigned chapter summaries. To facilitate a quick review of a chapter's highlights, we have rewritten each chapter's summary in a point-by-point format.
- Money Matters topical discussions. Students typically want to know how concepts presented in the text are applied in the "real world." In each chapter, we have added a feature entitled *Money Matters* that offers light and stimulating discussions of issues ranging from portfolio optimizers to insider trading.

- Annotated references. For those students interested in further study of subjects presented in the text, at the end of each chapter we have included a detailed set of references organized by topic.
- New co-author. Jeff Bailey, who contributed to the first edition, is now a co-author. Jeff is a full-time practitioner in the field of investments and has brought a wealth of knowledge about how things are done “in the trenches.”

Many people ask us how *Fundamentals* differs from *Investments*. After all, *Investments* has been one of the most successful finance textbooks published. Why another version of such a popular text?

Both *Fundamentals* and *Investments* are comprehensive, covering the major aspects and theories of investing, while avoiding excessive detail. Further, both books contain similar features, such as a glossary of terms introduced in the text, and both books offer an instructor’s manual and investment software.

Investments, however, is written primarily for students who have stronger backgrounds in economics, statistics, and accounting. We felt that most students in their first investments course could benefit from a textbook designed to provide a less theoretical and technical approach to investments. Therefore, while we have not ignored the quantitative nature of modern investment theory and practice, we have considerably reduced the mathematical content from that contained in *Investments*. Moreover, we have organized *Fundamentals* in a modular fashion, unlike *Investments*, where the presentation style is more integrated.

Fundamentals contains a wealth of teaching aids that we believe instructors will find valuable. The terms highlighted within the text and listed at the end of each chapter help emphasize important concepts. The Glossary allows students to quickly reference terms listed earlier in the text, thereby creating a continuity of concepts across chapters. The point-by-point chapter summaries permit students to easily identify essential thoughts developed in each chapter.

We are particularly proud of the *Money Matters* articles presented in each chapter. Specifically written for *Fundamentals*, these articles are designed to give students a sense of how various investment issues and techniques are approached by practitioners. For example, the *Money Matters* in Chapter 2 shows how short selling is used by hedge fund managers. Chapter 18 discusses custom benchmark portfolios—a sophisticated performance evaluation tool that is gaining increasing attention. Chapter 26 considers the controversial issue of whether to hedge a foreign investment portfolio. We believe that the *Money Matters* articles will provide both interesting reading for the students and a stimulating source of classroom discussion material.

An extended supplements package also accompanies *Fundamentals*. Included in this package are:

- Instructor’s Manual. Solutions to all end-of chapter problems are presented in a thorough and well-explained fashion. Also, a set of course outlines designed to accommodate a variety of teaching approaches is presented.
- Tutorial Software. Robert Ritchey of Texas Tech University has developed software to give students a means of applying various concepts presented in *Fundamentals*. Students can test the sensitivity of a bond’s

price to various yield and term-to-maturity assumptions or apply the Black-Scholes model to option pricing. Selected end-of-chapter problems are also available for analysis. The software operates under Lotus 1-2-3.

- **Test Item File and Prentice Hall DataManager.** The Test Item File gives an instructor access to hundreds of exam questions (true/false, multiple choice, and problems) and their solutions. The Prentice Hall DataManager facilitates classroom management with a computer-assisted test design system and an electronic gradebook.
- **Investment Analysis Software.** Investment software systems from both Disclosure Information Service and Value Line give students personal computer access to a wide range of individual company financial and market data. Students can identify stocks using customized selection criteria and can design their own portfolios. They can also create data files compatible with popular spreadsheet programs such as Lotus 1-2-3 and Excel.

Many people have assisted us in preparing the second edition of this book, and we would like to acknowledge them as well as those who helped us with the first edition. We would like to thank Seth Anderson, Ann Bailey, Jeffrey Born, James Conley, Thomas Eyssell, Joseph Finnerty, Robert Jennings, Linda Kramer, Jaroslaw Komarynsky, K.C. Ma, S. Maheswaran, Carl McGowan, Ronald Melicher, Tom Nohel, Thomas O'Brien, Sailesh Ramamurtie, Anthony Sanders, Arlene Spiegel, Leonard Washko, and J. Kenton Zumwalt for their help at various stages in preparing this book for publication. We are also especially grateful for the efforts of five people at Prentice Hall: Acquisition Editor, Leah Jewell; Copy Editor, Eleanor Walter; Production Editor, Lisa Kinne; Designer, Meryl Poweski; and Marketing Manager, Patti Arneson.

We learned much by writing this book, and hope that you will learn much by reading it. While we believe that the book is free of errors of any sort, experience tells us that this might not be the case. Thus, we encourage those with constructive comments to send them to us.

GJA
WFS
JVB

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Introduction

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THE INVESTMENT PROCESS

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- Portfolio Revision ▪ Portfolio Performance Evaluation

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THE INVESTMENT INDUSTRY

SUMMARY

KEY TERMS

QUESTIONS AND PROBLEMS

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forgone

This book is about investing in marketable securities. Accordingly, it focuses on the investment environment and process. The **investment environment** includes the kinds of marketable securities that exist and where and how they are bought and sold. The **investment process** is concerned with how an investor should proceed in making decisions about what marketable securities to invest in, how extensive the investments should be, and when the investments should be made. Before discussing the investment environment and process in more detail, the term **investment** will be described.

Investment, in its broadest sense, means the sacrifice of current dollars for future dollars. Two different attributes are generally involved: time and risk. The sacrifice takes place in the present and is certain. The reward comes later, if at all, and the magnitude is generally uncertain. In some cases the element of time predominates (for example, government bonds). In other cases risk is the dominant attribute (for example, call options on common stocks). In yet others, both time and risk are important (for example, shares of common stock).

A distinction is often made between investment and **savings**. Savings is defined as forgone consumption; investment is restricted to "real" investment of the sort that increases national output in the future. While this definition may prove useful in other contexts, it is not especially helpful here. However, it is useful to make a distinction between real and financial investments.

Real investments generally involve some kind of **tangible** asset, such as land, machinery, or factories. **Financial investments** involve contracts writ-

investment environment

investment process

investment

savings

real investments

financial investments