

Investment Analysis & Portfolio Management

10TH EDITION



Reilly & Brown



Investment Analysis & Portfolio Management

TENTH EDITION

FRANK K. REILLY

University of Notre Dame

KEITH C. BROWN

University of Texas at Austin



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*To my best friend & wife,
Therese,
and the greatest gifts and
sources of our happiness,
Frank K. III, Charlotte, and Lauren
Clarence R. II, Michelle, Sophie, and Cara
Therese B. and Denise Z.
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—F. K. R.*

*To Sheryl, Alexander, and Andrew, who make it all worthwhile
—K. C. B.*



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Preface

The pleasure of authoring a textbook comes from writing about a subject that we enjoy and find exciting. As authors, we hope that we can pass on to the reader not only knowledge but also the excitement that we feel for the subject. In addition, writing about investments brings an added stimulant because the subject can affect the reader during his or her entire business career and beyond. We hope that what readers derive from this course will help them enjoy better lives through managing their financial resources properly.

The purpose of this book is to help you learn how to manage your money so you will derive the maximum benefit from what you earn. To accomplish this purpose, you need to learn about the many investment alternatives that are available today and, what is more important, to develop a way of analyzing and thinking about investments that will remain with you in the years ahead when new and different investment opportunities become available.

Because of its dual purpose, the book mixes description and theory. The descriptive material discusses available investment instruments and considers the purpose and operation of capital markets in the United States and around the world. The theoretical portion details how you should evaluate current investments and future opportunities to develop a portfolio of investments that will satisfy your risk-return objectives.

Preparing this tenth edition has been challenging for two reasons. First, we continue to experience rapid changes in the securities markets in terms of theory, new financial instruments, innovative trading practices, and the fallout from the significant credit and liquidity disruption and the numerous regulatory changes that followed. Second, as mentioned in prior editions, capital markets continue to become very global in nature. Consequently, early in the book we present the compelling case for global investing. Subsequently, to ensure that you are prepared to function in a global environment, almost every chapter discusses how investment practice or theory is influenced by the globalization of investments and capital markets. This completely integrated treatment is to ensure that you develop a broad mindset on investments that will serve you well in the 21st century.

Intended Market

This text is addressed to both graduate and advanced undergraduate students who are looking for an in-depth discussion of investments and portfolio management. The presentation of the material is intended to be rigorous and empirical, without being overly quantitative. A proper discussion of the modern developments in investments and portfolio theory must be rigorous. The discussion of numerous empirical studies reflects the belief that it is essential for alternative investment theories to be exposed to the real world and be judged on the basis of how well they help us understand and explain reality.

Key Features of the Tenth Edition

When planning the tenth edition of *Investment Analysis and Portfolio Management*, we wanted to retain its traditional strengths and capitalize on new developments in the investments area to make it the most comprehensive investments textbook available.

First, the current edition maintains its unparalleled international coverage. Investing knows no borders, and although the total integration of domestic and global investment opportunities may seem to contradict the need for separate discussions of international issues, it, in fact, makes the need for specific information on non-U.S. markets, instruments, conventions, and techniques even more compelling.

Second, both technology and regulations have caused more significant changes during the last decade in the functioning and organization of global security markets than during the prior 40 years. Chapter 4 contains a detailed discussion of this evolution and the results for global markets.

Third, today's investing environment includes derivative securities not as exotic anomalies but as standard investment instruments. We felt that *Investment Analysis and Portfolio Management* must reflect that reality. Consequently, our four chapters on derivatives are written to provide the reader with an intuitive, clear discussion of the different instruments, their markets, valuation, trading strategies, and general use as risk management and return enhancement tools.

Fourth, we have added many new questions and problems to the end-of-chapter material to provide more student practice on executing computations concerned with more sophisticated investment problems.

Fifth, we have updated and enhanced the collection of Thomson ONE: Business School Edition (BSE) exercises in several end-of-chapter problem sets. Thomson ONE: BSE is a professional analytical package used by professionals worldwide. Our text allows one-year access for students to Thomson ONE: BSE, which contains information on firms, including financial statement comparisons with competitors, stock price information, and indexes for comparing firm performance against the market or sector. Thomson ONE: BSE is a great package for hands-on learning, which rivals or exceeds that offered by other textbook publishers.

Major Content Changes in the Tenth Edition

The text has been thoroughly updated for currency. In addition to these time-related revisions, we have also made the following specific changes to individual chapters:

Chapter 3 The updated evidence of returns (through 2010) continues to support global diversification, and an updated study on global assets supports the use of a global measure of systematic risk to explain asset returns. Also, we consider new investment instruments available for global investors, including global index funds and the continued growth of exchange-traded funds (ETFs) for numerous countries and sectors.

Chapter 4 Because of the continuing growth in trading volume handled by electronic communications networks (ECNs), this chapter was heavily rewritten to discuss in detail the significant changes in the market as well as the results of this new environment including the “flash crash” in 2008. This includes a discussion on the continuing changes on the NYSE during 2008–2011. We also consider the rationale for the continuing consolidation of global exchanges across asset classes of stocks, bonds, and derivatives. In addition, we document recent mergers and discuss several proposed and failed mergers. Finally, we note that the corporate bond market continues to experience major changes in how and when trades are reported and the number of bond issues involved.

Chapter 5 This chapter contains a discussion of fundamental weighted stock and bond indexes that use sales and earnings to weight components rather than market value. Also included is an updated analysis of the relationship among indexes.

Chapter 6 New studies that both support the efficient market hypothesis but also provide new evidence of anomalies are examined in this chapter. There is also discussion of behavioral finance and how it explains many of the anomalies. Further, we discuss the implications of the recent changes in the cost of trading (considered in Chapter 4) on some of the empirical results of prior studies.

Chapter 8 This chapter has been revised to enhance the presentation of the important transition between modern portfolio theory and the Capital Asset Pricing Model (CAPM) in a more intuitive way, including a new section on industry-specific characteristic lines. The discussion contains several examples of how the CAPM is measured and used in practice, in both the United States and global markets.

Chapter 9 The discussion of the theory and practice of using multifactor models of risk and expected return has been updated and expanded. The connection between the Arbitrage

Pricing Theory (APT) and empirical implementations of the APT continues to be stressed, both conceptually and with several revised examples using Morningstar style classification data.

Chapter 10 This chapter contains a detailed comparison of alternative cash flow specifications and how they are used in valuation models and credit analysis. When we apply the extensive ratio analysis to Walgreens, it uncovers several changes in the performance by Walgreens, which highlights the usefulness of the analysis.

Chapter 11 Here we emphasize the two alternative approaches to valuation (present value of cash flows and relative valuation). An updated presentation of the yield spread during the 2008–2010 period enforces the importance of the changing risk premium.

Chapter 12 This chapter both considers the macroeconomic variables that affect capital markets and demonstrates the microvaluation of these markets. The demonstration was very challenging and insightful due to the economic and market environment in 2008–2011.

Chapter 13 We continue to emphasize the importance of the macroanalysis of an industry and the large impact this has on the subsequent valuation of the industry.

Chapter 14 We advocate a two-part analysis that first involves a deep analysis of a company to understand both its business and financial risk and its growth outlook. The second part of the analysis is a stock valuation component that depends upon the company analysis for inputs. The result is two decisions—one on the company and the second on the stock. It is emphasized that these decisions do not have to be the same (e.g., the stock of a good company may be a poor stock—it may be overvalued).

Chapter 16 This chapter contains an enhanced discussion of the relative merits of passive versus active management techniques for equity portfolio management focusing on the important role of tracking error. Expanded material on measuring the tax efficiency of an equity portfolio has been introduced, along with additional analysis of equity portfolio investment strategies, including fundamental and technical approaches, as well as a detailed description of equity style analysis.

Chapter 17 Because of the major credit-liquidity problems encountered in the U.S. bond market during 2007–2009, which continue to impact security markets around the world, several topics in the chapter have been added or adjusted. This includes discussions on government-sponsored entities (GSEs), bond-rating firms, municipal bond insurance, collateralized debt obligations (CDOs), auction-rate securities, and covered bonds.

Chapter 18 We discuss four specifications of duration including the strengths and problems for each of them. Similarly, we consider three yield spreads—traditional spreads, static yield spreads, and option adjusted spreads (OAS)—and the relationships among them.

Chapter 19 This chapter on bond portfolio management strategies has been enhanced and revised to include an extended discussion comparing active and passive fixed-income strategies, as well as new and updated examples of how the bond immunization process functions. Both new and updated material on how the investment style of a fixed-income portfolio is defined and measured in practice has also been included, along with new examples of active bond management strategies.

Chapter 20 Expanded discussions of the fundamentals associated with using derivative securities (e.g., interpreting price quotations, basic payoff diagrams, basic strategies) are included in this chapter. We also provide updated examples of both basic and intermediate risk management applications using derivative positions, as well as new material on how these contracts trade in the marketplace.

Chapter 21 New and updated examples and applications are provided throughout the chapter, emphasizing the role that forward and futures contracts play in managing exposures to equity, fixed-income, and foreign exchange risk. Also included is an enhanced discussion of how futures and forward markets are structured and operate.

Chapter 22 Here we expand the discussion linking valuation and applications of call and put options in the context of investment management. The chapter contains both new and

updated examples designed to illustrate how investors use options in practice, as well as a discussion of the recent changes to options markets.

Chapter 23 This chapter includes a revised discussion of several advanced derivative applications (e.g., swap contracting, convertible securities, structured notes, real options), as well as updated examples and applications of each of these applications. An extensive discussion of how credit default derivatives are used in practice has also been updated.

Chapter 24 Contained in this chapter is a revised and updated discussion of the organization and participants in the professional asset management industry. Of particular note is an extensive update of the structure and strategies employed by hedge funds as well as enhanced analysis of how private equity funds function. The discussion of ethics and regulation in the asset management industry that concludes the chapter has also been updated and expanded.

Chapter 25 An updated and considerably expanded application of the performance measurement techniques introduced throughout the chapter is provided, including new material regarding the calculation of information ratios. The discussion emphasizes how the concept of “downside” risk can be incorporated into the performance measurement process and the examination of techniques that focus on the security holdings of a manager’s portfolio, rather than the returns that the portfolio generates.

Supplement Package

Preparation of the tenth edition provided the opportunity to enhance the supplement products offered to instructors and students who use *Investment Analysis and Portfolio Management*. The result of this examination is a greatly improved package that provides more than just basic answers and solutions. We are indebted to the supplement writers who devoted their time, energy, and creativity to making this supplement package the best it has ever been.

STOCK-TRAK[®] Thousands of students every year use STOCK-TRAK[®] to practice investment strategies, test theories, practice day trading, and learn about the various markets. A coupon for a price reduction for this optional stock simulation is included with the text.

Instructor’s Manual The *Instructor’s Manual* is available on the IRCD. Written by Narendar Rao at Northeastern Illinois University, it contains a brief outline of each chapter’s key concepts and equations, which can be easily copied and distributed to students as a reference tool.

Test Bank The *Test Bank*, written by Brian Boscailon at Penn State University–Erie, includes an extensive set of new questions and problems and complete solutions to the testing material. The *Test Bank* is available on the IRCD. For instructors who would like to prepare their exams electronically, the *ExamView* version contains all the test questions found in the printed version. It is available on the IRCD.

Solutions Manual This contains all the answers to the end-of-chapter questions and solutions to end-of-chapter problems. Edgar A. Norton at Illinois State University was ever-diligent in the preparation of these materials, ensuring the most error-free solutions possible. It is available on the IRCD.

Lecture Presentation Software A comprehensive set of PowerPoint slides created by Yulong Ma at California State University, Long Beach, is available on the IRCD. Each chapter has a self-contained presentation that covers all the key concepts, equations, and examples within the chapter. The files can be used as is for an innovative, interactive class presentation. Instructors who have access to Microsoft PowerPoint can modify the slides in any way they wish, adding or deleting materials to match their needs.

Website The text’s Website can be accessed through <http://login.cengage.com/> and includes up-to-date teaching and learning aids for instructors and students. The *Instructor’s Manual*, *Test Bank*, and PowerPoint slides are available to instructors for download. If they choose to, instructors may post, on a *password-protected site only*, the PowerPoint presentation for their students.



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Golden Gate University

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Clemson University

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East Carolina University

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University of Illinois
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Harrisburg, Pennsylvania

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Northern Illinois University

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University of Hartford

DANNY LITT
Century Software Systems/UCLA

MILES LIVINGSTON
University of Florida

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Texas Tech University

ANANTH MADHAVEN
University of Southern California

DAVINDER MALHOTRA
Philadelphia College of Textiles and
Science

STEPHEN MANN
University of South Carolina

IQBAL MANSUR
Widener University

LINDA MARTIN
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