Preface

We've just ended three decades of rapid and profound change in the investments industry as well as a financial crisis of historic magnitude. The vast expansion of financial markets during this period was due in part to innovations in securitization and credit enhancement that gave birth to new trading strategies. These strategies were in turn made feasible by developments in communication and information technology, as well as by advances in the theory of investments.

Yet the financial crisis also was rooted in the cracks of these developments. Many of the innovations in security design facilitated high leverage and an exaggerated notion of the efficacy of risk transfer strategies. This engendered complacency about risk that was coupled with relaxation of regulation as well as reduced transparency, masking the precarious condition of many big players in the system. Of necessity, our text has evolved along with financial markets and their influence on world events.

Investments, Tenth Edition, is intended primarily as a textbook for courses in investment analysis. Our guiding principle has been to present the material in a framework that is organized by a central core of consistent fundamental principles. We attempt to strip away unnecessary mathematical and technical detail, and we have concentrated on providing the intuition that may guide students and practitioners as they confront new ideas and challenges in their professional lives.

This text will introduce you to major issues currently of concern to all investors. It can give you the skills to conduct a sophisticated assessment of watershed current issues and debates covered by the popular media as well as more-specialized finance journals. Whether you plan to become an investment professional, or simply a sophisticated individual investor, you will find these skills essential, especially in today's rapidly evolving environment.

Our primary goal is to present material of practical value, but all three of us are active researchers in financial economics and find virtually all of the material in this book to be of great intellectual interest. Fortunately, we think, there is no contradiction in the field of investments between the pursuit of truth and the pursuit of money. Quite the opposite. The capital asset pricing model, the arbitrage pricing model, the efficient markets hypothesis, the option-pricing model, and the other centerpieces of modern financial research are as much intellectually satisfying subjects of scientific inquiry as they are of immense practical importance for the sophisticated investor.

In our effort to link theory to practice, we also have attempted to make our approach consistent with that of the CFA Institute. In addition to fostering research in finance, the CFA Institute administers an education and certification program to candidates seeking designation as a Chartered Financial Analyst (CFA). The CFA curriculum represents the consensus of a committee of distinguished scholars and practitioners regarding the core of knowledge required by the investment professional.

Many features of this text make it consistent with and relevant to the CFA curriculum. Questions from past CFA exams appear at the end of nearly every chapter, and, for students who will be taking the exam, those same questions and the exam from which they've been taken are listed at the end of the book. Chapter 3 includes excerpts from the "Code of Ethics and Standards of Professional Conduct" of the CFA Institute. Chapter 28, which discusses investors and the investment process, presents the

CFA Institute's framework for systematically relating investor objectives and constraints to ultimate investment policy. End-of-chapter problems also include questions from test-prep leader Kaplan Schweser.

In the Tenth Edition, we have continued our systematic collection of Excel spreadsheets that give tools to explore concepts more deeply than was previously possible. These spreadsheets, available on the Web site for this text (**www.mhhe.com/bkm**), provide a taste of the sophisticated analytic tools available to professional investors.

UNDERLYING PHILOSOPHY

In the Tenth Edition, we address many of the changes in the investment environment, including the unprecedented events surrounding the financial crisis.

At the same time, many basic *principles* remain important. We believe that attention to these few important principles can simplify the study of otherwise difficult material and that fundamental principles should organize and motivate all study. These principles are crucial to understanding the securities traded in financial markets and in understanding new securities that will be introduced in the future, as well as their effects on global markets. For this reason, we have made this book thematic, meaning we never offer rules of thumb without reference to the central tenets of the modern approach to finance.

The common theme unifying this book is that *security markets are nearly efficient,* meaning most securities are usually priced appropriately given their risk and return attributes. Free lunches are rarely found in markets as competitive as the financial market. This simple observation is, nevertheless, remarkably powerful in its implications for the design of investment strategies; as a result, our discussions of strategy are always guided by the implications of the efficient markets hypothesis. While the degree of market efficiency is, and always will be, a matter of debate (in fact we devote a full chapter to the behavioral challenge to the efficient market hypothesis), we hope our discussions throughout the book convey a good dose of healthy criticism concerning much conventional wisdom.

Distinctive Themes

Investments is organized around several important themes:

1. **The central theme** is the near-informational-efficiency of well-developed security markets, such as those in the United States, and the general awareness that competitive markets do not offer "free lunches" to participants.

   A second theme is the risk–return trade-off. This too is a no-free-lunch notion, holding that in competitive security markets, higher expected returns come only at a price: the need to bear greater investment risk. However, this notion leaves several questions unanswered. How should one measure the risk of an asset? What should be the quantitative trade-off between risk (properly measured) and expected return? The approach we present to these issues is known as *modern portfolio theory,* which is another organizing principle of this book. Modern portfolio theory focuses on the techniques and implications of *efficient diversification,* and we devote considerable attention to the effect of diversification on portfolio risk as well as the implications of efficient diversification for the proper measurement of risk and the risk–return relationship.
2. **This text places** greater emphasis on asset allocation than most of its competitors. We prefer this emphasis for two important reasons. First, it corresponds to the procedure that most individuals actually follow. Typically, you start with all of your money in a bank account, only then considering how much to invest in something riskier that might offer a higher expected return. The logical step at this point is to consider risky asset classes, such as stocks, bonds, or real estate. This is an asset allocation decision. Second, in most cases, the asset allocation choice is far more important in determining overall investment performance than is the set of security selection decisions. Asset allocation is the primary determinant of the risk–return profile of the investment portfolio, and so it deserves primary attention in a study of investment policy.
3. **This text offers** a much broader and deeper treatment of futures, options, and other derivative security markets than most investments texts. These markets have become both crucial and integral to the financial universe. Your only choice is to become conversant in these markets—whether you are to be a finance professional or simply a sophisticated individual investor.

NEW IN THE TENTH EDITION

The following is a guide to changes in the Tenth Edition. This is not an exhaustive road map, but instead is meant to provide an overview of substantial additions and changes to coverage from the last edition of the text.

Chapter 1 The Investment Environment

This chapter contains updated coverage of the consequences of the financial crisis as well as the Dodd-Frank act.

Chapter 2 Asset Classes and Financial Instruments

We devote additional attention to money markets, including recent controversies concerning the regulation of money market mutual funds as well as the LIBOR scandal.

Chapter 3 How Securities Are Traded

We have extensively rewritten this chapter and included new sections that detail the rise of electronic markets, algorithmic and high-speed trading, and changes in market structure.

Chapter 5 Risk, Return, and the Historical Record

This chapter has been updated with considerable attention paid to evidence on tail risk and extreme stock returns.

Chapter 9 The Capital Asset Pricing Model

We have streamlined the explanation of the simple CAPM and updated and integrated the sections dealing with extensions of the CAPM, tying together extra-market hedging demands and factor risk premia.

Chapter 10 Arbitrage Pricing Theory

The chapter contains new material on the practical feasibility of creating well-diversified portfolios and the implications for asset pricing.

Chapter 11 The Efficient Market Hypothesis

We have added new material documenting the behavior of market anomalies over time, suggesting how market inefficiencies seem to be corrected.

Chapter 13 Empirical Evidence on Security Returns

Increased attention is given to tests of multifactor models of risk and return and the implications of these tests for the importance of extra-market hedging demands.

Chapter 14 Bond Prices and Yields

This chapter includes new material on sovereign credit default swaps.

Chapter 18 Equity Valuation Models

This chapter includes a new section on the practical problems entailed in using DCF security valuation models and the response of value investors to these problems.

Chapter 19 Financial Statement Analysis

We have added a new introduction to the discussion of ratio analysis, providing greater structure and rationale concerning the use of financial ratios as tools to evaluate firm performance.

Chapter 21 Option Valuation

We have added substantial new sections on risk-neutral valuation methods and their implementation in the binomial option-pricing model, as well as the implications of the option pricing model for tail risk and financial instability.

Chapter 24 Portfolio Performance Evaluation

New sections on the vulnerability of standard performance measures to manipulation, manipulation-free measures, and the Morningstar Risk-Adjusted Return have been added.

ORGANIZATION AND CONTENT

The text is composed of seven sections that are fairly independent and may be studied in a variety of sequences. Because there is enough material in the book for a two-semester course, clearly a one-semester course will require the instructor to decide which parts to include.

Part One is introductory and contains important institutional material focusing on the financial environment. We discuss the major players in the financial markets, provide an overview of the types of securities traded in those markets, and explain how and where securities are traded. We also discuss in depth mutual funds and other investment companies, which have become an increasingly important means of investing for individual investors. Perhaps most important, we address how financial markets can influence all aspects of the global economy, as in 2008.

The material presented in Part One should make it possible for instructors to assign term projects early in the course. These projects might require the student to analyze in detail a particular group of securities. Many instructors like to involve their students in some sort of investment game, and the material in these chapters will facilitate this process.

Parts Two and Three contain the core of modern portfolio theory. Chapter 5 is a general discussion of risk and return, making the general point that historical returns on broad asset classes are consistent with a risk–return trade-off, and examining the distribution of stock returns. We focus more closely in Chapter 6 on how to describe investors' risk preferences and how they bear on asset allocation. In the next two chapters, we turn to portfolio optimization (Chapter 7) and its implementation using index models (Chapter 8).

After our treatment of modern portfolio theory in Part Two, we investigate in Part Three the implications of that theory for the equilibrium structure of expected rates of return on risky assets. Chapter 9 treats the capital asset pricing model and Chapter 10 covers multifactor descriptions of risk and the arbitrage pricing theory. Chapter 11 covers the efficient market hypothesis, including its rationale as well as evidence that supports the hypothesis and challenges it. Chapter 12 is devoted to the behavioral critique of market rationality. Finally, we conclude Part Three with Chapter 13 on empirical evidence on security pricing. This chapter contains evidence concerning the risk–return relationship, as well as liquidity effects on asset pricing.

Part Four is the first of three parts on security valuation. This part treats fixed-income securities—bond pricing (Chapter 14), term structure relationships (Chapter 15), and interest-rate risk management (Chapter 16). **Parts Five and Six** deal with equity securities and derivative securities. For a course emphasizing security analysis and excluding portfolio theory, one may proceed directly from Part One to Part Four with no loss in continuity.

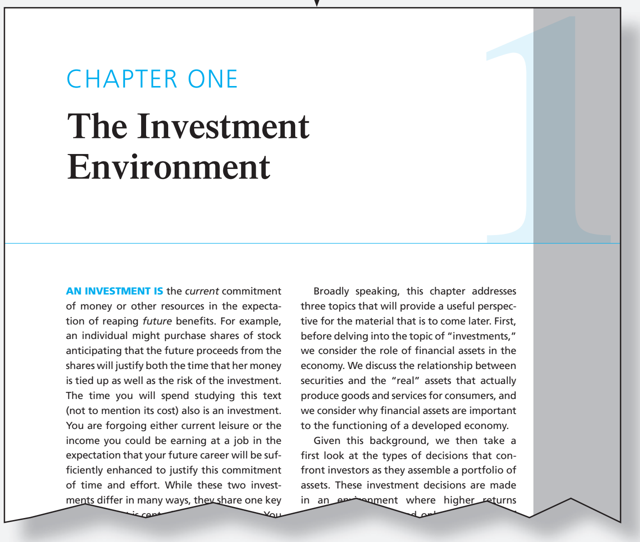
Finally, **Part Seven** considers several topics important for portfolio managers, including performance evaluation, international diversification, active management, and practical issues in the process of portfolio management. This part also contains a chapter on hedge funds.

A Guided Tour

This book contains several features designed to make it easy for students to understand, absorb, and apply the concepts and techniques presented.

CHAPTER OPENING VIGNETTES

SERVE TO OUTLINE the upcoming material in the chapter and provide students with a road map of what they will learn.



CHAPTER ONE

The Investment Environment

1

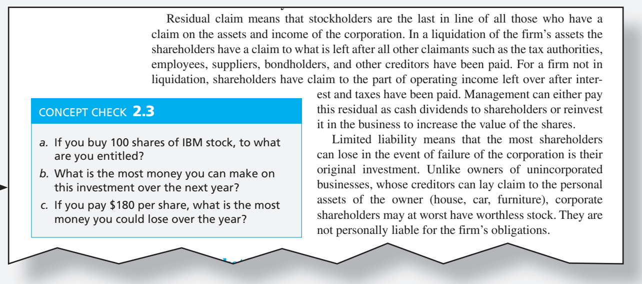
AN INVESTMENT IS the *current* commitment of money or other resources in the expectation of reaping *future* benefits. For example, an individual might purchase shares of stock anticipating that the future proceeds from the shares will justify both the time that her money is tied up as well as the risk of the investment. The time you will spend studying this text (not to mention its cost) also is an investment. You are forgoing either current leisure or the income you could be earning at a job in the expectation that your future career will be sufficiently enhanced to justify this commitment of time and effort. While these two investments differ in many ways, they share one key

Broadly speaking, this chapter addresses three topics that will provide a useful perspective for the material that is to come later. First, before delving into the topic of "investments," we consider the role of financial assets in the economy. We discuss the relationship between securities and the "real" assets that actually produce goods and services for consumers, and we consider why financial assets are important to the functioning of a developed economy.

Given this background, we then take a first look at the types of decisions that confront investors as they assemble a portfolio of assets. These investment decisions are made in an environment where higher returns

CONCEPT CHECKS

A UNIQUE FEATURE of this book! These self-test questions and problems found in the body of the text enable the students to determine whether they've understood the preceding material. Detailed solutions are provided at the end of each chapter.



Residual claim means that stockholders are the last in line of all those who have a claim on the assets and income of the corporation. In a liquidation of the firm's assets the shareholders have a claim to what is left after all other claimants such as the tax authorities, employees, suppliers, bondholders, and other creditors have been paid. For a firm not in liquidation, shareholders have claim to the part of operating income left over after interest and taxes have been paid. Management can either pay this residual as cash dividends to shareholders or reinvest it in the business to increase the value of the shares.

Limited liability means that the most shareholders can lose in the event of failure of the corporation is their original investment. Unlike owners of unincorporated businesses, whose creditors can lay claim to the personal assets of the owner (house, car, furniture), corporate shareholders may at worst have worthless stock. They are not personally liable for the firm's obligations.

CONCEPT CHECK **2.3**

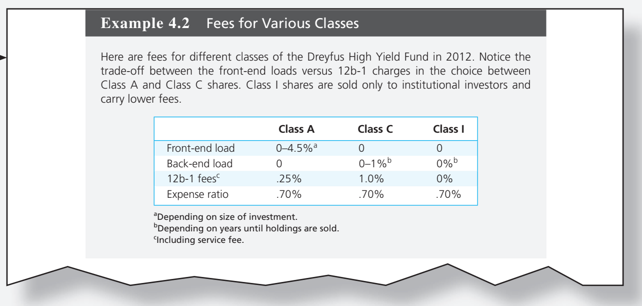
a. If you buy 100 shares of IBM stock, to what are you entitled?

b. What is the most money you can make on this investment over the next year?

c. If you pay $180 per share, what is the most money you could lose over the year?

NUMBERED EXAMPLES

NUMBERED AND TITLED examples are integrated throughout chapters. Using the worked-out solutions to these examples as models, students can learn how to solve specific problems step-by-step as well as gain insight into general principles by seeing how they are applied to answer concrete questions.



Example 4.2 Fees for Various Classes

Here are fees for different classes of the Dreyfus High Yield Fund in 2012. Notice the trade-off between the front-end loads versus 12b-1 charges in the choice between Class A and Class C shares. Class I shares are sold only to institutional investors and carry lower fees.

	Class A	Class C	Class I
Front-end load	0–4.5%[a]	0	0
Back-end load	0	0–1%[b]	0%[b]
12b-1 fees[c]	.25%	1.0%	0%
Expense ratio	.70%	.70%	.70%

[a]Depending on size of investment.
[b]Depending on years until holdings are sold.
[c]Including service fee.

WORDS FROM THE STREET BOXES

SHORT ARTICLES FROM business periodicals, such as *The Wall Street Journal,* are included in boxes throughout the text. The articles are chosen for real-world relevance and clarity of presentation.

WORDS FROM THE STREET

Investors Sour on Pro Stock Pickers

Investors are jumping out of mutual funds managed by professional stock pickers and shifting massive amounts of money into lower-cost funds that echo the broader market.

Through November 2012, investors pulled $119.3 billion from so-called actively managed U.S. stock funds according to the latest data from research firm Morningstar Inc. At the same time, they poured $30.4 billion into U.S. stock exchange-traded funds.

The move reflects the fact that many money managers of stock funds, which charge fees but also dangle the prospect of higher returns, have underperformed the benchmark stock indexes. As a result, more investors are choosing simply to invest in funds tracking the indexes, which carry lower fees and are perceived as having less risk.

The mission of stock pickers in a managed mutual fund is to outperform the overall market by actively trading individual stocks or bonds, with fund managers receiving higher fees for their effort. In an ETF (or indexed mutual fund), managers balance the share makeup of the fund so it accurately reflects the performance of its underlying index, charging lower fees.

Morningstar says that when investors have put money in stock funds, they have chosen low-cost index funds and ETFs. Some index ETFs cost less than 0.1% of assets a year, while many actively managed stock funds charge 1% a year or more.

While the trend has put increasing pressure lately on stock pickers, it is shifting the fortunes of some of the biggest players in the $14 trillion mutual-fund industry.

Fidelity Investments and American Funds, among the largest in the category, saw redemptions or weak investor interest compared with competitors, according to an analysis of mutual-fund flows done for *The Wall Street Journal* by research firm Strategic Insight, a unit of New York-based Asset International.

At the other end of the spectrum, Vanguard, the world's largest provider of index mutual funds, pulled in a net $141 billion last year through December, according to the company.

Many investors say they are looking for a way to invest cheaply, with less risk.

Source: Adapted from Kirsten Grind, "Investors Sour on Pro Stock Pickers" *The Wall Street Journal,* January 3, 2013.

or a mutual fund company that operates a market index fund. Vanguard, for example, operates the Index 500 Portfolio that mimics the S&P 500 index fund. It purchases shares of the firms constituting the S&P 500 in proportion to the market values of the outstanding equity of each firm, and therefore essentially replicates the S&P 500 index. The fund thus duplicates the performance of this market index. It has one of the lowest operating expenses (as a percentage of assets) of all mutual stock funds precisely because it requires minimal managerial effort.

A second reason to pursue a passive strategy is the free-ride... many

EXCEL APPLICATIONS

THE TENTH EDITION features Excel Spreadsheet Applications with new Excel questions. A sample spreadsheet is presented in the Investments text with an interactive version available on the book's Web site at **www.mhhe.com/bkm**.

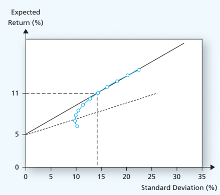
eXcel APPLICATIONS: Two–Security Model

The accompanying spreadsheet can be used to measure the return and risk of a portfolio of two risky assets. The model calculates the return and risk for varying weights of each security along with the optimal risky and minimum-variance portfolio. Graphs are automatically generated for various model inputs. The model allows you to specify a target rate of return and solves for optimal combinations using the risk-free asset and the optimal risky portfolio. The spreadsheet is constructed with the two-security return data from Table 7.1. This spreadsheet is available at **www.mhhe.com/bkm.**

Excel Question

1. Suppose your target expected rate of return is 11%.
   a. What is the lowest-volatility portfolio that provides that expected return?
   b. What is the standard deviation of that portfolio?
   c. What is the composition of that portfolio?

	A	B	C	D	E	F
1	Asset Allocation Analysis: Risk and Return					
2		Expected	Standard	Correlation		
3		Return	Deviation	Coefficient	Covariance	
4	Security 1	0.08	0.12	0.3	0.0072	
5	Security 2	0.13	0.2			
6	T-Bill	0.05	0			
7						
8	Weight	Weight		Expected	Standard	Reward to
9	Security 1	Security 2		Return	Deviation	Volatility
10	1	0		0.08000	0.12000	0.25000
11	0.9	0.1		0.08500	0.11559	0.30281
12	0.8	0.2		0.09000	0.11454	0.34922
13	0.7	0.3		0.09500	0.11696	0.38474
14	0.6	0.4		0.10000	0.12264	0.40771



EXCEL EXHIBITS

SELECTED EXHIBITS ARE set as Excel spreadsheets and are denoted by an icon. They are also available on the book's Web site at **www.mhhe.com/bkm**.

	A	B	C	D	E	F
1						
2						
3		Implicitly Assumed		Squared	Gross HPR =	Wealth
4	Period	Probability = 1/5	HPR (decimal)	Deviation	1 + HPR	Index*
5	2001	.2	–0.1189	0.0196	0.8811	0.8811
6	2002	.2	–0.2210	0.0586	0.7790	0.6864
7	2003	.2	0.2869	0.0707	1.2869	0.8833
8	2004	.2	0.1088	0.0077	1.1088	0.9794
9	2005	.2	0.0491	0.0008	1.0491	1.0275
10	Arithmetic average	AVERAGE(C5:C9) =	0.0210			
11	Expected HPR	SUMPRODUCT(B5:B9, C5:C9) =	0.0210			
12		Standard deviation	SUMPRODUCT(B5:B9, D5:D9)^.5 =	0.1774		Check:
13			STDEV(C5:C9) =	0.1983		1.0054^5=
14			Geometric average return	GEOMEAN(E5:E9) – 1 =	0.0054	1.0275
15	*The value of $1 invested at the beginning of the sample period (1/1/2001).					

Spreadsheet 5.2

Time series of HPR for the S&P 500

eXcel
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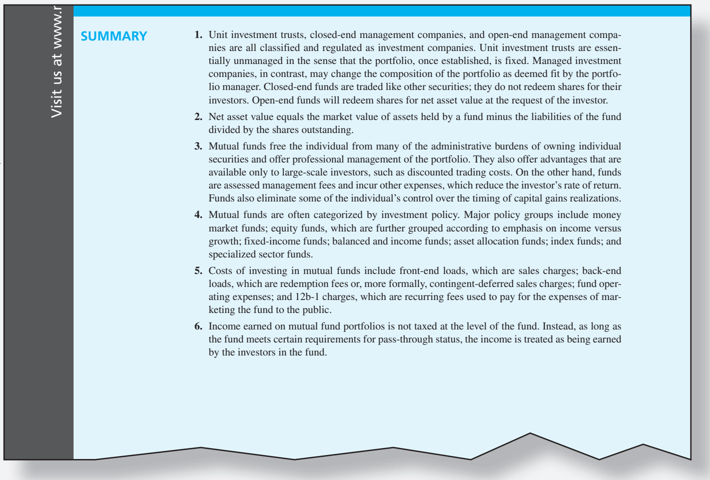
www.mhhe.com/bkm

End-of-Chapter Features

SUMMARY

AT THE END of each chapter, a detailed summary outlines the most important concepts presented. A listing of related Web sites for each chapter can also be found on the book's Web site at **www.mhhe.com/bkm**. These sites make it easy for students to research topics further and retrieve financial data and information.

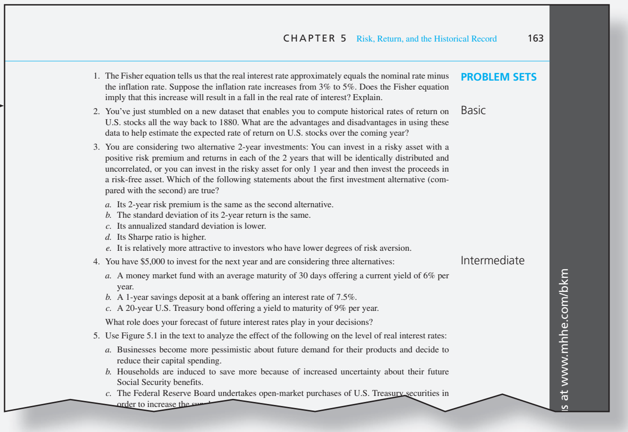

Visit us at www.r

SUMMARY

1. Unit investment trusts, closed-end management companies, and open-end management companies are all classified and regulated as investment companies. Unit investment trusts are essentially unmanaged in the sense that the portfolio, once established, is fixed. Managed investment companies, in contrast, may change the composition of the portfolio as deemed fit by the portfolio manager. Closed-end funds are traded like other securities; they do not redeem shares for their investors. Open-end funds will redeem shares for net asset value at the request of the investor.
2. Net asset value equals the market value of assets held by a fund minus the liabilities of the fund divided by the shares outstanding.
3. Mutual funds free the individual from many of the administrative burdens of owning individual securities and offer professional management of the portfolio. They also offer advantages that are available only to large-scale investors, such as discounted trading costs. On the other hand, funds are assessed management fees and incur other expenses, which reduce the investor's rate of return. Funds also eliminate some of the individual's control over the timing of capital gains realizations.
4. Mutual funds are often categorized by investment policy. Major policy groups include money market funds; equity funds, which are further grouped according to emphasis on income versus growth; fixed-income funds; balanced and income funds; asset allocation funds; index funds; and specialized sector funds.
5. Costs of investing in mutual funds include front-end loads, which are sales charges; back-end loads, which are redemption fees or, more formally, contingent-deferred sales charges; fund operating expenses; and 12b-1 charges, which are recurring fees used to pay for the expenses of marketing the fund to the public.
6. Income earned on mutual fund portfolios is not taxed at the level of the fund. Instead, as long as the fund meets certain requirements for pass-through status, the income is treated as being earned by the investors in the fund.

PROBLEM SETS

WE STRONGLY BELIEVE that practice in solving problems is critical to understanding investments, so a good variety of problems is provided. For ease of assignment we separated the questions by level of difficulty Basic, Intermediate, and Challenge.


CHAPTER 5 Risk, Return, and the Historical Record 163

PROBLEM SETS

Basic

1. The Fisher equation tells us that the real interest rate approximately equals the nominal rate minus the inflation rate. Suppose the inflation rate increases from 3% to 5%. Does the Fisher equation imply that this increase will result in a fall in the real rate of interest? Explain.
2. You've just stumbled on a new dataset that enables you to compute historical rates of return on U.S. stocks all the way back to 1880. What are the advantages and disadvantages in using these data to help estimate the expected rate of return on U.S. stocks over the coming year?
3. You are considering two alternative 2-year investments: You can invest in a risky asset with a positive risk premium and returns in each of the 2 years that will be identically distributed and uncorrelated, or you can invest in the risky asset for only 1 year and then invest the proceeds in a risk-free asset. Which of the following statements about the first investment alternative (compared with the second) are true?
   a. Its 2-year risk premium is the same as the second alternative.
   b. The standard deviation of its 2-year return is the same.
   c. Its annualized standard deviation is lower.
   d. Its Sharpe ratio is higher.
   e. It is relatively more attractive to investors who have lower degrees of risk aversion.

Intermediate

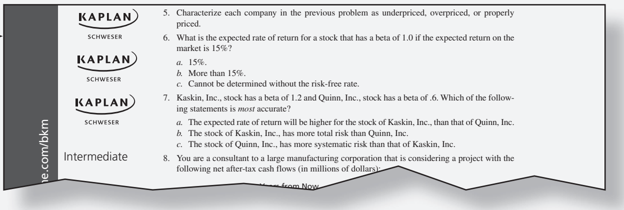
4. You have $5,000 to invest for the next year and are considering three alternatives:
   a. A money market fund with an average maturity of 30 days offering a current yield of 6% per year.
   b. A 1-year savings deposit at a bank offering an interest rate of 7.5%.
   c. A 20-year U.S. Treasury bond offering a yield to maturity of 9% per year.

   What role does your forecast of future interest rates play in your decisions?
5. Use Figure 5.1 in the text to analyze the effect of the following on the level of real interest rates:
   a. Businesses become more pessimistic about future demand for their products and decide to reduce their capital spending.
   b. Households are induced to save more because of increased uncertainty about their future Social Security benefits.
   c. The Federal Reserve Board undertakes open-market purchases of U.S. Treasury securities in

s at www.mhhe.com/bkm

EXAM PREP QUESTIONS

PRACTICE QUESTIONS for the CFA® exams provided by Kaplan Schweser, A Global Leader in CFA® Education, are available in selected chapters for additional test practice. Look for the Kaplan Schweser logo. Learn more at **www.schweser.com**.


5. Characterize each company in the previous problem as underpriced, overpriced, or properly priced.
6. What is the expected rate of return for a stock that has a beta of 1.0 if the expected return on the market is 15%?
   a. 15%.
   b. More than 15%.
   c. Cannot be determined without the risk-free rate.
7. Kaskin, Inc., stock has a beta of 1.2 and Quinn, Inc., stock has a beta of .6. Which of the following statements is *most* accurate?
   a. The expected rate of return will be higher for the stock of Kaskin, Inc., than that of Quinn, Inc.
   b. The stock of Kaskin, Inc., has more total risk than Quinn, Inc.
   c. The stock of Quinn, Inc., has more systematic risk than that of Kaskin, Inc.

Intermediate

8. You are a consultant to a large manufacturing corporation that is considering a project with the following net after-tax cash flows (in millions of dollars):

he.com/bkm

CFA PROBLEMS

WE PROVIDE SEVERAL questions from past CFA examinations in applicable chapters. These questions represent the kinds of questions that professionals in the field believe are relevant to the "real world." Located at the back of the book is a listing of each CFA question and the level and year of the CFA exam it was included in for easy reference when studying for the exam.

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b. Both were correct.
c. Stiles was correct and McCracken was wrong.

Challenge

17. Assume a universe of n (large) securities for which the largest residual variance is not larger than $n\sigma_M^2$. Construct as many different weighting schemes as you can that generate well-diversified portfolios.
18. Derive a more general (than the numerical example in the chapter) demonstration of the APT security market line:
    a. For a single-factor market.
    b. For a multifactor market.
19. Small firms will have relatively high loadings (high betas) on the SMB (small minus big) factor.
    a. Explain why.
    b. Now suppose two unrelated small firms merge. Each will be operated as an independent unit of the merged company. Would you expect the stock market behavior of the merged firm to differ from that of a portfolio of the two previously independent firms? How does the merger affect market capitalization? What is the prediction of the Fama-French model for the risk premium on the combined firm? Do we see here a flaw in the FF model?

CFA® PROBLEMS

1. Jeffrey Bruner, CFA, uses the capital asset pricing model (CAPM) to help identify mispriced securities. A consultant suggests Bruner use arbitrage pricing theory (APT) instead. In comparing CAPM and APT, the consultant made the following arguments:
    a. Both the CAPM and APT require a mean-variance efficient market portfolio.
    b. Neither the CAPM nor APT assumes normally distributed security returns.
    c. The CAPM assumes that one specific factor explains security returns but APT does not.

Visit us a

49.25	500	54.75	300
49.00	200	58.25	100
48.50	600		

a. If a market buy order for 100 shares comes in, at what price will it be filled?
b. At what price would the next market buy order be filled?
c. If you were a security dealer, would you want to increase or decrease your inventory of this stock?

eXcel
Please visit us at
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9. You are bullish on Telecom stock. The current market price is $50 per share, and you have $5,000 of your own to invest. You borrow an additional $5,000 from your broker at an interest rate of 8% per year and invest $10,000 in the stock.
    a. What will be your rate of return if the price of Telecom stock goes up by 10% during the next year? The stock currently pays no dividends.
    b. How far does the price of Telecom stock have to fall for you to get a margin call if the maintenance margin is 30%? Assume the price fall happens immediately.

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10. You are bearish on Telecom and decide to sell short 100 shares at the current market price of $50 per share.
    a. How much in cash or securities must you put into your brokerage account if the broker's initial margin requirement is 50% of the value of the short position?
    b. How high can the price of the stock go before you get a margin call if the maintenance margin is 30% of the value of the short position?

EXCEL PROBLEMS

SELECTED CHAPTERS CONTAIN problems, denoted by an icon, specifically linked to Excel templates that are available on the book's Web site at **www.mhhe.com/bkm**.

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E-INVESTMENTS EXERCISES

The Federal Reserve Bank of St. Louis has information available on interest rates and economic conditions. A publication called *Monetary Trends* contains graphs and tables with information about current conditions in the capital markets. Go to the Web site **www.stls.frb.org** and click on *Economic Research* on the menu at the top of the page. Find the most recent issue of *Monetary Trends* in the *Recent Data Publications* section and answer these questions.

1. What is the professionals' consensus forecast for inflation for the next 2 years? (Use the *Federal Reserve Bank of Philadelphia* line on the graph to answer this.)
2. What do consumers expect to happen to inflation over the next 2 years? (Use the *University of Michigan* line on the graph to answer this.)
3. Have real interest rates increased, decreased, or remained the same over the last 2 years?
4. What has happened to short-term nominal interest rates over the last 2 years? What about long-term nominal interest rates?
5. How do recent U.S. inflation and long-term interest rates compare with those of the other countries listed?
6. What are the most recently available levels of 3-month and 10-year yields on Treasury securities?

E-INVESTMENTS BOXES

THESE EXERCISES PROVIDE students with simple activities to enhance their experience using the Internet. Easy-to-follow instructions and questions are presented so students can utilize what they have learned in class and apply it to today's Web-driven world.

Supplements

FOR THE INSTRUCTOR

Online Learning Center www.mhhe.com/bkm

Find a wealth of information online! At this book's Web site instructors have access to teaching supports such as electronic files of the ancillary materials. Students have access to study materials created specifically for this text and much more. All Excel spreadsheets, denoted by an icon in the text are located at this site. Links to the additional support material are also included.

- **Instructor's Manual** Prepared by Anna Kovalenko, Virginia Tech University, the Manual has been revised and improved for this edition. Each chapter includes a Chapter Overview, Learning Objectives, and Presentation of Material.
- **Test Bank** Prepared by John Farlin, Ohio Dominican University, the Test Bank has been revised to improve the quality of questions. Each question is ranked by level of difficulty, which allows greater flexibility in creating a test and also provides a rationale for the solution.
- **Computerized Test Bank** A comprehensive bank of test questions is provided within a computerized test bank powered by McGraw-Hill's flexible electronic testing program EZ Test Online (**www.eztestonline.com**). You can select questions from multiple McGraw-Hill test banks or author your own, and then print the test for paper distribution or give it online. This user-friendly program allows you to sort questions by format, edit existing questions or add new ones, and scramble questions for multiple versions of the same test. You can export your tests for use in WebCT, Blackboard, PageOut, and Apple's iQuiz. Sharing tests with colleagues, adjuncts, and TAs is easy! Instant scoring and feedback is provided and EZ Test's grade book is designed to export to your grade book.
- **PowerPoint Presentation** These presentation slides, also prepared by Anna Kovalenko, contain figures and tables from the text, key points, and summaries in a visually stimulating collection of slides that you can customize to fit your lecture.
- **Solutions Manual** Updated by Marc-Anthony Isaacs, this Manual provides detailed solutions to the end-of-chapter problem sets. This supplement is also available for purchase by your students or can be packaged with your text at a discount.

FOR THE STUDENT

- **Excel Templates** are available for selected spreadsheets featured within the text, as well as those featured among the Excel Applications boxes. Selected end-of-chapter problems have also been designated as Excel problems, for which the available template allows students to solve the problem and gain experience using spreadsheets. Each template can also be found on the book's Web site **www.mhhe.com/bkm**.
- **Related Web Sites** A list of suggested Web sites is provided for each chapter. To keep Web addresses up-to-date, the suggested sites as well as their links are provided online. Each chapter summary contains a reference to its related sites.
- **Online Quizzes** These multiple-choice questions are provided as an additional testing and reinforcement tool for students. Each quiz is organized by chapter to test the specific concepts presented in that particular chapter. Immediate scoring of the quiz occurs upon submission and the correct answers are provided.

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- Access and review each response; manually change grades or leave comments for students to review.
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Instructor Library The *Connect Finance* Instructor Library is your repository for additional resources to improve student engagement in and out of class. You can select and use any asset that enhances your lecture. The *Connect Finance* Instructor Library includes all of the instructor supplements for this text.

Student Study Center The *Connect Finance* Student Study Center is the place for students to access additional resources. The Student Study Center:

- Offers students quick access to lectures, practice materials, eBooks, and more.
- Provides instant practice material and study questions, easily accessible on the go.

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- Provides continual reinforcement and remediation but gives only as much guidance as students need.
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- Access an instant view of student or class performance relative to learning objectives.
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The statements contained in *Investments* Tenth Edition are provided only as a guide for the users of this textbook. The AACSB leaves content coverage and assessment within the purview of individual schools, the mission of the school, and the faculty. While *Investments* Tenth Edition and the teaching package make no claim of any specific AACSB qualification or evaluation, within this edition we have labeled selected questions according to the six general knowledge and skills areas.

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