Preface

Financial statements are the lens on a business. Financial statement analysis calibrates the lens to bring the business into focus. Imperfections in the financial statements can dirty the lens and distort the picture. Financial statement analysis deals with the imperfections in financial statements to improve the focus.

Financial statements have many uses, but the predominant one is to provide information for investing in businesses. Every day millions of shares and corporate bonds are traded in the world's capital markets, and prices are set to value these securities. Investors wish to know what firms are worth so they can ascertain at what price to trade. They turn to financial statement analysis to get an indication of the underlying value of firms. This book focuses on these investors.

Underlying value is sometimes referred to as *fundamental value,* and the analysis of information about fundamental value is referred to as *fundamental analysis.* This book is about fundamental analysis. Financial statement analysis is central to fundamental analysis. Indeed, in this book, fundamental analysis is developed as a matter of appropriate financial statement analysis. As the lens on a business, financial statements, focused with the techniques of financial statement analysis, provide a way of interpreting the business that enables investors to understand the value it generates for shareholders.

The experience in stock markets in the late 1990s and the 2000s suggests that such understanding is sorely needed. During the 1990s, share prices rose considerably above the value that was indicated by earnings, book values, sales, and other fundamental information, only to collapse as the bubble burst. Spurred on by suspect analysis from those representing themselves as analysts, suspect financial reporting from some companies, the hyping of shares by corporate managements, and the speculative discussions of "talking heads" in the media, investors ignored sound analysis in a wave of "irrational exuberance." With a subsequent decline in share prices, compounded by a financial crisis, investors saw risk in action. That risk, in part, is the risk of paying too much for a share. The time has come to return to fundamentals, for fundamental analysis protects from the risk of paying too much. This book lays out the techniques of sound fundamental analysis.

THE APPROACH

Conceptual Framework

Good analysis comes from good understanding. And good understanding is provided by a conceptual framework that helps you—the student analyst—organize your thinking. In this information age, large amounts of information about firms are readily available to be processed. A conceptual framework guides you in using this information intelligently and economically—to turn the information into knowledge.

This book works from a conceptual framework that helps you understand how businesses work, how they generate value, and how the value they generate is captured (or not captured) in financial statements. The framework helps you translate your knowledge of a business into a valuation. The framework helps you interpret what you see in financial statements. It gives you answers to the many important questions facing analysts. What "fundamentals" should the analyst focus on—dividends, cash flows, or earnings? How is an analyst's earnings forecast converted into a valuation? How can an investor rely on earnings when earnings are sometimes measured with doubtful accounting methods? What role does the balance sheet play? What is a growth company and how is growth valued? What does a firm's price-earnings (P/E) ratio tell you? What does its price-to-book ratio tell you? How does one determine what the P/E or price-to-book should be?

Most important, the framework gives you the security that your analysis is a sound one. The framework is built block by block from "first principles" so that you see clearly where the analysis comes from and, by the end of the book, have a firm understanding of the principles of fundamental analysis. You will also be able to distinguish good analysis from poor analysis.

Practical Tools

This book is about understanding, but it is primarily about doing. Concepts and frameworks are important only if they lead to analysis tools. Each chapter of the book ends with a list of **Key Concepts,** but also with the **Analyst's Toolkit** that summarizes the key analysis tools in the chapter. By the end of the book, you will have a complete set of tools for practical analysis. The Toolkit is efficiently organized so that the analyst proceeds in a disciplined way with the assurance that his or her analysis is coherent and does not overlook any aspect of the value generation in a firm. The book identifies too-simple methods of analysis and shuns ad hoc methods. However, it also strives to develop simple schemes, with a sense of trade-off between the benefit of more complicated analysis over the cost. At all points in the book, methods are illustrated with applications to firms such as Google, Cisco Systems, Nike, Microsoft, Coca-Cola, and many more.

Most of the analysis and valuation material in the book can be built into a spreadsheet. So, as the book develops, you are given directions for building and embellishing a spreadsheet program, with further instructions on the book's Web site. By the end of the book, you will have a comprehensive analysis and valuation product that you can apply to almost any firm and use for active investing. A comprehensive guide to building spreadsheets—Build Your Own Analysis Product (BYOAP)—is on the book's Web site. Off-the-shelf spreadsheet products are available (many with faults), but you will find it much more satisfying to build your own, and certainly you will learn more this way.

Valuation and Strategy

The tools in the book are those that a security analyst outside the firm uses to advise clients about investing in the firm. These analysts present their recommendations in an equity research report. After studying this text, you will have the ability to write a persuasive, state-of-the-art equity research report. But the tools are also those that a manager within a firm uses to evaluate investments. The analyst outside the firm values the firm on the basis of what he or she understands the firm's strategy to be, while the manager within the firm uses the same tools to evaluate investments and choose the strategy. The techniques that are used to assess the value of a firm's strategy are also the techniques used to choose among strategies, so this book integrates valuation analysis and strategy analysis.

Accounting-Based Approach to Valuation

Valuation texts typically use discounted cash flow analysis to value businesses. However, analysts typically forecast earnings to indicate business value, and equity research reports primarily discuss firms' earnings, not their cash flows, to get a sense of whether the firm is making money for investors. "Buy earnings" is indeed the mantra of investing. The stock market focuses on earnings; analysts' and managements' earnings forecasts drive share prices, and when a firm announces earnings that are different from analysts' earnings estimates, the stock price responds accordingly. Revelations of overstated earnings result in large drops in stock prices—as with the Xerox, Enron, Qwest, WorldCom, Krispy Kreme, and other accounting scandals that broke as the stock market bubble burst. Investment houses are increasingly moving from cash flow valuation models to earnings-based valuation models.

This book focuses on earnings forecasting and the methods for converting earnings forecasts to a valuation. The reason will become clear as you proceed through the book: Earnings, appropriately measured, give a better indication of the value generation in a business, so the analysis of earnings prospects leads to a firmer understanding of fundamental value. Graham and Dodd and the fundamental analysts of earlier generations emphasized "earnings power." This book maintains that focus, but in a way that is consistent with the principles of modern finance. One must be careful, for there is a danger in paying too much for earnings.

The Quality of the Accounting

With an understanding of how accounting should work, you will develop an appreciation in this book of what is good accounting and what is poor accounting. By the end of the book you will recognize the defects in financial statements that are issued by firms and will have developed a critique of the "generally accepted accounting principles" and disclosure rules that determine what is in the statements. You will also understand how the accounting in reports can be distorted, as well as discover tools that detect the distortion and give you an indication of the quality of the accounting that a firm uses.

Integrating Finance and Accounting

Financial statements are prepared according to the dictates of accounting principles, and you take accounting courses to learn these accounting principles. Your appreciation of financial statements from these courses is often in terms of the accounting used to prepare them, not in terms of what the financial statements say about investing in businesses. Principles of finance guide investment analysis and you typically take finance courses to learn these principles. However, the investment analysis in these courses often does not employ financial statements or accounting concepts in any systematic way. Often you see finance and accounting as distinct or, if you see them as related, the relationship is vague in your mind. Finance courses are sometimes dismissive of accounting, while accounting courses sometimes propose analysis that violates the principles of finance. This book integrates your learning from finance and accounting courses. By integrating financial statement analysis and fundamental analysis, the book combines accounting concepts with finance concepts. Accounting is viewed as a matter of accounting for value and the accounting for value is appropriated for investment analysis. The organized structure of the financial statements helps organize fundamental analysis. Accounting principles for measuring balance sheets and income statements are incorporated as principles for measuring value. All analysis is performed in a way that is consistent with the principles of modern finance and with an appreciation of what is good accounting and what is poor accounting.

Activist Approach

Investment texts often take the view that capital markets are "efficient," such that market prices always reflect the underlying value of the securities traded. These texts are primarily concerned with measuring risk, not with valuation. The investor is viewed as relatively passive, accepting prices as fair value, concerned primarily with managing risk through asset allocation. This text takes an activist's perspective. Active investors do not "assume that the market is efficient." Rather, active investors challenge the market price with sound analysis, checking whether that price is a fair price. Indeed, they exploit what is perceived to be mispricing in the market to earn superior returns. Active investors adopt the creed of fundamental analysts: Price is what you pay, value is what you get. They believe that an important risk in equity investing is the risk of paying too much for a share, so active investors seek to gain an appreciation of value independently of price. Whether or not the market is efficient, you will find this perspective engaging.

Negotiating with Mr. Market

Benjamin Graham saw equity investing as a matter of "negotiating with Mr. Market" over the price to pay. The book shows how to carry out these negotiations. In the spirit of comparing price with value, analysts typically think of calculating a "true" intrinsic value for a stock and comparing that to Mr. Market's price quote. This is not bad thinking but, with so many uncertainties involved, establishing one true number for the intrinsic value with confidence is difficult. The book takes a different approach: Understand how earnings forecasts relate to value, reverse engineer the market price to understand the forecast that Mr. Market is making, and then challenge that forecast. This recognizes that valuation is not a game against nature, but rather a game against other investors; one does not have to find the true value but rather what other investors are thinking. Financial statement analysis that challenges this thinking is then the focus in the dialogue with Mr. Market.

New to This Edition

This edition of the book emphasizes this theme of challenging market prices. A new chapter, Chapter 7, applies the valuation models of Chapters 5 and 6 as tools for active investing. The process is refined in Part Three of the book after the financial statement analysis of Part Two, for it is this financial statement analysis that elicits the information to evaluate whether market prices are reasonable. Many of the active investing themes and tools of my recent book, *Accounting for Value* (Columbia University Press, 2011), are elaborated upon in this edition.

Here are the significant changes for the fifth edition, now running to 20 chapters rather than 19:

- The new Chapter 7—"Valuation and Active Investing"—has been added to Part One of the book.
- Chapters 5 and 6 on valuation have been written more succinctly with some of the material moved to the new Chapter 7.
- Material in all chapters has been updated to incorporate new accounting standards.
- Comparisons between U.S. GAAP accounting and international (IFRS) accounting are made where relevant.
- Examples, illustrations, and graphical material have been updated, now current as of 2010.
- New cases have been added to a number of chapters and the cases in earlier editions have been updated to 2010.
- New end-of-chapter exercises have been added.
- Chapter 15 (previously Chapter 14) on simple forecasting and valuation has been extensively revised and simplified.
- Chapter 19 on risk and return in equity investing returns to the theme of active investing.

When I wrote the first edition of this book (in 1999), world equity markets were experiencing what, in retrospect, is seen as a market bubble. The book was couched in terms of challenging the high price-earnings and price-to-book ratios at that time with fundamental analysis. The episode is an important historical lesson in overvaluation, so that perspective continues in this edition, beginning in Chapter 1. But since then we have experienced not only the bursting of that bubble, but also a credit crisis and a plunge in stock prices, with price multiples now lower than historical benchmarks. This edition thus emphasizes that the analysis techniques it offers are just as applicable to challenging underpricing as well as overpricing. It also warns of the risk of investing in uncertain times and points out that, just as bubbles can perpetuate for some time, so can depressed prices.

The Overview

Chapter 1 introduces you to financial statement analysis and fundamental analysis, and sets the stage for the rest of the book. Chapter 2 introduces you to the financial statements. The remainder of the book is in five parts:

- **Part One** (Chapters 3–7) develops the thinking that is necessary to perform fundamental analysis. It integrates finance concepts with accounting concepts and shows you how the structure of accounting can be exploited for valuation analysis. Good thinking about valuation is captured in a valuation model, so this part of the book introduces accrual-accounting valuation models that provide the framework for the practical analysis that follows in the rest of the book. Alternative models are discussed as competing technologies, so you develop an appreciation of the strength and weaknesses of alternative approaches. Part One ends with an application of these models to active investing.
- **Part Two** (Chapters 8–13) lays out the financial statement analysis that identifies value generation in a business and provides information for forecasting. In this part of the book you will see the lens being focused on the business.
- **Part Three** (Chapters 14–16) deals with forecasting. The value of a firm and its shares is based on the payoffs it is expected to yield investors; thus, using the information from the financial statement analysis, this part of the book shows you how to forecast payoffs. The forecasting is developed within a financial statement framework so that forecasting is an exercise in pro forma financial statement analysis. The analysis then shows how to convert forecasts into valuations of firms and their strategies.
- **Part Four** (Chapters 17 and 18) deals with accounting issues that arise with the use of accounting-based valuation. It shows how to accommodate different accounting methods for measuring earnings and how to analyze the quality of the accounting used in financial statements.
- **Part Five** (Chapters 19 and 20) lays out the fundamental analysis of risk, both equity risk and credit risk, and provides a pro forma analysis that integrates equity analysis and credit analysis. Here, again, the emphasis is on active investing: How does the investor handle risk in investing, particularly the risk of paying too much?

PUTTING IT ALL TOGETHER: A TOOLKIT FOR ANALYSTS AND MANAGERS

The best way to tackle this book is to see yourself as putting together a Toolkit for analyzing financial statements and valuing businesses and business strategies. As a professional analyst or business planner, you want to be using the best technologies available, to get an edge on the competition. So approach the book in the spirit of sorting out what are good methods and what are poor ones. You require methods that are practical as well as conceptually sound.

As you read the text, you find answers to the following questions:

- How are fundamental values (or "intrinsic values") estimated?
- How does one pull apart the financial statements to get at the relevant information to value equities?
- What is the relevance of cash flows? Of dividends? Of book values? How are these measures treated in a valuation?
- What is growth? How does one analyze growth? How does one value a growth firm?
- What are the pitfalls in buying growth?
- How does one challenge the growth expectations implicit in stock prices?
- How does ratio analysis help in valuation?
- How does profitability tie into valuation?
- How does one analyze the quality of financial reports?
- How does one deal with the accounting methods used in financial statements?
- How is financial analysis developed for strategy and planning?
- What determines a firm's P/E ratio? How does one calculate what the P/E should be?
- What determines a firm's market-to-book (P/B) ratio? How does one calculate what the P/B should be?
- How does one evaluate risk? For equity? For debt?
- How does one evaluate an equity research report? What does a good one look like?
- How does one trade on fundamental information?

USING THE BOOK

Background Requirements

To comprehend the text material, you should have a basic course in financial accounting and a basic course in finance. A second course in financial accounting and a course in investments or corporate finance will be helpful but not necessary. Indeed, you may find yourself motivated to take those courses after reading this book.

Chapter Features

The text is written with features designed to enhance your efforts in learning the material. Each chapter of the book begins with a **flow chart** that lays out the material covered in the chapter and connects that material to the preceding and upcoming chapters. This chart will help you see clearly where you've been and where you are going, and how it all ties together. Each chapter also opens with **The Analyst's Checklist,** which has two lists: one covering the conceptual points in the chapter and the other a set of tasks that you should be able to perform after working the chapter. This outlines the goals of the chapter, setting you up for mastery of the material at hand. Each chapter concludes with **The Analyst's Toolkit,** a convenient resource complete with page references, that summarizes the analysis tools in the chapter—ideal for studying and review.

End-of-Chapter Material

Each chapter ends with a set of concept questions, exercises, and minicases. Working through this material will enhance your understanding considerably. These problems are designed, not so much to test you, but to further your learning with practical analysis. Each problem makes a point. **Concept questions** reinforce the thinking in the chapter. **Exercises** apply methods covered in the chapter. **Drill Exercises** lead you gently into the analysis. **Applications** focus on issues involving specific companies. **Minicases,** designed for classroom discussion, are more contextual and involve a broader set of issues, some involving ambiguity. They are written more concisely than full cases so that you do not have to handle a large amount of detail, and classroom time is used more efficiently to make the point. However, the minicases involve considerable analysis and insight, providing stimulus for group discussion.

As with the chapter material, the Exercises and Minicases often use the same real world companies to make different points in different parts of the book. To help you refer back to earlier material on the same company, the Exercises and Minicases are marked with an easy-to-identify **Real World Connection** tagline.

The Continuing Case

A continuing case for one company—Kimberly-Clark Corporation—weaves its way through the book. At the end of each chapter (through Chapter 16), you receive a new installment of the case which shows how the principles and methods in that chapter are applied to Kimberly-Clark and build on the analysis of previous chapters. By the end, you have a demonstration of the application of the book, in total, to one company as a model for other companies. Work the case, then check your solution against that on the book's Web site.

Web Site Reinforcement

The material in the text is supplemented with further analysis on the book's Web site at **www.mhhe.com/penman5e**. The **Student Center** on the Web site contains the following:

- **Chapter supplements** for each chapter in the book. The flow chart at the beginning of each chapter of the text refers you to the Web site, and **The Web Connection** at the end of each chapter summarizes what you will find in the supplements.
- **Solutions to the Continuing Case.**
- **Additional exercises** for each chapter, along with solutions. Work these exercises and correct yourself with the solutions to reinforce your learning.
- **Accounting Clinics I–VII** review accounting issues that are particularly relevant to equity and credit analysis. Among the topics covered are accrual accounting, fair value and historical cost accounting, accounting for debt and equity investments, accounting for stock compensation, pension accounting, and the accounting for taxes.
- **Build Your Own Analysis Product (BYOAP)** on the Web site shows you how to build your own financial statement analysis and valuation spreadsheet product using the principles and methods in the book. It is not a final product that you can immediately appropriate; rather it is a guidebook for constructing your own. As such, it is a learning device; rather than mechanically applying a black-box product, you learn by doing. With the completed product you can analyze financial statements; forecast earnings, residual earnings, abnormal earnings growth, cash flows, and dividends; and then value firms and strategies with a variety of techniques. Add your own bells and whistles. In short, the product is the basis for preparing an equity research report and for carrying out due diligence as a professional. You will find the building process will give you a feeling of accomplishment, and the final product—of your own construction—will be a valuable tool to carry into your professional life or to use for your own investing. Spreadsheet engines for specific tasks are available in the chapter supplements on the Web page for each chapter. Off-the-shelf products are also available. **eVal 2000,** authored by Russell Lundholm and Richard Sloan, is available through McGraw-Hill/Irwin. Also check out

the spreadsheet tool of Dan Gode and James Ohlson, at **www.godeohlson.com**, that more closely follows the scheme in this book.

- **Links** to firms' financial statements and to many other sources of financial information. You will also find engines to screen and analyze stocks and to help you build your own analysis tools.
- **Market Insight** (Educational Version) from Standard & Poor's contains financial information on 370 companies. Access codes are available from your instructor.

Resources for Instructors

The book is accompanied by ancillaries that support the teaching and learning. The **Instructor Center** on the book's Web site contains the following:

- **Solutions Manual** with detailed solutions to the end-of-chapter material.
- **Teaching Notes** with advice for teaching from the book, alternative course outlines, a number of teaching tools, and a commentary on each chapter of the book.
- **PowerPoint** slides for each chapter.
- **Test Bank** containing further problems and exercises.
- **Accounting Clinics** to cover the accounting issues in the book in more detail.
- **Chapter Notes** for each chapter.