FINANCIAL REPORTING, FINANCIAL STATEMENT ANALYSIS, AND VALUATION

A Strategic Perspective

WAHLEN • BAGINSKI • BRADSHAW

9e

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A Strategic Perspective

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Financial Reporting, Financial Statement Analysis, and Valuation, 9e

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For our students,

with thanks for permitting us to take the journey with you

For Clyde Stickney and Paul Brown,

with thanks for allowing us the privilege to carry on their legacy of teaching through this book

For our families, with love,

Debbie, Jessica, Jaymie, Ailsa, Lynn, Drew, Marie, Kim, Ben, and Lucy

Jim Steve MARK

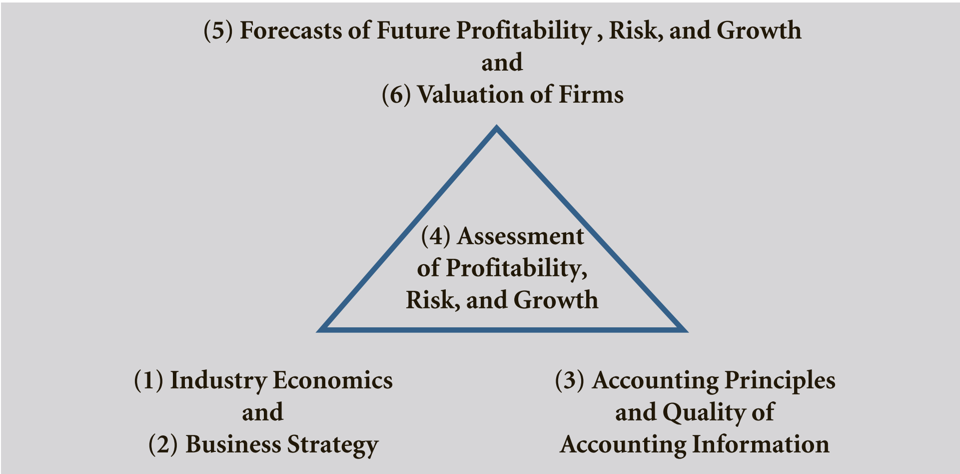
PREFACE

The process of financial reporting, financial statement analysis, and valuation helps investors and analysts understand a firm's profitability, risk, and growth; use that information to forecast future profitability, risk, and growth; and ultimately to value the firm, enabling intelligent investment decisions. This process is central to the role of accounting, financial reporting, capital markets, investments, portfolio management, and corporate management in the world economy. When conducted with care and integrity, thorough financial statement analysis and valuation are fascinating and rewarding activities that can create tremendous value for society. However, as the recent financial crises in our capital markets reveal, when financial statement analysis and valuation are conducted carelessly or without integrity, they can create enormous loss of value in the capital markets and trigger deep recession in even the most powerful economies in the world. The stakes are high.

In addition, the game is changing. The world is shifting toward a new approach to financial reporting, and expectations for high-quality and high-integrity financial analysis and valuation are increasing among investors and securities regulators. Many of the world's most powerful economies, including the European Union, Canada, and Japan, have shifted to International Financial Reporting Standards (IFRS). The U.S. Securities and Exchange Commission (SEC) accepts financial statement filings based on IFRS from non-U.S. registrants, and has considered whether to converge financial reporting from U.S. Generally Accepted Accounting Principles (GAAP) to IFRS for U.S. registrants. Given the pace and breadth of financial reform legislation, it is clear that it is no longer "business as usual" on Wall Street or around the world for financial statement analysis and valuation.

Given the profound importance of financial reporting, financial statement analysis, and valuation, and given our rapidly changing accounting rules and capital markets, this textbook provides you with a principled and disciplined approach for analysis and valuation. This textbook explains a thoughtful and thorough six-step framework you should use for financial statement analysis and valuation. You should begin an effective analysis of a set of financial statements with an evaluation of **(1)** the economic characteristics and competitive conditions of the industries in which a firm competes and **(2)** the particular strategies the firm executes to compete in each of these industries. Your analysis should then move to **(3)** assessing how well the firm's financial statements reflect the economic effects of the firm's strategic decisions and actions. Your assessment requires an understanding of the accounting principles and methods used to create the financial statements, the relevant and reliable information that the financial statements provide, and the appropriate adjustments that you might make to improve the quality of that information. Note that in this text we help you embrace financial reporting and financial statement analysis based on U.S. GAAP and IFRS. Next, you should **(4)** assess the profitability, risk, and growth of the firm using financial statement ratios and other analytical tools and then **(5)** forecast the firm's future profitability, risk, and growth, incorporating information about expected changes in the economics of the industry and the firm's strategies. Finally, you can **(6)** value the firm using various valuation methods, making an investment decision by comparing likely ranges of your value estimate to the observed market value. This six-step process forms the conceptual and pedagogical framework for this book, and it is a principled and disciplined approach you can use for intelligent analysis and valuation decisions.

All textbooks on financial statement analysis include step (4), assessing the profitability, risk, and growth of a company. Textbooks differ, however, with respect to their emphases on the other five steps. Consider the following depiction of these steps.



Our view is that these six steps must form an integrated approach for effective and complete financial statement analysis. We have therefore structured and developed this book to provide balanced, integrated coverage of all six elements. We sequence our study by beginning with industry economics and firm strategy, moving to a general consideration of GAAP and IFRS and the quality of accounting information, and providing a structure and tools for the analysis of profitability, risk, and growth. We then examine specific accounting issues and the determinants of accounting quality, and conclude with forecasting and valuation. We anchor each step in the sequence on the firm's profitability, risk, and growth, which are the fundamental drivers of value. We continually relate each part to those preceding and following it to maintain this balanced, integrated perspective.

The premise of this book is that you will learn financial statement analysis most effectively by performing the analysis on actual companies. The book's narrative sets forth the important concepts and analytical tools and demonstrates their application using the financial statements of Starbucks. Each chapter contains a set of questions, exercises, problems, and cases based primarily on financial statement data of actual companies. Each chapter also contains an integrative case involving Walmart so you can apply the tools and methods throughout the text. A financial statement analysis package (FSAP) is available to aid you in your analytical tasks (discussed later).

Some of the Highlights of This Edition

In the 9th edition, the author team of James Wahlen, Stephen Baginski, and Mark Bradshaw continues to improve on the foundations established by Clyde Stickney and Paul Brown. Clyde Stickney, the original author of the first three editions of this book and coauthor of the fourth, fifth, and sixth editions, is enjoying his well-earned retirement. Paul Brown, a coauthor of the fourth, fifth, and sixth editions, recently announced his retirement as the president of Monmouth University. Jim, Steve, and Mark are internationally recognized research scholars and award-winning teachers in accounting, financial statement analysis, and valuation. They continue to bring many fresh new ideas and insights to produce a new edition with a strong focus on thoughtful and disciplined fundamental analysis, a broad and deep coverage of accounting issues including IFRS, and expanded analysis of companies within a global economic environment.

The next section highlights the content of each chapter. Listed below are some of the major highlights in this edition that impact all chapters or groups of chapters.

1. As in prior editions, the 9th edition uses a "golden thread" case company in each chapter. We now illustrate and highlight each step of the analysis in each chapter using the financial statements of Starbucks. **The financial statements and disclosures of Starbucks provide an excellent setting for teaching financial statements analysis because most students are very familiar with the company; it has an effective strategy; and it has many important accounting, analysis, and valuation issues.** In the material at the end of each chapter, we also use Walmart as a "golden thread" case company.
2. **The exposition of each chapter has been streamlined.** Known for being a well-written, accessible text, this edition presents each chapter in more concise, direct discussion, so you can get the key insights quickly and efficiently. To achieve the streamlining, some highly technical (mainly accounting-related) material has been moved to online appendices that students may access at www.cengagebrain.com.
3. The chapters include **quick checks**, so you can be sure you have obtained the key insights from reading each section. In addition, each section and each of the end-of-chapter questions, exercises, problems, and cases is **cross-referenced to learning objectives**, so you can be sure that you can implement the critical skills and techniques associated with each of the learning objectives.
4. The chapters on profitability analysis (**Chapter 4**) and risk analysis (**Chapter 5**) continue to provide **disaggregation of return on common equity** along traditional lines of profitability, efficiency, and leverage, as well as along operating versus financing lines.
5. The book's companion website, at www.cengagebrain.com, contains an **updated Appendix D** with descriptive statistics on 20 commonly used financial ratios computed over the past 10 years for 48 industries. These ratios data enable you to benchmark your analyses and forecasts against industry averages.
6. The chapters on accounting quality continue **to provide broad coverage of accounting for financing, investing, and operating activities**. **Chapter 6** discusses the determinants of accounting quality, how to evaluate accounting quality, and how to adjust reported earnings and financial statements to cleanse low-quality accounting items. Then the discussion proceeds across the primary business activities of firms in the natural sequence in which the activities occur—raising financial capital, investing that capital in productive assets, and operating the business. **Chapter 7** discusses accounting for financing activities. **Chapter 8** describes accounting for investing activities, and **Chapter 9** deals with accounting for operating activities. Detailed examples of foreign currency translation and accounting for various hedging activities have been moved to online appendices.
7. The chapters on accounting quality continue to provide **more in-depth analysis of both balance sheet and income statement quality**.
8. Each chapter includes **relevant new discussion of current U.S. GAAP and IFRS, how U.S. GAAP compares to IFRS**, and how you should deal with such differences in financial statement analysis. **New material includes recent changes in accounting standards dealing with revenue recognition, leasing,**

and investments in securities.** End-of-chapter materials contain many problems and cases involving non-U.S. companies, with **application of financial statement analysis techniques to IFRS-based financial statements**.

9. Each chapter provides references to specific standards in U.S. GAAP using the **new FASB Codification system**.
10. The chapters provide a number of **relevant insights from empirical accounting research**, pertinent to financial statement analysis and valuation.
11. The end-of-chapter material for each chapter contains portions of an **updated, integrative case applying the concepts and tools discussed in that chapter to Walmart**.
12. Each chapter contains **new or substantially revised and updated end-of-chapter material, including new problems and cases**. This material is relevant, real-world, and written for maximum learning value.
13. The Financial Statement Analysis Package (**FSAP**) available with this book has been **substantially revised and made more user-friendly**.

Overview of the Text

This section describes briefly the content and highlights of each chapter.

Chapter 1—Overview of Financial Reporting, Financial Statement Analysis, and Valuation. This chapter introduces you to the six interrelated sequential steps in financial statement analysis that serve as the organization structure for this book. It presents you with several frameworks for understanding the industry economics and business strategy of a firm and applies them to Starbucks. It also reviews the purpose, underlying concepts, and content of each of the three principal financial statements, including those of non-U.S. companies reporting using IFRS. This chapter also provides the rationale for analyzing financial statements in capital market settings, including showing you some very compelling results from an empirical study of the association between unexpected earnings and market-adjusted stock returns as well as empirical results showing that fundamental analysis can help investors generate above-market returns. The chapter's appendix, which can be found on this book's companion website at www.cengagebrain.com, presents an extensive discussion to help you do a term project involving the analysis of one or more companies. Our examination of the course syllabi of users of the previous edition indicated that most courses require students to engage in such a project. This appendix guides you in how to proceed, where to get information, and so on.

In addition to the new integrative case involving Walmart, the chapter includes an updated version of a case involving Nike.

Chapter 2—Asset and Liability Valuation and Income Recognition. This chapter covers three topics we believe you need to review from previous courses before delving into the more complex topics in this book.

- First, we discuss the link between the valuation of assets and liabilities on the balance sheet and the measurement of income. We believe that you will understand topics such as revenue recognition and accounting for marketable securities, derivatives, pensions, and other topics more easily when you examine them with an appreciation for the inherent trade-off of a balance sheet versus income statement perspective. This chapter also reviews the trade-offs faced by accounting standard setters, regulators, and corporate managers who attempt to simultaneously provide both reliable and relevant financial statement information. We also examine whether firms should recognize value changes immediately in net income or delay their recognition, sending them temporarily through other comprehensive income.

- Second, we present a framework for analyzing the dual effects of economic transactions and other events on the financial statements. This framework relies on the balance sheet equation to trace these effects through the financial statements. Even students who are well grounded in double-entry accounting find this framework helpful in visually identifying the effects of various complex business transactions, such as corporate acquisitions, derivatives, and leases. We use this framework in subsequent chapters to present and analyze transactions, as we discuss various GAAP and IFRS topics.

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A_{BEG} = & L_{BEG} & + & CC_{BEG} & + & AOCI_{BEG} & + & RE_{BEG} \\
+\Delta A & +\Delta L & & +\Delta Stock & & +OCI & & \begin{array}{l}+NI \\ -D\end{array} \\
\hline
A_{END} = & L_{END} & + & CC_{END} & + & AOCI_{END} & + & RE_{END}
\end{array}
$$

[A=Assets, L=Liabilities, CC=Contributed Capital, AOCI=Accumulated Other Comprehensive Income, RE=Retained Earnings, Stock=Common and Preferred Capital Stock Accounts, OCI=Other Comprehensive Income, NI=Net Income, and D=Dividends.]

- Third, we discuss the measurement of income tax expense, particularly with regard to the treatment of temporary differences between book income and taxable income. Virtually every business transaction has income tax consequences, and it is crucial that you grasp the information conveyed in income tax disclosures.

The end-of-chapter materials include various asset and liability valuation problems involving Biosante Pharmaceuticals, Prepaid Legal Services, and Nike, as well as the integrative case involving Walmart.

Chapter 3—Income Flows versus Cash Flows: Understanding the Statement of Cash Flows. Chapter 3 reviews the statement of cash flows and presents a model for relating the cash flows from operating, investing, and financing activities to a firm's position in its product life cycle. The chapter demonstrates procedures you can use to prepare the statement of cash flows when a firm provides no cash flow information. The chapter also provides new insights that place particular emphasis on how you should use information in the statement of cash flows to assess earnings quality.

The end-of-chapter materials utilize cash flow and earnings data for a number of companies including Tesla, Amazon, Kroger, Coca-Cola, Texas Instruments, Sirius XM Radio, Apollo Group, and AerLingus. A case (Prime Contractors) illustrates the relation between earnings and cash flows as a firm experiences profitable and unprofitable operations and changes its business strategy. The classic W. T. Grant case illustrating the use of earnings and cash flow information to assess solvency risk and avoid bankruptcy has been moved to an online appendix.

Chapter 4—Profitability Analysis. This chapter discusses the concepts and tools for analyzing a firm's profitability, integrating industry economic and strategic factors that affect the interpretation of financial ratios. It applies these concepts and tools to the analysis of the profitability of Starbucks. The analysis of profitability centers on the rate of return on assets and its disaggregated components, the rate of return on common shareholders' equity and its disaggregated components, and earnings per share. The chapter contains a section on alternative profitability measures, including a discussion of "street earnings." This chapter also considers analytical tools unique to certain industries, such as airlines, service firms, retailers, and technology firms.

A number of problems and exercises at the end of the chapter cover profitability analyses for companies such as Nucor Steel, Hershey, Microsoft, Oracle, Dell, Sun Microsystems, Texas Instruments, Hewlett Packard, Georgia Pacific, General Mills, Abercrombie & Fitch, Hasbro, and many others. The integrative case examines Walmart's profitability.

Chapter 5—Risk Analysis. This chapter begins with a discussion of recently required disclosures on the extent to which firms are subject to various types of risk, including unexpected changes in commodity prices, exchange rates, and interest rates and how firms manage these risks. The chapter provides new insights and discussion about the benefits and dangers associated with financial flexibility and the use of leverage. This edition shows you how to decompose return on common equity into components that highlight the contribution of the inherent profitability of the firm's assets and the contribution from the strategic use of leverage to enhance the returns to common equity investors. The chapter provides you an approach to in-depth financial statement analysis of various risks associated with leverage, including short-term liquidity risk, long-term solvency risk, credit risk, bankruptcy risk, and systematic and firm-specific market risk. This chapter also describes and illustrates the calculation and interpretation of risk ratios and applies them to the financial statements of Starbucks, focusing on both short-term liquidity risk and long-term solvency risk. We also explore credit risk and bankruptcy risk in greater depth.

A unique feature of the problems in Chapters 4 and 5 is the linking of the analysis of several companies across the two chapters, including problems involving Hasbro, Abercrombie & Fitch, and Walmart. In addition, other problems focus on risk-related issues for companies like Coca-Cola, Delta Air Lines, VF Corporation, Best Buy, Circuit City, The Tribune Company and The Washington Post. Chapter-ending cases involve risk analysis for Walmart and classic cases on credit risk analysis (Massachusetts Stove Company) and bankruptcy prediction (Fly-By-Night International Group).

Chapter 6—Accounting Quality. This chapter provides an expanded discussion of the quality of income statement and balance sheet information, emphasizing faithful representation of relevant and substantive economic content as the key characteristics of high quality, useful accounting information. The chapter also alerts you to the conditions under which managers might likely engage in earnings management. The discussion provides a framework for accounting quality analysis, which is used in the discussions of various accounting issues in Chapters 7 through 9. We consider several financial reporting topics that primarily affect the persistence of earnings, including gains and losses from discontinued operations, changes in accounting principles, other comprehensive income items, impairment losses, restructuring charges, changes in estimates, and gains and losses from peripheral activities. The chapter concludes with an assessment of accounting quality by separating accruals and cash flows and an illustration of a model to assess the risk of financial reporting manipulation (Beneish's multivariate model for identifying potential financial statement manipulators).

Chapter-ending materials include problems involving Nestlé, Checkpoint Systems, Rock of Ages, Vulcan Materials, Northrop Grumman, Intel, Enron, and Sunbeam. End-of-chapter materials also include an integrative case involving the analysis of Walmart's accounting quality.

Chapter 7—Financing Activities. This chapter has been structured along with Chapters 8 and 9 to discuss accounting issues in their natural sequence—raising financial capital, then investing the capital in productive assets, and then managing the operations of the business. Chapter 7 discusses the accounting principles and practices under U.S. GAAP and IFRS associated with firms' financing activities. The chapter begins by describing the financial statement reporting of capital investments by owners (equity issues) and distributions to owners (dividends and share repurchases), and the accounting for equity issued to compensate employees (stock options, stock appreciation rights, and restricted stock). The chapter demonstrates how shareholders' equity reflects the effects of transactions with non-owners that flow through the income statement (net income) and those that do not (other comprehensive income). The chapter then describes the financial reporting for long-term debt (bonds, notes payable, lease liabilities, and troubled debt), hybrid securities (convertible bonds, preferred stock), and derivatives used to hedge interest rate risk (an online appendix provides specific examples of accounting for interest rate swaps). The lease discussion demonstrates the adjustments required to convert operating leases to capital leases in past financial statements and illustrates lease accounting under the new lease standard going forward. Throughout the chapter, we highlight the differences between U.S. GAAP and IFRS in the area of equity and debt financing.

In addition to various questions and exercises, the end-of-chapter material includes problems probing accounting for various financing alternatives, Ford Motor Credit's securitization of receivables, operating versus capital leases of The Gap and Limited Brands, and stock-based compensation at Coca-Cola and Eli Lilly. End-of-chapter cases include the integrative case involving Walmart, a case on stock compensation at Oracle, and long-term financing and solvency risk at Southwest Airlines versus Lufthansa.

Chapter 8—Investing Activities. This chapter discusses various accounting principles and methods under U.S. GAAP and IFRS associated with a firm's investments in long-lived tangible assets, intangible assets, and financial instruments. The chapter demonstrates the accounting for a firm's investments in tangible productive assets including property, plant, and equipment, including the initial decision to capitalize or expense and the use of choices and estimates to allocate costs through the depreciation process. The chapter demonstrates alternative ways that firms account for intangible assets, highlighting research and development expenditures, software development expenditures, and goodwill, including the exercise of judgment in the allocation of costs through the amortization process. The chapter reviews and applies the rules for evaluating the impairment of different categories of long-lived assets, including goodwill. The chapter then describes accounting and financial reporting of intercorporate investments in securities (trading securities, available-for-sale securities, held-to-maturity securities, and noncontrolled affiliates) and corporate acquisitions. The chapter reviews accounting for variable-interest entities, including the requirement to consolidate them with the firm identified as the primary beneficiary. Finally, an online appendix to the chapter addresses foreign investments by preparing a set of translated financial statements using the all-current method and the monetary/nonmonetary method and describing the conditions under which each method best portrays the operating relationship between a U.S. parent firm and its foreign subsidiary.

The end-of-chapter questions, exercises, problems, and cases include a problem involving Molson Coors Brewing Company and its variable interest entities, an integrative application of the chapter topics to Walmart, and a case involving Disney's acquisition of Marvel Entertainment.

Chapter 9—Operating Activities. Substantially revised Chapter 9 discusses how financial statements prepared under U.S. GAAP or IFRS capture and report the firm's operating activities. The chapter opens with a discussion of how financial accounting measures and reports the revenues and expenses generated by a firm's operating activities, as well as the related assets, liabilities, and cash flows. This discussion reviews the criteria for recognizing revenue and expenses under the accrual basis of accounting and applies these criteria to various types of businesses. The revenue recognition discussion is based on a new revenue recognition standard, and an online appendix illustrates some legacy revenue recognition rules that you might encounter in past financial statements. The chapter analyzes and interprets the effects of FIFO versus LIFO on financial statements and demonstrates how to convert the statements of a firm from a LIFO to a FIFO basis. The chapter identifies the working capital investments created by operating activities and the financial statement effects of credit policy and credit risk. The chapter also shows how to use the financial statement and note information for corporate income taxes to analyze the firm's tax strategies, pensions, and other post-employment benefits obligations. The chapter concludes with a discussion of how a firm uses derivative instruments to hedge the risk associated with commodities and with operating transactions denominated in foreign currency, and an online appendix illustrates the hedge accounting.

The end-of-chapter problems and exercises examine revenue and expense recognition for a wide variety of operating activities, including revenues for software, consulting, transportation, construction, manufacturing, and others. End-of-chapter problems also involve Coca-Cola's tax notes and include the integrative case involving Walmart, and a case involving Coca-Cola's pension disclosures.

Chapter 10—Forecasting Financial Statements. This chapter describes and illustrates the procedures you should use in preparing forecasted financial statements. This material plays a central role in the valuation of companies, discussed throughout Chapters 11 through 14. The chapter begins by giving you an overview of forecasting and the importance of creating integrated and articulated financial statement forecasts. It then demonstrates the preparation of projected financial statements for Starbucks. The chapter also demonstrates how to get forecasted balance sheets to balance and how to compute implied statements of cash flows from forecasts of balance sheets and income statements. The chapter also discusses forecast shortcuts analysts sometimes take, and when such forecasts are reliable and when they are not. The Forecast and Forecast Development spreadsheets within FSAP provide templates you can use to develop and build your own financial statement forecasts.

Short end-of-chapter problems illustrate techniques for projecting key accounts for firms like Home Depot, Intel, Hasbro, and Barnes and Noble, determining the cost structure of firms like Nucor Steel and Sony, and dealing with irregular changes in accounts. Longer problems and cases include the integrative Walmart case and a classic case involving the projection of financial statements to assist the Massachusetts Stove Company in its strategic decision to add gas stoves to its wood stove line. The problems and cases specify the assumptions you should make to illustrate the preparation procedure. We link and use these longer problems and cases in later chapters that rely on these financial statement forecasts in determining share value estimates for these firms.

Chapter 11—Risk-Adjusted Expected Rates of Return and the Dividends Valuation Approach. Chapters 11 through 14 form a unit in which we demonstrate various approaches to valuing a firm. Chapter 11 focuses on fundamental issues of valuation that you will apply in all of the valuation chapters. This chapter provides you with a discussion of the measurement of the cost of debt and equity capital and the weighted average cost of capital, as well as the dividends-based valuation approach. The chapter also discusses various issues of valuation, including forecasting horizons, projecting long-run continuing dividends, and computing continuing (sometimes called terminal) value. The chapter describes and illustrates the internal consistency in valuing firms using dividends, free cash flows, or earnings. We place particular emphasis on helping you understand that the different approaches to valuation are simply differences in perspective (dividends capture wealth distribution, free cash flows capture wealth realization in cash, and earnings represent wealth creation), and that these approaches should produce internally consistent estimates of value. In this chapter we demonstrate the cost-of-capital measurements and the dividends-based valuation approach for Starbucks, using the forecasted amounts from Starbucks' financial statements discussed in Chapter 10. The chapter also presents techniques for assessing the sensitivity of value estimates, varying key assumptions such as the cost of capital and long-term growth rate. The chapter also discusses and illustrates the cost-of-capital computations and dividends valuation model computations within the Valuation spreadsheet in FSAP. This spreadsheet takes the forecast amounts from the Forecast spreadsheet and other relevant information and values the firm using the various valuation methods discussed in Chapters 11 through 14.

End-of-chapter material includes the computation of costs of capital across different industries and companies, including Whirlpool, IBM, and Target Stores, as well as short dividends valuation problems for companies like Royal Dutch Shell. Cases involve computing costs of capital and dividends-based valuation of Walmart, and Massachusetts Stove Company from financial statement forecasts developed in Chapter 10's problems and cases.

Chapter 12—Valuation: Cash-Flow Based Approaches. Chapter 12 focuses on valuation using the present value of free cash flows. This chapter distinguishes free cash flows to all debt and equity stakeholders and free cash flows to common equity shareholders and the settings where one or the other measure of free cash flows is appropriate for valuation. The chapter demonstrates valuation using free cash flows for common equity shareholders, and valuation using free cash flows to all debt and equity stakeholders. The chapter also considers and applies techniques for projecting free cash flows and measuring the continuing value after the forecast horizon. The chapter applies both of the discounted free cash flows valuation methods to Starbucks, demonstrating how to measure the free cash flows to all debt and equity stakeholders, as well as the free cash flows to common equity. The valuations use the forecasted amounts from Starbucks' projected financial statements discussed in Chapter 10. The chapter also presents techniques for assessing the sensitivity of value estimates, varying key assumptions such as the costs of capital and long-term growth rates. The chapter also explains and demonstrates the consistency of valuation estimates across different approaches and shows that the dividends approach in Chapter 11 and the free cash flows approaches in Chapter 12 should and do lead to identical value estimates for Starbucks. The Valuation spreadsheet in FSAP uses projected amounts from the Forecast spreadsheet and other relevant information and values the firm using both of the free cash flows valuation approaches.

Updated shorter problem material asks you to compute free cash flows from financial statement data for companies like 3M and Dick's Sporting Goods. Problem material also includes using free cash flows to value firms in leveraged buyout transactions, such as May Department Stores, Experian Information Solutions, and Wedgewood Products. Longers and cases material include the valuation of Walmart, Coca-Cola, and Massachusetts Stove Company. The chapter also introduces the Holmes Corporation case, which is an integrated case relevant for Chapters 10 through 13 in which you select forecast assumptions, prepare projected financial statements, and value the firm using the various methods discussed in Chapters 10 through 13. This case can be analyzed in stages with each chapter or as an integrated case after Chapter 13.

Chapter 13—Valuation: Earnings-Based Approaches. Chapter 13 emphasizes the role of accounting earnings in valuation, focusing on valuation methods using the residual income approach. The residual income approach uses the ability of a firm to generate income in excess of the cost of capital as the principal driver of a firm's value in excess of its book value. We apply the residual income valuation method to the forecasted amounts for Starbucks from Chapter 10. The chapter also demonstrates that the dividends valuation methods, the free cash flows valuation methods, and the residual income valuation methods are consistent with a fundamental valuation approach. In the chapter we explain and demonstrate that these approaches yield identical estimates of value for Starbucks. The Valuation spreadsheet in FSAP includes valuation models that use the residual income valuation method.

End-of-chapter materials include various problems involving computing residual income across different firms, including Abbott Labs, IBM, Target Stores, Microsoft, Intel, Dell, Southwest Airlines, Kroger, and Yum! Brands. Longer problems also involve the valuation of other firms such as Steak 'n Shake in which you are given the needed financial statement information. Longer problems and cases enable you to apply the residual income approach to Coca-Cola, Walmart, and Massachusetts Stove Company, considered in Chapters 10 through 12.

Chapter 14—Valuation: Market-Based Approaches. Chapter 14 demonstrates how to analyze and use the information in market value. In particular, the chapter describes and applies market-based valuation multiples, including the market-to-book ratio, the price-to-earnings ratio, and the price-earnings-growth ratio. The chapter illustrates the theoretical and conceptual approaches to market multiples and contrasts them with the practical approaches to market multiples. The chapter demonstrates how the market-to-book ratio is consistent with residual ROCE valuation and the residual income model discussed in Chapter 13. The chapter also describes the factors that drive market multiples, so you can adjust multiples appropriately to reflect differences in profitability, growth, and risk across comparable firms. An applied analysis demonstrates how you can reverse engineer a firm's stock price to infer the valuation assumptions that the stock market appears to be making. We apply all of these valuation methods to Starbucks. The chapter concludes with a discussion of the role of market efficiency, as well as striking evidence on using earnings surprises to pick stocks and form portfolios (the Bernard-Thomas post-earnings announcement drift anomaly) as well as using value-to-price ratios to form portfolios (the Frankel-Lee investment strategy), both of which appear to help investors generate significant above-market returns.

End-of-chapter materials include problems involving computing and interpreting market-to-book ratios for pharmaceutical companies, Enron, Coca-Cola, and Steak 'n Shake and the integrative case involving Walmart.

Appendices. Appendix A includes the financial statements and notes for Starbucks used in the illustrations throughout the book. Appendix B, available at www.cengagebrain.com, is Starbucks' letter to the shareholders and management's discussion and analysis of operations, which we use when interpreting Starbucks' financial ratios and in our financial statement projections. Appendix C presents the output from FSAP for Starbucks, including the Data spreadsheet, the Analysis spreadsheet (profitability and risk ratio analyses), the Forecasts and Forecast Development spreadsheets, and the Valuations spreadsheet. Appendix D, also available online, provides descriptive statistics on 20 financial statement ratios across 48 industries over the years 2006 to 2015.

Chapter Sequence and Structure

Our own experience and discussions with other professors suggest there are various approaches to teaching a financial statement analysis course, each of which works well in particular settings. We have therefore designed this book for flexibility with respect to the sequence of chapter assignments. The following diagram sets forth the overall structure of the book.

<table>
<tr><td colspan="6">Chapter 1: Overview of Financial Reporting, Financial Statement Analysis, and Valuation</td></tr>
<tr><td colspan="3">Chapter 2: Asset and Liability Valuation and Income Recognition</td><td colspan="3">Chapter 3: Income Flows versus Cash Flows</td></tr>
<tr><td colspan="3">Chapter 4: Profitability Analysis</td><td colspan="3">Chapter 5: Risk Analysis</td></tr>
<tr><td colspan="6">Chapter 6: Accounting Quality</td></tr>
<tr><td colspan="2">Chapter 7:
Financing Activities</td><td colspan="2">Chapter 8:
Investing Activities</td><td colspan="2">Chapter 9:
Operating Activities</td></tr>
<tr><td colspan="6">Chapter 10: Forecasting Financial Statements</td></tr>
<tr><td colspan="6">Chapter 11: Risk-Adjusted Expected Rates of Return and the Dividends Valuation Approach</td></tr>
<tr><td colspan="3">Chapter 12: Valuation: Cash-Flow-Based Approaches</td><td colspan="3">Chapter 13: Valuation: Earnings-Based Approaches</td></tr>
<tr><td colspan="6">Chapter 14: Valuation: Market-Based Approaches</td></tr>
</table>

The chapter sequence follows the six steps in financial statement analysis discussed in Chapter 1. Chapters 2 and 3 provide the conceptual foundation for the three financial statements. Chapters 4 and 5 present tools for analyzing the financial statements. Chapters 6 through 9 describe how to assess the quality of accounting information under U.S. GAAP and IFRS and then examine the accounting for financing, investing, and operating activities. Chapters 10 through 14 focus primarily on forecasting financial statements and valuation.

Some schools teach U.S. GAAP and IFRS topics and financial statement analysis in separate courses. Chapters 6 through 9 are an integrated unit and sufficiently rich for the U.S. GAAP and IFRS course. The remaining chapters will then work well in the financial statement analysis course. Some schools leave the topic of valuation to finance courses. Chapters 1 through 10 will then work well for the accounting prelude to the finance course. Some instructors may wish to begin with forecasting and valuation (Chapters 10 through 14) and then examine data issues that might affect the numbers used in the valuations (Chapters 6 through 9). This textbook is adaptable to other sequences of the various topics.

Overview of the Ancillary Package

The Financial Statement Analysis Package (FSAP) is available on the companion website for this book (www.cengagebrain.com) to all purchasers of the text. The package performs various analytical tasks (common-size and rate of change financial statements, ratio computations, risk indicators such as the Altman-Z score and the Beneish manipulation index), provides a worksheet template for preparing financial statements forecasts, and applies amounts from the financial statement forecasts to valuing a firm using various valuation methods. A user manual for FSAP is embedded within FSAP.

New to the 9th edition of *Financial Reporting, Financial Statement Analysis, and Valuation* is MindTap. MindTap is a platform that propels students from memorization to mastery. It gives you complete control of your course, so you can provide engaging content, challenge every learner, and build student confidence. Customize interactive syllabi to emphasize priority topics, then add your own material or notes to the eBook as desired. This outcomes-driven application gives you the tools needed to empower students and boost both understanding and performance.

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James M. Wahlen
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BRIEF CONTENTS

CONTENTS

CHAPTER 1

Overview of Financial Reporting, Financial Statement Analysis, and Valuation

LEARNING OBJECTIVES

LO 1-1 Describe the six-step analytical framework that is the logical structure for financial statement analysis and valuation. It is the foundation for this book.

LO 1-2 Apply tools for assessing the economic characteristics that drive competition in an industry, including (a) Porter's five forces framework, (b) value chain analysis, and (c) an economic attributes framework; then identify the firm's specific strategies for achieving and maintaining competitive advantage within that industry.

LO 1-3 Explain the purpose, underlying concepts, and format of the balance sheet, income statement, and statement of cash flows, and the importance of accounting quality.

LO 1-4 Obtain an overview of useful tools for analyzing a firm's profitability, growth, and risk, including financial ratios, common-size financial statements, and percentage change financial statements, as well as how to use this information to forecast the future business activities of a firm, and to value a firm.

LO 1-5 Consider the role of financial statement analysis and valuation in an efficient capital market, and review empirical evidence on the association between changes in earnings and changes in stock prices.

LO 1-6 Review sources of financial information available for publicly held firms.

Chapter Overview

This book has three principal objectives, each designed to help you gain important knowledge and skills necessary for financial statement analysis and valuation:

1. Chapters 1 to 5: To demonstrate how you can analyze the economics of an industry, a firm's strategy, and its financial statements, gaining important insights about the firm's profitability, growth, and risk.
2. Chapters 6 to 9: To deepen your understanding of the accounting principles and methods under U.S. Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS) that firms use to measure and report their financing, investing, and operating activities in a set of financial statements and, if necessary, make adjustments to reported amounts to increase their relevance and reliability.

3. Chapters 10 to 14: To demonstrate how you can use financial statement information to build forecasts of future financial statements and then use the expected future amounts of earnings, cash flows, and dividends to value firms.

Financial statements play a central role in the analysis and valuation of a firm. Financial statement analysis is an exciting and rewarding activity, particularly when the objective is to assess whether the market is pricing a firm's shares fairly. This text demonstrates and explains many tools and techniques that you can use to analyze the fundamental characteristics of a firm—such as its business strategies; competitive advantages; product markets; and operating, investing, and financing decisions—and then use this information to make informed decisions about the value of the firm.

Security analysts are professionals whose primary objective is to value equity securities issued by firms. Security analysts collect and analyze a wide array of information from financial statements and other sources to evaluate a firm's current and past performance, predict its future performance, and then estimate the value of the firm's shares. Comparisons of thoughtful and intelligent estimates of the firm's share value with the market price for the shares provide the bases for making good investment decisions.

In addition to estimating firm value, you can apply the tools of effective financial statement analysis in many other important decision-making settings, including the following:

- Managing a firm and communicating results to investors, creditors, employees, and other stakeholders.
- Assigning credit ratings or extending short-term credit (for example, a bank loan used to finance accounts receivable or inventories) or long-term credit (for example, a bank loan or public bond issue used to finance the acquisition of property, plant, or equipment).
- Assessing the operating performance and financial health of a supplier, customer, competitor, or potential employer.
- Evaluating firms for potential acquisitions, mergers, or divestitures.
- Valuing the initial public offering of a firm's shares.
- Consulting with a firm and offering helpful strategic advice.
- Forming a judgment in a lawsuit about damages sustained.
- Assessing the extent of auditing needed to form an opinion about a client's financial statements.

LO 1-1

Describe the six-step analytical framework that is the logical structure for financial statement analysis and valuation. It is the foundation for this book.

Overview of Financial Statement Analysis

We view effective financial statement analysis as a three-legged stool, as Exhibit 1.1 depicts. The three legs of the stool in the figure represent effective analysis based on the following:

1. Identifying the *economic characteristics* of the *industries* in which a firm competes and mapping those characteristics into determinants of profitability, growth, and risk.
2. Describing the *strategies* that a *firm* pursues to differentiate itself from competitors as a basis for evaluating a firm's competitive advantages, the sustainability and potential growth of a firm's earnings, and its risks.
3. Evaluating the firm's *financial statements*, including the accounting concepts and methods that underlie them and the quality of the information they provide.

Our approach to effective analysis of financial statements for valuation and many other decisions involves six interrelated sequential steps, depicted in Exhibit 1.2.

Exhibit 1.1

Building Blocks for Financial Statement Analysis

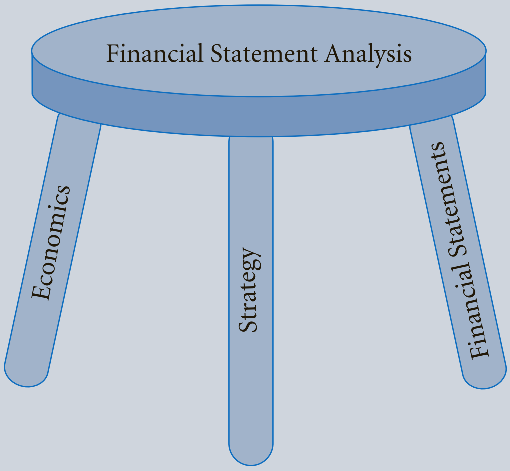

Exhibit 1.2

Six Interrelated Sequential Steps in Financial Statement Analysis

1. Identify Economic Characteristics and Competitive Dynamics in the Industry → 2. Identify Company Strategies → 3. Assess the Quality of the Financial Statements → 4. Analyze Profitability, Growth, and Risk → 5. Project Future Financial Statements → 6. Value the Firm

1. **Identify the economic characteristics and competitive dynamics of the industry in which a particular firm participates.** What dynamic forces drive competition in the industry? For example, does the industry include a large number of firms selling similar products, such as grocery stores, or only a small number of firms selling unique products, such as pharmaceutical companies? Does technological change play an important role in maintaining a competitive advantage, as in computer software? Understanding the competitive forces in the firm's industry in the first step establishes the economic foundation and context for the remaining steps in the process.
2. **Identify strategies the firm pursues to gain and sustain a competitive advantage.** What business model is the firm executing to be different and successful in its industry? Does the firm have competitive advantages? If so, how sustainable are they? Are its products designed to meet the needs of specific market segments, such as ethnic or health foods, or are they intended for a broader consumer market, such as typical grocery stores and family restaurants? Has the firm integrated backward into the growing or manufacture of raw materials for its products, such as a steel company that owns iron ore mines? Is the firm

diversified across products, geographic markets, or industries? Understanding the firm's strategy and the sustainability of its competitive advantages provides the necessary firm-specific context to evaluate the firm's accounting information; assess profitability, growth, and risk; and project the firm's future business activities.

3. **Obtain all of the information available from a firm's financial statements, and assess the quality of that information. If necessary, adjust the financial statements to enhance reliability and comparability.** To be informative, the firm's financial statements should provide a complete and faithful representation of the firm's economic performance, financial position, and risk, in accordance with U.S. GAAP or IFRS. Do earnings include nonrecurring gains or losses, such as a write-down of goodwill, which you should evaluate differently from recurring components of earnings? Has the firm structured transactions or commercial arrangements so as to avoid recognizing certain assets or liabilities on the balance sheet? Has the firm selected certain accounting methods simply to make the firm appear more profitable or less risky than economic conditions otherwise suggest? It is essential to understand the quality of the firm's accounting information to effectively analyze the firm's profitability, growth, and risk and to project its future balance sheets, income statements, and cash flows.
4. **Analyze the current profitability, growth, and risk of the firm using information in the financial statements.** Most financial analysts assess the profitability of a firm relative to the risks involved. What rate of return is the firm generating from the use of its assets? What rate of return is the firm generating for its common equity shareholders? Is the firm's profit margin increasing or decreasing over time? Are revenues and profits growing faster or slower than those of its key competitors? Are rates of return and profit margins higher or lower than those of its key competitors? How risky is the firm because of leverage in its capital structure? Ratios that reflect relations among particular items in the financial statements are informative tools you can use to analyze profitability, growth, and risk. By understanding the firm's current and past profitability, growth, and risk, you will establish important information you will use in projecting the firm's future profitability, growth, and risk and in valuing its shares.
5. **Prepare forecasted financial statements.** What will be the firm's future operating, investing, and financing activities? What will be the firm's future resources, obligations, investments, cash flows, and earnings? What will be the likely future profitability, growth, and risk and, in turn, the likely future returns from investing in the company? Forecasted financial statements that project the firm's future operating, investing, and financing activities provide the basis for projecting future profitability, growth, and risk, which provide the basis for financial decision making, including valuation.
6. **Value the firm.** What is the firm worth? Financial analysts use their estimates of share value to make recommendations for buying, selling, or holding the equity securities of firms when market price is too low, too high, or about right. Similarly, an investment bank that underwrites the initial public offering of a firm's common stock must set the initial offer price. Also, an analyst in a corporation considering whether to acquire a company (or divest a subsidiary or division) must assess a reasonable range of values to bid to acquire the target (or to expect to receive).

These six steps provide a logical, powerful sequence that will enable you to address very important and difficult questions, such as how to analyze and value a firm. We use these six steps as the analytical framework for you to follow as you develop your skills in analyzing and valuing companies. This chapter introduces each step. Subsequent chapters develop the important concepts and tools for each step in considerably more depth.

How Do the Six Steps Relate to Share Pricing in the Capital Markets?

The extent to which market prices fully reflect the implications of accounting information depends on four links:

1. the accounting system mapping a firm's transactions and events into accounting fundamentals, such as earnings, cash flows, and book value of equity, reported on financial statements;
2. analysts and investors analyzing financial statement information to get a deep understanding of the firm's profitability, growth, and risk;
3. analysts and investors mapping accounting fundamentals into expectations of future earnings and cash flows, and then into estimates of share value; and
4. trading activities mapping share value estimates into stock prices.

Down the left-hand side of Exhibit 1.3 we illustrate these four links. In parallel, down the right-hand side, we illustrate how our six-step analysis and valuation process captures each of those four links.

Beginning in the upper left, the process through which firms create shareholder value is driven by the firm's business activities. The firm executes its strategy to compete in its industry through its financing, investing, and operating activities. Hopefully, these activities enable the firm to create and sustain competitive advantage within the industry, and create shareholder value. On the right side, we illustrate how Steps 1 and 2 of our six-step process focus on analyzing the factors and dynamics of competition within the industry, and then analyzing the firm's competitive strategy and the sustainability of the firm's competitive advantages (if any).

The first link in the share-pricing process involves financial reporting. Through the financial reporting process, the firm's accountants map the firm's business activities to financial statements. The balance sheets, income statements, statements of cash flows, and notes provide the firm a channel of credible communication through which the firm can report fundamentally important information to stakeholders about the firm's financial position and performance. On the right side, in Step 3 of the six-step process, we analyze the accounting information firms report in their financial statements and assess the quality of that information. To what extent do the balance sheets, income statements, cash flows, and notes faithfully represent the firm's underlying financial position and performance?

The second link in the share-pricing process involves financial analysis. In this link, investors and analysts analyze the information in the firm's financial statements to develop a deeper understanding of the firm's profitability, growth, and risk. These are the fundamental drivers of share value. On the right side, in Step 4, we analyze the firm's financial statements using a wide variety of ratios to analyze the firm's profitability, growth, and risk. We analyze how profitability, growth, and risk have changed over time, and how they compare to key competitors in the industry.

The third link in the share-pricing process involves forecasting and valuation. In this link, investors and analysts map the firm's financial statements into expectations of future earnings, cash flows, and dividends, and then map those expectations into share-value estimates. In this link, for example, an analyst or an investor would project the firm's future earnings and cash flows, evaluate the firm's risk, and determine a reasonable range of share values. On the right side, in Steps 5 and 6, we project the firm's future business activities and measure the expected future outcomes with projected future balance sheets, income statements, and cash flows. Next, we use our projected future

Exhibit 1.3

Linking the Share-Pricing Process to the Six-Step Analysis Framework

Four Links Mapping Firms' Business Activities into Share Prices:	The Six-Step Analysis Framework:
Firms' Business Activities: All of the transactions, events, commercial arrangements in the firm's financing, operating, and investing activities.	**Steps 1 and 2:** **Industry Analysis and Firm Strategy Analysis** • How competitive is the industry? • How sustainable are the firm's competitive advantages?
Link 1: The Financial Reporting Process Financial statement preparers map the firm's business activities into financial statements.	**Step 3:** **Accounting Quality Analysis** • Do the financial statements faithfully represent the underlying economics and financial performance of the firm?
Link 2: The Analysis Process Investors and analysts analyze financial statement information to develop a deep understanding of the firm's profitability, growth, and risk.	**Step 4:** **Financial Analysis** • Analyze the firm's profitability, growth, and risk.
Link 3: The Valuation Process Investors and analysts map financial statement information into expectations of future earnings, cash flows, and dividends, and then map these expectations into estimates of share values.	**Steps 5 and 6:** **Forecasting and Valuation** • Project the firm's future business activities and risk. • Develop expectations for future earnings, cash flows, and dividends. • Use these expected future payoffs to estimate firm value.
Link 4: The Share-Pricing Process Capital market participants map share-value estimates into share prices through trading activities.	**Investment Decision Making and Trading: Buy or Sell?** • How does our share value estimate compare to the market share price? Does the market price appear high, low, or about right, relative to our estimate of share value? Given the market's share price, should we buy or sell shares?
Share Prices	

financial statements to determine expected future earnings, cash flows, and dividends, and then use those expectations to estimate share value.

In the fourth link in the market's share-pricing process, analysts and investors map their share value estimates into share prices through buying and selling shares. When analysts and investors buy shares at prices that they believe are below the share's fundamental value, the demand for shares should drive price up, toward fundamental value. Similarly, when analysts and investors sell shares at prices that they believe are high relative to fundamental value, that trading should drive prices down. On the bottom right side of the exhibit, we illustrate the culmination of our six-step analysis and valuation process—buying shares at prices that we believe are below fundamental value, and selling shares for prices that we believe are above fundamental value—the old adage, "buy low, sell high."

Note, the four links mapping firms' activities into share prices are not always tight. For example, the financial reporting process and accounting information may not capture all past transactions and events that are value-relevant, and companies differ in the extent to which they face accounting measurement challenges. As such, reported financial statement information may not fully faithfully represent the firm's profitability, growth, and risk (Links 1 and 2). Accounting fundamentals seldom explicitly capture the expected *future* transactions and events that drive firm value, and companies differ in the richness of information available for forecasting these future outcomes (Link 3). Finally, market sentiment, noise trading, and market frictions can lead to temporary departures of price from value even in highly efficient markets, as seen during bubble periods (Link 4). Therefore, the six-step analysis and valuation process enables us to evaluate and analyze the tightness of the four links, and hopefully identify shares that are temporarily overpriced or underpriced.

Introducing Starbucks

Throughout this book, we use financial statements, notes, and other information provided by **Starbucks Corporation** (**Starbucks**; ticker symbol SBUX) to illustrate and apply the six-step analysis and valuation framework. We use **Starbucks** as a "golden-thread" case company throughout the book for three reasons. First, most of you reading this text are likely already familiar with **Starbucks**: they are the world's largest chain of coffee shops. At the end of fiscal 2015 (September 27, 2015), 23,043 **Starbucks** coffee shops were operating in 68 countries around the world. Of those shops, **Starbucks** owned and operated 12,235 shops (53.1%) and licensees owned and operated the other 10,808 shops (46.9%). At the end of fiscal 2015, **Starbucks** had a total of 14,803 shops (64.2%) in the Americas segment; 5,462 shops (23.7%) in the China/Asia Pacific segment; 2,362 shops (10.3%) in the Europe–Middle East–Africa segment; and 416 shops (1.6%) in the "other" segment, which also includes new, developing business.

Our second reason for using **Starbucks** as an illustrative case throughout the book is that **Starbucks** operates a fairly basic business—owning and operating a large chain of coffee shops. This makes it more straightforward for us to understand the industry, **Starbucks'** strategy, and accounting information. Third, **Starbucks** has some pretty interesting accounting. As we will discover, some aspects of **Starbucks'** financial statements reflect very high accounting quality, while other aspects reflect poor accounting quality.

At the end of fiscal 2015, **Starbucks'** shares were trading at a price of $56.84. Is that share price fair? Or is it too high or too low? At a price of $56.84 per share, should we buy or sell SBUX shares? By the end of this book, and after carefully applying all six steps of the analysis and valuation process, we will have a good answer to this difficult but very interesting question.

Appendix A at the end of the book includes the fiscal year 2015 financial statements and notes for **Starbucks**, as well as statements by management and the opinion of the independent accountant regarding these financial statements. Appendix B (which can be found online at the book's companion website at www.cengagebrain.com) includes excerpts from management's discussion and analysis of **Starbucks'** business strategy; it also offers explanations for changes in **Starbucks'** profitability and risk over time.

Appendix C at the end of the book presents the output of the FSAP (Financial Statements Analysis Package), which is the financial statement analysis software that accompanies this book. The FSAP model is an Excel add-in that enables you to enter financial statement data, after which the model computes a wide array of profitability, growth, and risk ratios and creates templates for forecasting future financial statements and estimating a variety of valuation models. Appendix C presents the use of FSAP for **Starbucks**, including profitability and risk ratios, projected future financial statements, and valuation. FSAP is available at www.cengagebrain.com. You can use FSAP in your analysis for many of the problems and cases in this book. (We highlight FSAP applications with the FSAP icon in the margin of the text). FSAP contains a user manual with guides to assist you. Appendix D (also found online at the book's companion website at www.cengagebrain.com) presents tables of descriptive statistics on a wide array of financial ratios across 48 industries.

LO 1-2

Apply tools for assessing the economic characteristics that drive competition in an industry, including (a) Porter's five forces framework, (b) value chain analysis, and (c) an economic attributes framework; then identify the firm's specific strategies for achieving and maintaining competitive advantage within that industry.

Step 1: Identify the Industry Economic Characteristics

The economic characteristics and competitive dynamics of an industry play a key role in influencing the strategies firms in the industry employ; their profitability, growth, and risk factors; and therefore the types of financial statement relations you should expect to observe. Consider, for example, the financial statement data for firms in four different industries shown in Exhibit 1.4. This exhibit expresses all items on the balance sheets and income statements as percentages of revenue. Consider how the economic characteristics of these industries affect their financial statements.

Grocery Store Chain

The products of one grocery store chain are difficult to differentiate from similar products of other grocery store chains, a trait that characterizes such products as *commodities*. In addition, low barriers to entry exist in the grocery store industry; an entrant needs primarily retail space and access to food products distributors. Thus, extensive competition and nondifferentiated products result in a relatively low net income to sales, or profit margin, percentage (3.5% in this case). When this grocery store chain generates one dollar of revenue, it generates a profit of 3.5 cents. Grocery stores, however, need relatively few assets to generate sales (34.2 cents in assets for each dollar of sales). The assets are described as turning over 2.9 times (100.0%/34.2%) per year. (Each dollar in assets generated, on average, \$2.90 of revenues.) Thus, during a one-year period, the grocery store earns 10.15 cents (3.5% × 2.9) for each dollar invested in assets.

Pharmaceutical Company

The barriers to entry in the pharmaceutical industry are much higher than for grocery stores. Pharmaceutical firms must invest considerable amounts in research and development to create new drugs. The research and development process is lengthy, with highly

Exhibit 1.4

Common-Size Financial Statement Data for Four Firms
(all figures as a percentage of revenue)

	Grocery Store Chain	Pharmaceutical Company	Electric Utility	Commercial Bank
BALANCE SHEET				
Cash and marketable securities	0.7%	11.0%	1.5%	261.9%
Accounts and notes receivable	0.7	18.0	7.8	733.5
Inventories	8.7	17.0	4.5	—
Property, plant, and equipment, net	22.2	28.7	159.0	18.1
Other assets	1.9	72.8	29.2	122.6
Total Assets	34.2%	147.5%	202.0%	1,136.1%
Current liabilities	7.7%	30.8%	14.9%	936.9%
Long-term debt	7.6	12.7	130.8	71.5
Other noncurrent liabilities	2.6	24.6	1.8	27.2
Shareholders' equity	16.3	79.4	54.5	100.5
Total Liabilities and Shareholders' Equity	34.2%	147.5%	202.0%	1,136.1%
INCOME STATEMENT				
Revenue	100.0%	100.0%	100.0%	100.0%
Cost of goods sold	(74.1)	(31.6)	(79.7)	—
Operating expenses	(19.7)	(37.1)	—	(41.8)
Research and development	—	(10.1)	—	—
Interest expense	(0.5)	(3.1)	(4.6)	(36.6)
Income taxes	(2.2)	(6.0)	(5.2)	(8.6)
Net Income	3.5%	12.1%	10.5%	13.0%

uncertain outcomes. Very few projects result in successful development of new drugs. Once new drugs have been developed, they must then undergo a lengthy government testing and approval process. If the drugs are approved, firms receive patents that give them exclusive rights to manufacture and sell the drugs for a number of years. These high entry barriers permit pharmaceutical firms to realize much higher profit margins compared to the profit margins of grocery stores. Exhibit 1.4 indicates that the pharmaceutical firm generated a profit margin of 12.1%, more than three times that reported by the grocery store chain. Pharmaceutical firms, however, face product liability risks as well as the risk that competitors will develop superior drugs that make a particular firm's drug offerings obsolete. Because of these business risks, pharmaceutical firms tend to take on relatively small amounts of debt financing as compared to firms in industries such as electric utilities and commercial banks.

Electric Utility

The principal assets of an electric utility are its power-generating plants. Thus, property, plant, and equipment dominate the balance sheet. Because of the large investments required by such assets, electric utility firms generally demanded a monopoly position