

8E

# Financial Reporting, Financial Statement Analysis, and Valuation

A STRATEGIC PERSPECTIVE



WAHLEN | BAGINSKI | BRADSHAW

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## James M. Wahlen

Professor of Accounting

James R. Hodge Chair of Excellence  
and Accounting Department Chair

Kelley School of Business, Indiana  
University

## Stephen P. Baginski

Professor of Accounting

Herbert E. Miller Chair in Financial  
Accounting

J.M. Tull School of Accounting  
Terry College of Business,  
The University of Georgia

## Mark T. Bradshaw

Associate Professor of Accounting

Department of Accounting

Carroll School of Management,  
Boston College



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**Financial Reporting, Financial Statement  
Analysis and Valuation, 8e****James Wahlen, Stephen Baginski,  
Mark Bradshaw**

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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, Lynn, Drew, Marie, Kim, Ben, and Lucy*

A handwritten signature in black ink that reads "Jim". The letters are cursive and fluid.A handwritten signature in black ink that reads "Steve". The letters are cursive and somewhat stylized.A handwritten signature in black ink that reads "MARK". The letters are bold, uppercase, and cursive.

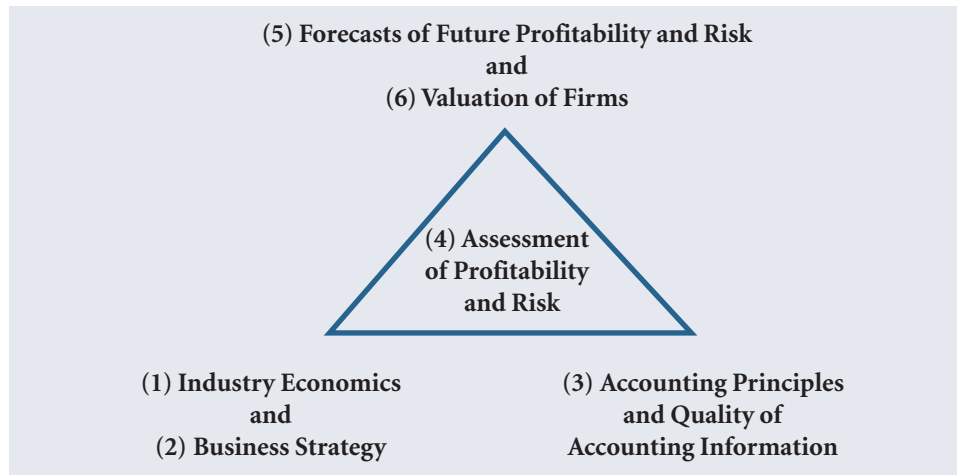
# PREFACE

The process of financial reporting, financial statement analysis, and valuation is intended to help investors and analysts to deeply understand a firm's profitability and risk and to use that information to forecast future profitability and risk, and ultimately 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 and thoughtful 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 is conducted carelessly and without integrity, it 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 is considering 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 and 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 world in accounting and the capital markets, this textbook provides you with a principled and disciplined approach to analysis and valuation. This textbook demonstrates and 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 current 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 process 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 should make to improve the quality of that information. 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 and risk of the firm using financial statement ratios and other analytical tools, and then (5) forecast the firm's future profitability and risk, 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 the value of the share to the share price observed in the capital market. 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 and risk 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 and risk. We then delve deeply into specific accounting issues and the determinants of accounting quality, and then conclude with forecasting and valuation. We anchor each step in the sequence on the firm's profitability and risk, 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 PepsiCo. 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 Starbucks 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

The 8th edition continues to improve with two excellent coauthors, Stephen Baginski and Mark Bradshaw, who joined the authorship team for the 7th edition, replacing 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, is now the president of Monmouth University. Mark and Steve are both 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. **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.
2. The chapters now include **quick checks after each section**, 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.
3. The chapters on profitability analysis (**Chapter 4**) and risk analysis (**Chapter 5**) provide **disaggregation of return on common equity** along traditional lines of profitability, efficiency, and leverage, as well as along operating versus financing lines.
4. The book's companion website, at [www.cengagebrain.com](http://www.cengagebrain.com), contains an **updated Appendix D** with descriptive statistics on 20 commonly used financial ratios computed over the past ten years for 48 industries. These ratios data enable you to benchmark your analyses and forecasts against industry averages.
5. The chapters on accounting quality have been **restructured to provide broader and deeper coverage of accounting for financing, investing, and operating activities**. The reorganization provides a logical flow, beginning in **Chapter 6** with a discussion of 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.
6. The chapters on accounting quality have also been expanded to provide **more in-depth analysis of balance sheet quality, to augment income statement quality**.
7. Each chapter includes **relevant new discussion of current U.S. GAAP and IFRS, as well as how U.S. GAAP compares to IFRS**, and how you should deal with such differences in financial statement analysis. 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**.
8. Each chapter provides references to specific standards in U.S. GAAP using the **new FASB Codification system**.
9. The chapters provide a number of **relevant insights from empirical accounting research**, pertinent to financial statement analysis and valuation.
10. 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**



**Starbucks.** This series of cases builds on the illustrations in the chapter in which the concepts and tools are applied to PepsiCo.

11. 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.
12. 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 PepsiCo. 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. It also contains a section describing key provisions of the Sarbanes-Oxley Act of 2002. 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 various 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](http://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 updated integrative case involving Starbucks, 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.

$A_{\text{BEG}}$	=	$L_{\text{BEG}}$	+	$CC_{\text{BEG}}$	+	$\text{AOCI}_{\text{BEG}}$	+	$\text{RE}_{\text{BEG}}$
$+\Delta A$		$+\Delta L$		$+\Delta \text{Stock}$		$+\text{OCI}$		$+\text{NI}$ $-\text{D}$
$A_{\text{END}}$	=	$L_{\text{END}}$	+	$CC_{\text{END}}$	+	$\text{AOCI}_{\text{END}}$	+	$\text{RE}_{\text{END}}$

[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. Discussing consideration of the income tax consequences early in the text enhances your learning in later chapters that cover complex topics such as restructuring charges, asset impairments, depreciation, and leases.

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

**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 eBay, Amazon, The Walt Disney Company, Fedex, Kroger, Coca-Cola, Texas Instruments, Sirius XM Radio, Sunbeam, AerLingus, and Fuso Pharmaceuticals. 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 illustrates the use of earnings and cash flow information to assess solvency risk and avoid bankruptcy.

**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 then applies these concepts and tools to the analysis of the profitability of PepsiCo. 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 the well-publicized measurement of EVA (economic value added) and shows its relation to net income under GAAP. This chapter also considers analytical tools unique to certain industries, such as airlines, service firms, and financial institutions.

A number of problems and exercises at the end of the chapter cover profitability analyses for companies such as Nucor Steel, Boston Scientific, Valero Energy, Microsoft, Oracle, Dell, Sun Microsystems, Texas Instruments, Hewlett Packard, Georgia Pacific, General Mills, Abercrombie & Fitch, Hasbro, Coca-Cola, and many others. The integrative case on Starbucks involves analysis of Starbucks in both a time-series setting and in a cross-sectional setting in comparison to Panera Bread Company. Another case involves the time-series analysis of Walmart Stores and the cross-sectional analysis of its profitability versus Target and Carrefour.

**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 PepsiCo, 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, Coca-Cola, Starbucks, and Walmart. Chapter-ending cases involve risk analysis for Starbucks 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 and identifying 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 to 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 the earnings quality of Starbucks in light of the inclusion of several potentially nonrecurring items in earnings, as well as a case on the earnings quality of Citigroup.

**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 which flow through the income statement (net income) and those which 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. The lease discussion demonstrates the adjustments required to convert operating leases to capital leases. Throughout the chapter we highlight the differences between U.S. GAAP and IFRS in the area of equity and debt financing, and we conclude the chapter with a discussion of likely forthcoming changes in the financial reporting for debt and leases.

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 Starbucks, 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, covering the initial decision to capitalize or expense and the use of choices and estimates to allocate costs through the depreciation process. The chapter demonstrates and explains 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 (including the market value, equity, proportionate consolidation, and full consolidation methods). The chapter reviews accounting for variable-interest entities, including the requirement to consolidate them with the firm identified as the primary beneficiary. Finally, 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 Starbucks, and a case involving Disney's acquisition of Marvel Entertainment.

**Chapter 9—Operating Activities.** 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 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 chapter evaluates the financial statement effects of recognizing income prior to the point of sale, at the time of sale, and subsequent to sale. 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.

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 an integrative case involving Starbucks, a case on alternative revenue recognition timing for the Arizona Land Development Company, 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 to 14. The chapter begins by giving you an overview of forecasting and the importance of creating integrated and articulated financial statement forecasts. It then illustrates the preparation of projected financial statements for PepsiCo. 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 require the preparation of financial statements for cases discussed in earlier chapters involving Walmart and Starbucks. The end-of-chapter material also includes 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 to 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 an extensive 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. Particular emphasis is placed 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 earning 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 PepsiCo, using the forecasted amounts from PepsiCo's 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 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 to 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. Longer problems and cases involve computing costs of capital and dividends-based valuation of Walmart, Starbucks, 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 develops and 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 PepsiCo, 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 for PepsiCo use the forecasted amounts from PepsiCo's 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 PepsiCo. 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. Longer problem material includes the valuation of Walmart, Coca-Cola, Starbucks, and Massachusetts Stove Company. The chapter also introduces the Holmes Corporation case, which is an integrated case relevant for Chapters 10 to 13 in which you select forecast assumptions, prepare projected financial statements, and value the firm using the various methods discussed in Chapters 10 to 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 PepsiCo 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 PepsiCo. 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 as well as to Walmart, Starbucks, and Massachusetts Stove Company, considered in Chapters 10, 11, and 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 describes and 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 PepsiCo. The chapter concludes with a new 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 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, Walmart, and Steak 'n Shake and the integrative case involving Starbucks.

**Appendices.** Appendix A includes the financial statements and notes for PepsiCo used in the illustrations throughout the book. Appendix B, available at [www.cengagebrain.com](http://www.cengagebrain.com), is PepsiCo's letter to the shareholders and management's discussion and analysis of operations, which we use when interpreting PepsiCo's financial ratios and in our financial statement projections. Appendix C presents the output from FSAP for PepsiCo, 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 2003 to 2013.

## Chapter Sequence and Structure

Our own experience and our discussions with other professors suggest that there are various approaches to teaching the 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.

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

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 to 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 to 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 to 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 to 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 to 14) and then examine data issues that might affect the numbers used in the valuations (Chapters 6 to 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](http://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.



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*James M. Wahlen*  
*Stephen P. Baginski*  
*Mark T. Bradshaw*

# ABOUT THE AUTHORS



**James M. Wahlen** is the James R. Hodge Chair, Professor of Accounting, Chair of the Accounting Department, and the former Chairman of the MBA Program at the Kelley School of Business at Indiana University. He received his Ph.D. from the University of Michigan and has served on the faculties of the University of Chicago, University of North Carolina at Chapel Hill, INSEAD, the University of Washington, and Pacific Lutheran University. Professor Wahlen's teaching and research interests focus on financial accounting, financial statement analysis, and the capital markets. His research investigates earnings quality and earnings management, earnings volatility as an indicator of risk, fair value account-

ing for financial instruments, accounting for loss reserve estimates by banks and insurers, stock market efficiency with respect to accounting information, and testing the extent to which future stock returns can be predicted with earnings and other financial statement information. His research has been published in a wide array of academic and practitioner journals in accounting and finance. He has had public accounting experience in both Milwaukee and Seattle and is a member of the American Accounting Association. He has received numerous teaching awards during his career. In his free time Jim loves spending time with his wife and daughters, spoiling his incredibly adorable granddaughter Ailsa, outdoor sports (biking, hiking, skiing, golf), cooking (and, of course, eating), and listening to rock music (especially if it is loud and live).



**Stephen P. Baginski** is the Herbert E. Miller Chair in Financial Accounting at the University of Georgia's J.M. Tull School of Accounting. He received his Ph.D. from the University of Illinois in 1986, and he has taught a variety of financial and managerial undergraduate, MBA, and executive education courses at Indiana University, Illinois State University, the University of Illinois, Northeastern University, Florida State University, Washington University in St. Louis, the University of St. Gallen, the Swiss Banking Institute at the University of Zurich, Bocconi, and INSEAD. Professor Baginski has published articles in a variety of journals including *The Accounting Review*, *Journal of Accounting Research*,

*Contemporary Accounting Research*, *Review of Accounting Studies*, *The Journal of Risk and Insurance*, *Quarterly Review of Finance and Economics*, and *Review of Quantitative Finance and Accounting*. His research primarily deals with the causes and consequences of voluntary management disclosures of earnings forecasts, and he also investigates the usefulness of financial accounting information in security pricing and risk assessment. Professor Baginski has served on several editorial boards and as an associate editor at *Accounting Horizons* and *The Review of Quantitative Finance and Accounting*. He has won numerous undergraduate and graduate teaching awards at the department, college, and university level during his career, including receipt of the Doctoral Student Inspiration Award from students at Indiana University. Professor Baginski loves to watch college football, play golf, and run (very slowly) in his spare time.



**Mark T. Bradshaw** is an Associate Professor of Accounting at the Carroll School of Management of Boston College. Bradshaw received a Ph.D. from the University of Michigan Business School, and earned a BBA summa cum laude with highest honors in accounting and master's degree in financial accounting from the University of Georgia. He previously taught at University of Chicago, Harvard Business School, and University of Georgia. He has been a Certified Public Accountant since 1991 and was an auditor for Arthur Andersen & Co. in Atlanta. Bradshaw conducts research on capital markets, specializing in the examination of securities analysts and financial reporting issues. His research has been published in a variety of academic and practitioner journals,

and he serves as Associate Editor for *Journal of Accounting and Economics*, *The Accounting Review*, and *Management Science*. He is also on the Editorial Board of *Review of Accounting Studies* and the *Journal of International Accounting Research*, and is a reviewer for numerous other accounting and finance journals. He has also authored a book with Brian Bruce, *Analysts, Lies, and Statistics—Cutting through the Hype in Corporate Earnings Announcements*. Approximately twenty-five pounds ago, Bradshaw was an accomplished cyclist. Currently focused on additional leisurely pursuits, he nevertheless routinely passes younger and thinner cyclists.

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# 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 and the foundation for this book.
- LO 1-2** Apply tools for assessing the economic characteristics and dynamics that drive competition in an industry, including (a) value chain analysis, (b) Porter's five forces framework, and (c) an economic attributes framework.
- LO 1-3** Identify firm-specific strategies for achieving competitive advantage within an industry.
- LO 1-4** Show familiarity with the purpose, underlying concepts, and format of the balance sheet, income statement, and statement of cash flows.
- LO 1-5** Use tools to analyze a firm's profitability and risk, including financial ratios, common-size financial statements, and percentage change financial statements.
- LO 1-6** Obtain an overview of how to use financial statement information to forecast the future business activities of a firm and to value a firm.
- LO 1-7** Consider the role of financial statement analysis in an efficient capital market, and review empirical evidence on the association between changes in earnings and changes in stock prices.
- LO 1-8** Review sources of financial information available for publicly held firms.

## Chapter Overview

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

1. To demonstrate how you can link the economics of an industry, a firm's strategy, and its financial statements, gaining important insights about the firm's profitability and its risk. Chapters 1–5 discuss the principal financial statements and tools for analyzing profitability and risk.
2. To enhance 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, the adjustments you may make to reported amounts to increase their relevance and reliability. Chapters 6–9 explore accounting principles in depth.

3. 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 in the valuation of firms. Chapters 10–14 focus on forecasting and valuation.

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. Studying the intrinsic characteristics of a firm—such as its business model, product markets, and operating, investing, and financing decisions—and using this information to make informed judgments about the value of the firm can be done by anyone with an interest in learning and applying the many tools and techniques of analysis and valuation demonstrated in this text.

Security analysts are professionals whose primary objective is to value 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 and to predict its future performance. Then they use the expected future performance to measure 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.

Besides being used to measure firm value, the tools of effective financial statement analysis can be applied in many other decision-making settings, including the following:

- Managing a firm and communicating results to investors, creditors, employees, and other stakeholders
- Assigning credit ratings or extending credit for a short-term period (for example, a bank loan used to finance accounts receivable or inventories) or a long-term period (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 about damages sustained in a lawsuit
- Assessing the extent of auditing needed to form an opinion about a client's financial statements

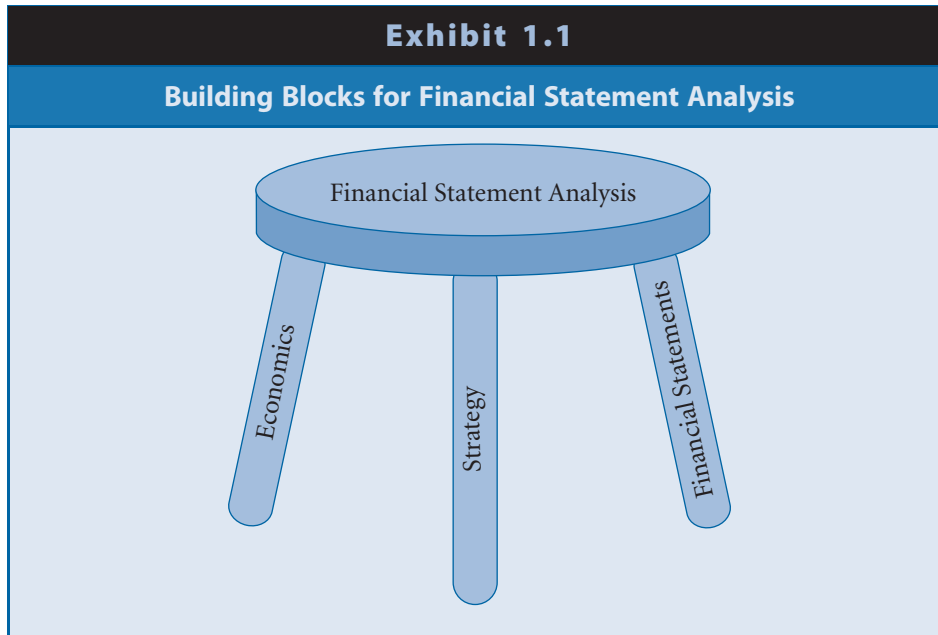
### LO 1-1

Describe the six-step analytical framework that is the logical structure for financial statement analysis and valuation and 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:

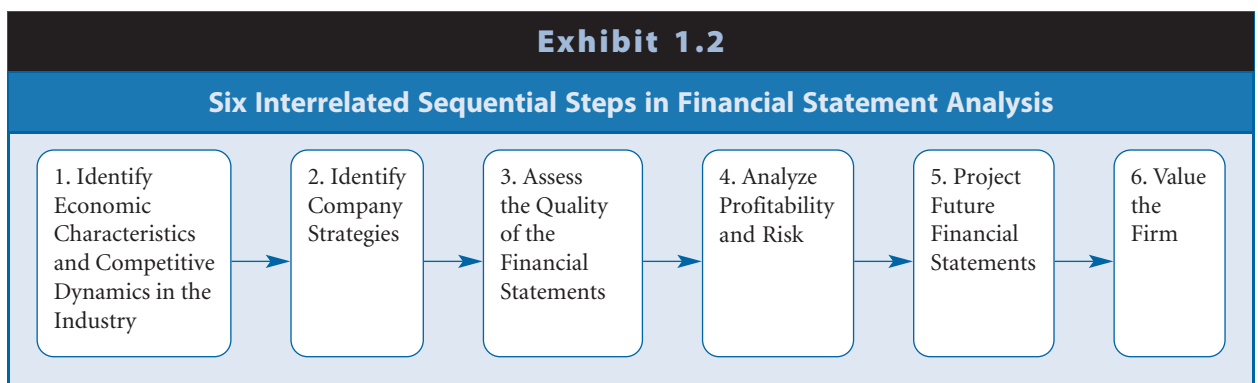
1. Identifying the *economic characteristics* of the *industries* in which a firm competes and mapping those characteristics into determinants of profitability and risk
2. Describing the *strategies* that a *firm* pursues to differentiate itself from competitors as a basis for evaluating a firm's competitive 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.

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 competitors 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 several 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 and risk, and to project the firm's future business activities.
  - 3. Assess the quality of the firm's financial statements and, if necessary, adjust them for such desirable characteristics as sustainability or comparability.** Do the firm's financial statements provide an informative and complete representation of the firm's economic performance, financial position, and risk? Has the firm prepared its financial statements in accordance with U.S. GAAP or are they prepared in accordance with the IFRS established by the International Accounting Standards Board (IASB)? 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 or selected accounting methods so as 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 in order to effectively analyze the firm's profitability and risk and to project its future balance sheets, income statements, and cash flows.
  - 4. Analyze the current profitability 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 returns and profit margins higher or lower than those of its key competitors? How much leverage does the firm have in its capital structure? Ratios that reflect relations among particular items in the financial statements are the tools you can use to analyze profitability and risk. By understanding the firm's current and past profitability and risk, you will establish important information you will use in projecting the firm's future profitability and risk and in valuing its shares.
  - 5. Prepare forecasted financial statements.** What will be the firm's future resources, obligations, investments, cash flows, revenues, and expenses? What will be the likely future profitability and risk and, in turn, the likely future returns from investing in the company? Forecasted financial statements that rely on projections of the firm's future operating, investing, and financing activities provide the basis for projecting future profitability 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 various firms whose market price they think is too low, too high, or about right. Similarly, an investment banking firm that underwrites the initial

public offering of a firm's common stock must set the initial offering price, and an analyst in a corporation considering whether to acquire a company (or to divest a subsidiary or division) must assess a reasonable range of values to bid in order to acquire the target (or to expect to receive from the divestiture).

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. These six interrelated steps represent the subject matter of this book. 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.

Throughout this book, we use financial statements, notes, and other information provided by **PepsiCo, Inc.** (PepsiCo) and its subsidiaries to illustrate the various topics discussed. Appendix A at the end of the book includes the fiscal year 2012 financial statements and notes for PepsiCo, 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](http://www.cengagebrain.com)) includes excerpts from a financial review provided by management that discusses the business strategy of PepsiCo; it also offers explanations for changes in PepsiCo's 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 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 PepsiCo, including PepsiCo's profitability and risk ratios, projected future financial statements, and valuation. FSAP is available at [www.cengagebrain.com](http://www.cengagebrain.com). You can use FSAP for many of the problems and cases in this book to aid in your analysis (FSAP applications are highlighted with the FSAP icon in the margin of the text). FSAP contains a user manual with guides to assist you. Appendix D (found online at the book's companion website at [www.cengagebrain.com](http://www.cengagebrain.com)) presents tables of descriptive statistics on a wide array of financial ratios across 48 industries.



## 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 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 1.3. 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 a particular 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

#### LO 1-2

Apply tools for assessing the economic characteristics and dynamics that drive competition in an industry, including (a) value chain analysis, (b) Porter's five forces framework, and (c) an economic attributes framework.

## Exhibit 1.3

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

	Grocery Store Chain	Pharmaceutical Company	Electric Utility	Commercial Bank
<b>BALANCE SHEET</b>				
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
<b>Total Assets</b>	<u>34.2%</u>	<u>147.5%</u>	<u>202.0%</u>	<u>1,136.1%</u>
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
<b>Total Liabilities and Shareholders' Equity</b>	<u>34.2%</u>	<u>147.5%</u>	<u>202.0%</u>	<u>1,136.1%</u>
<b>INCOME STATEMENT</b>				
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)
<b>Net Income</b>	<u>3.5%</u>	<u>12.1%</u>	<u>10.5%</u>	<u>13.0%</u>

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). 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 invested in assets generated, on average, \$2.90 of revenues.) Each time the assets of this grocery store chain generate one dollar of revenue, it generates a profit of 3.5 cents. Thus, during a one-year period, the grocery store earns 10.15 cents ( $3.5\% \times 2.9$ ) 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

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 an extended period. These high entry barriers permit pharmaceutical firms to realize much higher profit margins on approved patent-protected products compared to the profit margins of grocery stores. Exhibit 1.3 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 capital-intensive 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 in a particular locale, and until recent years, usually obtained it. Government regulators permitted this monopoly position but set the rates that utilities charged customers for electric services. Thus, electric utilities have traditionally realized relatively high profit margins (10.5% in this case) to offset their relatively low total asset turnovers ( $0.495 = 100.0\%/202.0\%$  in this case). The monopoly position and regulatory protection reduced the risk of financial failure and permitted electric utilities to invest large amounts of capital in long-lived assets and take on relatively high proportions of debt in their capital structures. The economic characteristics of electric utilities have changed dramatically in recent years with gradual elimination of monopoly positions and the introduction of competition that affects rates, reducing profit margins considerably.

## Commercial Bank

Through their borrowing and lending activities, commercial banks serve as intermediaries in the supply and demand for financial capital. The principal assets of commercial banks are investments in financial securities and loans to businesses and consumers. The principal financing for commercial banks comes from customers' deposits and short-term borrowings. Because customers can generally withdraw deposits at any time, commercial banks invest in securities that they can quickly convert into cash if necessary. Because money is a commodity, one would expect a commercial bank to realize a small profit margin on the revenue it earns from lending (interest revenue) over the price it pays for its borrowed funds (interest expense). The profit margins on lending are indeed relatively small. In contrast, the 13.0% margin for the commercial bank shown in Exhibit 1.3 reflects the much higher profit margins it generates from offering fee-based financial services such as structuring financing packages for businesses, guaranteeing financial commitments of business customers, and arranging mergers and acquisitions. Note that the assets of this commercial bank turn over just 0.09 ( $100.0\%/1,136.1\%$ ) times per year, reflecting the net effect of interest revenues and fees from investments and loans of 6–8% per year, which requires a large investment in financial assets.

## Tools for Studying Industry Economics

Three tools for studying the economic characteristics of an industry are (1) value chain analysis, (2) Porter's five forces classification framework, and (3) an economic attributes framework. The microeconomics literature suggests other analytical frameworks as well.

### Value Chain Analysis

The value chain for an industry sets forth the sequence or chain of activities involved in the creation, manufacture, and distribution of its products and services. As an example, Exhibit 1.4 portrays an example of a value chain for the pharmaceutical industry. Pharmaceutical companies invest in research and development to discover and develop new drugs. When promising drugs emerge, a lengthy drug approval process begins. Estimates suggest that it takes seven to ten years and almost \$1 billion to discover and obtain approval of new drugs. To expedite the approval process, reduce costs, and permit their scientists to concentrate on the more creative drug discovery phase, pharmaceutical companies often contract with clinical research firms to conduct the testing and shepherding of new drugs through the approval process.

To the extent prices are available for products or services at each stage in the value chain, you can study where value is added within an industry. For example, you can look at the prices paid to acquire firms with promising or newly discovered drugs to ascertain the value of the drug discovery phase. The prices that clinical research firms charge to test and obtain approval of new drugs signal the value added by this activity. The higher the value added from any activity, the higher the profitability should be from engaging in that phase.

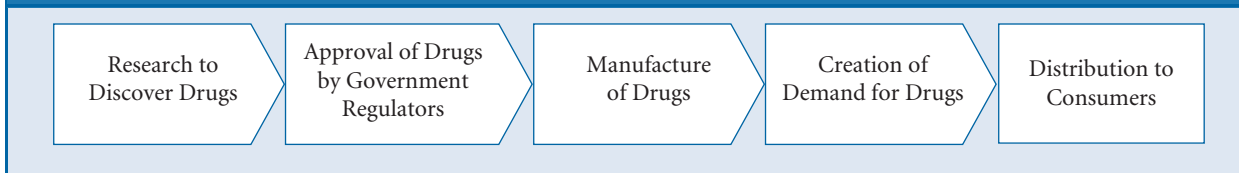
You also can use the value chain to identify the strategic positioning of a particular firm within the industry. Traditionally, pharmaceutical firms have maintained a presence in the discovery through demand creation phases, leaving distribution to pharmacies and increasingly contracting out the drug testing and approval phase.

The manufacture of drugs involves combining various chemicals and other elements. For quality control and product purity reasons, pharmaceutical companies use highly automated manufacturing processes. Pharmaceutical companies employ sales forces to market drugs to doctors, hospitals, and health maintenance organizations. In an effort to create demand, these companies have increasingly advertised new products through multiple advertising media, suggesting that consumers ask their doctors about the drug. Drug distribution typically channels through pharmacies, although bulk mail-order and Internet purchases are increasingly common (and encouraged by health insurers).

Refer to Note 1, "Basis of Presentation and Our Divisions," to the financial statements of [PepsiCo](#) (Appendix A) for a description of PepsiCo's divisions and segments. PepsiCo operates four business units: PepsiCo Americas Foods (PAF), PepsiCo Americas Beverages

### Exhibit 1.4

#### Value Chain for the Pharmaceutical Industry





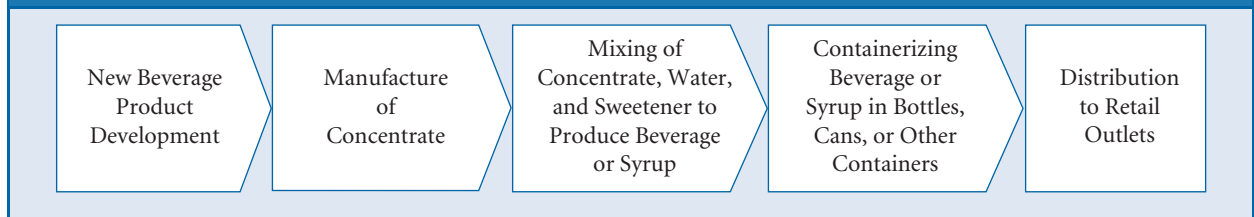
**Exhibit 1.5****Division Revenues and Operating Profits for PepsiCo for 2012  
(dollar amounts in millions)**

	Revenues		Operating Profits		Operating Profit Margin
Frito-Lay North America	\$13,574	20.7%	\$ 3,646	40.0%	26.9%
Quaker Foods North America	2,636	4.0	695	7.6	26.4%
Latin America Foods	7,780	11.9	1,059	11.6	13.6%
PepsiCo Americas Beverages	21,408	32.7	2,937	32.2	13.7%
PepsiCo Europe	13,441	20.5	1,330	14.6	9.9%
Asia, Middle East & Africa	6,653	10.2	747	8.2	11.2%
Corporate unallocated	—	—	(1,302)	(14.3)	
<b>Total</b>	<u>\$65,492</u>	<u>100.0%</u>	<u>\$ 9,112</u>	<u>100.0%</u>	13.9%

(PAB), PepsiCo Europe, and PepsiCo Asia, Middle East and Africa (AMEA). The four business units include six reportable segments. PAF is organized into three divisions: Frito-Lay North America (FLNA; branded snacks, chips, and other food products), Quaker Foods North America (QFNA; cereal and related products), and Latin America Foods (LAF; branded snacks, chips, and other food products). PAB operates as a single-segment division, and it manufactures and distributes soft drinks and other beverages throughout North America. PepsiCo Europe and AMEA operate in markets outside North America and manufacture and sell branded snack foods, breakfast foods, soft drinks, and other beverages. Exhibit 1.5 shows the amounts taken from PepsiCo's Note 1, the proportions of revenues and operating profit that PepsiCo derived from each division, and the operating profit margin (operating profit divided by revenues) of each division for 2012.

Exhibit 1.6 illustrates a value chain for one of PepsiCo's principal businesses, the soft drink/beverage industry. Note that this is PepsiCo's legacy business, so for completeness you should also evaluate PepsiCo's other principal businesses, particularly in the snack food and breakfast food industries.

Although the classic PepsiCo soft drinks (for example, Pepsi, Diet Pepsi, and Mountain Dew) have not changed for many years, the company continually engages in new product development. Once a product appears to have commercial feasibility,

**Exhibit 1.6****Value Chain for the Soft Drink/Beverage Industry**

PepsiCo combines raw materials into a concentrate or syrup base. The ingredients and their mixes are highly confidential. PepsiCo transfers the concentrate to its bottlers (or, in the case of syrup, to its national fountain accounts), which combine it with water and sweeteners and then bottle it to produce the finished soft drink.

## Porter's Five Forces Classification Framework

Porter suggests that five forces influence the level of competition and the profitability of firms in an industry.<sup>1</sup> Three of the forces—rivalry among existing firms, potential entry, and substitutes—represent horizontal competition among current or potential future firms in the industry and closely related products and services. The other two forces—buyer power and supplier power—depict vertical competition in the value chain, from the suppliers through the existing rivals to the buyers. We discuss each of these forces next and illustrate them within the soft drink/beverage industry. Exhibit 1.7 depicts Porter's five forces in the soft drink/beverage industry.

- 1. Rivalry among Existing Firms.** Direct rivalry among existing firms is often the first order of competition in an industry. Some industries can be characterized by concentrated rivalry (such as a monopoly, a duopoly, or an oligopoly), whereas others have diffuse rivalry across many firms. Economists often assess the level of competition with industry concentration ratios, such as a four-firm concentration index that measures the proportion of industry sales controlled by the four largest competitors. Economics teaches that in general, the greater the industry concentration, the lower the competition between existing rivals and thus the more profitable the firms will be.

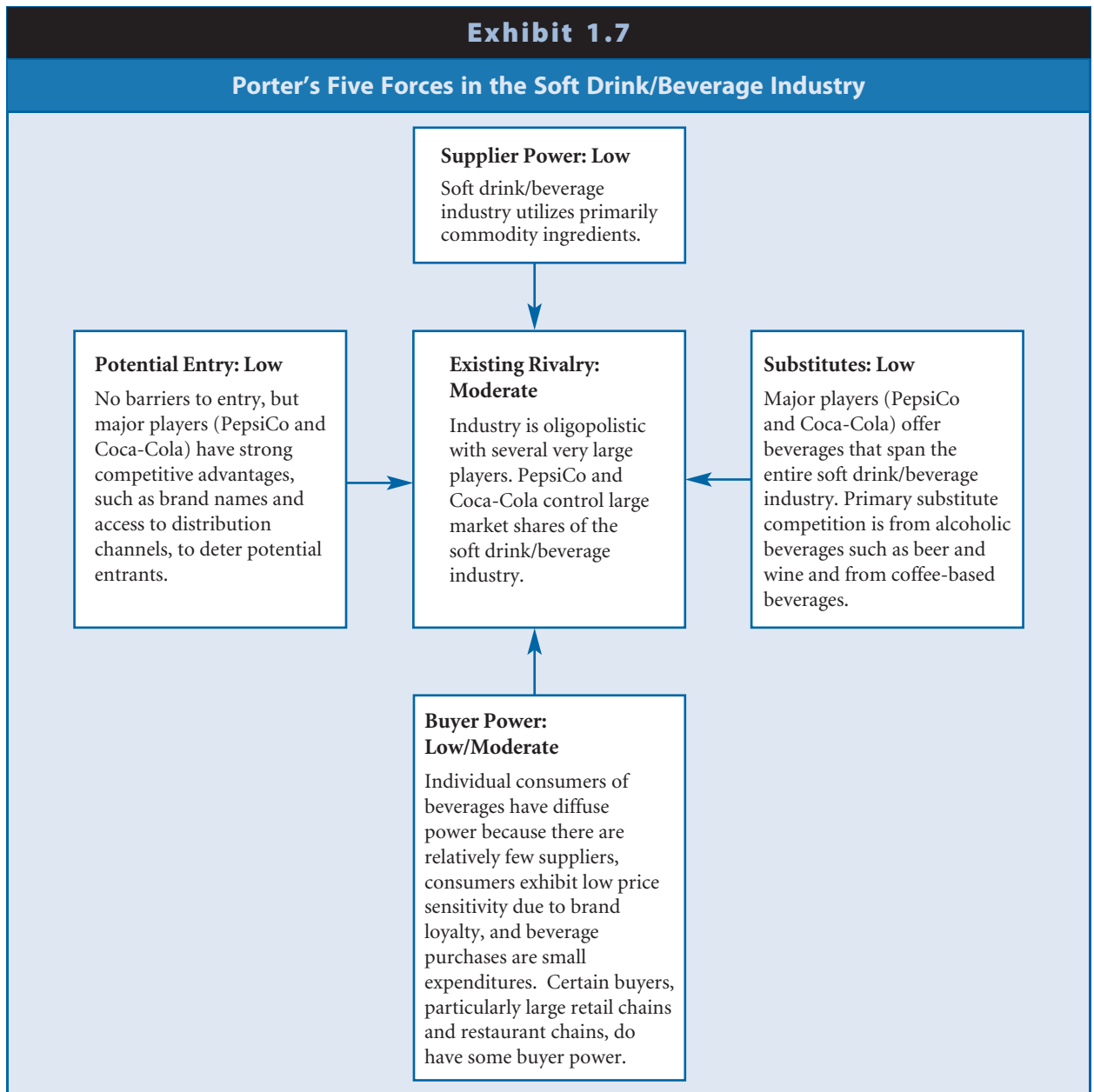
**PepsiCo** and **Coca-Cola** dominate the soft drink/beverage industry in the United States. Because some consumers view the two companies' products as being similar, intense competition based on price could develop. Also, the soft drink market in the United States is mature (that is, not growing rapidly), so price cutting could become a strategy to gain market share. Although intense rivalries have a tendency to reduce profitability, in this case, PepsiCo and Coca-Cola appear to tacitly avoid competing based on price and compete instead on brand image, access to key distribution channels (for example, fast-food chains and grocery store shelf space), and other attributes. Growth opportunities do exist in other countries, which both companies pursue aggressively. Thus, we characterize industry rivalry as moderate.

- 2. Threat of New Entrants.** How easily can new firms enter a market? Are there entry barriers such as large capital investment, technological expertise, patents, or regulations that inhibit new entrants? Do the existing rivals have distinct competitive advantages (such as brand names) that will make it difficult for other firms to enter and compete successfully? If so, firms in the industry will likely generate higher profits than if new entrants can enter the market easily and compete away any potential excess profits.

The soft drink/beverage industry has no significant barriers to entry. This is evident by the numerous small juice, sports drink, water, and soft drink companies that exist; the frequency with which new firms enter the industry; and the availability of generic and no-name beverage products. However, the existing major players in the soft drink/beverage industry have competitive advantages that reduce the threat of new entrants. Brand recognition by PepsiCo and Coca-Cola serves as a very powerful

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<sup>1</sup>Michael E. Porter, *Competitive Strategy: Techniques for Analyzing Industries and Competitors* (New York: Free Press), 1998.



deterrent to potential new competitors. Another deterrent is these two firms' domination of distribution channels. Most restaurant chains sign exclusive contracts to serve the beverages of one or the other of these two firms. Also, PepsiCo and Coca-Cola often dominate shelf space in grocery stores.

- 3. Threat of Substitutes.** How easily can customers switch to substitute products or services? How likely are they to switch? When there are close substitutes in a market, competition increases and profitability diminishes (for example, between restaurants and grocery stores for certain types of prepared foods). Unique products with few substitutes, such as certain prescription medications, enhance profitability.

The carbonated soft drink industry faces substitute competition from an array of other beverages that consumers can substitute to quench their thirst. Fruit juices, bottled water, sports drinks, teas, coffees, milk, beers, and wines serve a similar thirst-quenching function to that of soft drinks. Over the years, Coca-Cola and PepsiCo have expanded their beverage portfolios to encompass virtually all nonalcoholic beverages. For example, PepsiCo purchased **Tropicana** and **Gatorade** to enhance its product offerings in juices, sports drinks, and bottled water, and has joint ventures with **Lipton** and **Starbucks** to sell teas and coffees. Because of the wide range of beverage products offered by PepsiCo and Coca-Cola and because of consumer buying habits, brand loyalty, and channel availability, the threat of substitutes in the soft drink/beverage industry is low. The primary substitute competition comes from alcoholic beverages such as beer and wine and from coffee-based beverages.

- 4. Buyer Power.** Buyer power relates to the relative number of buyers and sellers in a particular industry and the leverage buyers have with respect to price. Are the buyers price takers or price setters? If there are many sellers of a product and a small number of buyers making very large purchase decisions, such as military equipment bought by governments or automobile parts purchased by automobile manufacturers, the buyer can exert significant downward pressure on prices and therefore on the profitability of suppliers. If there are few sellers and many buyers, as with beverages, the sellers have more bargaining power.

Buyer power also relates to buyers' price sensitivity and the elasticity of demand. How sensitive are consumers to product prices? If products are similar to those offered by competitors, consumers may switch to the lowest-priced offering. If consumers view a particular firm's products as unique, however, they will be less sensitive to price differences. Another dimension of price sensitivity is the relative cost of a product. Consumers are less sensitive to the prices of products that represent small expenditures, such as beverages, than they are to higher-priced products, such as automobiles. However, even though individual consumers may switch easily between brands or between higher- or lower-priced products, they make individual rather than large collective buying decisions; so they are likely to continue to be price takers (not price setters). The ease of switching does not make the buyer powerful; instead it increases the level of competition between the rivals.

In the beverage industry, buyer power is relatively low because there are very few suppliers and they have access to essential distribution channels. Individual consumers tend to exhibit relatively low price sensitivity because of brand loyalty, and beverages comprise relatively small dollar amount purchases. However, certain buyers (for example, large retail and grocery chains such as **Walmart** and large fast-food chains such as **McDonald's**) make such large beverage purchases on a national level that they can exert significant buyer power.

- 5. Supplier Power.** A similar set of factors with respect to leverage in negotiating prices applies on the input side as well. If an industry is comprised of a large number of potential buyers of inputs that are produced by relatively few suppliers, the suppliers will have greater power in setting prices and generating profits. For example, many firms assemble and sell personal computers and laptops, but these firms face significant supplier power because **Microsoft** is a dominant supplier of operating systems and application software and **Intel** is a dominant supplier of microprocessors.

Beverage companies produce their concentrates and syrups with raw materials that are commodities. Although PepsiCo does not disclose every ingredient, PepsiCo is not likely to be dependent on one supplier (or even a few suppliers) for its raw materials. It also is unlikely that any of these ingredients are sufficiently unique that the suppliers could exert much power over PepsiCo. Given PepsiCo's size, the power more likely resides with PepsiCo than with its suppliers.

In summary:

- Competition in the soft drink/beverage industry rates low on supplier power, threat of new entrants, and threat of substitutes.
- The industry rates low on buyer power of consumers but moderate on buyer power of fast-food chains and large retail and grocery chains.
- The industry rates moderate on rivalry within the industry. Unless PepsiCo or Coca-Cola decides to compete on the basis of low price, you might expect these firms to continue to generate relatively high profitability.

## Economic Attributes Framework

We find the following framework useful in studying the economic attributes of a business, in part because it ties in with items reported in the financial statements.

### 1. Demand

- Are customers highly price-sensitive, as in the case of automobiles, or are they relatively insensitive, as in the case of soft drinks?
- Is demand growing rapidly, as in the case of long-term health care, or is the industry relatively mature, as in the case of grocery stores?
- Does demand move with the economic cycle, as in the case of construction of new homes and offices, or is demand insensitive to business cycles, as in the case of food products and medical care?
- Does demand vary with the seasons, as in the case of summer clothing and ski equipment, or is demand relatively stable throughout the year, as in the case of most grocery store products?

### 2. Supply

- Are many suppliers offering similar products, or are a few suppliers offering unique products?
- Are there high barriers to entry, or can new entrants gain easy access?
- Are there high barriers to exit, as in the case of firms that face substantial environment cleanup costs?

### 3. Manufacturing

- Is the manufacturing process capital-intensive, as in the case of electric power generation; labor-intensive, as in the case of advertising, investment banking, auditing, and other professional services; or a combination of the two, as in the case of automobile manufacturing and airline transportation?
- Is the manufacturing process complex with low tolerance for error, as in the case of heart pacemakers and microchips, or relatively simple with ranges of products that are of acceptable quality, as in the case of apparel and nonmechanized toys?

### 4. Marketing

- Is the product promoted to other businesses, in which case a sales staff plays a key role, or is it marketed to consumers, so that advertising, location, and coupons serve as principal promotion mechanisms?

- Does steady demand pull products through distribution channels, or must firms continually create demand?
- 5. Investing and Financing**
- Are the assets of firms in the industry relatively short-term, as in the case of commercial banks, which require short-term sources of funds to finance them? Or are assets relatively long-term, as in the case of electric utilities, which require primarily long-term financing?
  - Is there relatively little risk in the assets of firms in the industry, such as from technological obsolescence, so that firms can carry high proportions of debt financing? Alternatively, are there high risks resulting from short product life cycles or product liability concerns that dictate low debt and high shareholders' equity financing?
  - Is the industry relatively profitable and mature, generating more cash flow from operations than is needed for acquisitions of property, plant, and equipment? Alternatively, is the industry growing rapidly and in need of external financing?

Exhibit 1.8 summarizes the economic attributes of the soft drink/beverage industry.

## Exhibit 1.8

### Economic Attributes of the Soft Drink/Beverage Industry

#### Demand

- Demand is relatively insensitive to price.
- There is low growth in the United States, but more rapid growth opportunities are available in other countries.
- Demand is not cyclical.

#### Supply

- Two principal suppliers (PepsiCo and Coca-Cola) sell branded products.
- Branded products and domination of distribution channels by two principal suppliers create significant competitive advantages.

#### Manufacturing

- Manufacturing process for concentrate/syrup is not capital-intensive.
- Bottling and distribution of final product are capital-intensive.
- Manufacturing process is simple (essentially a mixing operation) with some tolerance for quality variation.

#### Marketing

- Brand recognition and established demand pull products through distribution channels, but advertising can stimulate demand to some extent.

#### Investing and Financing

- Bottling operations and transportation of products to retailers require long-term financing.
- Profitability is relatively high and growth is slow in the United States, leading to excess cash flow generation. Growth markets in other countries require financing from internal domestic cash flow or from external sources.

## Step 2: Identify the Company Strategies

### LO 1-3

Identify firm-specific strategies for achieving competitive advantage within an industry.

Firms establish business strategies to differentiate themselves from competitors, but an industry's economic characteristics affect the flexibility that firms have in designing those strategies. In some cases, firms can create sustainable competitive advantages. **PepsiCo's** size, brand name, and access to distribution channels give it sustainable competitive advantages over smaller, less-known beverage companies. Similarly, the reputation for quality family entertainment provides **Disney** with a sustainable advantage, whereas a reputation for low prices generates advantages for **Walmart**.

In many industries, however, products and ideas quickly get copied. Consider the following examples: cell phones, tablets, and computer hardware; chicken, pizza, and hamburger restaurant chains; and financial services. In these cases, firms may achieve competitive advantage by being the first with a new concept or idea (referred to as *first mover advantage*) or by continually investing in product development to remain on the leading edge of change in an industry. Such competitive advantages are difficult (but not impossible) to sustain for long periods of time.

## Framework for Strategy Analysis

The set of strategic choices confronting a particular firm varies across industries. The following framework dealing with product and firm characteristics helps you identify and structure the set of trade-offs and choices a firm must face.

- 1. Nature of Product or Service.** Is a firm attempting to create unique products or services for particular market niches, thereby achieving relatively high profit margins (referred to as a *product differentiation strategy*)? Or is it offering nondifferentiated products at low prices, accepting a lower profit margin in return for a higher sales volume and market share (referred to as a *low-cost leadership strategy*)? Is a firm attempting to achieve both objectives by differentiating (perhaps by creating brand loyalty or technological innovation) and being price competitive by maintaining tight control over costs?
- 2. Degree of Integration in Value Chain.** Is the firm pursuing a vertical integration strategy, participating in all phases of the value chain, or selecting just certain phases in the chain? With respect to manufacturing, is the firm conducting all manufacturing operations itself (as usually occurs in steel manufacturing), outsourcing all manufacturing (common in athletic shoes), or outsourcing the manufacturing of components but conducting the assembly operation in-house (common in automobile and computer hardware manufacturing)?

With respect to distribution, is the firm maintaining control over the distribution function or outsourcing it? Some restaurant chains, for example, own all of their restaurants, while other chains operate through independently owned franchises. Computer hardware firms have recently shifted from selling through their own sales staffs to using various indirect sellers, such as value-added resellers and systems integrators—in effect shifting from in-house sourcing to outsourcing the distribution function.

- 3. Degree of Geographical Diversification.** Is the firm targeting its products to its domestic market or integrating horizontally across many countries? Operating in other countries creates opportunities for growth but exposes firms to risks from changes in exchange rates, political uncertainties, and additional competitors.

- 4. Degree of Industry Diversification.** Is the firm operating in a single industry or diversifying across multiple industries? Operating in multiple industries permits firms to diversify product, cyclical, regulatory, and other risks encountered when operating in a single industry but raises questions about management's ability to understand and manage multiple and different businesses effectively.

## Application of Strategy Framework to PepsiCo's Beverage Division

To apply this strategy framework to **PepsiCo's** beverage division, we rely on the description provided by PepsiCo's management (Appendix B). Most U.S. firms include this type of management discussion and analysis in their Form 10-K filing with the Securities and Exchange Commission (SEC).

- 1. Nature of Product or Service.** PepsiCo's beverage division competes broadly in the beverage industry, with offerings in soft drinks, fruit juices, bottled waters, sports drinks, teas, and coffees. However, its principal beverage products are soft drinks. Although one might debate whether its products differ from similar products offered by **Coca-Cola** and other competitors (a debate that invariably involves taste), PepsiCo relies on brand recognition and distribution channels to differentiate its products.
- 2. Degree of Integration in Value Chain.** PepsiCo engages in new product development, manufactures concentrates and syrups, and bottles, distributes, and promotes its products. Maintaining product quality and efficient and effective distribution channels are critical to PepsiCo's success, so PepsiCo emphasizes the important role of much of the value chain. However, bottling operations are relatively simple, yet capital-intensive, and require long-term financing, typically debt. After many years of these operations being delegated to affiliated bottlers, PepsiCo recently began repurchasing financial interests in such operations, which has resulted in an increase in debt financing.
- 3. Degree of Geographical Diversification.** Note 1 to PepsiCo's financial statements and Exhibit 1.5 indicate that the PepsiCo Americas Beverages division generated 33% of the firm's revenues during 2012. PepsiCo Europe and PepsiCo Asia, Middle East and Africa (AMEA) represented 21% and 10% of revenues, respectively. The remainder of revenues came from the three distinct foods divisions (Frito-Lay North America, Quaker Foods North America, and Latin America Foods). Note that the Europe and AMEA divisions include both beverage and food sales, so it is not possible from these disclosures to identify the exact amount of food versus beverage revenues for PepsiCo overall. Nevertheless, it is clear that PepsiCo is not strictly a beverage company.
- 4. Degree of Industry Diversification.** To focus and streamline the presentation of industry analysis and strategic analysis techniques, our discussion thus far has focused on PepsiCo's beverages business. However, PepsiCo generates greater revenues and higher operating profit margins from the snack food and breakfast foods divisions than from the beverage division. As seen in Exhibit 1.5, PepsiCo's three foods divisions generated nearly 37% of the company's total revenues. Although PepsiCo is more industry-diverse than Coca-Cola, many economic characteristics of the beverage, snack food, and cereal industries are similar in nature, involving the selling of branded consumer products. These industries can be characterized as having low barriers to entry but a small number of powerful rivals with brand recognition and access to key distribution channels. These industries rely on commodity



raw materials for inputs, facing low supplier power, and relatively price-insensitive buyers because of brand loyalty and distribution channels. As a result, PepsiCo's strategies are relatively similar between the beverage and foods divisions, focusing on product development and promotion to leverage the brand recognition and maintaining access to important distribution channels.

- The value chain for an industry sets forth the sequence or chain of activities involved in the creation, manufacture, and distribution of its products and services.
- The Porter five forces framework is useful for identifying the level of competition and the profitability of firms in an industry.
- Applying an economics attributes framework describes elements of supply, demand, and other structural features of an industry, which are typically reflected in the financial statements.
- The set of strategic choices confronting a particular firm varies across industries. Firms adopt different strategies to differentiate themselves from competitors, but available strategies are determined by an industry's economic characteristics.

## Step 3: Assess the Quality of the Financial Statements

Firms prepare four principal financial statements to report the results of their activities: (1) balance sheet, (2) income statement, (3) statement of comprehensive income, and (4) statement of cash flows. Firms also prepare a fifth statement, the statement of shareholders' equity, which provides further detail of the shareholders' equity section of the balance sheet. A set of notes that elaborate on items included in these statements is also required. Together, the financial statements and notes provide an extensive set of information about the firm's financial position, performance, and cash flows, and permit users to develop insights about the firm's profitability, risk, and growth.

Using the financial statements and notes for **PepsiCo** in Appendix A as examples, this section presents a brief overview of the purpose and content of each of these three financial statements. Understanding accounting concepts and methods and evaluating the quality of a firm's financial statements is a central element of effective financial statement analysis and therefore one of the three central objectives of this book. Chapters 2 and 3 describe the fundamental accounting concepts and methods for measuring and reporting:

- assets, liabilities, and shareholders' equity.
- revenues, expenses, and income.
- cash flows associated with operating, investing, and financing activities.

Chapters 6–9 describe specific accounting principles and methods in depth, opening with a discussion of accounting quality. In this chapter, we introduce the overall concept of accounting quality by highlighting the key elements of PepsiCo's financial statements and notes.

## Accounting Principles

Firms produce financial statements and notes based on accounting standards and principles established by the accounting profession. For American firms, U.S. GAAP determines

### LO 1-4

Show familiarity with the purpose, underlying concepts, and format of the balance sheet, income statement, and statement of cash flows.

the valuation and measurement methods used in preparing financial statements. The SEC (Securities and Exchange Commission), an agency of the federal government, has the legal authority to specify acceptable accounting principles in the United States ([www.sec.gov](http://www.sec.gov)), but has, for the most part, delegated the responsibility for setting U.S. GAAP to the Financial Accounting Standards Board (FASB), a private-sector body within the accounting profession ([www.fasb.org](http://www.fasb.org)). The FASB is an independent board comprising seven members and a full-time professional staff. The FASB specifies acceptable accounting principles only after receiving extensive comments on proposed accounting standards from various preparers, auditors, and users of financial statements.

The IASB is an independent entity comprising 16 members and a full-time professional staff, which is responsible for developing international financial reporting standards (IFRS) ([www.ifrs.org](http://www.ifrs.org)). Many countries have dropped their own country-specific accounting rules, formally accepting IFRS as the applicable accounting standards. Beginning in 2005, the financial statements of listed firms in the European Community were required to conform to the pronouncements of the IASB.

The SEC accepts financial statement filings prepared under IFRS from non-U.S. registrants, although it has not yet accepted IFRS-based financial statement filings from U.S. firms, a matter that remains under discussion. The FASB and IASB are working together closely to harmonize accounting standards and principles worldwide. Although substantial differences must be resolved between the two sets of standards (we will highlight existing differences throughout this book), the two boards have managed to find common ground on many major principles. Now when the two boards propose a new principle or a revision of an existing principle, they typically work jointly to develop the proposed principle and to collect and evaluate comments from various constituencies. They then agree on the final principle, which becomes part of both U.S. GAAP and IFRS. Global harmonization in accounting standards should facilitate better financial statement analysis, enabling analysts to evaluate and compare financial statements from firms across many countries, prepared under similar accounting principles. Accordingly, increasing comparability should make allocation of capital more efficient worldwide.

## Balance Sheet—Measuring Financial Position

The balance sheet, or statement of financial position, presents a snapshot of the resources of a firm (assets) and the claims on those resources (liabilities and shareholders' equity) as of a specific date. The balance sheet derives its name from the fact that it reports the following balance, or equality:

$$\text{Assets} = \text{Liabilities} + \text{Shareholders' Equity}$$

That is, a firm's assets are in balance with, or equal to, the claims on those assets by creditors (liabilities) and owners (shareholders' equity). The balance sheet views resources from two perspectives: a list of the specific resources the firm controls (for example, cash, inventory, and equipment) and the obligations of the entity and ownership claims on the assets (for example, suppliers, employees, governments, financial institutions, and shareholders).

The assets portion of the balance sheet reports the effects of a firm's operating decisions (principally those involving assets used in day-to-day activities to produce and deliver products and services to customers) and investing decisions (principally those involving financial assets to generate interest income, dividends, and other returns on investment). Refer to the balance sheets for **PepsiCo** as of fiscal year-end 2008 through 2012 in Exhibit 1.9. PepsiCo's principal operating assets are cash and cash equivalents; accounts and notes receivable; inventories; prepaid expenses; property, plant, and equipment; and goodwill and other

**Exhibit 1.9****PepsiCo, Inc., and Subsidiaries  
Consolidated Balance Sheets  
(in millions)**

	2012	2011	2010	2009	2008
<b>ASSETS</b>					
<b>Current Assets</b>					
Cash and cash equivalents	\$ 6,297	\$ 4,067	\$ 5,943	\$ 3,943	\$ 2,064
Short-term investments	322	358	426	192	213
Accounts and notes receivable, net	7,041	6,912	6,323	4,624	4,683
Inventories	3,581	3,827	3,372	2,618	2,522
Prepaid expenses and other current assets	1,479	2,277	1,505	1,194	1,324
<b>Total Current Assets</b>	<b>\$ 18,720</b>	<b>\$ 17,441</b>	<b>\$ 17,569</b>	<b>\$ 12,571</b>	<b>\$ 10,806</b>
Property, plant and equipment, net	19,136	19,698	19,058	12,671	11,663
Amortizable intangible assets, net	1,781	1,888	2,025	841	732
Goodwill	16,971	16,800	14,661	6,534	5,124
Other nonamortizable intangible assets	14,744	14,557	11,783	1,782	1,128
Investments in noncontrolled affiliates	1,633	1,477	1,368	4,484	3,883
Other assets	1,653	1,021	1,689	965	2,658
<b>Total Assets</b>	<b>\$ 74,638</b>	<b>\$ 72,882</b>	<b>\$ 68,153</b>	<b>\$ 39,848</b>	<b>\$ 35,994</b>
<b>LIABILITIES AND EQUITY</b>					
<b>Current Liabilities</b>					
Short-term obligations	\$ 4,815	\$ 6,205	\$ 4,898	\$ 464	\$ 369
Accounts payable and other current liabilities	11,903	11,757	10,923	8,127	8,273
Income taxes payable	371	192	71	165	145
<b>Total Current Liabilities</b>	<b>\$ 17,089</b>	<b>\$ 18,154</b>	<b>\$ 15,892</b>	<b>\$ 8,756</b>	<b>\$ 8,787</b>
Long-term debt obligations	23,544	20,568	19,999	7,400	7,858
Other liabilities	6,543	8,266	6,729	5,591	6,541
Deferred income taxes	5,063	4,995	4,057	659	226
<b>Total Liabilities</b>	<b>\$ 52,239</b>	<b>\$ 51,983</b>	<b>\$ 46,677</b>	<b>\$ 22,406</b>	<b>\$ 23,412</b>
<b>Commitments and Contingencies</b>					
	—	—	—	—	—
Preferred stock, no par value	\$ 41	\$ 41	\$ 41	\$ 41	\$ 41
Repurchased preferred stock	(164)	(157)	(150)	(145)	(138)
<b>Common Shareholders' Equity</b>					
Common stock	26	26	31	30	30
Capital in excess of par value	4,178	4,461	4,527	250	351
Retained earnings	43,158	40,316	37,090	33,805	30,638
Accumulated other comprehensive loss	(5,487)	(6,229)	(3,630)	(3,794)	(4,694)
Repurchased common stock, in excess of par value	(19,458)	(17,870)	(16,745)	(13,383)	(14,122)
<b>Total Common Shareholders' Equity</b>	<b>\$ 22,417</b>	<b>\$ 20,704</b>	<b>\$ 21,273</b>	<b>\$ 16,908</b>	<b>\$ 12,203</b>
Noncontrolling interests	105	311	312	638	476
<b>Total Equity</b>	<b>\$ 22,399</b>	<b>\$ 20,899</b>	<b>\$ 21,476</b>	<b>\$ 17,442</b>	<b>\$ 12,582</b>
<b>Total Liabilities and Equity</b>	<b>\$ 74,638</b>	<b>\$ 72,882</b>	<b>\$ 68,153</b>	<b>\$ 39,848</b>	<b>\$ 35,994</b>

Source: PepsiCo, Inc., Forms 10-K for the Fiscal Years Ended 2010–2012.

intangible assets. PepsiCo's principal financial assets from investing activities include short-term investment securities and investments in the equity securities of noncontrolled affiliates.

The liabilities and shareholders' equity portion of the balance sheet reports obligations that arise from a firm's operating decisions (involving obligations to pay employees and suppliers of goods and services) and financing decisions, involving raising debt capital from banks and other lenders as well as raising equity capital from investors in common stock. PepsiCo obtains financing from suppliers of goods and services (reported as accounts payable, other current liabilities, and other long-term liabilities), banks and other lenders (reported as both short- and long-term obligations), preferred equity investors (reported as preferred stock, offset by repurchased preferred stock), and common equity investors (reported as common shareholders' equity).

For sake of comparison, also refer to the balance sheets for **The Coca-Cola Company** as of fiscal year-end 2008 through 2012 in Exhibit 1.10. Notice that Coca-Cola's principal assets, liabilities, and financing from banks, lenders, and common equity investors are similar to those of PepsiCo.

### Exhibit 1.10

#### The Coca-Cola Company Consolidated Balance Sheets (in millions)

	2012	2011	2010	2009	2008
<b>ASSETS</b>					
<b>Current Assets</b>					
Cash and cash equivalents	\$ 8,442	\$ 12,803	\$ 8,517	\$ 7,021	\$ 4,701
Short-term investments	5,017	1,088	2,682	2,130	—
Total cash, cash equivalents, and short-term investments	\$ 13,459	\$ 13,891	\$ 11,199	\$ 9,151	\$ 4,701
Marketable securities	3,092	144	138	62	278
Trade accounts receivable, less allowances of \$53 and \$83, respectively	4,759	4,920	4,430	3,758	3,090
Inventories	3,264	3,092	2,650	2,354	2,187
Prepaid expenses and other assets	2,781	3,450	3,162	2,226	1,920
Assets held for sale	2,973	—	—	—	—
<b>Total Current Assets</b>	<b>\$ 30,328</b>	<b>\$ 25,497</b>	<b>\$ 21,579</b>	<b>\$ 17,551</b>	<b>\$ 12,176</b>
Equity method investments	9,216	7,233	6,954	6,217	5,316
Other investments, principally bottling companies	1,232	1,141	631	538	463
Other assets	3,585	3,495	2,121	1,976	1,733
Property, plant and equipment, net	\$ 14,476	\$ 14,939	\$ 14,727	\$ 9,561	\$ 8,326
Trademarks with indefinite lives	6,527	6,430	6,356	6,183	6,059
Bottlers' franchise rights with indefinite lives	7,405	7,770	7,511	1,953	—
Goodwill	12,255	12,219	11,665	4,224	4,029
Other intangible assets	1,150	1,250	1,377	468	2,417
<b>Total Assets</b>	<b>\$ 86,174</b>	<b>\$ 79,974</b>	<b>\$ 72,921</b>	<b>\$ 48,671</b>	<b>\$ 40,519</b>

(Continued)

**Exhibit 1.10 (Continued)**

	2012	2011	2010	2009	2008
<b>LIABILITIES AND EQUITY</b>					
<b>Current Liabilities</b>					
Accounts payable and accrued expenses	\$ 8,680	\$ 9,009	\$ 8,859	\$ 6,657	\$ 6,205
Loans and notes payable	16,297	12,871	8,100	6,749	6,066
Current maturities of long-term debt	1,577	2,041	1,276	51	465
Accrued income taxes	471	362	273	264	252
Liabilities held for sale	796	—	—	—	—
<b>Total Current Liabilities</b>	<b>\$ 27,821</b>	<b>\$ 24,283</b>	<b>\$ 18,508</b>	<b>\$ 13,721</b>	<b>\$ 12,988</b>
Long-term debt	14,736	13,656	14,041	5,059	2,781
Other liabilities	5,468	5,420	4,794	2,965	3,011
Deferred income taxes	4,981	4,694	4,261	1,580	877
<b>Total Liabilities</b>	<b>\$ 53,006</b>	<b>\$ 48,053</b>	<b>\$ 41,604</b>	<b>\$ 23,325</b>	<b>\$ 19,657</b>
<b>Shareowners' Equity</b>					
Common stock	\$ 1,760	\$ 1,760	\$ 880	\$ 880	\$ 880
Capital surplus	11,379	10,332	10,057	8,537	7,966
Reinvested earnings	58,045	53,621	49,278	41,537	38,513
Accumulated other comprehensive income (loss)	(3,385)	(2,774)	(1,450)	(757)	(2,674)
Treasury stock, at cost—2,571 and 2,514 shares, respectively	(35,009)	(31,304)	(27,762)	(25,398)	(24,213)
<b>Equity Attributable to Shareowners</b>	<b>\$ 32,790</b>	<b>\$ 31,635</b>	<b>\$ 31,003</b>	<b>\$ 24,799</b>	<b>\$ 20,472</b>
<b>Equity Attributable to Noncontrolling Interests</b>	<b>378</b>	<b>286</b>	<b>314</b>	<b>547</b>	<b>390</b>
<b>Total Equity</b>	<b>\$ 33,168</b>	<b>\$ 31,921</b>	<b>\$ 31,317</b>	<b>\$ 25,346</b>	<b>\$ 20,862</b>
<b>Total Liabilities and Equity</b>	<b>\$ 86,174</b>	<b>\$ 79,974</b>	<b>\$ 72,921</b>	<b>\$ 48,671</b>	<b>\$ 40,519</b>

Source: The Coca-Cola Company, Forms 10-K for the Fiscal Years Ended 2010–2012.

Under U.S. GAAP, firms are required to report assets and liabilities in descending order of liquidity, so the assets that are closest to cash are listed first while the assets that are hardest to convert to cash are reported last. Similarly, the liabilities that are likely to be settled soonest are listed first while the liabilities likely to be settled furthest in the future are shown last.

Formats of balance sheets in some countries can differ from the format used in the United States. Under IFRS, for example, firms can choose to report the balance sheet with assets and liabilities listed in *descending* order of liquidity or they can report the balance sheet with long-term assets such as property, plant, and equipment and other noncurrent assets appearing first, followed by current assets. On the financing side, balance sheets prepared under IFRS may list shareholders' equity first, followed by noncurrent liabilities and current liabilities. Both formats under IFRS maintain the balance sheet equality but present accounts in a different sequence.

In the United Kingdom, for example, the balance sheet equation commonly takes the following form:

$$\text{Noncurrent Assets} + (\text{Current Assets} - \text{Current Liabilities}) - \text{Noncurrent Liabilities} = \text{Shareholders' Equity}$$

This format takes the perspective of shareholders by reporting the net assets available for shareholders after subtracting claims by creditors. You can always rearrange the components of published balance sheets to the format you consider most informative or comparable with others.

## Assets—Recognition, Measurement, and Classification

Which of its resources should a firm recognize as assets? At what amount should the firm measure these assets? How should it classify them in the assets portion of the balance sheet? U.S. GAAP and IFRS establish the principles that firms must use to determine responses to those questions.

Defining what resources firms should recognize as assets is one of the most important definitions among all of the principles established by U.S. GAAP and IFRS:

Assets are probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events.<sup>2</sup>

Assets are resources that have the potential to provide a firm with future economic benefits: the ability to generate future cash inflows (as with accounts receivable, inventories, and investment securities) or to reduce future cash outflows (as with prepayments) or to provide future service potential for operating activities (as with property, equipment, and intangibles). Therefore, asset recognition depends on managers' expectations for future economic benefits. A firm can recognize as assets only those resources for which it:

- controls the rights to future economic benefits as a result of a past transaction or event.
- can predict and measure, or quantify, the future benefits with a reasonable degree of precision and reliability.

If an expenditure does not meet *both* criteria, it cannot be capitalized as an asset and must be expensed. A firm should *derecognize* assets (that is, write off assets from the balance sheet) that it determines no longer represent future economic benefits (such as writing off uncollectible receivables or unsalable inventory). Resources that firms do not normally recognize as assets because they fail to meet one or both of the criteria include purchase orders received from customers; employment contracts with corporate officers and employees; and a quality reputation with employees, customers, or citizens of the community.

Most assets on the balance sheet are either *monetary* or *nonmonetary*. (We will define these categories more specifically in the discussion of foreign currency translation in Chapter 8.) Monetary assets include cash and claims to future payments of cash (such as receivables). **PepsiCo's** monetary assets include cash, accounts and notes receivable, and investments in debt and equity securities of other firms. Under U.S. GAAP and IFRS, balance sheets report monetary assets using a variety of measurement attributes intended to enhance the relevance and reliability of reported asset values. Some monetary assets such as cash are reported at current value. Others, such as accounts receivable, are reported at net realizable value (the amounts the firm expects to collect).

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<sup>2</sup>Financial Accounting Standards Board, *Statement of Financial Accounting Concepts No. 6*, "Elements of Financial Statements" (1985), par. 25.

For other assets, such as notes receivable and loans with cash receipts that extend beyond one year, the firm reports the monetary asset at the present value of the future cash flows using a discount rate that reflects the underlying uncertainty of collecting the cash as assessed at the time the claim initially arose. Still other assets, such as debt and equity investment securities, are typically reported at fair value, which represents those cash amounts the firm could expect to realize if it sold the securities. Chapter 2 provides more discussion of how accounting is a “mixed attribute” measurement system.

Nonmonetary assets are *tangible*, such as inventories, buildings, and equipment, and *intangible*, including brand names, patents, trademarks, licenses, and goodwill. In contrast to monetary assets, nonmonetary assets do not represent claims to future cash flows. The amount of cash firms receive from using or selling nonmonetary assets depends on market conditions at the time of their use or sale. Under U.S. GAAP and IFRS, firms might report nonmonetary assets at the:

- amounts initially paid to acquire them (acquisition, or historical, cost) adjusted for the use of the asset over time (accumulated depreciation or amortization).
- amounts currently required to replace them (replacement cost).
- amounts for which firms could currently sell them (net realizable value).
- present values of the amounts firms expect to receive in the future from selling or using the assets (present value of future cash flows).

Chapter 2 discusses alternative valuation methods and their implications for measuring earnings.

Perhaps PepsiCo’s most valuable assets are its brand names (for example, Pepsi, Frito-Lay, and Quaker Oats), and brand names associated with specific products, like Mountain Dew and Doritos. PepsiCo and its subsidiaries created and developed these brand names through past expenditures on advertising, event sponsorships, product development, and quality control. Ascertaining the portion of these expenditures that creates reliably predictable future economic benefits and the portion that simply stimulates sales during the current period is too uncertain to justify recognizing an asset. The amounts that PepsiCo does report for amortizable intangible assets, goodwill, and other nonamortizable intangible assets result from PepsiCo’s purchases of other companies, where the transaction provides market evidence of the value of acquired intangibles. PepsiCo’s balance sheet reports \$1,781 million of amortizable intangible assets and \$14,744 million of nonamortizable intangibles, principally brand names. The remaining \$16,971 million of intangible assets is goodwill, which represents the portion of the purchase price of other businesses that PepsiCo could not allocate to identifiable assets and liabilities. Every year, PepsiCo tests the value of all of its intangible assets for impairment, and if the evaluation indicates impairment, the intangible asset is written down to its estimated fair value. Chapter 8 discusses the accounting for goodwill and intangibles.

The classification of assets in the balance sheet varies widely in published annual reports. The principal asset categories are as follows:

**Current Assets.** Current assets include cash and other assets that a firm expects to collect, sell, or consume during the normal operating cycle of a business, usually one year. Cash; short-term investments; accounts and notes receivable; inventories; and prepayments for expenses such as rent, insurance, and advertising appear as current assets for PepsiCo.

**Investments.** This category includes short-term and long-term investments in the debt and equity securities of other entities. If a firm makes such investments for short-term purposes, it classifies them under current assets. Noncurrent assets include investments in noncontrolled affiliates. PepsiCo has recently acquired controlling interests in

its affiliates (particularly its major bottlers), but still maintains investments in other noncontrolled affiliates. For these investments in noncontrolling interests, the company does not prepare consolidated financial statements; instead, it reports the investments on the balance sheet using the equity method (discussed in Chapter 8).

**Property, Plant, and Equipment.** This category includes the tangible, long-lived assets that a firm uses in operations over a period of years. Note 4, “Property, Plant and Equipment and Intangible Assets,” to PepsiCo’s financial statements (Appendix A) indicates that property, plant, and equipment includes land and improvements, buildings and improvements, machinery and equipment, and construction in progress. It reports property, plant, and equipment at acquisition cost and then subtracts the accumulated depreciation recognized on these assets since acquisition.

**Intangibles.** Intangibles include the rights established by law or contract to the future use of property. Patents, trademarks, licenses, and franchises are intangible assets. The most troublesome asset recognition questions revolve around which rights satisfy the criteria for an asset. As Chapter 8 discusses in more depth, firms generally recognize the intangibles acquired in external market transactions as assets. For example, brand names and goodwill are included in PepsiCo’s balance sheet under the categories of amortizable and nonamortizable intangible assets, which are detailed in Note 4. However, firms do not recognize as assets intangibles developed internally by the firm (the Pepsi and Frito-Lay brand names, for example). The rationale for the different accounting treatment is that the value of intangibles acquired in external market transactions is more reliable than the value of internally developed intangibles.

## Liabilities—Recognition, Valuation, and Classification

Under U.S. GAAP and IFRS, firms must report obligations as liabilities if they meet the **definition** of a liability:

Liabilities are probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events.<sup>3</sup>

Therefore, liabilities represent a firm’s existing obligations to make payments of cash, goods, or services in a reasonably predictable amount at a reasonably predictable future time as a result of a past transaction or event. Liabilities reflect managers’ expectations of future sacrifices of resources to satisfy existing obligations. Liabilities for **PepsiCo** include obligations to suppliers of goods and services (accounts payable and other current liabilities), governments (income taxes payable), and banks and other lenders (short-term and long-term debt obligations).

The most troublesome questions regarding liability recognition relate to *executory contracts* and *contingent obligations*. Under U.S. GAAP and IFRS, firms do not recognize executory contracts for labor, purchase order commitments, and some lease agreements as liabilities, because the firm has not yet received the benefits from these items and is not yet obligated to pay for them. For example, a firm should not recognize a liability when it places an order to purchase inventory, which is a contingent obligation; the obligation arises only when the firm receives the inventory. Likewise, the firms should not recognize a liability for future wages to employees; instead, it should

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<sup>3</sup>*Ibid.*, par. 35.



recognize the liability once the employees have provided services. Notes to the financial statements disclose material executory contracts and other contingent claims. For example, refer to PepsiCo's long-term contractual commitments in Note 9, "Debt Obligations and Commitments" (Appendix A). PepsiCo lists noncancelable operating leases, purchasing commitments, and marketing commitments among its executory contracts.

Most liabilities are monetary, requiring future payments of cash. U.S. GAAP and IFRS report those due within one year at the amount of cash the firm expects to pay to discharge the obligation. If the payment dates extend beyond one year, U.S. GAAP and IFRS state the liability at the present value of the required future cash flows (discounted at an interest rate that reflects the underlying uncertainty of paying the cash as assessed at the time the obligation initially arose). Some liabilities, such as warranties, require delivery of goods or services instead of payment of cash, and the balance sheet states those liabilities at the expected future cost of providing these goods and services. Other liabilities also involve obligations to deliver goods or services when customers prepay, giving rise to deferred revenue liabilities. For example, such obligations can arise from the sale of gift cards redeemable for products or services and from advance purchases of insurance coverage, airfares, subscriptions, and membership fees. The balance sheet reports these liabilities at the amount of revenues that have been received from customers and not yet earned.

Balance sheets classify liabilities in various ways. Virtually all firms (except banks) use a current liabilities category, which includes obligations a firm expects to settle within one year. Balance sheets report the remaining liabilities in a section labeled "noncurrent liabilities" or "long-term debt." PepsiCo uses three noncurrent liability categories: long-term debt obligations, other liabilities, and deferred income taxes. Chapters 2 and 9 discuss deferred income taxes.

## Shareholders' Equity Valuation and Disclosure

The shareholders' equity in a firm is a residual interest or claim. That is, the owners have a claim on all assets not required to meet the claims of creditors. Therefore, the valuation of assets and liabilities on the balance sheet determines the valuation of total shareholders' equity.<sup>4</sup>

Balance sheets show shareholders' equity separated into:

- amounts invested by shareholders for an ownership interest in a firm (**PepsiCo** uses the accounts *Common Stock* and *Capital in Excess of Par Value*).
- cumulative net income in excess of dividends declared (PepsiCo's account is *Retained Earnings*).
- shareholders' equity effects of the recognition or valuation of certain assets or liabilities (PepsiCo includes items related to available-for-sale investment securities, foreign currency translation, derivatives, and pensions in *Accumulated Other Comprehensive Loss*).
- treasury stock (PepsiCo purchases of its own shares, which it labels *Repurchased Common Stock, in Excess of Par Value*).

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<sup>4</sup>The issuance of bonds with equity characteristics (such as convertible bonds), the issuance of equity claims with debt characteristics (such as redeemable preferred or common stock), and the issuance of obligations to be settled with the issuance of equity shares (such as stock options) cloud the distinction between liabilities and shareholders' equity.

PepsiCo also reports a small amount of contributed capital as preferred stock (which had been issued by Quaker prior to PepsiCo's acquisition of Quaker) minus the amount of repurchased preferred stock.

## Assessing the Quality of the Balance Sheet as a Complete Representation of Economic Position

Analysts frequently examine the relation among items on the balance sheet when assessing a firm's financial position and credit risk. For example, an excess of current assets over current liabilities suggests that a firm has sufficient liquid resources to pay short-term creditors. Alternatively, a firm with strong cash flows and sufficient bargaining power (like **Walmart** or **Amazon**) can operate with current liabilities in excess of current assets. A relatively low percentage of long-term debt to shareholders' equity suggests that a firm likely has sufficient long-term assets to repay the long-term debt at maturity, or at least an ability to take on new debt financing using the long-term assets as collateral to repay debt coming due.

However, when using the balance sheet for these purposes, you must recognize the following:

- Certain valuable resources of a firm that generate future cash flows, such as a patent for a pharmaceutical firm or a brand name for a consumer products firm, appear as assets only if they were acquired from another firm and therefore have a measurable acquisition cost.
- Nonmonetary assets are reported at acquisition cost, net of accumulated depreciation or amortization, even though some of these assets may have current market values that exceed their recorded amounts. An example is the market value versus recorded value of land on the balance sheets of railroads and many urban department stores.
- Certain rights to use resources and commitments to make future payments may not appear as assets and liabilities. On the balance sheet of airlines, you generally do not see, for example, leased aircraft or commitments to make future lease payments on those aircraft. Also, on the balance sheets of steel, tire, and automobile companies, you do not see the rights to receive labor services or the commitments to make future payments for labor services under labor union contracts.
- Noncurrent liabilities appear at the present value of expected cash flows discounted at an interest rate determined at the time the liability initially arose instead of at a current market interest rate.

For certain firms under these circumstances, the balance sheet reporting may provide incomplete measures of the economic position of the firms. When using the balance sheet, you should consider making adjustments for items that impact balance sheet quality. Chapters 6–9 discuss these issues more fully.

## Income Statement—Measuring Operating Performance

The second principal financial statement, the income statement, provides information about the profitability of a firm for a period of time. As is common among analysts and investors, we use the terms *net income*, *earnings*, and *profit* interchangeably when referring to the bottom-line amount on the income statement. Exhibit 1.11 presents the income statements for **PepsiCo** for the five years 2008 through 2012.

Net income equals revenues and gains minus expenses and losses. Revenues measure the inflows of assets and the settlements of obligations from selling goods and providing services to customers. Expenses measure the outflows of assets that a firm consumes and the obligations it incurs in the process of operating the business to generate revenues. As a measure of performance for a period, revenues represent the resources generated by a firm and expenses represent the resources consumed during that period. Gains and losses result from selling assets or settling liabilities for more or less than their book values in transactions that are only peripherally related to a firm's central operations. For example, the sale of a building by PepsiCo for more than its book value would appear as a gain on the income statement. Chapter 2 describes income measurement in detail, and Chapter 3 contrasts income measurement with cash flows. Chapter 9 describes accounting for operating activities, particularly recognizing revenues and expenses.

PepsiCo generates revenues from selling goods in three principal product categories: snack foods; various soft drink concentrates, syrups, and bottled beverages; and cereals and related items. PepsiCo also generates interest income from investments in debt instruments and equity method income from investments in noncontrolled affiliates (such as bottlers, until 2011).

### Exhibit 1.11

#### PepsiCo, Inc., and Subsidiaries Consolidated Statements of Income (in millions, except per-share amounts)

	2012	2011	2010	2009	2008
<b>Net Revenue</b>	\$65,492	\$66,504	\$57,838	\$43,232	\$43,251
Cost of sales	31,291	31,593	26,575	20,099	20,351
<b>Gross profit*</b>	\$34,201	\$34,911	\$31,263	\$23,133	\$22,900
Selling, general and administrative expenses	24,970	25,145	22,814	15,026	15,877
Amortization of intangible assets	119	133	117	63	64
<b>Operating Profit</b>	\$ 9,112	\$ 9,633	\$ 8,332	\$ 8,044	\$ 6,959
Bottling equity income	—	—	735	365	374
Interest expense	(899)	(856)	(903)	(397)	(329)
Interest income	91	57	68	67	41
<b>Income before Income Taxes</b>	\$ 8,304	\$ 8,834	\$ 8,232	\$ 8,079	\$ 7,045
Provision for income taxes	2,090	2,372	1,894	2,100	1,879
<b>Net Income</b>	\$ 6,214	\$ 6,462	\$ 6,338	\$ 5,979	\$ 5,166
Less: Net income attributable to noncontrolling interests	36	19	18	33	24
<b>Net Income Attributable to PepsiCo</b>	\$ 6,178	\$ 6,443	\$ 6,320	\$ 5,946	\$ 5,142
Net income attributable to PepsiCo per common share:					
Basic	\$ 3.96	\$ 4.08	\$ 3.97	\$ 3.81	\$ 3.26
Diluted	\$ 3.92	\$ 4.03	\$ 3.91	\$ 3.77	\$ 3.21

\*Gross profit line does not appear in PepsiCo's Consolidated Statement of Income but is included here for comparison to Coca-Cola.

Source: PepsiCo, Inc., Forms 10-K for the Fiscal Years Ended 2010–2012.

Costs of sales include the cost of manufacturing snack foods; the cost of producing concentrates, syrups, and bottled beverages; and the cost of manufacturing cereals and related items. Expenses also include selling, general, and administrative expenses (including advertising and other promotion costs) and interest expense on short- and long-term borrowing. PepsiCo reports amortization of intangible assets as a separate expense.

Compare PepsiCo's income statements to those of its closest rival, [Coca-Cola](#). Exhibit 1.12 presents the income statements for Coca-Cola for the five years 2008 through 2012. Although PepsiCo is larger than Coca-Cola in terms of annual revenues, Coca-Cola is generally more profitable in terms of annual net income. For example, in 2012, PepsiCo generated total revenues of \$65,492 million and net income of \$6,178 million; during the same year, Coca-Cola generated total revenues of \$48,017 and net income of \$9,019.

When using the income statement to assess a firm's profitability, you are interested not only in its current and past profitability, but also in the likely level of sustainable earnings in the future (Step 5 in our six-step framework). When forecasting future earnings, you must project whether past levels of revenues and expenses will likely continue and grow. Chapters 4 and 6 discuss some of the accounting quality factors you should consider before making these judgments. Chapter 10 provides an extensive discussion of building forecasts of future financial statements.

### Exhibit 1.12

#### The Coca-Cola Company Consolidated Statements of Income (in millions, except per-share amounts)

	2012	2011	2010	2009	2008
<b>Net Operating Revenues</b>	\$48,017	\$46,542	\$35,119	\$30,990	\$31,944
Cost of goods sold	19,053	18,215	12,693	11,088	11,374
<b>Gross Profit</b>	28,964	28,327	22,426	19,902	20,570
Selling, general and administrative expenses	17,738	17,422	13,194	11,358	11,774
Other operating charges	447	732	819	313	350
<b>Operating Income</b>	\$10,779	\$10,173	\$ 8,413	\$ 8,231	\$ 8,446
Interest income	471	483	317	249	333
Interest expense	397	417	733	355	438
Equity income (loss)—net	819	690	1,025	781	(874)
Other income (loss)—net	137	529	5,185	40	39
<b>Income before Income Taxes</b>	\$11,809	\$11,458	\$14,207	\$ 8,946	\$ 7,506
Income taxes	2,723	2,812	2,370	2,040	1,632
<b>Consolidated Net Income</b>	\$ 9,086	\$ 8,646	\$11,837	\$ 6,906	\$ 5,874
Less: Net income attributable to noncontrolling interests	67	62	50	82	67
<b>Net Income Attributable to Shareowners</b>	\$ 9,019	\$ 8,584	\$11,787	\$ 6,824	\$ 5,807
Basic net income per share	\$ 2.00	\$ 1.88	\$ 2.55	\$ 2.95	\$ 2.51
Diluted net income per share	\$ 1.97	\$ 1.85	\$ 2.53	\$ 2.93	\$ 2.49

Source: The Coca-Cola Company, Forms 10-K for the Fiscal Years Ended 2010–2012.

## Accrual Basis of Accounting

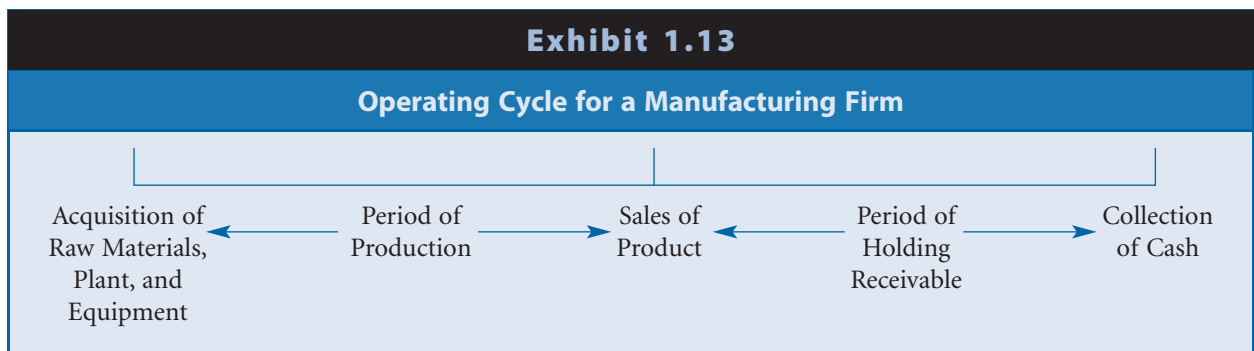
Exhibit 1.13 depicts the operating, or earnings, cycle for a typical manufacturing firm. Net income from this series of activities equals the amount of cash received from customers minus the amount of cash paid for raw materials, labor, and the services of production facilities. If the entire operating cycle occurred in one accounting period, few difficulties would arise in measuring operating performance. Net income would equal cash inflows minus cash outflows related to these operating activities. However, firms acquire raw materials in one accounting period and use them in several future accounting periods. They acquire buildings and equipment in one accounting period and use them during many future accounting periods. Firms commonly sell goods or services in an earlier period than the one in which customers pay. Firms often consume resources or incur obligations in one accounting period and pay for those resources or settle those obligations in subsequent periods.

Under a cash basis of accounting, a firm recognizes revenue when it receives cash from customers and recognizes expenses when it pays cash to suppliers, employees, and other providers of goods and services. Because a firm's operating cycle usually extends over several accounting periods, the cash basis of accounting provides a poor measure of economic performance for specific periods of time because it focuses on the timing of cash receipt and payment rather than on the period in which the firm successfully earned resources (revenues) and used resources in an effort to achieve that success (expenses). To overcome this deficiency of the cash basis, both U.S. GAAP and IFRS require that firms use the accrual basis of accounting in measuring performance on the income statement and in measuring assets, liabilities, and equity on the balance sheet.

Under the accrual basis of accounting, a firm recognizes revenue when it meets the following two criteria:

- **It has completed all (or substantially all) of the revenue-generating process by delivering products or services to customers.**
- **It is reasonably certain it has satisfied a liability or generated an asset that it can measure reliably.**

Most firms recognize revenue during the period in which they sell goods or render services. Consider the accrual basis of accounting applied to a manufacturing firm. The cost of manufacturing a product remains on the balance sheet as an asset (inventory) until the time of sale. At the time of sale, the firm recognizes revenue in the amount of cash it expects to collect. It recognizes the cost of manufacturing the product as a cost of the goods sold.



Other costs cannot be associated with particular revenues because they are costs of operating the business for a particular period of time (for example, the salary of the chief executive officer and rent on corporate offices.). Therefore, the firm recognizes such costs as expenses on the income statement in the period in which it consumes those resources.

Note that under accrual accounting a firm should not delay revenue recognition until it receives cash from customers as long as the firm can estimate with reasonable precision the amount of cash it will ultimately receive. The amount will appear in accounts receivable prior to the receipt of cash. The accrual basis provides a better measure of operating performance than the cash basis because it better captures the economics of a firm's periodic activities and performance than does simply reporting cash flows.<sup>5</sup>

## Classification and Format in the Income Statement

Investors commonly assess a firm's value based on the firm's expected future sustainable earnings stream. As Chapter 10 discusses more fully, analysts predict future earnings, or net income, of a firm by projecting future business activities that will drive future revenues, expenses, profits, and cash flows. To inform analysts and other financial statement users about sustainable earnings, firms often report income from recurring business activities separately from income effects from unusual or nonrecurring activities (such as asset impairments, restructuring, discontinued business segments, and extraordinary events). To provide more useful information for prediction, U.S. GAAP requires that the income statement include some or all of the following sections or categories depending on the nature of the firm's income for a period:

- Income from continuing operations
- Income, gains, and losses from discontinued operations

### Income from Continuing Operations

This first section reports the revenues and expenses of activities in which a firm anticipates an ongoing involvement. When a firm does not have discontinued segments in a particular year, all of its income items are related to continuing operations; so it does not need to use the continuing operations label.

Firms report their expenses in various ways. Most firms in the United States report expenses by their function: cost of goods sold for manufacturing, selling expenses for marketing, administrative expenses for administrative management, and interest expense for financing. Other firms, particularly those in the European community, tend to report expenses by their nature: raw materials, compensation, advertising, and research and development.

Many variations in income statement format appear in corporate annual reports. Most commonly, firms list various sources of revenues from selling their goods and services and then list the cost of goods sold. Some firms (**Coca-Cola** but not **PepsiCo**) choose to report a subtotal of gross profit (sales revenues minus cost of goods sold), which is an important measure of the inherent profitability of a firm's principal

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<sup>5</sup>Of course, if you define *periodic activities and performance* as the amount of cash collected, then cash flows is the ideal performance measure. However, although cash is king, investors are primarily interested in the performance of a firm's operating activities, and income statements and balance sheets are the preferred measure based on decades of research, some of which is summarized later in the chapter.

products and services. Firms then list subtractions for the various operating expenses (for example, selling, general, and administrative expenses). This format reports a subtotal for operating income. The income statement then reports income amounts from investments (interest income and equity income), expenses associated with financing (interest expense), and nonoperating gains and losses. Firms commonly aggregate operating income with the nonoperating income items to report income before income taxes. Firms then subtract the provision for income taxes to compute and report the bottom-line net income.

Many firms, including **PepsiCo**, report restructuring charges and impairment losses in their income statements. Such items often reflect the write-down of assets or the recognition of liabilities arising from changes in economic conditions and corporate strategies. Because restructuring charges and impairment losses do not satisfy the criteria for discontinued operations, firms often report them in the continuing operations section of the income statement. If the amounts are material, they appear on a separate line to distinguish them from recurring income items. Chapters 4 and 6 discuss the benefits and possible pitfalls of segregating such amounts when analyzing profitability.

## Income from Discontinued Operations

A firm that intends to remain in a line of business but decides to sell or close down some portion of that line (such as closing a single plant or dropping a line of products) generally will report any income, gain, or loss from such an action under continuing operations. On the other hand, if a firm decides to terminate its involvement in a line of business (such as selling or shutting down an entire division or subsidiary), it will report the income, gain, or loss from operating that line of business in the second section of the income statement, labeled “Income, Gains, and Losses from Discontinued Operations.” Income, gains, and losses from discontinued operations appear on the income statement net of any income tax effects. Firms must report the results of discontinued operations separately from continuing operations so financial statement users can assess the portion of earnings that are likely to persist in the future.

## Comprehensive Income

The FASB and IASB have determined that the balance sheet is the cornerstone of accounting and that income should be measured by changes in the values of assets and liabilities. To provide relevant and reliable measures of assets and liabilities, U.S. GAAP and IFRS use a variety of measurement attributes, some of which require firms to adjust asset or liability values to reflect changes in net realizable values, fair values, or present values. Valuation adjustments to assets and liabilities usually give rise to revenues (or gains) or to expenses (or losses). For example, if a firm determines that it will not collect some of its accounts receivable or will not be able to sell some items of inventory, it should adjust receivables and inventory to their net realizable values and recognize those adjustments as expenses or losses in net income.

The FASB and IASB have determined that four particular types of valuation adjustments represent unrealized gains or losses that should be reported in a statement of comprehensive income for reporting periods beginning after December 15, 2012.<sup>6</sup> Other comprehensive income items are accumulated over time in a special equity account

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<sup>6</sup>Accounting Standards Codification 220, *Comprehensive Income*.

titled Accumulated Other Comprehensive Income or Loss (AOCI). These other comprehensive income items are not recognized in net income until they are realized in an economic transaction, such as when the related assets are sold or the liabilities are settled. The segregation of AOCI acts as a temporary “holding area” for such gains or losses until their ultimate settlement.

Review the consolidated statement of equity for **PepsiCo** in Appendix A. It details the four types of unrealized gain/loss items that are triggered by the revaluation of assets and liabilities. The accumulated effects of these items over several periods are reported as the components of accumulated other comprehensive loss: (1) currency translation adjustments; (2) cash flow hedges, net of tax; (3) certain changes in pension and retiree medical plan obligations, net of tax; and (4) unrealized losses/gains on securities, net of tax. Because PepsiCo uses U.S. GAAP instead of IFRS, it does not report the fifth possible item related to revaluations of property, plant, and equipment. Later chapters discuss the accounting for each of these items.

The FASB and IASB are aware that unrealized gains and losses of this nature affect the market value of firms, but users of financial statements might overlook them because they do not yet appear in net income. Therefore, firms must report *comprehensive income*.<sup>7</sup> Comprehensive income equals *all* revenues, expenses, gains, and losses for a period, both realized and unrealized. Comprehensive income includes net income plus or minus the other comprehensive income items. Refer to PepsiCo’s consolidated statement of comprehensive income in Appendix A. Comprehensive income for PepsiCo for 2012 is as follows (in millions):

Net income	\$6,214
Currency translation adjustment	737
Cash flow hedges, net of tax	18
Pension and retiree medical plan liability adjustments, net of tax	(72)
Unrealized losses on securities, net of tax	18
Other	<u>36</u>
Comprehensive income	\$6,951
Comprehensive income attributable to noncontrolling interests	<u>(31)</u>
Comprehensive income attributable to PepsiCo	<u><u>\$6,920</u></u>

Thus, PepsiCo’s comprehensive income exceeded net income, primarily due to a large favorable effect of currency translation. Firms may present a single statement of comprehensive income, which includes the standard statement of net income, but continues with other comprehensive income to arrive at comprehensive income. Alternatively, firms may present other comprehensive income as part of a separate statement of comprehensive income, which begins with net income and adds or subtracts various elements of other comprehensive income to compute comprehensive income. PepsiCo uses the second method of disclosure. Appendix A indicates that PepsiCo uses the term *accumulated other comprehensive loss* on its consolidated balance sheet. In addition, PepsiCo reports the accumulated balances for each component of its other comprehensive income in Note 13, “Accumulated Other Comprehensive Loss Attributable to PepsiCo,” to the financial statements.

<sup>7</sup>*Ibid.*



## Assessing the Quality of Earnings as a Complete Representation of Economic Performance

Common stock prices in the capital markets usually react quickly when firms announce new earnings information, indicating that earnings play an important role in the valuation of firms. We provide some striking empirical evidence of the association between earnings and stock returns later in this chapter. In using earnings information for valuation, however, you must be alert to the possibility that reported earnings for a particular period represent an incomplete measure of current period profitability or are a poor predictor of ongoing sustainable profitability. For example, reported net income may include amounts that are not likely to recur in the future, such as restructuring charges, impairment charges, or gains and losses from discontinued operations. You may want to eliminate the effects of nonrecurring items when assessing operating performance for purposes of forecasting future earnings. (Chapters 6 and 10 discuss these ideas more fully.)

In some circumstances, managers use subtle means to manage earnings. For example, a firm might accelerate recognition of revenues, understate its estimate of bad debt expense or warranty expense, cut back on advertising or research and development expenditures, or delay maintenance expenditures as a means of increasing earnings in a particular period. Chapters 6–9 discuss the quality of accounting information and illustrate adjustments you might make to improve the quality of earnings.

## Statement of Cash Flows

The third principal financial statement is the statement of cash flows. The purpose of the statement of cash flows is important but simple: to inform financial statement users about the sources and uses of cash, partitioned into its three business activities: operating, investing, and financing. This is an extremely useful statement, but because of the way it is reported by most companies, it can be confusing and either misinterpreted or ignored. The statement provides useful information to complement the income statement, demonstrating how cash flows differ from accrual-based income. As typically prepared, the statement begins with net income, and effectively “undoes” the accrual accounting procedures to recapture the underlying cash flows.

### Rationale for the Statement of Cash Flows

The statement of cash flows provides information on the sources and uses of cash. Even profitable firms—especially those growing rapidly—sometimes find themselves strapped for cash and unable to pay suppliers, employees, and other creditors in a timely manner. This can occur for two principal reasons:

- The timing of cash receipts from customers does not necessarily coincide with the recognition of revenue, and the timing of cash expenditures does not necessarily coincide with the recognition of expenses under the accrual basis of accounting. In the usual case, cash expenditures precede the recognition of expenses, and cash receipts follow the recognition of revenue. Thus, a firm might have positive net income for a period but a negative net cash flow from operations.
- The firm may need to acquire new property, plant, and equipment; retire outstanding debt; or reacquire shares of its common stock when sufficient cash is not available.

In many cases, a profitable firm finding itself short of cash can obtain the needed funds from short- or long-term creditors or from equity investors. The firm must repay

with interest the funds borrowed from creditors. Owners may require that the firm pay periodic dividends as an inducement to invest in the firm. Eventually, the firm must generate sufficient cash from operations if it is to survive.

Sometimes firms have excess cash, which can occur for two principal reasons:

- Firm operations may be profitable, with cash flows from operations equal to or greater than profits. This can occur, for example, when the firm is mature, stable, and profitable and does not need to invest excess cash flows in capital or growth opportunities (sometimes referred to as cash-cow firms).
- The firm may have engaged in cash-raising transactions by selling assets or divesting subsidiaries, issuing short- or long-term debt, or issuing equity shares.

You will find it useful to know which of the two reasons explain the firm's excess cash because they have different implications for the firm's strategy and are likely to influence how you value the firm.

### Classification of Cash Flows

Cash flows are the connecting link between operating, investing, and financing activities. They permit each of these three principal business activities to continue functioning smoothly and effectively. The statement of cash flows also can be helpful in assessing a firm's past ability to generate free cash flows and for predicting future free cash flows. The concept of free cash flows is first introduced in Chapter 3. As discussed in Chapter 12, free cash flows are central to cash-flow-based valuation models.

The statement of cash flows classifies cash flows as relating to operating, investing, or financing activities.

**Operating.** Selling goods and providing services are among the most important ways a financially healthy company generates cash. Assessing cash flow from operations over several years indicates the extent to which operating activities have provided the necessary cash to maintain operating capabilities (and the extent to which firms have had to rely on other sources of cash).

**Investing.** The acquisition of long-lived productive assets, particularly property, plant, and equipment, usually represents major ongoing uses of cash. Firms must replace such assets as they wear out. If firms are to grow, they must acquire additional long-lived productive assets. Firms obtain a portion of the cash needed to acquire long-lived productive assets from sales of existing assets. However, such cash inflows are seldom sufficient to cover the cost of new acquisitions.

**Financing.** A firm obtains cash from short- and long-term borrowing and from issuing preferred and common stock. It uses cash to repay short- and long-term borrowing, to pay dividends, and to reacquire shares of outstanding preferred and common stock.

Exhibit 1.14 presents the consolidated statements of cash flows for **PepsiCo** for 2008 through 2012. The statement reveals that cash flow from operating activities exceeded the net cash outflow for investing activities in each year. Also, in every year PepsiCo used a significant amount of cash for investing activities, and in every year except 2010 used significant cash for financing activities. These patterns of cash inflows and outflows are typical of a mature, profitable firm. For comparative purposes, Exhibit 1.15 (pages 37–38) presents the consolidated statements of cash flows for Coca-Cola for 2008 through 2012, where the patterns of cash inflows and outflows are similar.

Firms sometimes engage in investing and financing transactions that do not directly involve cash. For example, a firm might acquire a building by assuming a mortgage obligation. It might issue common stock upon conversion of long-term debt, or it might acquire a firm with stock rather than cash. Firms disclose these transactions in a

**Exhibit 1.14**

**PepsiCo, Inc. and Subsidiaries**  
**Consolidated Statements of Cash Flows**  
(in millions)

	2012	2011	2010	2009	2008
<b>OPERATING ACTIVITIES</b>					
Net income	\$ 6,214	\$ 6,462	\$ 6,338	\$ 5,979	\$ 5,166
Adjustments to reconcile net income to net cash provided by operating activities:					
Depreciation and amortization	2,689	2,737	2,327	1,635	1,543
Stock-based compensation expense	278	326	299	227	238
Merger and integration costs	16	329	808	—	—
Cash payments for merger and integration costs	(83)	(377)	(385)	—	—
Restructuring and impairment charges	279	383	—	36	543
Cash payments for restructuring charges	(343)	(31)	(31)	(196)	(180)
PBG/PAS merger costs	—	—	—	50	—
Cash payments for PBG/PAS merger costs	—	—	—	(49)	—
Restructuring and other charges related to the transaction with Tingyi	176	—	—	—	—
Cash payments for restructuring and other charges related to Tingyi	(109)	—	—	—	—
Gain on previously held equity interests in PBG and PAS	—	—	(958)	—	—
Assets write-off	—	—	145	—	—
Non-cash foreign exchange loss related to Venezuela devaluation	—	—	120	—	—
Excess tax benefits from share-based payment arrangements	(124)	(70)	(107)	(42)	(107)
Pension and retiree medical plan contributions	(1,865)	(349)	(1,734)	(1,299)	(219)
Pension and retiree medical plan expenses	796	571	453	423	459
Bottling equity income, net of dividends	—	—	42	(235)	(202)
Deferred income taxes and other tax charges and credits	321	495	500	284	573
Change in accounts receivable and notes receivable	(250)	(666)	(268)	188	(549)
Change in inventories	144	(331)	276	17	(345)
Change in prepaid expenses and other current assets	89	(27)	144	(127)	(68)
Change in accounts payable and other current liabilities	548	520	488	(133)	718
Change in income taxes payable	(97)	(340)	123	319	(180)
Other, net	(200)	(688)	(132)	(281)	(391)
<b>Net Cash Provided by Operating Activities</b>	<b>\$ 8,479</b>	<b>\$ 8,944</b>	<b>\$ 8,448</b>	<b>\$ 6,796</b>	<b>\$ 6,999</b>
<b>INVESTING ACTIVITIES</b>					
Capital spending	\$(2,714)	\$(3,339)	\$(3,253)	\$(2,128)	\$(2,446)
Sales of property, plant and equipment	95	84	81	58	98

(Continued)

**Exhibit 1.14 (Continued)**

	2012	2011	2010	2009	2008
Acquisitions and investments in noncontrolled affiliates	—	—	—	(500)	(1,925)
Acquisitions of PBG and PAS, net of cash and cash equivalents acquired	—	—	(2,833)	—	—
Acquisition of manufacturing and distribution rights from DPSG	—	—	(900)	—	—
Acquisition of WBD, net of cash and cash equivalents acquired	—	(2,428)	—	—	—
Investment in WBD	—	(164)	(463)	—	—
Cash payments related to the transaction with Tinyi	(306)	—	—	—	—
Other acquisitions and investments in noncontrolled affiliates	(121)	(601)	(83)	—	—
Divestitures	(32)	780	12	99	6
Cash restricted for pending acquisitions	—	—	—	15	(40)
Cash proceeds for sale of PBG and PAS stock	—	—	—	—	358
Short-term investments, by original maturity:					
More than three months—purchases	—	—	(12)	(29)	(156)
More than three months—maturities	—	21	29	71	62
Three months or less, net	61	45	(229)	13	1,376
Other investing, net	12	(16)	(17)	—	—
<b>Net Cash Used for Investing Activities</b>	<u>\$(3,005)</u>	<u>\$(5,618)</u>	<u>\$(7,668)</u>	<u>\$(2,401)</u>	<u>\$(2,667)</u>
<b>FINANCING ACTIVITIES</b>					
Proceeds from issuances of long-term debt	\$ 5,999	\$ 3,000	\$ 6,451	\$ 1,057	\$ 3,719
Payments of long-term debt	(2,449)	(1,596)	(59)	(226)	(649)
Debt repurchase	—	(771)	(500)	—	—
Short-term borrowings, by original maturity					
More than three months—proceeds	549	523	227	26	89
More than three months—payments	(248)	(559)	(96)	(81)	(269)
Three months or less, net	(1,762)	339	2,351	(963)	625
Cash dividends paid	(3,305)	(3,157)	(2,978)	(2,732)	(2,541)
Share repurchases—common	(3,219)	(2,489)	(4,978)	—	(4,720)
Share repurchases—preferred	(7)	(7)	(5)	(7)	(6)
Proceeds from exercises of stock options	1,122	945	1,038	413	620
Excess tax benefits from share-based payment arrangements	124	70	107	42	107
Acquisition of noncontrolling interests	(68)	(1,406)	(159)	—	—
Other financing	(42)	(27)	(13)	(26)	—
<b>Net Cash (Used for)/Provided by Financing Activities</b>	<u>\$(3,306)</u>	<u>\$(5,135)</u>	<u>\$ 1,386</u>	<u>\$(2,497)</u>	<u>\$(3,025)</u>
Effect of exchange rate changes on cash and cash equivalents	<u>\$ 62</u>	<u>\$ (67)</u>	<u>\$ (166)</u>	<u>\$ (19)</u>	<u>\$ (153)</u>

(Continued)

**Exhibit 1.14 (Continued)**

	2012	2011	2010	2009	2008
Net increase/(decrease) in Cash and Cash Equivalents	\$ 2,230	\$(1,876)	\$ 2,000	\$ 1,879	\$ 1,154
Cash and Cash Equivalents, Beginning of Year	<u>4,067</u>	<u>5,943</u>	<u>3,943</u>	<u>2,064</u>	<u>910</u>
Cash and Cash Equivalents, End of Year	<u>\$ 6,297</u>	<u>\$ 4,067</u>	<u>\$ 5,943</u>	<u>\$ 3,943</u>	<u>\$ 2,064</u>

Source: PepsiCo, Inc., Forms 10-K for the Fiscal Years Ended 2010–2012.

**Exhibit 1.15**

**The Coca-Cola Company**  
**Consolidated Statements of Cash Flows**  
(in millions)

	2012	2011	2010	2009	2008
<b>OPERATING ACTIVITIES</b>					
Consolidated net income	\$ 9,086	\$ 8,646	\$ 11,837	\$ 6,906	\$ 5,874
Adjustments to reconcile net income to net cash provided by operating activities:					
Depreciation and amortization	1,982	1,954	1,443	1,236	1,228
Stock-based compensation expense	259	354	380	241	266
Deferred income taxes	632	1,035	604	353	(360)
Equity income or loss, net of dividends	(426)	(269)	(671)	(359)	1,128
Foreign currency adjustments	(130)	7	151	61	(42)
Gains on sales of assets	(98)	(220)	(645)	(43)	(130)
Other significant (gains) losses—net	—	—	(4,713)	—	—
Other operating charges	166	214	264	134	209
Other items	254	(354)	512	221	153
Net change in operating assets and liabilities	(1,080)	(1,893)	370	(564)	(755)
<b>Net Cash Provided by Operating Activities</b>	<u>\$ 10,645</u>	<u>\$ 9,474</u>	<u>\$ 9,532</u>	<u>\$ 8,186</u>	<u>\$ 7,571</u>
<b>INVESTING ACTIVITIES</b>					
Purchases of short-term investments	\$ (9,590)	\$ (4,057)	\$ (4,579)	—	—
Proceeds from disposals of short-term investments	5,622	5,647	4,032	—	—
Acquisitions and investments	(1,535)	(977)	(2,511)	\$ (300)	\$ (759)
Purchases of other investments	(5,266)	(787)	(132)	(2,152)	(240)
Proceeds from disposals of bottling companies and other investments	2,189	562	972	240	479
Purchases of property, plant and equipment	(2,780)	(2,920)	(2,215)	(1,993)	(1,968)
Proceeds from disposals of property, plant and equipment	143	101	134	104	129
Other investing activities	(187)	(93)	(106)	(48)	(4)
<b>Net Cash Provided by (Used in) Investing Activities</b>	<u>\$ (11,404)</u>	<u>\$ (2,524)</u>	<u>\$ (4,405)</u>	<u>\$ (4,149)</u>	<u>\$ (2,363)</u>

(Continued)

**Exhibit 1.15 (Continued)**

	2012	2011	2010	2009	2008
<b>FINANCING ACTIVITIES</b>					
Issuances of debt	\$ 42,791	\$ 27,495	\$ 15,251	\$ 14,689	\$ 4,337
Payments of debt	(38,573)	(22,530)	(13,403)	(12,326)	(4,308)
Issuances of stock	1,489	1,569	1,666	664	586
Purchases of stock for treasury	(4,559)	(4,513)	(2,961)	(1,518)	(1,079)
Dividends	(4,595)	(4,300)	(4,068)	(3,800)	(3,521)
Other financing activities	100	45	50	(2)	—
<b>Net Cash Provided by (Used in) Financing Activities</b>	<u>\$ (3,347)</u>	<u>\$ (2,234)</u>	<u>\$ (3,465)</u>	<u>\$ (2,293)</u>	<u>\$ (3,985)</u>
Effect of Exchange Rate Changes on Cash and Cash Equivalents	\$ (255)	\$ (430)	\$ (166)	\$ 576	\$ (615)
<b>Cash and Cash Equivalents</b>					
Net increase (decrease) during the year	(4,361)	4,286	1,496	2,320	608
<b>Balance at Beginning of Year</b>	<u>12,803</u>	<u>8,517</u>	<u>7,021</u>	<u>4,701</u>	<u>4,093</u>
<b>Balance at End of Year</b>	<u>\$ 8,442</u>	<u>\$ 12,803</u>	<u>\$ 8,517</u>	<u>\$ 7,021</u>	<u>\$ 4,701</u>

Source: The Coca-Cola Company, Forms 10-K for the Fiscal Years Ended 2010–2012.

supplementary schedule or note to the statement of cash flows in a way that clearly indicates that the transactions are investing and financing activities that do not affect cash.

The statement of cash flows is required under both U.S. GAAP and IFRS, but it is not a required financial statement in some countries. Increasingly, however, most large international firms are providing the statement on a voluntary basis. To help illustrate how the statement of cash flows links to the other financial statements, Chapter 3 describes procedures for preparing a statement of cash flows based only on information on the balance sheet and income statement. Chapter 10 demonstrates techniques for projecting future statements of cash flows from projected balance sheets and income statements.

## Important Information with the Financial Statements

A firm's accounting system records the results of transactions, events, and commercial arrangements and generates the financial statements, but the financial statements do not stand alone. To provide more complete information for financial statement users, firms typically provide a substantial amount of important additional information with the financial statements. This section briefly introduces three important additional elements of information: (a) Notes, (b) Management's Discussion and Analysis, and (c) Managers' and Independent Auditors' Attestations.

### Notes

The financial statements report the accounts and amounts that comprise the balance sheet, income statement, and statement of cash flows, but they do not explain how those accounts and amounts have been determined. The notes to financial statements are audited by the firm's independent auditors and are crucial for you to understand the

accounting methods the firm has used to measure assets, liabilities, revenues, expenses, gains, and losses. The first note typically provides a summary of the key accounting principles the firm has used. Because each account balance reported on the financial statements was determined with the application of judgments, estimates, and accounting method choices, the notes typically describe and explain how each amount has been determined (with the exception of those deemed immaterial). For example, the notes explain how the firm is accounting for inventory and what cost methods the firm used to value inventory on hand as well as cost of goods sold. The notes explain how property, plant, and equipment are valued; how they are being depreciated; how much depreciation has been accumulated to date; and what the expected useful lives of the underlying assets are. Notes also provide important details about key financial statement estimates, such as fair values of investment securities, pension and postemployment benefit liabilities, income taxes, and intangible assets.

In its 2012 annual report, **PepsiCo** provides a total of 15 notes to explain the accounting principles, methods, and estimates used to prepare the financial statements. Immediately following the financial statements, the notes comprise an additional 36 pages of the annual report. You should read the notes carefully because they provide important information that is useful for understanding the firm's accounting and assessing its accounting quality.

## Management Discussion and Analysis

Many firms accompany the financial statements and notes with extensive narrative and quantitative discussion and analysis from the managers. The Management Discussion and Analysis (MD&A) section of the financial statements provides insights into managers' strategies and their assessments and evaluation of the firm's performance. In some cases, MD&A disclosures provide glimpses into managers' expectations about the future of the company.

In its MD&A (Appendix B), PepsiCo describes the business as a whole, as well as the operations of the business in each of its divisions. In addition to qualitative descriptions, the MD&A section provides valuable details about the financial performance of each division, with managers' analysis comparing results of 2012 to 2011 and 2011 to 2010. In addition, PepsiCo's MD&A section provides important insights into the firm's business risks and the way PepsiCo is managing them, critical accounting policies PepsiCo has applied, and PepsiCo's liquidity and capital resource situation. It also provides valuable glimpses into a few of PepsiCo's plans for the future, such as its intention to continue to aggressively invest in emerging and developing markets and to make a pension contribution of approximately \$240 million in 2013. Because the MD&A section provides insights from the managers' point of view, you should read it carefully but with a bit of skepticism, because it is not audited and managers tend to be optimistic when evaluating the strategies and performance of their own firms.

## Management and Independent Auditor Attestation

The design and operation of the accounting system are the responsibility of a firm's managers. However, the SEC and most stock exchanges require firms with publicly traded common stock to have their accounting records and financial statements audited by independent auditors. The independent auditor's attestation as to the fairness and reliability of a firm's financial statements relative to U.S. GAAP or IFRS is an essential element in the integrity of the financial reporting process and the efficiency of the capital markets. Investors and other users of the financial statements can rely on financial statements for essential information about a firm only if they are confident that the independent auditor has examined the accounting records and has concluded that the financial statements are fair and reliable according to U.S. GAAP or IFRS.

In response to some managers' misrepresenting their financial statements and audit breakdowns in now infamous cases involving **Enron**, **Worldcom**, **Global Crossing**, **Qwest Communications**, and other firms, Congress passed the Sarbanes-Oxley Act of 2002. This act more clearly defines the explicit responsibility of managers for financial statements, the relation between the independent auditor and the firm audited, and the kinds of services permitted and not permitted. Exhibit 1.16 summarizes some of the more important provisions of the Sarbanes-Oxley Act as they relate to financial statements.

For many years, firms have included with their financial statements a report by management that states its responsibility for the financial statements. The Sarbanes-Oxley Act of 2002 now requires that the management report include an attestation that managers assume responsibility for establishing and maintaining adequate internal control structure and procedures (referred to as the *Management Assessment*). This new requirement now makes explicit management's responsibility not only for the financial statements, but also for the underlying accounting and control system that generates the financial statements.

The chief executive officer and the chief financial officer must sign this management report. PepsiCo's management report appears in Appendix A.

### Exhibit 1.16

#### Summary of the Principal Provisions of the Sarbanes-Oxley Act of 2002

1. Violation of the provisions of the Sarbanes-Oxley Act of 2002 is a violation of the Securities Exchange Act of 1934, which governs the public trading of securities.
2. The Sarbanes-Oxley Act of 2002 created the Public Company Accounting Oversight Board (PCAOB), which has responsibility for setting generally accepted auditing standards, ethics standards, and quality-control standards for audits, overseen by the SEC.
3. The act precludes a registered public accounting firm from performing non-audit services contemporaneously with the audit. Certain services, such as tax work, are allowed if they are preapproved by the firm's audit committee or constitute less than 5% of the billing price for audit and other services.
4. The lead auditor or coordinating partner and the reviewing partner of the public accounting firm must rotate, or change, every five years.
5. Members of the audit committee of a firm's board of directors will have primary responsibility for appointment, oversight, and compensation of the registered public accounting firm.
6. At least one member of the audit committee of the board of directors must be a "financial expert."
7. The firm's chief executive officer and the chief financial officer must issue a statement along with the audit report stating that the financial statements and notes fairly present the operations and financial position of the firm.
8. Each annual report must contain an "internal control report" that states management's responsibility for establishing and maintaining an adequate internal control structure and procedures (Management Assessment Report). The annual report must also contain an assessment of the effectiveness of the internal control structure and procedures by the firm's auditor (Assurance Opinion). The assurance opinion can be unqualified, qualified, adverse, or a disclaimer. The chief executive officer and the chief financial officer must sign this management report.



The independent auditor also assesses a firm's internal control system, designs its audit tests in light of the quality of these internal controls, and then forms an opinion about the fairness of the amounts reported on the financial statements based on its audit tests. The independent auditor must now include opinions on the effectiveness of the internal control system (referred to as the *Assurance Opinion*) and the fairness of the amounts reported in the financial statements. This dual opinion makes explicit the independent auditor's responsibility for testing the effectiveness of the internal control system and judging the fairness of the amounts reported. PepsiCo's management assessment report and independent auditor's assurance opinion (KPMG, LLP) appear in Appendix A after Note 15, "Acquisitions and Divestitures." The last paragraph of the management assessment report reads as follows:

PepsiCo has a strong history of doing what's right. We realize that great companies are built on trust, strong ethical standards and principles. Our financial results are delivered from that culture of accountability, and we take responsibility for the quality and accuracy of our financial reporting.

The last paragraph of the auditor's report includes opinions on both the internal control system and the financial statements:

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of PepsiCo, Inc. as of December 29, 2012 and December 31, 2011, and the results of its operations and its cash flows for each of the fiscal years in the three-year period ended December 29, 2012, in conformity with U.S. generally accepted accounting principles. Also in our opinion, PepsiCo, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 29, 2012, based on criteria established in Internal Control—Integrated Framework issued by COSO.

- The financial statements, notes, MD&A section, and managers' and auditors' attestations provide analysts with an immense amount of useful information for understanding various aspects of a firm's operating, investing, and financing activities.
- The balance sheet reports the results of firms' decisions to acquire assets and the financing of those assets.
- The income statement primarily reflects the results of operating decisions (for example, product mix and pricing, sourcing of production and marketing, and use of plant and equipment). The income statement also reports amounts related to investing decisions (for example, interest and dividend income) and financing decisions (for example, interest expense).
- The statement of comprehensive income items reflect gains and losses from changes in values of certain assets and liabilities that are not reported in net income until such gains and losses are realized.
- The statement of cash flows reflects the sources of uses of cash during a period. The statement of cash flows classifies cash flows during a period into operating, investing, and financing categories. The operating section, as typically prepared, begins with net income and "undoes" the accrual-based accounting entries to reveal the underlying cash flows.
- The notes to the financial statements explain and describe the accounting methods, assumptions, estimates, and judgments used in recording the items appearing on the statements.
- The MD&A section provides managers' insights and evaluation of the firm's performance and risks.
- Management's attestation and the independent auditor's attestation provide statements about (and take responsibility for) the quality and effectiveness of the firm's internal control system and the fairness of its financial statements and notes in reporting a firm's financial position, performance, and cash flows. The independent audit adds credibility and reliability to the financial statements and notes prepared by management.

## LO 1-5

Use tools to analyze a firm's profitability and risk, including financial ratios, common-size financial statements, and percentage change financial statements.

## Step 4: Analyze Profitability and Risk

The first three steps of the six-step analytical framework establish three key building blocks:

- An understanding of the economics of the *industry* in which a firm competes
- An understanding of the particular strategies that the *firm* has chosen to compete in its industry
- An understanding of the information contained in the *financial statements* and *notes* that report the results of a firm's operating, investing, and financing activities and an assessment of the quality of the financial statements

You are now ready to conduct a financial statement analysis.

Most financial statement analysis aims to evaluate a firm's profitability and risk. This twofold focus stems from the emphasis of investment decisions on returns and risk. Investors acquire shares of common stock in a company because of the return they expect from such investments. This return includes any dividends received plus the change in the market price of the shares of stock while the investor holds them. A rational investor will not be indifferent between two investments that are expected to yield, for example, a 20% return if there are differences in the uncertainty, or risk, of earning that 20% return. The investor will demand a higher expected return from higher-risk investments to compensate for the additional risk assumed.

The income statement reports a firm's net income during the current year and prior years. Assessing the profitability of the firm during these periods, after adjusting as appropriate for nonrecurring or unsustainable items, permits you to evaluate the firm's current and past profitability and to begin forecasting its likely future profitability. Empirical research has shown an association between earnings and market rates of return on common stock, a point discussed in the next section of this chapter and in greater depth in Chapters 13 and 14.

Financial statements also are useful for assessing the risk of a firm. Empirical research has shown that volatility in reported earnings over time is correlated with stock market-based measures of firm risk, such as market equity beta. In addition, firms that cannot generate sufficient cash flow from operations will likely encounter financial difficulties and perhaps even bankruptcy. Firms that have high proportions of debt in their capital structures will experience financial difficulties if they are unable to repay the debt at maturity or replace maturing debt with new debt. Assessing the financial risk of a firm assists the investor in identifying the level of risk incurred when investing in the firm's common stock.

## Tools of Profitability and Risk Analysis

Most of this book describes and illustrates tools for analyzing financial statements. In the next several pages, we simply introduce several of these tools as a broad overview.

### Common-Size Financial Statements

One simple but powerful analytical tool is *common-size* financial statements, a tool that is helpful in highlighting relations in a financial statement. Common-size income statements and balance sheets express all items in the statement as a percentage of a common base. Common-size balance sheets often use total assets as the base. Sales revenue is a common base in a common-size income statement.

The first five columns of Exhibit 1.17 present common-size balance sheets for **PepsiCo** for 2008 through 2012. Note that various common-size percentages for PepsiCo remain quite stable while others change over this period. For example, PepsiCo experienced a decrease in the proportion of assets comprising most tangible and financial assets (including receivables, inventory, and property, plant, and equipment), but a sharp increase in the proportion of assets reflected by intangible assets. To better understand the reasons for the increased proportion of intangible assets, refer to the investing section of PepsiCo's statement of cash flows in Exhibit 1.14. It shows significant cash outflows for several acquisitions during 2008–2012. Acquisitions often result in significant intangibles being recognized. In addition, Note 4, “Property, Plant and Equipment and Intangible Assets” includes a breakdown of intangible assets by type and by segment.

The common-size balance sheets also show that the proportion of financing from liabilities rose from 65.0% in 2008 to 70.0% in 2012. Current liabilities remained relatively level, but both long-term debt and noncurrent deferred tax liabilities increased. This is consistent with the prior observation from the statement of cash flows that PepsiCo increased its long-term borrowing. The common-size balance sheet also reveals that retained earnings decreased as a proportion of total assets, falling from 85.1% in 2008 to 57.8% in 2012. This is due to the combined effects discussed already for the increases in intangible assets from acquisitions and the increase in long-term debt financing. The common-size balance sheets for **Coca-Cola** for 2008 through 2012, presented in the first five columns of Exhibit 1.19 (pages 47–48), reveal similar trends.

The first five columns of Exhibit 1.18 (page 46) present common-size income statements for PepsiCo for 2008 through 2012. Note that net income as a percentage of sales (also known as the *profit margin*) rose from 16.2% in 2008 to a high of 18.7% in 2009, but then declined to 12.7% in 2012. The common-size income statements show that most expenses as a percentage of sales revenue increased during this period. Management's discussion and analysis of operations presented in Appendix B explains some of these changes. The task of the financial analyst is to probe into the reasons for such changes, taking into consideration industry economics, company strategies, management's explanations, and the operating results of competitors. Chapter 4 explores the reasons for PepsiCo's decreased profit margin.

The common-size income statements for Coca-Cola for 2008 through 2012, presented in the first five columns of Exhibit 1.20 (page 49), reveal a similar decline in profit margin over the same period of time, which is again not surprising given the similar commodities inputs for both firms.

You must interpret common-size financial statements carefully. The amount for any one item in these statements is not independent of all other items. For example, the dollar amount for an item might increase between two periods, but its relative percentage in the common-size statement might decrease if the dollar amount increased at a slower rate than total assets. For example, PepsiCo's dollar amounts for property, plant, and equipment increased significantly between 2008 and 2012 (from \$11.7 million to \$19.1 million), but the common-size percentages decreased (from 32.4% to 25.6%). Common-size percentages provide a general overview of financial position and operating performance, but you must supplement them with other analytical tools.

## Percentage Change Financial Statements

Another powerful analytical tool is *percentage change* financial statements, a tool that is helpful in highlighting the relative rates of growth in financial statement amounts from year to year and over longer periods of time. These statements present the percentage

## Exhibit 1.17

Common-Size and Percentage Change Balance Sheets for PepsiCo  
(allow for rounding)

	Common-Size Balance Sheets					Percentage Change Balance Sheets				
	2012	2011	2010	2009	2008	2012	2011	2010	2009	2008
<b>ASSETS</b>										
Cash and cash equivalents	8.4%	5.6%	8.7%	9.9%	5.7%	54.8%	(31.6)%	50.7%	91.0%	
Short-term investments	0.4	0.5	0.6	0.5	0.6	(10.1)	(16.0)	121.9	(9.9)	
Accounts and notes receivable, net	9.4	9.5	9.3	11.6	13.0	1.9	9.3	36.7	(1.3)	
Inventories	4.8	5.3	4.9	6.6	7.0	(6.4)	13.5	28.8	3.8	
Prepaid expenses and other current assets	2.0	3.1	2.2	3.0	3.7	(35.0)	51.3	26.0	(9.8)	
<b>Total Current Assets</b>	<u>25.1%</u>	<u>23.9%</u>	<u>25.8%</u>	<u>31.5%</u>	<u>30.0%</u>	<u>7.3%</u>	<u>(0.7)%</u>	<u>39.8%</u>	<u>16.3%</u>	
Property, plant and equipment, net	25.6	27.0	28.0	31.8	32.4	(2.9)	3.4	50.4	8.6	
Amortizable intangible assets, net	2.4	2.6	3.0	2.1	2.0	(5.7)	(6.8)	140.8	14.9	
Goodwill	22.7	23.1	21.5	16.4	14.2	1.0	14.6	124.4	27.5	
Other nonamortizable intangible assets	19.8	20.0	17.3	4.5	3.1	1.3	23.5	561.2	58.0	
Investments in noncontrolled affiliates	2.2	2.0	2.0	11.3	10.8	10.6	8.0	(69.5)	15.5	
Other assets	2.2	1.4	2.5	2.4	7.4	61.9	(39.6)	75.0	(63.7)	
<b>Total Assets</b>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>2.4%</u>	<u>6.9%</u>	<u>71.0%</u>	<u>10.7%</u>	
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>										
Short-term obligations	6.5%	8.5%	7.2%	1.2%	1.0%	(22.4)%	26.7%	955.6%	25.7%	
Accounts payable and other current liabilities	15.9	16.1	16.0	20.4	23.0	1.2	7.6	34.4	(1.8)	
Income taxes payable	0.5	0.3	0.1	0.4	0.4	93.2	170.4	(57.0)	13.8	
<b>Total Current Liabilities</b>	<u>22.9%</u>	<u>24.9%</u>	<u>23.3%</u>	<u>22.0%</u>	<u>24.4%</u>	<u>(5.9)%</u>	<u>14.2%</u>	<u>81.5%</u>	<u>(0.4)%</u>	

(Continued)