

Chapter 2

Introduction to Financial Statement Analysis

■ Chapter Overview

Financial statements are the tools financial managers use to assess the success of a firm and to compare it to competitors. It is also the tool they use to make the correct decisions that maximize stockholder wealth. Therefore, it is absolutely imperative that students have a thorough grasp of the story each statement tells about the company and how it fits in with the other statements. Chapter 2 covers both national and international accounting standards, as well as the different types of financial statements. Most students are familiar with balance sheets and income statements, but the statement of cash flows is often overlooked. Its importance, implications, and use to the financial manager are explored thoroughly. This discussion is followed by an introduction to other sources of financial statement information that are rarely discussed in an introductory text: the management discussion and analysis, statement of stockholders' equity, and the notes to financial statements. The chapter concludes with a look at the realities of financial reporting, including the Enron and WorldCom scandals and ensuing legislation, and a look at the role of the auditor. The chapter includes an interview with Sue Frieden, Ernst & Young's Global Managing Partner, who offers some practical insights into developing international accounting standards.

■ Chapter Outline

Introduction

2.1 Firms' Disclosure of Financial Information

Preparation of Financial Statements

- Interview with Ruth Forat, Senior Vice President and CFO of Alphabet and Google

Types of Financial Statements

2.2 The Balance Sheet

Assets

—Current Assets

—Long-Term Assets

Liabilities

—Current Liabilities

—Long-Term Liabilities

Stockholders' Equity

Market Value Versus Book Value

- *Example 2.1:* Market Versus Book Value

Market-to-Book Ratio

Enterprise Value

- *Example 2.2:* Computing Enterprise Value

2.3 The Income Statement

- Earnings Calculations
 - Gross Profit
 - Operating Expenses
 - Earnings Before Interest and Taxes
 - Pretax and Net Income
 - EBITDA
- 2.4 The Statement of Cash Flows
 - Operating Activity
 - *Example 2.3: The Impact of Depreciation on Cash Flow*
 - Investment Activity
 - Financing Activity
- 2.5 Other Financial Statement Information
 - Statement of Stockholders' Equity
 - Management Discussion and Analysis
 - Notes to the Financial Statements
- 2.6 Financial Statement Analysis
 - Profitability Ratios
 - Gross Margin
 - Operating Margin
 - Net Profit Margin
 - Liquidity Ratios
 - Asset Efficiency
 - Working Capital Ratios
 - *Example 2.4: Computing Working Capital Ratios*
 - Interest Coverage Ratios
 - *Example 2.5: Computing Interest Coverage Ratios*
 - Leverage Ratios
 - Valuation Ratios
 - *Example 2.6: Computing Profitability and Valuation Ratios*
 - Operating Returns
 - *Example 2.7: Computing Operating Returns*
 - The DuPont Identity
 - *Example 2.8: DuPont Analysis*
- 2.7 Financial Reporting in Practice
 - Enron
 - The Sarbanes-Oxley Act
 - Dodd-Frank Act
 - The Financial Statements: A Useful Starting Point

■ Learning Objectives

- Know why the disclosure of financial information through financial statements is critical to investors
- Understand the function of the balance sheet
- Understand how the income statement is used
- Interpret a statement of cash flows
- Understand the management's discussion and analysis and the statement of stockholders' equity
- Analyze a firm through its financial statements, including using the DuPont Identity
- Understand the main purpose and aspects of the Sarbanes-Oxley reforms following Enron and other financial scandals

■ CFA Topic Areas

The following table shows which CFA topic areas are covered in the chapter and points to the specific section in which to find the material.

CFA Topic Areas	CFA Learning Outcomes
Financial Reporting Systems (IFRS and GAAP)	2.1 Firms' Disclosure of Financial Information
Analysis of Principal Financial Statements	2.2 The Balance Sheet
Ratio and Financial Analysis	2.3 The Income Statement
	2.4 The Statement of Cash Flows
	2.5 Other Financial Statement Analysis
	2.6 Financial Statement Analysis
Financial Reporting Quality	2.7 Financial Reporting in Practice
Effects of Government Regulations	

■ Lecture Launchers

1. Ask students to download the annual report of a company for which they would like to work, for which their parents work, or one chosen by the instructor. Before the lecture, and before reading this chapter, ask them to look at the annual report and see what they can glean from it by having them write a short analysis based on the report. Given the information in front of them, do they find the company to be a well-managed, successful company with investment possibilities? (They can only use information from the annual report, no news reports or Internet searches, etc. Most shareholders are provided with the annual report but don't quite know what to do with the information.) This lecture usually requires several sessions, so at the end of the final lecture session, ask them to look again at the annual report to see if they have a better understanding of the corporation. Ask them to rewrite their analysis based on what they have learned from Chapter 2. A discussion of what changes they have made and why may follow. Hopefully, students will see yet another example of the power of knowledge.

2. The Enron and WorldCom bankruptcies are certainly famous, but an entire generation has come to adulthood since those events occurred. One way to make students aware of the gravity of what happened and the importance of auditing is to begin the lecture with what happened to the “little people” whose retirement funds and life savings were wiped out overnight. Millions were affected by the actions of a comparatively few unethical managers. This prepares students for one fact that the balance sheet implicitly shows: residual ownership. In a bankruptcy, very little is left to distribute to the stockholders. Finally, what happened to the culprits? How long were their sentences? What are they doing now? Did crime pay?
3. The chapter includes a discussion of financial reporting standards, GAAP and IFRS. Because accounting is a prerequisite for the introductory finance class, students should be well equipped to do some research into finding out the difference between the two standards. What does a balance sheet and income statement look like under IFRS? Are there statements in IFRS that are required in an annual report that are not required by GAAP?
4. Speaker/Team Instruction: Finance and accounting look at financial statements in different ways. Accountants speak of the bottom line while finance looks at free cash flow. Students are often confused about the difference between finance and accounting. Invite a member of the Accounting department to discuss what he/she looks for in financial statements and which types of statements are most important to accountants. Offer to do the same for the accounting instructor. Perhaps by the time students take the introductory course in finance, they will know the difference between the functions of finance and accounting.
5. Some of the largest companies in the world have been brought to their knees by the recession of the last few years, by financial malfeasance, or perhaps both. At the beginning of the lecture, discuss the financial situation of corporations like GM, Ford, Merrill Lynch, and Bear Stearns. Yahoo! Finance and other sources have historical financial statements, as well as ratios. Sometimes 20/20 hindsight can be a great teacher. Go online and look at some of the basic ratios five years before the “fall” and see if the financial statements provide any inkling that the companies were headed for trouble. Again, most students have had some accounting, so they should be familiar with the basic ratios.

■ Questions for Further Class Discussion

1. The United States was one of the leaders in pushing for development of international accounting standards. Yet, despite the fact that so many U.S. corporations have offices worldwide, the United States has been reluctant to forgo GAAP; the text suggests there are still issues that need to be resolved. Are the issues the result of financial or cultural differences between the United States and other countries?
2. Early on in this chapter, the function and importance of the auditor is described, and the chapter ends with examples where auditing did not help. Who audits the auditor? How do you keep the auditors honest? Why didn't auditing catch Bernie Madoff's Ponzi scheme?
3. Students tend to look at balance sheets and income statements as something used exclusively for business, but if you seek a loan from a bank, you will be asked to provide information that would essentially generate your own balance sheet and income statement. What would be on the asset side on such a balance sheet for a young college graduate? What liabilities would he/she have, and would there be any equity?

4. This chapter presents quantitative techniques like balance sheet and income statement analysis that use ratios that help the managers and investors evaluate the performance of the corporation. Are there any qualitative techniques to be considered? Can you develop a qualitative checklist for the corporation with which to evaluate a company's performance?
5. Why does the balance sheet only show book values? As an investor or manager, would it not help to know the market value of items on the balance sheet?
6. Market-to-book value, as indicated in the text, can help you determine if the stock is a value stock or a growth stock. Go to the Investopedia Web site (www.Investopedia.com), look up the difference, and discuss what kind of investor would be interested in either type of stock. For example, would you recommend companies with low market-to-book value to your newly retired grandmother?
7. After studying this chapter, you now know the difference between diluted and undiluted EPS. Would knowing that the company gives stock options to its employees or has convertible bonds in its debt structure influence your investment decision?
8. If you had to evaluate a company using only three ratios, which ones would you choose and why?
9. If you could only have one statement upon which to base your investment decision, which statement would you choose: the balance sheet, income statement, cash flow statement, or the stockholders' equity statement? Why?
10. It has been said that money and power are addictive. Why would people who are already extremely wealthy by any standard manipulate financial statements to their benefit in order to create more wealth? Is it possible to become a multi-billionaire by following the rules?
11. Do you think regulation will keep company officers honest? Does "big brother," also known as the federal government, need to be a bigger brother to make sure the large-scale frauds that affected millions of people and hundreds of banks do not happen again? Is this even possible or financially feasible? Chasing the bad guys can be expensive.

■ AACSB Learning Standards

This section details how the end-of-chapter problems correlate to the general knowledge and skill guidelines in the accreditation standards, as set by the Association to Advance Collegiate Schools of Business (AACSB).

AACSB Learning Standards	End-of-Chapter Problem
Ethical Reasoning and Understanding	38
Analytical Thinking	Problems 5, 20, 21, 24, 31d, 32c, Data Case
Information Technology	Problems 3, 6, 7, 35–38, Data Case
Reflective Thinking	Critical Thinking Questions 1–11

■ End-of-Chapter Problem Complexity Rating

The end-of-chapter problems are sorted below, according to their level of complexity.

Simple	Average	Complex
1, 2, 3, 6, 7, 8, 10, 20, 22, 34, 38	4, 5, 9, 12, 13, 15, 17, 19, 21, 23, 24, 25, 26, 27, 28, 29, 31	11, 14, 16,, 18, 30, 32, 33, 34, 35, 36, 37, Data Case

■ Spreadsheet Solutions in Excel

The following end-of-chapter problem solutions are available with Excel spreadsheets. These spreadsheets are available can be downloaded from the Instructor's Resource Center at www.pearsonhighered.com/irc. If you do not have a login and password for this Web site, contact your Pearson sales representative.

Problems: 9–16, 28–33, 37

■ Answers to Chapter 2 Critical Thinking Questions

1. Firms disclose financial statements to communicate financial information to the investment community.
2. Anyone interested in a firm can look to the financial statements for information. This includes:
 - *Shareholders*: Checking the profitability and performance of the firm.
 - *Lenders*: Looking for information about the credit-worthiness of the firm.
 - *Suppliers*: Will this firm be a dependable customer?
 - *Competitors*: Seeking sales and profitability of the competition.
 - *Management*: How well are we running the firm?
3. The purpose of the balance sheet is to show the financial position of the firm at a specific point in time.
4. The purpose of the income statement is to report the firm's revenues, expenses, and earnings. It shows the profitability of the firm over a specific period.
5. The income statement measures the profits of the firm, while the statement of cash flows measures how cash moves in and out of the firm. These are not necessarily the same, as many non-cash flow transactions are included in the income statement (such as depreciation), while other cash flow transactions are not included in the income statement (such as investment in working capital and property, plant, and equipment).
6. Yes, a firm with positive net income can run out of cash. A rapidly growing firm, which is investing heavily in working capital and property, plant, and equipment, can have positive net income on the income statement but show negative cash flows from operating and investing activities.
7. The balance sheet can show how well the firm is managing the assets and financing the operations of the firm.
8. The balance sheet shows the financial situation of a firm at a given point in time, while the income statement shows the financial performance of the firm during the period leading up to the balance sheet

date. The statements are linked through the retained earnings account on the balance sheet, which shows the cumulative profits of the firm during its existence.

9. The DuPont Identity takes the return on equity (ROE) and breaks it into three components: net profit margin, asset turnover, and asset multiplier. The DuPont Identity equation is below:

$$\begin{aligned}\text{Return on Equity} &= \text{Net Profit Margin} \times \text{Asset Turnover} \times \text{Equity Multiplier} \\ \frac{\text{Net Income}}{\text{Shareholder Equity}} &= \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Shareholder Equity}}\end{aligned}$$

The DuPont Identity is useful to managers because it identifies three drivers that the manager can use to affect ROE.

10. Management's discussion contains their analysis of the performance of the firm and identifies the risks that the business faces. The notes to the financial statements often clarify and augment the information used and reported in the financial statements.
11. Enron utilized off-balance sheet transactions to inflate profits and hide liabilities.