

Third Edition

Business Analysis & Valuation

Using Financial Statements

Text & Cases

Palepu · Healy · Bernard

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P R E F A C E

Financial statements are the basis for a wide range of business analysis. Managers use them to monitor and judge their firms' performance relative to competitors, to communicate with external investors, to help judge what financial policies they should pursue, and to evaluate potential new businesses to acquire as part of their investment strategy. Securities analysts use financial statements to rate and value companies they recommend to clients. Bankers use them in deciding whether to extend a loan to a client and to determine the loan's terms. Investment bankers use them as a basis for valuing and analyzing prospective buyouts, mergers, and acquisitions. And consultants use them as a basis for competitive analysis for their clients. Not surprisingly, therefore, we find that there is a strong demand among business students for a course that provides a framework for using financial statement data in a variety of business analysis and valuation contexts. The purpose of this book is to provide such a framework for business students and practitioners.

The first two editions of this book have been successful well beyond our original expectations. The book has been used in Accounting and Finance departments in business schools in the U.S. and around the world.

CHANGES FROM THE SECOND EDITION

Many of our colleagues who used the second edition provided us with valuable feedback. Based on this feedback, we made the following changes:

- We rewrote the chapters dealing with accounting analysis to focus sharply on the task of the analyst. There are now two chapters on this topic. The first of these (Chapter 3) provides a conceptual approach to evaluating a firm's accounting choices and estimates with respect to assets, liabilities, entities, revenues, and expenses. The second chapter (Chapter 4) shows specific steps the analyst can take in examining assets, liabilities, revenues, and expenses, and in making adjustments to reported financial statements where needed. Our objective is that these two chapters will prepare students to identify questionable accounting practices, make adjustments, and produce a set of restated financials that are free of these accounting concerns.
- We revised the forecasting and valuation chapters (Chapters 6 and 7) to better prepare students for the task of making specific assumptions in the analysis steps. We use a real company example in both these chapters, so that students can use the material as a basis for studying the case applications.
- The chapter on management communication (Chapter 13) has been substantially revised. It now focuses heavily on the corporate governance role of financial reports and the role of key accounting institutions—auditors, audit committees of corporate boards, and top management of firms—in the governance process. The chapter is designed to address some of the issues raised in the aftermath of accounting and governance debacles at major corporations around the world.
- We included seven new cases in this edition. However, we also retained several popular cases from the previous edition because they have proved to be very effective for many instructors.

- This new edition is accompanied by a comprehensive software model, the **BAV Tool**, to implement the analytical framework and techniques discussed in this book. This companion software allows students to import a company's reported financial statements from any source, as long as they are in a Microsoft Excel spreadsheet format, and analyze them. The tool facilitates the following activities: (1) recasting the reported financial statements in a standard format for analysis; (2) performing accounting analysis as discussed in Chapters 3 and 4, making desired accounting adjustments, and producing restated financials; (3) computing ratios and free cash flows presented in Chapter 5; (4) producing forecasted income statement, balance sheet, and cash flow statements for as many as 15 years into the future, using the approach discussed in Chapter 6; and (5) valuing a company (either assets or equity) from these forecasts and preparing a terminal value forecast using the abnormal earnings method, the abnormal returns method, and discounted cash flow method discussed in Chapters 7 and 8. The tool also allows students to graph their assumptions and compare them with the historical performance of a large group of U.S. companies that are in the same performance range at the beginning of the forecasting period. This comparison is facilitated by a database consisting of key ratios for a comprehensive set of U.S. public companies listed on Standard & Poor's Compustat. We think that the BAV Tool will make it significantly easier for students to apply the framework and techniques discussed in the book in a real-world context.
- The third edition also includes access to *Thomson Analytics–Business School Edition*, which is a web-based portal product that provides integrated access to Thomson financial content for the purpose of financial analysis. This new application delivers the most powerful and flexible tools available for turning critical market data into actionable intelligence for educational purposes. *Thomson Analytics–Business School Edition* is an educational version of the same financial resources used by Wall Street analysts on a daily basis.

Thomson Analytics–Business School Edition includes the following content sets:

I/B/E/S Consensus Estimate Includes consensus estimates—averages, means, and medians; analyst-by-analyst earnings coverage; analysts forecasts based on 15 industry standard measures; and current and historic coverage for the selected 500 companies that are drawn from a database of 60 established and emerging markets. Current history is five years forward and historic data is from 1976 for the U.S. and 1987 for international. Current data is updated daily and historic is updated monthly.

Worldscope Includes company profiles, financials and accounting results and market per-share data for the selected 500 companies drawn from a database of more than 55 established and emerging markets. Annual information and monthly prices going back to 1980 are all updated daily.

Disclosure SEC Database Includes company profiles, annual and quarterly company financials, pricing information, and earnings estimates for selected U.S. and Canadian companies. Annual information from 1987—quarterly data rolling 10 years—and monthly pricing are all updated weekly.

DataStream–International Equity and Index Daily Pricing Includes share price index and exchange rate data—updated daily.

ILX Systems Delayed Quotes Equities and indices, 20-minute-delayed quotes from domestic and international markets.

ComtexReal Time News Real-time feed of company and market news.

SEC Filings and GlobalImage Source Filings Regulatory and nonregulatory filings.

KEY FEATURES

This book differs from other texts in business and financial analysis in a number of important ways. We introduce and develop a framework for business analysis and valuation using financial statement data. We then show how this framework can be applied to a variety of decision contexts.

Framework for Analysis

We begin the book with a discussion of the role of accounting information and intermediaries in the economy, and how financial analysis can create value in well functioning markets. We identify four key components of effective financial statement analysis:

- Business Strategy Analysis
- Accounting Analysis
- Financial Analysis
- Prospective Analysis

The first of the components, business strategy analysis, involves developing an understanding of the business and competitive strategy of the firm being analyzed. Incorporating business strategy into financial statement analysis is one of the distinctive features of this book. Traditionally, this step has been ignored by other financial statement analysis books. However, we believe that it is critical to begin financial statement analysis with a company's strategy because it provides an important foundation for the subsequent analysis. The strategy analysis section discusses contemporary tools for analyzing a company's industry, its competitive position and sustainability within an industry, and the company's corporate strategy.

Accounting analysis involves examining how accounting rules and conventions represent a firm's business economics and strategy in its financial statements, and, if necessary, developing adjusted accounting measures of performance. In the accounting analysis section, we do not emphasize accounting rules. Instead we develop general approaches to analyzing assets, liabilities, entities, revenues, and expenses. We believe that such an approach enables students to effectively evaluate a company's accounting choices and accrual estimates, even if students have only a basic knowledge of accounting rules and standards. The material is also designed to allow students to make accounting adjustments rather than merely identify questionable accounting practices.

Financial analysis involves analyzing financial ratio and cash flow measures of the operating, financing, and investing performance of a company relative to either key competitors or historical performance. Our distinctive approach focuses on using financial analysis to evaluate the effectiveness of a company's strategy and to make sound financial forecasts.

Finally, under prospective analysis we show how to develop forecasted financial statements and how to use these to make estimates of a firm's value. Our discussion of valuation includes traditional discounted cash flow models as well as techniques that link value directly to accounting numbers. In discussing accounting-based valuation models, we integrate the latest academic research with traditional approaches such as earnings and book value multiples that are widely used in practice.

While we cover all four components of business analysis and valuation in the book, we recognize that the extent of their use depends on the user's decision context. For example, bankers are likely to use business strategy analysis, accounting analysis, financial analysis, and the forecasting portion of prospective analysis. They are less likely to be interested in formally valuing a prospective client.

Application of the Framework to Decision Contexts

The next section of the book shows how our business analysis and valuation framework can be applied to a variety of decision contexts:

- Securities Analysis
- Credit Analysis
- Corporate Financing Policies Analysis
- Merger and Acquisition Analysis
- Governance and Communication Analysis

For each of these topics we present an overview to provide a foundation for the class discussions. Where possible we discuss relevant institutional details and the results of academic research that are useful in applying the analysis concepts developed earlier in the book. For example, the chapter on credit analysis shows how banks and rating agencies use financial statement data to develop analysis for lending decisions and to rate public debt issues. This chapter also presents academic research on how to determine whether a company is financially distressed.

CASE APPROACH

We have found that teaching a course in business analysis and valuation is significantly enhanced, both for teachers and students, by using cases as a pedagogical tool. Students want to develop "hands-on" experience in business analysis and valuation so that they can apply the concepts in decision contexts similar to those they will encounter in the business world. Cases are a natural way to achieve this objective by presenting practical issues that might otherwise be ignored in a traditional classroom exercise. Our cases all present business analysis and valuation issues in a specific decision context, and we find that this makes the material more interesting and exciting for students.

To provide both guidance and flexibility in the choice of cases, we include one case at the end of each chapter, especially chosen for applying the concepts in that chapter. The multipurpose cases at the end of the book can be used with more than one chapter.

USING THE BOOK

We designed the book so that it is flexible for courses in financial statement analysis for a variety of student audiences—MBA students, Masters in Accounting students, Executive Program participants, and undergraduates in Accounting or Finance. Depending upon the audience, the instructor can vary the manner in which the conceptual materials in the chapters, end-of-chapter questions, and case examples are used.

Prerequisites

To get the most out of the book, students should have completed basic courses in financial accounting, finance, and either business strategy or business economics. The text provides

a concise overview of some of these topics, primarily as background for preparing the cases. But it would probably be difficult for students with no prior knowledge in these fields to use the chapters as stand-alone coverage of them. We have integrated only a small amount of business strategy into each case and do not include any cases that focus exclusively on business strategy analysis.

The extent of accounting knowledge required for the cases varies considerably. Some require only a basic understanding of accounting issues, whereas others require a more detailed knowledge at the level of a typical intermediate financial accounting course. However, we have found it possible to teach even these more complex cases to students without a strong accounting background by providing additional reading on the topic. For some cases, the Teaching Manual includes a primer on the relevant accounting issue, which instructors can hand out to help students prepare the case.

How to Use the Text and Case Materials

The materials can be used in a variety of ways. If the book is used for students with prior working experience or for executives, the instructor can use almost a pure case approach, adding relevant lecture sections as needed. When teaching students with little work experience, a lecture class can be presented first, followed by an appropriate case. It is also possible to use the book primarily for a lecture course and include some of the cases as in-class illustrations of the concepts discussed in the book.

Alternatively, lectures can be used as a follow-up to cases to more clearly lay out the conceptual issues raised in the case discussions. This may be appropriate when the book is used in undergraduate capstone courses. In such a context, cases can be used in course projects that can be assigned to student teams.

We have designed the cases so that they can be taught at a variety of levels. For students who need more structure to work through a case, the Instructor's Manual includes a set of detailed questions that the instructor can hand out before class. For students who need less structure, there are recommended questions at the end of each case.

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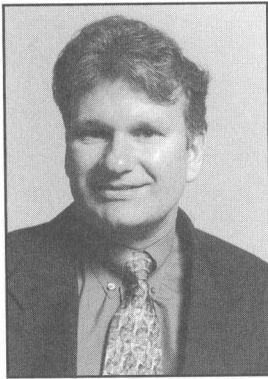
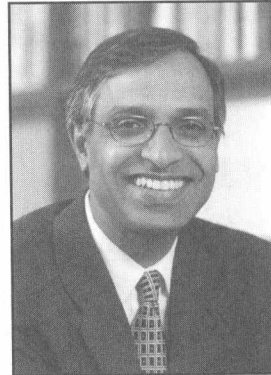
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A Framework for Business Analysis and Valuation Using Financial Statements

This chapter outlines a comprehensive framework for financial statement analysis. Because financial statements provide the most widely available data on public corporations' economic activities, investors and other stakeholders rely on financial reports to assess the plans and performance of firms and corporate managers.

A variety of questions can be addressed by business analysis using financial statements, as shown in the following examples:

- A security analyst may be interested in asking: "How well is the firm I am following performing? Did the firm meet my performance expectations? If not, why not? What is the value of the firm's stock given my assessment of the firm's current and future performance?"
- A loan officer may need to ask: "What is the credit risk involved in lending a certain amount of money to this firm? How well is the firm managing its liquidity and solvency? What is the firm's business risk? What is the additional risk created by the firm's financing and dividend policies?"
- A management consultant might ask: "What is the structure of the industry in which the firm is operating? What are the strategies pursued by various players in the industry? What is the relative performance of different firms in the industry?"
- A corporate manager may ask: "Is my firm properly valued by investors? Is our investor communication program adequate to facilitate this process?"
- A corporate manager could ask: "Is this firm a potential takeover target? How much value can be added if we acquire this firm? How can we finance the acquisition?"
- An independent auditor would want to ask: "Are the accounting policies and accrual estimates in this company's financial statements consistent with my understanding of this business and its recent performance? Do these financial reports communicate the current status and significant risks of the business?"

In the twentieth century, we have seen two distinct models for channeling savings into business investments. Communist and socialist market economies have used central planning and government agencies to pool national savings and to direct investments in business enterprises. The failure of this model is evident from the fact that most of these economies have abandoned it in favor of the second model—the market model. In almost all countries in the world today, capital markets play an important role in channeling financial resources from savers to business enterprises that need capital.

Financial statement analysis is a valuable activity when managers have complete information on a firm's strategies and a variety of institutional factors make it unlikely that they fully disclose this information. In this setting outside analysts attempt to create "inside information" from analyzing financial statement data, thereby gaining valuable insights about the firm's current performance and future prospects.

To understand the contribution that financial statement analysis can make, it is important to understand the role of financial reporting in the functioning of capital markets and the institutional forces that shape financial statements. Therefore we present first a brief description of these forces; then we discuss the steps that an analyst must perform to extract information from financial statements and provide valuable forecasts.

THE ROLE OF FINANCIAL REPORTING IN CAPITAL MARKETS

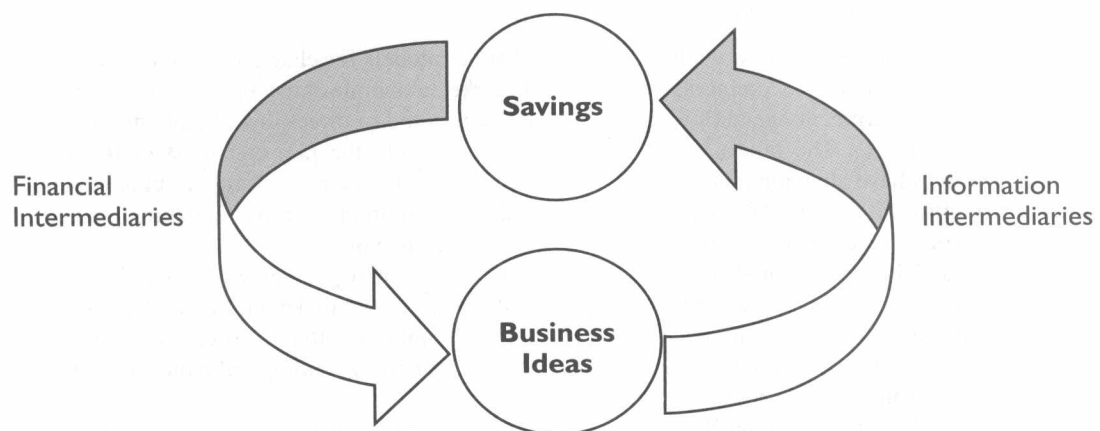
A critical challenge for any economy is the allocation of savings to investment opportunities. Economies that do this well can exploit new business ideas to spur innovation and create jobs and wealth at a rapid pace. In contrast, economies that manage this process poorly dissipate their wealth and fail to support business opportunities.

Figure 1-1 provides a schematic representation of how capital markets typically work. Savings in any economy are widely distributed among households. There are usually many new entrepreneurs and existing companies that would like to attract these savings to fund their business ideas. While both savers and entrepreneurs would like to do business with each other, matching savings to business investment opportunities is complicated for at least two reasons. First, entrepreneurs typically have better information than savers on the value of business investment opportunities. Second, communication by entrepreneurs to investors is not completely credible because investors know entrepreneurs have an incentive to inflate the value of their ideas.

These information and incentive problems lead to what economists call the “lemons” problem, which can potentially break down the functioning of the capital market.¹ It works like this. Consider a situation where half the business ideas are “good” and the other half are “bad.” If investors cannot distinguish between the two types of business ideas, entrepreneurs with “bad” ideas will try to claim that their ideas are as valuable as the “good” ideas. Realizing this possibility, investors value both good and bad ideas at an average level. Unfortunately, this penalizes good ideas, and entrepreneurs with good ideas find the terms on which they can get financing to be unattractive. As these entrepreneurs leave the capital market, the proportion of bad ideas in the market increases. Over time, bad ideas “crowd out” good ideas, and investors lose confidence in this market.

Figure 1-1

Capital Markets



The emergence of intermediaries can prevent such a market breakdown. Intermediaries are like a car mechanic who provides an independent certification of a used car's quality to help a buyer and seller agree on a price. There are two types of intermediaries in the

capital markets. Financial intermediaries, such as venture capital firms, banks, mutual funds, and insurance companies, focus on aggregating funds from individual investors and analyzing different investment alternatives to make investment decisions. Information intermediaries, such as auditors, financial analysts, bond-rating agencies, and the financial press, focus on providing information to investors (and to financial intermediaries who represent them) on the quality of various business investment opportunities. Both these types of intermediaries add value by helping investors distinguish “good” investment opportunities from the “bad” ones.

Financial reporting plays a critical role in the functioning of both the information intermediaries and financial intermediaries. Information intermediaries add value by either enhancing the credibility of financial reports (as auditors do), or by analyzing the information in the financial statements (as analysts and the rating agencies do). Financial intermediaries rely on the information in the financial statements to analyze investment opportunities, and supplement this information with other sources of information. In the following section, we discuss key aspects of the financial reporting system design that enable it to play effectively this vital role in the functioning of the capital markets.

FROM BUSINESS ACTIVITIES TO FINANCIAL STATEMENTS

Corporate managers are responsible for acquiring physical and financial resources from the firm’s environment and using them to create value for the firm’s investors. Value is created when the firm earns a return on its investment in excess of the cost of capital. Managers formulate business strategies to achieve this goal, and they implement them through business activities. A firm’s business activities are influenced by its economic environment and its own business strategy. The economic environment includes the firm’s industry, its input and output markets, and the regulations under which the firm operates. The firm’s business strategy determines how the firm positions itself in its environment to achieve a competitive advantage.

As shown in Figure 1-2, a firm’s financial statements summarize the economic consequences of its business activities. The firm’s business activities in any time period are too numerous to be reported individually to outsiders. Further, some of the activities undertaken by the firm are proprietary in nature, and disclosing these activities in detail could be a detriment to the firm’s competitive position. The firm’s accounting system provides a mechanism through which business activities are selected, measured, and aggregated into financial statement data.

Intermediaries using financial statement data to do business analysis have to be aware that financial reports are influenced both by the firm’s business activities and by its accounting system. A key aspect of financial statement analysis, therefore, involves understanding the influence of the accounting system on the quality of the financial statement data being used in the analysis. The institutional features of accounting systems discussed below determine the extent of that influence.

Accounting System Feature 1: Accrual Accounting

One of the fundamental features of corporate financial reports is that they are prepared using accrual rather than cash accounting. Unlike cash accounting, accrual accounting distinguishes between the recording of costs and benefits associated with economic activities and the actual payment and receipt of cash. Net income is the primary periodic performance