IFRS EDITION

BUSINESS ANALYSIS AND VALUATION

Krishna G. Palepu Paul M. Healy Erik Peek

fourth edition

FOURTH EDITION

BUSINESS ANALYSIS AND VALUATION: IFRS EDITION

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Krishna G. Palepu, Paul M. Healy, & Erik Peek

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Brief contents

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Preface

Financial statements are the basis for a wide range of business analyses. 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, 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. This IFRS edition is the European adaptation of the authoritative US edition – authored by Krishna G. Palepu and Paul M. Healy – that has been used in Accounting and Finance departments in universities around the world. In 2007 we decided to write the first IFRS edition because of the European business environment's unique character and the introduction of mandatory IFRS reporting for public corporations in the European Union. This fourth IFRS edition is a thorough update of the successful third edition, incorporating new examples, cases, problems and exercises, and regulatory updates.

This IFRS edition

Particular features of the IFRS edition are the following:

- A large number of examples support the discussion of business analysis and valuation throughout the chapters. The examples are from European companies that students will generally be familiar with, such as Audi, Bayer, British American Tobacco, BP, Burberry, Carlsberg, Deutsche Telekom, easyGroup, GlaxoSmithKline, Hennes and Mauritz, Lufthansa, Marks and Spencer, and Société Générale.
- The chapters dealing with accounting analysis (Chapters 3 and 4) prepare European students for the task of analyzing IFRS-based financial statements. All numerical examples of accounting adjustments in Chapter 4 describe adjustments to IFRS-based financial statements. Further, throughout the book we discuss various topics that are particularly relevant to understanding IFRS-based European financial reports, such as: the classification of expenses by nature and by function; a principles-based approach versus a rules-based approach to standard setting; the first-time adoption of IFRS; cross-country differences and similarities in external auditing and public enforcement, and cross-country differences in financing structures.
- The terminology that we use throughout the chapters is consistent with the terminology that is used in the IFRS.
- Throughout the chapters, we describe the average performance and growth ratios, the average time-series behavior of these ratios, and average financing policies of a sample of close to 7,200 firms that have been listed on European public exchanges between 1995 and 2014.
- The financial analysis and valuation chapters (Chapters 5–8) focus on firms in the apparel retail sector, primarily Hennes & Mauritz and Inditex. Throughout these chapters, we explicitly differentiate between analyzing and valuing operations and analyzing and valuing non-operating investments. Further, Chapter 8 explicitly discusses implementation differences between equity-based and asset-based valuation approaches.

- Chapter 10 on credit analysis includes a discussion of how credit ratings and default probability estimates can be used in debt valuation. Chapter 11 on M&A analysis includes a discussion on how to perform a purchase price allocation using the tools and techniques from Chapters 5 through 8.
- Data, analyses, problems, and examples have been thoroughly updated in the fourth edition.
- We have updated some of the third IFRS edition's cases and have included three new cases: 'Ryanair – the low fares airline: Whither now?' 'Facebook, Inc: The Initial Public Offering' and 'Glencore/Xstrata: Playing Aida's Triumphal March on Top of the Everest.'
- This IFRS edition includes 16 cases about European companies. Thirteen of these cases make use of IFRS-based financial statements. However, we have also included several popular cases from the US edition because they have proved to be very effective for many instructors.

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 (Chapter 1). We identify four key components, or steps, of effective financial statement analysis:

- Business strategy analysis
- Accounting analysis
- Financial analysis
- Prospective analysis

The first step, business strategy analysis (Chapter 2), 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 (Chapters 3 and 4) 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 (Chapter 5) 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 (Chapters 6–8) 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 steps 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 (Chapter 9)
- Credit analysis and distress prediction (Chapter 10)
- Merger and acquisition analysis (Chapter 11)

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.

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 or Finance 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. 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.

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 or other assignment material. It is also possible to use the book primarily for a lecture course and include some of the short or long 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.

Companion website

A companion website accompanies this book. This website contains the following valuable material for instructors and students:

- Instructions for how to easily produce standardized financial statements in Excel.
- Spreadsheets containing: (1) the reported and standardized financial statements of Hennes & Mauritz (H&M) and Inditex; (2) calculations of H&M's and Inditex's ratios (presented in Chapter 5); (3) H&M's forecasted

financial statements (presented in Chapter 6); and (4) valuations of H&M's shares (presented in Chapter 8). Using these spreadsheets students can easily replicate the analyses presented in Chapters 5 through 8 and perform "what-if" analyses – i.e., to find out how the reported numbers change as a result of changes to the standardized statements or forecasting assumptions.

- Spreadsheets containing case material.
- Answers to the discussion questions and case instructions (for instructors only).
- A complete set of lecture slides (for instructors only).

Accompanying teaching notes to some of the case studies can be found at www.harvardbusiness.org. Lecturers are able to register to access the teaching notes and other relevant information.

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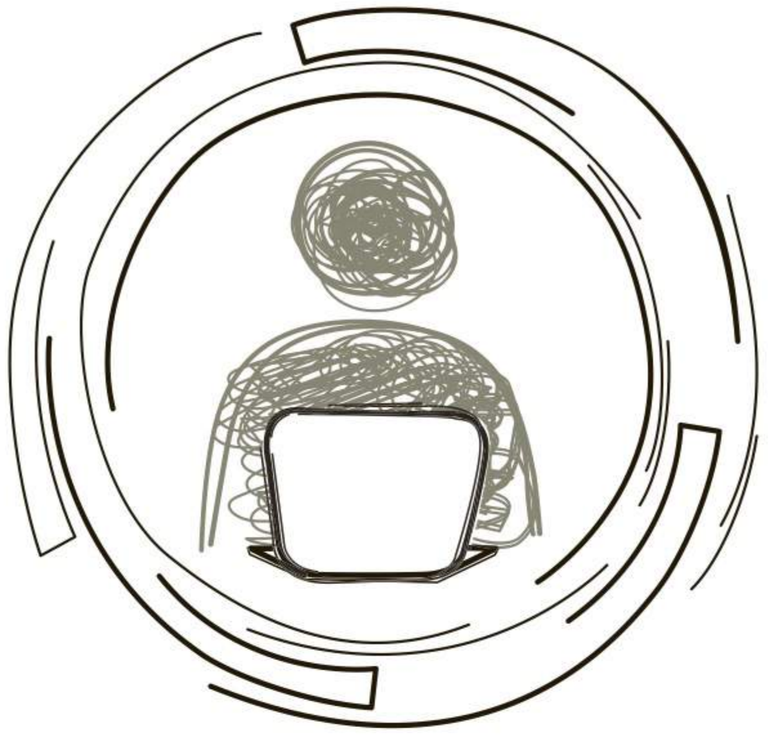

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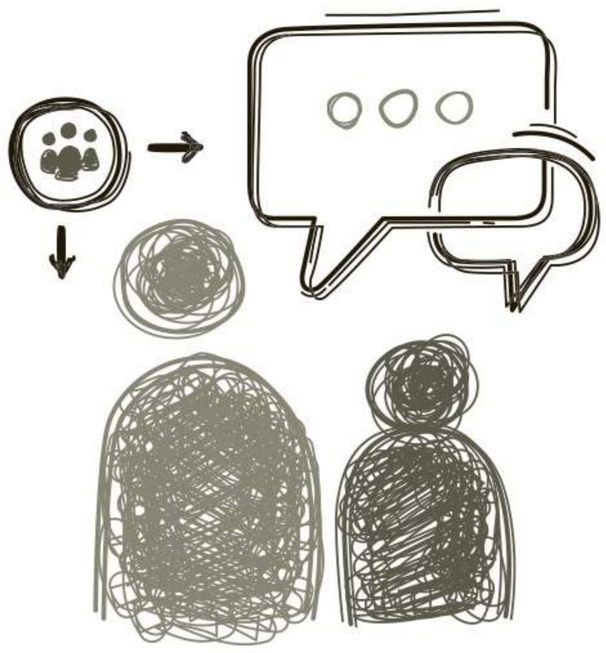

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Framework

PART I

1 A framework for business analysis and valuation using financial statements

1 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 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 to suppliers of capital. 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 Capital markets

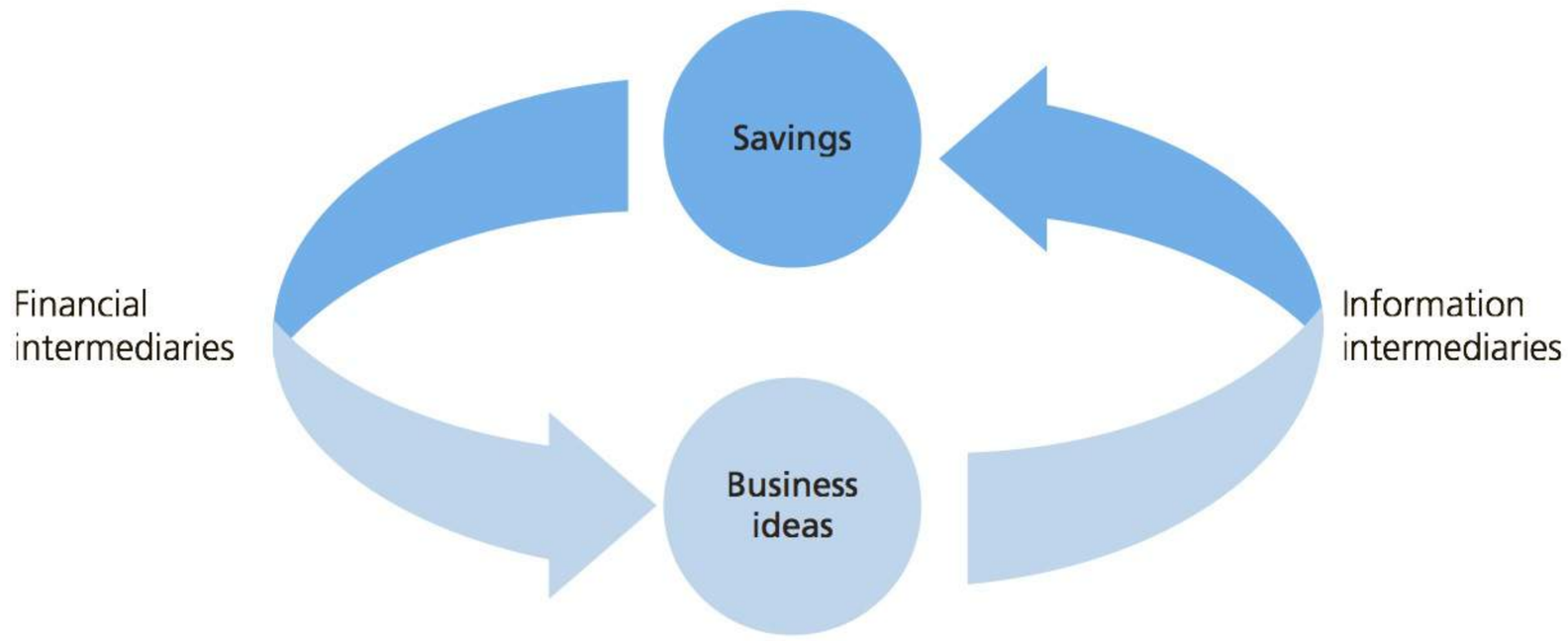


Figure 1.1 provides a schematic representation of how capital markets typically work. Savings in any economy are widely distributed among households. There are usually many new entrepreneurs and existing companies that would like to attract these savings to fund their business ideas. While both savers and entrepreneurs would like to do business with each other, matching savings to business investment opportunities through the use of capital markets – funding business ideas with the highest prospects first – is complicated for at least three reasons:

- Information asymmetry between savers and entrepreneurs. Entrepreneurs typically have better information than savers on the value of business investment opportunities.
- Potentially conflicting interests – credibility problems. Communication by entrepreneurs to savers is not completely credible because savers know that entrepreneurs have an incentive to inflate the value of their ideas.
- Expertise asymmetry. Savers generally lack the financial sophistication needed to analyze and differentiate between the various business opportunities.

The information and incentive issues 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.

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, collective investment funds, pension 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, credit-rating agencies, and the financial press, focus on providing or assuring 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.

The relative importance of financial intermediaries and information intermediaries varies from country to country for historical reasons. In countries where individual investors traditionally have had strong legal rights to discipline entrepreneurs who invest in "bad" business ideas, such as in the UK, individual investors have

been more inclined to make their own investment decisions. In these countries, the funds that entrepreneurs attract may come from a widely dispersed group of individual investors and be channeled through public stock exchanges. Information intermediaries consequently play an important role in supplying individual investors with the information that they need to distinguish between "good" and "bad" business ideas. In contrast, in countries where individual investors traditionally have had weak legal rights to discipline entrepreneurs, such as in many Continental European countries, individual investors have been more inclined to rely on the help of financial intermediaries. In these countries, financial intermediaries, such as banks, tend to supply most of the funds to entrepreneurs and can get privileged access to entrepreneurs' private information.

Over the past decade, many countries in Europe have been moving toward a model of strong **legal protection of investors' rights** to discipline entrepreneurs and well-developed stock exchanges. In this model, 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.

Ideally, the various intermediaries serve as a system of checks and balances to ensure the efficient functioning of the capital markets system. However, this is not always the case as on occasion the intermediaries tend to mutually reinforce rather than counterbalance each other. A number of problems can arise as a result of incentive issues, governance issues within the intermediary organizations themselves, and conflicts of interest, as evidenced by the spectacular failures of companies such as Enron and Parmalat. However, in general this market mechanism functions efficiently and prices reflect all available information on a particular investment. Despite this overall market efficiency, individual securities may still be temporarily mispriced, thereby justifying the need for financial statement analysis.

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

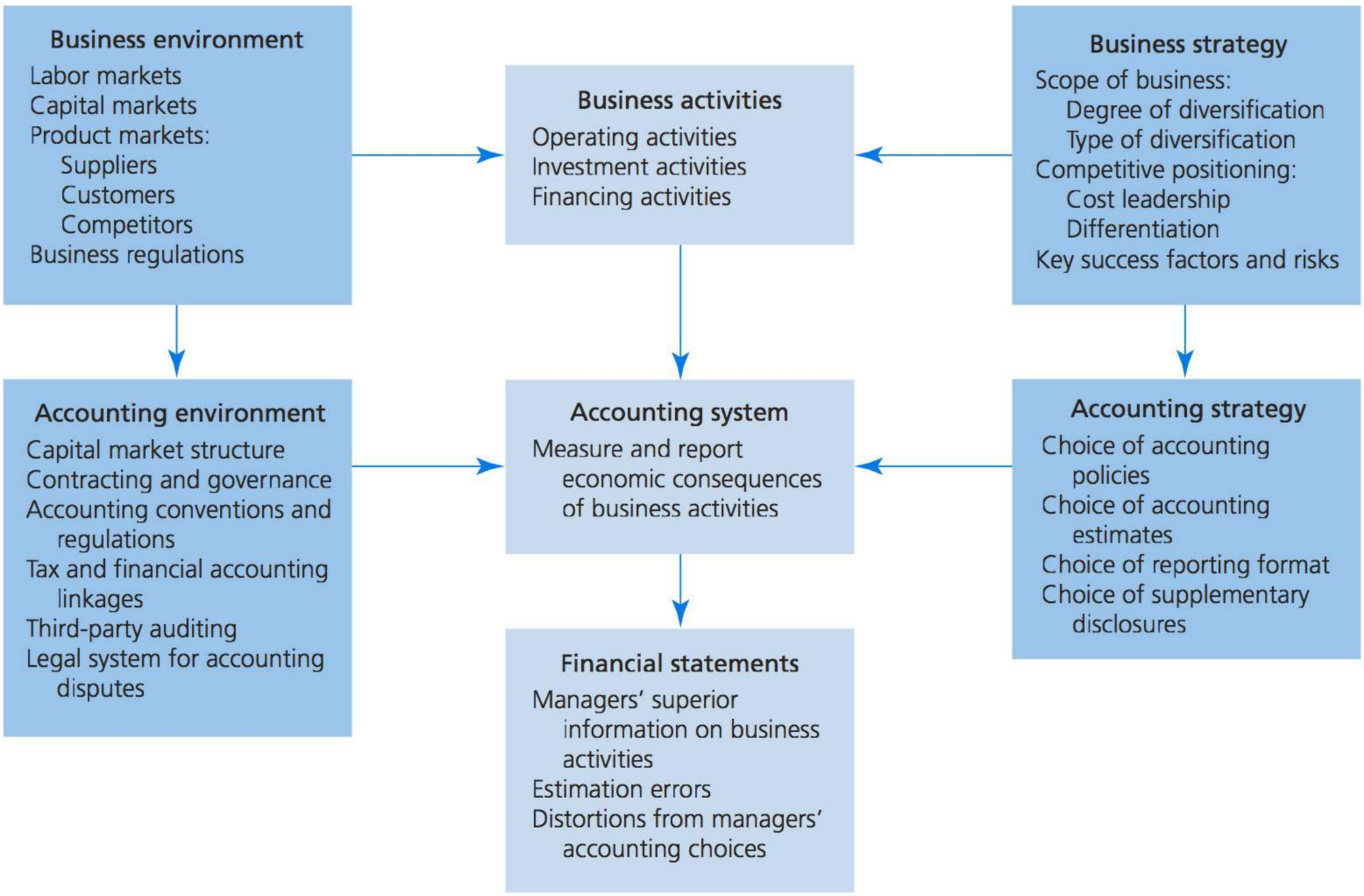
Corporate managers are responsible for acquiring physical and financial resources from the firm's environment and using them to create value for the firm's investors. Value is created when the firm earns a return on its investment in excess of the return required by its capital suppliers. Managers formulate 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.

On a periodic basis, firms typically produce five financial reports:

1. An income statement that describes the operating performance during a time period.
2. A balance sheet that states the firm's assets and how they are financed.[2]
3. A cash flow statement that summarizes the cash flows of the firm.

FIGURE 1.2 From business activities to financial statements



4 A statement of other comprehensive income that outlines the sources of changes in equity that are (a) not the result of transactions with the owners of the firm, and (b) not included in the income statement.[3]

5 A statement of changes in equity that summarizes all sources of changes in equity during the period between two consecutive balance sheets, consisting of (a) total comprehensive income – being the sum of profit or loss [item 1] and other comprehensive income [item 4] – and (b) the financial effects of transactions with the owners of the firm.

These statements are accompanied by notes that provide additional details on the financial statement line items, as well as by management's narrative discussion of the firm's activities, performance and risks in the Management Commentary section.[4]

Influences of the accounting system on information quality

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 next determine the extent of that influence.

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 or benefits associated with economic activities and the actual payment or receipt of cash. Profit or loss

is the primary periodic performance index under accrual accounting. To compute profit or loss, the effects of economic transactions are recorded on the basis of *expected*, not necessarily *actual*, cash receipts and payments. Expected cash receipts from the delivery of products or services are recognized as revenues, and expected cash outflows associated with these revenues are recognized as expenses. Timing differences between the moment of recording costs or benefits and the moment of experiencing cash in- or outflows result in the recognition of assets and liabilities on the balance sheet.

While there are many rules and conventions that govern a firm's preparation of financial statements, there are only a few conceptual building blocks that form the foundation of accrual accounting. Starting from the balance sheet, the principles that define a firm's **assets**, **liabilities**, and equity are as follows:

- Assets are economic resources controlled by a firm that (a) have the potential to produce future economic benefits, and (b) are measurable with a reasonable degree of certainty. An example of an asset is a firm's inventories that will produce economic benefits once sold and delivered to the firm's customers.
- Liabilities are economic obligations of a firm that (a) arise from benefits received in the past, (b) have the potential of being required to be met, and (c) cannot be feasibly avoided by the firm. Examples of liabilities are bonds or bank loans that must be settled in cash, or performance obligations that must be settled by providing services to a customer.
- Equity is the difference between a firm's assets and its liabilities.

The definitions of assets, liabilities, and equity lead to the fundamental relationship that governs a firm's balance sheet:

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

The following definitions are critical to the (comprehensive) income statement, which summarizes a firm's **income** and **expenses**:[5]

- Income or revenue consist of economic resources earned (or increases in assets that affect equity) and performance obligations settled (or decreases in liabilities that affect equity) during a time period. Revenue recognition is governed by the realization principle, which proposes that revenues should be recognized when (a) the firm has provided all, or substantially all, the goods or services to be delivered to the customer, and (b) the customer has paid cash or is expected to pay cash with a reasonable degree of certainty.
- Expenses are economic resources used up (or decreases in assets that affect equity) and economic obligations created (or increases in liabilities that affect equity) during a time period.
- Profit or loss is the difference between a firm's income and expenses in a time period. The following fundamental relationship is therefore reflected in a firm's income statement:

$$\text{Profit or loss} = \text{Income} - \text{Expenses}$$

Note from the above definitions that the recognition of income and expenses depends on a firm's measurement of its assets and liabilities. A consistent application of the principles that define assets and liabilities implies that associated elements of income and expenses are recognized in the income statement in the same time period – a process that is also referred to as matching of income and expenses. For example, after a firm has sold and delivered goods to a customer an increase in the asset "trade receivables" combined with a simultaneous decrease in the asset "inventories" leads to the recognition of associated income and expense in the same time period.

Remeasurements of assets or liabilities may also result in the recognition of income or expense items that are not related to the firm's current economic activities. For instance, when a firm holds inventories that have suddenly become obsolete, writing down the value of such assets will cause the recognition of an expense item that is unrelated to the firm's current economic transactions. In sum, expenses are (a) costs directly associated with revenues recognized in the same period (such as the cost of inventory sold), or (b) costs associated with

benefits that are consumed in this time period (such as depreciation on non-current assets used in the period), or (c) resources whose future benefits are not reasonably certain (such as research expenditures or inventory write-downs).

The need for accrual accounting arises from investors' demand for financial reports on a periodic basis. Because firms undertake economic transactions on a continual basis, the arbitrary closing of accounting books at the end of a reporting period leads to a fundamental measurement problem. Because cash accounting does not report the full economic consequence of the transactions undertaken in a given period, accrual accounting is designed to provide more complete information on a firm's periodic performance.

FEATURE 2: ACCOUNTING CONVENTIONS AND STANDARDS

The use of accrual accounting lies at the center of many important complexities in corporate financial reporting. For example, how should revenues be recognized when a firm sells land to customers and also provides customer financing? If revenue is recognized before cash is collected, how should potential defaults be estimated? Are the outlays associated with research and development activities, whose payoffs are uncertain, assets or expenses when incurred? Are contractual commitments under lease arrangements or post-employment plans liabilities? If so, how should they be valued? Because accrual accounting deals with expectations of future cash consequences of current events, it is subjective and relies on a variety of assumptions. Who should be charged with the primary responsibility of making these assumptions? In the current system, a firm's managers are entrusted with the task of making the appropriate estimates and assumptions to prepare the financial statements because they have intimate knowledge of their firm's business.

The accounting discretion granted to managers is potentially valuable because it allows them to reflect inside information in reported financial statements. However, because investors view profits as a measure of managers' performance, managers have incentives to use their accounting discretion to distort reported profits by making biased assumptions. Further, the use of accounting numbers in contracts between the firm and outsiders provides another motivation for manipulation of accounting numbers. Income management distorts financial accounting data, potentially making them less valuable to external users of financial statements. Therefore, the delegation of financial reporting decisions to corporate managers has both costs and benefits.

A number of accounting conventions have been implemented to ensure that managers use their accounting flexibility to summarize their knowledge of the firm's business activities, and not to disguise reality for self-serving purposes. For example, in most countries financial statements are prepared using the concept of prudence, where caution is taken to ensure that assets are not recorded at values above their fair values and liabilities are not recorded at values below their fair values. This reduces managers' ability to overstate the value of the net assets that they have acquired or developed.

Accounting standards and rules also limit management's ability to misuse accounting judgment by regulating how particular types of transactions are recorded. For example, accounting standards for leases stipulate how firms are to record contractual arrangements to lease resources. Similarly, post-employment benefit standards describe how firms are to record commitments to provide pensions and other post-employment benefits for employees. These accounting standards, which are designed to convey quantitative information on a firm's performance, are complemented by a set of disclosure principles. The disclosure principles guide the amount and kinds of information that are disclosed and require a firm to provide qualitative information related to assumptions, policies, and uncertainties that underlie the quantitative data presented.

More than 100 countries have delegated the task of setting accounting standards to the International Accounting Standards Board (IASB). For example:

- Since 2005 European Union (EU) companies that have their shares traded on a public exchange must prepare their consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) as promulgated by the IASB and endorsed by the EU. Most EU countries, however, also have their own national accounting standard-setting bodies. These bodies may, for example, set

accounting standards for private companies and for single entity financial statements of public companies or comment on the IASB's drafts of new or modified standards.[6]

- Since 2005 and 2007, respectively, Australian and New Zealand public companies must comply with locally adopted IFRS, labeled A-IFRS and NZ-IFRS. These sets of standards include all IFRS requirements as well as some additional disclosure requirements.
- South African public companies have prepared financial statements that comply with IFRS, as published by the IASB, since 2005.
- Some other large economies with stock exchanges that require (most) publicly listed companies to prepare IFRS compliant financial statements are Brazil (since 2010), Canada (2011), Korea (2011), Mexico (2012), and Russia (2012).

In the US, the Securities and Exchange Commission (SEC) has the legal authority to set accounting standards. Since 1973 the SEC has relied on the Financial Accounting Standards Board (FASB), a private sector accounting body, to undertake this task.

Uniform accounting standards attempt to reduce managers' ability to record similar economic transactions in dissimilar ways either over time or across firms. Thus, they create a uniform accounting language, improve the comparability of financial statements and increase the credibility of financial statements, by limiting a firm's ability to distort them. Increased uniformity from accounting standards, however, comes at the expense of reduced flexibility for managers to reflect genuine business differences in a firm's accounting decisions. Rigid accounting standards work best for economic transactions whose accounting treatment is not predicated on managers' proprietary information. However, when there is significant business judgment involved in assessing a transaction's economic consequences (such as in determining the economic benefits of product development), rigid standards (such as requiring the immediate expensing of product development outlays) are likely to be dysfunctional for some companies because they prevent managers from using their superior business knowledge to determine how best to report the economics of key business events. Further, if accounting standards are too rigid, they may induce managers to expend economic resources to restructure business transactions to achieve a desired accounting result or forego transactions that may be difficult to report on.

FEATURE 3: MANAGERS' REPORTING STRATEGY

Because the mechanisms that limit managers' ability to distort accounting data add noise, it is not optimal to use accounting regulation to eliminate managerial flexibility completely. Therefore, real-world accounting systems leave considerable room for managers to influence financial statement data. A firm's **reporting strategy** – that is, the manner in which managers use their accounting discretion – has an important influence on the firm's financial statements.

Corporate managers can choose accounting and disclosure policies that make it more or less difficult for external users of financial reports to understand the true economic picture of their businesses. Accounting rules often provide a broad set of alternatives from which managers can choose. Further, managers are entrusted with making a range of estimates in implementing these accounting policies. Accounting regulations usually prescribe minimum disclosure requirements, but they do not restrict managers from *voluntarily* providing additional disclosures.

A superior disclosure strategy will enable managers to communicate the underlying business reality to outside investors. One important constraint on a firm's disclosure strategy is the competitive dynamics in product markets. Disclosure of proprietary information about business strategies and their expected economic consequences may hurt the firm's competitive position. Subject to this constraint, managers can use financial statements to provide information useful to investors in assessing their firm's true economic performance.

Managers can also use financial reporting strategies to manipulate investors' perceptions. Using the discretion granted to them, managers can make it difficult for investors to identify poor performance on a timely basis. For example, managers can choose accounting policies and estimates to provide an optimistic assessment

of the firm's true performance. They can also make it costly for investors to understand the true performance by controlling the extent of information that is disclosed voluntarily.

The extent to which financial statements are informative about the underlying business reality varies across firms and across time for a given firm. This variation in accounting quality provides both an important opportunity and a challenge in doing business analysis. The process through which analysts can separate noise from information in financial statements, and gain valuable business insights from financial statement analysis, is discussed in the following section.

FEATURE 4: AUDITING, LEGAL LIABILITY, AND PUBLIC ENFORCEMENT

Auditing

Broadly defined as a verification of the integrity of the reported financial statements by someone other than the preparer, **auditing** ensures that managers use accounting rules and conventions consistently over time, and that their accounting estimates are reasonable. Therefore, auditing improves the quality of accounting data. In Europe, the US and most other countries, all listed companies are required to have their financial statements audited by an independent public accountant. The standards and procedures to be followed by independent auditors are set by various institutions. By means of the Revised Statutory Audit Directive and Regulation, the EU has set minimum standards for public audits that are performed on companies from its member countries. These standards prescribe, for example, that the external auditor does not provide any nonaudit services to the audited company that may compromise his independence. To maintain independence, the auditor must also not audit the same company for more than ten consecutive years. Further, all audits must be carried out in accordance with the International Standards on Auditing (ISA), as promulgated by the International Auditing and Assurance Standards Board (IAASB) and endorsed by the EU.

In the US, independent auditors must follow Generally Accepted Auditing Standards (GAAS), a set of standards comparable to the ISA. All US public accounting firms are also required to register with the Public Company Accounting Oversight Board (PCAOB), a regulatory body that has the power to inspect and investigate audit work, and, if needed, discipline auditors. Like the Statutory Audit Directive and Regulation in the EU, the US Sarbanes–Oxley Act specifies the relationship between a company and its external auditor, for example, requiring auditors to report to, and be overseen by, a company's audit committee rather than its management.

While auditors issue an opinion on published financial statements, it is important to remember that the primary responsibility for the statements still rests with corporate managers. Auditing improves the quality and credibility of accounting data by limiting a firm's ability to distort financial statements to suit its own purposes. However, as audit failures at companies such as Enron, Parmalat, Autonomy, and Tesco show, auditing is imperfect. Audits cannot review all of a firm's transactions. They can also fail because of lapses in quality, or because of lapses in judgment by auditors who fail to challenge management for fear of losing future business.

Third-party auditing may also reduce the quality of financial reporting because it constrains the kind of accounting rules and conventions that evolve over time. For example, the IASB considers the views of auditors – in addition to other interest groups – in the process of setting IFRS. To illustrate, about one-third of the IASB board members have a background as practicing auditor. Further, the IASB is advised by the IFRS Advisory Council, which contains several practicing auditors. Finally, the IASB invites auditors to comment on its policies and proposed standards. Auditors are likely to argue against accounting standards that produce numbers that are difficult to audit, sometimes also if the proposed rules produce relevant information for investors.

Legal liability

The legal environment in which accounting disputes between managers, auditors, and investors are adjudicated can also have a significant effect on the quality of reported numbers. The threat of lawsuits and resulting penalties have the beneficial effect of improving the accuracy of disclosure. In the EU, the Transparency Directive requires that every member state has established a statutory civil liability regime for misstatements

that managers make in their periodic disclosures to investors. However, legal liability regimes vary in strictness across countries, both within and outside Europe. Under strict regimes, such as that found in the US, investors can hold managers liable for their investment losses if they prove that the firm's disclosures were misleading, that they relied on the misleading disclosures, and that their losses were caused by the misleading disclosures. Under less strict regimes, such as those found in France, Germany, and several other Continental European countries, investors must additionally prove that managers were (grossly) negligent in their reporting or even had the intent to harm investors (i.e. committed fraud).[7] Further, in some countries only misstatements in annual and interim financial reports are subject to liability, whereas in other countries investors can hold managers liable also for misleading ad hoc disclosures.

The potential for significant legal liability might also discourage managers and auditors from supporting accounting proposals requiring risky forecasts – for example, forward-looking disclosures. This type of concern has motivated several European countries to adopt a less strict liability regime.[8]

Public enforcement

Several countries adhere to the idea that strong accounting standards, external auditing, and the threat of legal liability do not suffice to ensure that financial statements provide a truthful picture of economic reality. As a final guarantee on reporting quality, these countries have public enforcement bodies that either proactively or on a complaint basis initiate reviews of companies' compliance with accounting standards, and take actions to correct noncompliance. In the US, the Securities and Exchange Commission (SEC) performs such reviews and frequently disciplines companies for violations of US GAAP. In recent years, several European countries have also set up proactive enforcement agencies that should enforce listed companies' compliance with IFRS. Examples of such agencies are the French AMF (Autorité des Marchés Financiers), the German DPR (Deutsche Prüfstelle für Rechnungslegung), the Italian CONSOB (Commissione Nazionale per le Società e la Borsa), and the UK Financial Reporting Council. Because each European country maintains control of domestic enforcement, there is a risk that the enforcement of IFRS exhibits differences in strictness and focus across Europe. To coordinate enforcement activities, however, most European enforcement agencies cooperate under the stimulus of the European Securities and Markets Authority (ESMA). One of the ESMA's tasks is to develop mechanisms that lead to consistent enforcement across Europe. For example, the ESMA's Review Panel organizes peer reviews of national enforcement agencies and promotes best practices through the publication of peer review reports and guidelines. The coming years will show whether a decentralized system of enforcement can consistently assure that European companies comply with IFRS.

Public enforcement bodies cannot ensure full compliance of all listed companies. In fact, most proactive enforcement bodies conduct their investigations on a sampling basis. For example, the enforcement bodies may periodically select industry sectors on which they focus their enforcement activities and select individual companies either at random or on the basis of company characteristics such as poor governance. The set of variables that European enforcers most commonly use to select companies includes market capitalization or trading volume (both measuring the company's economic relevance), share price volatility, the likelihood of new equity issues, and the inclusion of the company in an index.[9]

Strict public enforcement can also reduce the quality of financial reporting because, in their attempt to avoid an accounting credibility crisis on public capital markets, enforcement bodies may pressure companies to exercise excessive prudence in their accounting choices.

Alternative forms of communication with investors

Given the limitations of accounting standards, auditing and enforcement, as well as the reporting credibility problems faced by management, firms that wish to communicate effectively with external investors are often forced to use alternative media. Below we discuss two alternative ways that managers can communicate with

Public Enforcement Practices

The fact that most countries have a public enforcement agency does not, of course, imply that all countries have equally developed and effective enforcement systems. One measure of the development of public enforcement is how much a country spends on enforcement. A study has shown that there still is significant variation worldwide in enforcement agencies' staff and budget size. For example, in the late 2000s, agencies in Italy, the Netherlands, the UK and the US spent more than twice as much as their peers in France, Germany, Spain, and Sweden.[10] Although public enforcement has important preventive effects – it deters violations of accounting rules just through its presence – another measure of its development is an enforcement agency's activity, potentially measured by the number of investigations held and the number of actions taken against public companies. Most agencies disclose annual reports summarizing their activities. In addition, the ESMA periodically publishes extracts from its confidential database of enforcement decisions taken by the national agencies. These reports illustrate that many actions taken by enforcement agencies (a) target poor disclosure quality, and (b) are recommendations to firms on how to improve their reporting and better comply with IFRS in the future. In several cases the agencies took corrective actions. Following are two examples of such actions:

- In the year ending March 2014, the UK Financial Reporting Council reviewed 271 annual reports, 255 on its own initiative, and 16 in response to complaints or referrals. In only a few cases a firm had to either restate its current financial statements or adjust the prior period figures in its next financial statements. For example, until fiscal year 2012, engine manufacturer Rolls-Royce plc recognized the entry fees that it received from its key suppliers in joint development projects immediately in operating income. The company did so despite its practice of capitalizing a part of the associated development expenses. Rolls-Royce was asked to change the accounting treatment of entry fees in fiscal year 2013, recognizing entry fees in the same period as the associated deferred development expenses, and retrospectively adjust its financial statements for the years 2011 and 2012. The change reduced Rolls-Royce's 2013 profit before tax by £39 million.
- In May 2013 the German supervisory authority (DPR) publicly "named and shamed" online art trading platform Artnet AG. The DPR disclosed that Artnet had incorrectly classified operating expenses as part of a loss from discontinued operations in its 2012 half-year financial statements, helping the company to turn a loss from continued operations into a profit.

external investors and analysts: meetings with analysts to publicize the firm, and expanded voluntary disclosure. These forms of communication are typically not mutually exclusive.

ANALYST MEETINGS

One popular way for managers to help mitigate information problems is to meet regularly with financial analysts that follow the firm. At these meetings management will field questions about the firm's current financial performance and discuss its future business plans. In addition to holding analyst meetings, many firms appoint a director of public relations, who provides further regular contact with analysts seeking more information on the firm.

Conference calls have become a popular forum for management to communicate with financial analysts. Recent research finds that firms are more likely to host calls if they are in industries where financial statement data fail to capture key business fundamentals on a timely basis.[11] In addition, conference calls themselves appear to provide new information to analysts about a firm's performance and future prospects.[12] Smaller and less heavily traded firms in particular benefit from initiating investor conference calls.[13]

While firms continue to meet with analysts, rules such as the EU Market Abuse Directive affect the nature of these interactions. Under these rules, all EU countries must have regulations and institutions in place that prevent unfair disclosure. Specifically, countries must ensure that exchange-listed companies disclose nonpublic private information promptly and simultaneously to all investors. This can reduce the information that managers are willing to disclose in conference calls and private meetings, making these less effective forums for resolving information problems.

VOLUNTARY DISCLOSURE

Another way for managers to improve the credibility of their financial reporting is through voluntary disclosure. Accounting rules usually prescribe minimum disclosure requirements, but they do not restrict managers from voluntarily providing additional information. These could include an articulation of the company's long-term strategy, specification of nonfinancial leading indicators that are useful in judging the effectiveness of the strategy implementation, explanation of the relationship between the leading indicators and future profits, and forecasts of future performance. Voluntary disclosures can be reported in the firm's annual report, in brochures created to describe the firm to investors, in management meetings with analysts, or in investor relations responses to information requests.[14]

One constraint on expanded disclosure is the competitive dynamics in product markets. Disclosure of proprietary information on strategies and their expected economic consequences may hurt the firm's competitive position. Managers then face a trade-off between providing information that is useful to investors in assessing the firm's economic performance, and withholding information to maximize the firm's product market advantage.

A second constraint in providing voluntary disclosure is management's legal liability. Forecasts and voluntary disclosures can potentially be used by dissatisfied shareholders to bring civil actions against management for providing misleading information. This seems ironic, since voluntary disclosures should provide investors with additional information. Unfortunately, it can be difficult for courts to decide whether managers' disclosures were good faith estimates of uncertain future events which later did not materialize, or whether management manipulated the market. Consequently, many corporate legal departments recommend against management providing much in the way of voluntary disclosure. One aspect of corporate governance, earnings guidance, has been particularly controversial. There is growing evidence that the guidance provided by management plays an important role in leading analysts' expectations toward achievable profit targets, and that management guidance is more likely when analysts' initial forecasts are overly optimistic.[15]

Finally, management credibility can limit a firm's incentives to provide voluntary disclosures. If management faces a credibility problem in financial reporting, any voluntary disclosures it provides are also likely to be viewed skeptically. In particular, investors may be concerned about what management is not telling them, particularly since such disclosures are not audited.

From financial statements to business analysis

Because managers' insider knowledge is a source both of value and distortion in accounting data, it is difficult for outside users of financial statements to separate true information from distortion and noise. Not being able to undo accounting distortions completely, investors "discount" a firm's reported accounting performance. In doing so, they make a probabilistic assessment of the extent to which a firm's reported numbers reflect economic reality. As a result, investors can have only an imprecise assessment of an individual firm's performance. **Financial and information intermediaries** can add value by improving investors' understanding of a firm's current performance and its future prospects.

Effective financial statement analysis is valuable because it attempts to get at managers' inside information from public financial statement data. Because intermediaries do not have direct or complete access to

this information, they rely on their knowledge of the firm's industry and its competitive strategies to interpret financial statements. Successful intermediaries have at least as good an understanding of the industry economics as do the firm's managers, as well as a reasonably good understanding of the firm's competitive strategy. Although outside analysts have an information disadvantage relative to the firm's managers, they are more objective in evaluating the economic consequences of the firm's investment and operating decisions.

The Impact of EU Directives on Financial Reporting and Auditing in Europe

During the past 15 years, the European Commission has issued or revised a few Directives and Regulations that significantly affect financial reporting and auditing practices in the European Union. The Revised Statutory Audit Directive and Regulation (SAD; effective since 2014) regulates the audit of financial statements. In addition, the Transparency Directive (TD; 2007) and the Revised Market Abuse Directive and Regulation (MAD; 2014) regulate firms' periodic and ad-hoc disclosures, with the objective of improving the quality and timeliness of information provided to investors. Some of the highlights of these Directives and Regulations include:

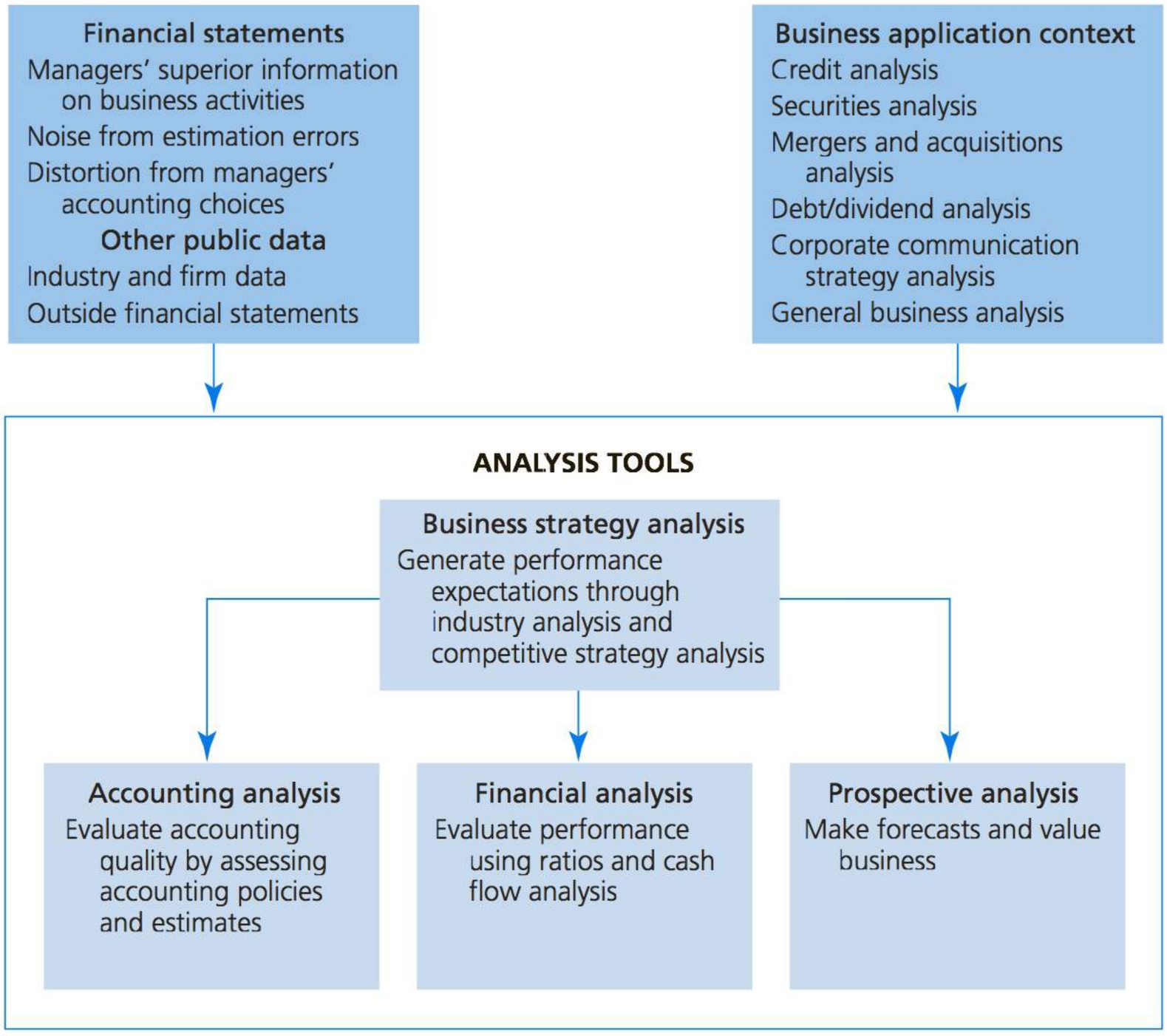
- Prescribing that firms issuing public debt or equity securities (public firms) publish their annual report no more than four months after the financial year-end. The annual report must contain the audited financial statements, a management report, and management's responsibility statement certifying that the financial statements give a true and fair view of the firm's performance and financial position (TD).
- Requiring that public firms publish semiannual financial reports, including condensed financial statements, an interim management report and a responsibility statement, within two months of the end of the first half of the fiscal year. The firms must also indicate whether the interim financial statements have been audited or reviewed by an auditor (TD).
- Enhancing interim reporting by requiring that public firms publish two interim management statements, describing the firms' financial position, material events, and transactions (TD).
- Ensuring that each EU member state has a central filing and storage system for public financial reports (TD).
- Requiring that public firms immediately disclose any information that may have a material impact on their security price and prohibiting that insiders to the firm trade on such information before its disclosure (TD, MAD).
- Requiring that the member states impose common criminal sanctions for insider trading offences (MAD).
- Prohibiting that the external auditor provides any nonaudit services to the audited firm that may compromise his independence, such as tax advice and valuation services (SAD).
- Enhancing auditor independence by prescribing that the external auditor does not audit the same firm for more than ten consecutive years, unless a second ten-year period follows a public tender (SAD).
- Requiring that all audits are carried out in accordance with International Standards of Auditing (SAD).
- Requiring that all audit firms are subject to a system of external quality assurance and public oversight (SAD).
- Mandating that each public firm has an audit committee, which monitors the firm's financial reporting process, internal control system and statutory audit (SAD).
- Ensuring that each EU member state designates a competent authority responsible for supervising firms' compliance with the provisions of the Directives (SAD, TD, MAD).

Each EU member state must implement the Directives by introducing new or changing existing national legislation. Because the member states have some freedom in deciding how to comply with the Directives, some differences in financial reporting, disclosure and auditing regulation still exist. To illustrate, whereas public firms in most countries are required to publish their financial statements on a quarterly basis, public firms in, for example, the Netherlands and the UK comply with local interim reporting rules if they publish a semiannual financial statement and two interim management statements. The interim management statements typically do not include financial statements.

Figure 1.3 provides a schematic overview of how business intermediaries use financial statements to accomplish four key steps:

1 Business strategy analysis.
2 Accounting analysis.
3 Financial analysis.
4 Prospective analysis.

FIGURE 1.3 Analysis using financial statements



ANALYSIS STEP 1: BUSINESS STRATEGY ANALYSIS

The purpose of **business strategy analysis** is to identify key profit drivers and business risks, and to assess the company's profit potential at a qualitative level. Business strategy analysis involves analyzing a firm's industry and its strategy to create a sustainable competitive advantage. This qualitative analysis is an essential first step because it enables the analyst to frame the subsequent accounting and financial analysis better. For example, identifying the key success factors and key business risks allows the identification of key accounting policies. Assessment of a firm's competitive strategy facilitates evaluating whether current profitability is sustainable. Finally, business analysis enables the analyst to make sound assumptions in forecasting a firm's future performance. We discuss business strategy analysis in further detail in Chapter 2.

ANALYSIS STEP 2: ACCOUNTING ANALYSIS

The purpose of **accounting analysis** is to evaluate the degree to which a firm's accounting captures the underlying business reality. By identifying places where there is accounting flexibility, and by evaluating the appropriateness of the firm's accounting policies and estimates, analysts can assess the degree of distortion in a

firm's accounting numbers. Another important step in accounting analysis is to "undo" any accounting distortions by recasting a firm's accounting numbers to create unbiased accounting data. Sound accounting analysis improves the reliability of conclusions from financial analysis, the next step in financial statement analysis. Accounting analysis is the topic in Chapters 3 and 4.

ANALYSIS STEP 3: FINANCIAL ANALYSIS

The goal of **financial analysis** is to use financial data to evaluate the current and past performance of a firm and to assess its sustainability. There are two important skills related to financial analysis. First, the analysis should be systematic and efficient. Second, the analysis should allow the analyst to use financial data to explore business issues. Ratio analysis and cash flow analysis are the two most commonly used financial tools. Ratio analysis focuses on evaluating a firm's product market performance and financial policies; cash flow analysis focuses on a firm's liquidity and financial flexibility. Financial analysis is discussed in Chapter 5.

ANALYSIS STEP 4: PROSPECTIVE ANALYSIS

Prospective analysis, which focuses on forecasting a firm's future, is the final step in business analysis. (This step is explained in Chapters 6, 7 and 8.) Two commonly used techniques in prospective analysis are financial statement forecasting and valuation. Both these tools allow the synthesis of the insights from business analysis, accounting analysis, and financial analysis in order to make predictions about a firm's future.

While the intrinsic value of a firm is a function of its future cash flow performance, it is also possible to assess a firm's value based on the firm's current book value of equity, and its future return on equity (ROE) and growth. Strategy analysis, accounting analysis, and financial analysis, the first three steps in the framework discussed here, provide an excellent foundation for estimating a firm's intrinsic value. Strategy analysis, in addition to enabling sound accounting and financial analysis, also helps in assessing potential changes in a firm's competitive advantage and their implications for the firm's future ROE and growth. Accounting analysis provides an unbiased estimate of a firm's current book value and ROE. Financial analysis facilitates an in-depth understanding of what drives the firm's current ROE.

The predictions from a sound business analysis are useful to a variety of parties and can be applied in various contexts. The exact nature of the analysis will depend on the context. The contexts that we will examine include securities analysis, credit evaluation, mergers and acquisitions, evaluation of debt and dividend policies, and assessing corporate communication strategies. The four analytical steps described above are useful in each of these contexts. Appropriate use of these tools, however, requires a familiarity with the economic theories and institutional factors relevant to the context.

There are several ways in which financial statement analysis can add value, even when capital markets are reasonably efficient. First, there are many applications of financial statement analysis whose focus is outside the capital market context – credit analysis, competitive benchmarking, analysis of mergers and acquisitions, to name a few. Second, markets become efficient precisely because some market participants rely on analytical tools such as the ones we discuss in this book to analyze information and make investment decisions.

Public versus private corporations

This book focuses primarily on publicly traded corporations. In some countries, financial statements of (unlisted) private corporations are also widely available. For example, the member states of the EU require that privately held corporations prepare their financial statements under a common, largely country-specific set of rules and make their financial statements publicly available. All corporations must prepare at least single company financial statements, while parent corporations of large groups must also prepare consolidated financial statements.[16] Consolidated financial statements are typically more appropriate for use in

business analysis and valuation because these statements report the combined assets, liabilities, revenues, and expenses of the parent company and its subsidiaries. Single company financial statements report the assets, liabilities, revenues, and expenses of the parent company only and therefore provide little insight into the activities of subsidiaries.

EU law also requires that private corporations' financial statements be audited by an external auditor, although member states may exempt small corporations from this requirement.[17] The way in which private corporations in the EU make their financial statements available to the public is typically by filing these with a local public register that is maintained by agencies such as the companies register (e.g., Ireland, UK), the chamber of commerce (e.g., the Netherlands, Italy), or the national bank (e.g., Belgium).[18]

Private corporations' financial statements can be, and are being, used for business analysis and valuation. For example, venture capitalists, which provide equity funds to mostly private start-up companies, can use financial statements to evaluate potential investments. Nevertheless, although private corporations' financial statements are also subject to accounting standards, their usefulness in business analysis and valuation is less than that of public corporations' financial statements for the following reasons.[19] First, information and incentive problems are smaller in private corporations than in public corporations. Capital suppliers and managers of private corporations maintain close relationships and communicate their information through other means than public financial reports, such as personal communication or ad hoc reports. Because public reporting plays only a small role in communication, managers of private corporations have little incentive to make their public financial statements informative about the underlying business reality. Second, private corporations often produce one set of financial statements that meets the requirements of both tax rules and accounting rules. Tax rules grant managers less discretion in their assumptions than, for example, IFRS. Under tax rules, the recording of costs and benefits is also typically more associated with the payment and receipt of cash than with the underlying economic activities. Consequently, when private corporations' financial statements also comply with tax rules, they are less useful in assessing the corporations' true economic performance.[20]

Summary

Financial statements provide the most widely available data on public corporations' economic activities; investors and other stakeholders rely on them to assess the plans and performance of firms and corporate managers. Accrual accounting data in financial statements are noisy, and unsophisticated investors can assess firms' performance only imprecisely. Financial analysts who understand managers' disclosure and reporting strategies have an opportunity to create inside information from public data, and they play a valuable role in enabling outside parties to evaluate a firm's current and prospective performance.

This chapter has outlined the framework for business analysis with financial statements, using the four key steps: business strategy analysis, accounting analysis, financial analysis, and prospective analysis. The remaining chapters in this book describe these steps in greater detail and discuss how they can be used in a variety of business contexts.

Core concepts

Accounting analysis Second step of financial statement analysis, aimed at scrutinizing a firm's accounting policies and estimates, and undoing the firm's financial statements from any accounting distortions.

Accounting standards Set of rules governing the determination of a company's revenues, profit and (change in) financial position under a system of accrual accounting.

Accrual accounting A system of accounting under which current profit or loss is derived from past and current as well as expected future cash flows arising from business transactions completed in the current period.

Assets Economic resources controlled by a firm that (a) have the potential to produce future economic benefits, and (b) are measurable with a reasonable degree of certainty. Examples of economic resources are inventories and property, plant, and equipment.

Auditing Certification of financial statements by an independent public accounting firm, aimed at improving the statements' credibility.

Business strategy analysis First step of financial statement analysis, aimed at identifying a firm's key profit drivers and business risks and qualitatively assessing the firm's profit potential.

Capital markets Markets where entrepreneurs raise funds to finance their business ideas in exchange for equity or debt securities.

Expenses Economic resources (e.g., finished goods inventories) used up and economic obligations (e.g., pension obligations) created in a time period.

Financial analysis Third step of financial statement analysis, which goal is to evaluate (the sustainability of) a firm's current and past financial performance using ratio and cash flow analysis.

Financial and information intermediaries Capital market participants who help to resolve problems of information asymmetry between managers and investors and, consequently, prevent markets from breaking down. Information intermediaries such as auditors or financial analysts improve the (credibility of) information provided by the manager. Financial intermediaries such as banks and collective investment funds specialize in collecting, aggregating and investing funds from dispersed investors.

Financial statements Periodically disclosed set of statements showing a company's financial performance and change in financial position during a prespecified period. The statements typically include a balance sheet (showing the financial position), a (comprehensive) income statement and a cash flow statement (describing financial performance), and a statement of changes in equity (outlining the equity effects of comprehensive income and transactions with the owners of the firm). One of the primary purposes of the financial statements is to inform current or potential investors about management's use of their funds, such that they can evaluate management's actions and value their current or potential claim on the firm.

Income Economic resources (e.g., cash and receivables) earned and performance obligations settled during a time period.

Institutional framework for financial reporting Institutions that govern public corporations' financial reporting. These institutions include:

a Accounting standards set by public or private sector accounting standard-setting bodies, which limit management's accounting flexibility. In the EU, public corporations report under International Financial Reporting Standards, set by the International Accounting Standards Board.
b Mandatory external auditing of the financial statements by public accountants. In the EU, the Statutory Audit Directive and Regulation have set minimum standards for external audits.
c Legal liability of management for misleading disclosures. The Transparency Directive requires that each EU member state has a statutory civil liability regime.
d Public enforcement of accounting standards. Enforcement activities of individual European public enforcement bodies are coordinated by the European Securities and Markets Authority (ESMA).

Legal protection of investors' rights Laws and regulations aimed at providing investors the rights and mechanisms to discipline managers who control their funds. Examples of such rights and mechanisms are transparent disclosure requirements, the right to vote (by proxy) on important decisions or the right to appoint supervisory directors. In countries where small, minority investors lack such rights or mechanisms, financial intermediaries play an important role in channeling investments to entrepreneurs.

Lemons problem The problem that arises if entrepreneurs have better information about the quality of their business ideas than investors but are not able to credibly communicate this information. If this problem becomes severe enough, investors may no longer be willing to provide funds and capital markets could break down.

Liabilities Economic obligations of a firm arising from benefits received in the past that (a) have the potential of being required to be met and (b) cannot be feasibly avoided by the firm. Examples of economic obligations are bank loans and product warranties.

Prospective analysis Fourth and final step of financial statement analysis, which focuses on forecasting a firm's future financial performance and position. The forecasts can be used for various purposes, such as estimating firm value or assessing creditworthiness.

Reporting strategy Set of choices made by managers in using their reporting discretion, shaping the quality of their financial reports.

Questions, exercises, and problems

1 Matti, who has just completed his first finance course, is unsure whether he should take a course in business analysis and valuation using financial statements since he believes that financial analysis adds little value, given the efficiency of capital markets. Explain to Matti when financial analysis can add value, even if capital markets are efficient.

2 Accounting statements rarely report financial performance without error. List three types of errors that can arise in financial reporting.

3 A finance student states, "I don't understand why anyone pays any attention to accounting profits, given that a 'clean' number like cash from operations is readily available." Do you agree? Why or why not?

4 Fred argues, "The standards that I like most are the ones that eliminate all management discretion in reporting – that way I get uniform numbers across all companies and don't have to worry about doing accounting analysis." Do you agree? Why or why not?

5 Bill Simon says, "We should get rid of the IASB, IFRS, and EU Accounting and Audit Directives, since free market forces will make sure that companies report reliable information." Do you agree? Why or why not?

6 Juan Perez argues that "Learning how to do business analysis and valuation using financial statements is not very useful, unless you are interested in becoming a financial analyst." Comment.

7 Four steps for business analysis are discussed in the chapter (strategy analysis, accounting analysis, financial analysis, and prospective analysis). As a financial analyst, explain why each of these steps is a critical part of your job and how they relate to one another.

Problem 1 The Neuer Markt

Many economists believe that innovation is one of the main building blocks of economic growth and job creation. Not all economic infrastructures, however, are equally supportive of innovation. In 1995 venture capital investments in Europe amounted up to 4 percent of total Gross Domestic Product (GDP), compared to 6 percent of GDP in the US. During the second half of the 1990s, European and US venture capital investments experienced an explosive but distinctively different level of growth. In fact, in 2000, venture capitalists invested an amount equal to 17 percent of European GDP in European companies, while investing 78 percent of US GDP in US companies.[21] The availability of venture capital can be crucial in the development of innovation. Venture capitalists serve an important role as intermediaries in capital markets because they separate good business ideas from bad ones and bestow their reputation on the start-ups that they finance. In addition to providing capital, venture capitalists offer their expertise in management and finance and let start-up

companies benefit from their network of contacts. Their close involvement with start-ups' day-to-day operations and their ability to give finance in installments, conditional on start-ups' success, allows venture capitalists to invest in risky business ideas that public capital markets typically ignore.

To improve young, innovative, and fast-growing companies' access to external finance, several European stock exchanges founded separate trading segments for this group of companies at the end of the 1990s. Examples of such trading segments were the Nuovo Mercato in Italy, the Nouveau Marché in France, the NMAX in the Netherlands, and the Neuer Markt in Germany. These new markets coordinated some of their activities under the EuroNM umbrella. For example, starting in 1999 the markets facilitated cross-border electronic trading to create a pan-European exchange. Another important way of cooperation was to harmonize the admission requirements for new listings.[22] These requirements were not easier to comply with than the admission requirements of the traditional, established trading segments of the European stock exchanges. On the contrary, the common idea was that a separate trading segment for innovative fast-growing companies needed stricter regulation than the established segments that targeted mature companies with proven track records. If this was true, having (some) common listing requirements across European new markets helped to prevent a race to the bottom in which companies would flee to markets with lenient listing requirements and markets then start to compete with each other on the basis of their leniency.

The European new markets had also harmonized some of their disclosure requirements. All new markets required that companies produced quarterly reports of, at least, sales figures. Further, most of the new markets required that companies prepared their financial reports in accordance with either US GAAP or International Accounting Standards. Given the opportunities for electronic cross-border trading, strict disclosure requirements could help in broadening companies' investor base as well as improve investors' opportunities for diversifying their risky investments. However, because the new markets experienced difficulties in further harmonizing their admission and listing requirements and eventually came to realize that the small cap companies appealed primarily to local investors, their cooperative venture was dissolved in December 2000.

One of the European new markets was the Neuer Markt, a trading segment of the "Deutsche Börse", the German stock exchange. The Neuer Markt's target companies were innovative companies that opened up new markets, used new processes in development, production, or marketing and sales, offered new products or services and were likely to achieve above-average growth in revenue and profit. On March 10, 1997, the initial public offering of Mobilcom AG started the existence of the exchange. The offering of Mobilcom's 640,000 shares for an issue price of €31.95 was heavily oversubscribed, as €20 million additional shares could have been sold. Mobilcom's closing price at the end of the first trading day equaled €50.10, yielding an initial return of 56.8 percent. Other success stories followed. For example, on October 30, 1997, Entertainment München, better known as EM.TV, went public on the German Neuer Markt. The Munich-based producer and distributor of children's programs was able to place 600,000 of its common shares at a price set at the upper end of the bookbuilding range, collecting approximately €5.3 million in total. There was a strong demand for the company's shares. At the end of the first trading day, the share price closed at €9.72, up by 9.4 percent. At its peak, in February 2000, EM.TV's share price had increased from €0.35 (split-adjusted) to slightly more than €120.

At the end of February 2000, being close to its three-year anniversary, the Neuer Markt comprised 229 companies with a total market capitalization of approximately €234 billion. However, in March 2000, the downfall began, in line with the plunge of the NASDAQ exchange. In September 2000, Gigabell AG, was the first company to file for insolvency. The total market capitalization of the growth segment of the Deutsche Börse declined further from €121 billion (339 firms) at the end of 2000 to €50 billion (327 firms) at the end of 2001. Because both the "going public" and the "being public" requirements were very strict compared to other segments and markets, several companies left the Neuer Markt, changing to the less regulated

Geregelter Markt. During the early 2000s, several Neuer Markt firms were found to have manipulated their financial statements. For example, in September 2000, EM.TV announced that it had overstated the revenue and profit figures of its most recently acquired subsidiaries, the Jim Henson Company and Speed Investments, in the company's semiannual financial statements. Following this announcement, EM.TV's market capitalization declined by more than 30 percent. Other examples include computer games developer Phenomedia and Comroad, a provider of traffic information systems that was found to have falsified more than 90 percent of its 1998–2001 revenues.

On September 26, 2002, the Deutsche Börse announced that it would close its Neuer Markt trading segment in 2003. The remaining Neuer Markt companies could join the exchange's Prime Standard segment, which would adopt the Neuer Markt's strict listing requirements (i.e., quarterly reporting; IAS or US GAAP; at least one analyst conference per year; ad hoc and ongoing disclosures in English), or its General Standard segment, with legal minimum transparency requirements. Approximately two-thirds of the remaining Neuer Markt firms decided to join the Prime Standard segment.

1 Do you think that exchange market segments such as the EuroNM markets can be a good alternative to venture capital? If not, what should be their function?
2 This chapter has described four institutional features of accounting systems that affect the quality of financial statements. Which of these features may have been particularly important in reducing the quality of Neuer Markt companies' financial statements?
3 The decline of the Neuer Markt could be viewed as the result of a lemons problem. Can you think of some mechanisms that might have prevented the market's collapse?
4 What could have been the Deutsche Börse's objective of introducing two new segments and letting Neuer Markt firms choose and apply for admission to one of these segments? When is this strategy most likely to be effective?

Problem 2 Fair value accounting for financial instruments

One of the key accounting policies of banks and other financial institutions is how they recognize (changes in) the fair value of the securities that they hold in the balance sheet and income statement. Until the implementation of IFRS 9 (effective in 2018) the international rules on the recognition and measurement of financial instruments require a firm to recognize financial securities (other than loans and receivables) at their fair values if the firm does not intend (or is not able) to hold these assets to their maturities (labeled held-for-trading instruments). Changes in the securities' fair values must be recognized as gains or losses in the income statement. Financial securities that a firm initially intended to hold to their maturities but that are currently available for sale, must also be recognized at their fair values. However, changes in the fair value of these available-for-sale securities are temporarily recorded in equity and recognized in the income statement once the securities are sold. If the firm intends to hold the financial instruments to their maturities (held-to-maturity instruments), they must be recognized at (amortized) historical cost.

How should the fair values of financial instruments be determined? The rules require that they be derived from quoted market prices if an active market for the assets exists (typically referred to as marking to market). If quoted market prices are not available, firms can use their own valuation technique to determine the assets' fair values (referred to as marking to model); however, their valuation should be based on assumptions that outside market participants would reasonably make, not management's own assumptions.

Complications may arise if quoted market prices are available but, at least in the eyes of some, unreliable. For example, the credit crisis of 2008 led to a substantial increase in the uncertainty about the quality and value of asset-backed securities, such as mortgage-backed loans. As a result of the heightened uncertainty, investors fled asset-backed securities and the market for such securities became highly illiquid. Observable prices from infrequent transactions remained available; however, managers of

financial institutions owning asset-backed securities claimed that these prices did not properly reflect the values of the securities if one had the option to hold on to the securities until the crisis was over or the securities matured. In response to these claims, the IASB provided additional guidance and reemphasized that in declining, illiquid markets, managers had the option to use their own valuations to determine fair values. Consequently, many financial institutions choose to move away from marking to market toward adjusting market prices or marking to model.

Prior to the credit market crisis of 2008, an important detail of the international accounting rules for financial instruments was that instruments could not be reclassified between categories (with the exception, of course, of reclassifications from held-to-maturity to available-for-sale). The crisis, however, led some bank managers to change their minds about which securities were actually held for trading purposes and which securities were better held to their maturities. Under great political pressure from the EU, the IASB amended this rule in October 2008.[23] The amendment allowed firms to reclassify securities out of the held-for-trading category in rare circumstances, such as those created by the crisis, if management decided not to sell the securities in the foreseeable future. A survey carried out by the Committee of European Securities Regulators (CESR) revealed that 48 out of 100 European financial institutions reclassified one or more financial instruments in their financial statements for the third quarter of 2008.

1 Discuss how the changes in the reclassification rules affect the balance between noise introduced in accounting data by rigidity in accounting rules, and bias introduced in accounting data by managers' systematic accounting choices.

2 The move from marking to market to marking to model during the credit crisis increased managers' accounting flexibility. Managers of financial institutions may have incentives to bias their valuations of financial instruments. Summarize the main incentives that may affect these managers' accounting choices.

3 Some politicians argued that fair value accounting needed to be suspended and replaced by historical cost accounting. What is the risk of allowing financial institutions to report their financial securities such as asset-backed securities at historical cost?

Notes

1 G. Akerlof, "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* (August 1970): 488–500. Akerlof recognized that the seller of a used car knew more about the car's value than the buyer. This meant that the buyer was likely to end up overpaying, since the seller would accept any offer that exceeded the car's true value and reject any lower offer. Car buyers recognized this problem and would respond by only making average-quality offers for used cars, leading sellers with high quality cars to exit the market. As a result, only the lowest quality cars (the "lemons") would remain in the market. Akerlof pointed out that qualified independent mechanics could correct this market breakdown by providing buyers with reliable information on a used car's true value.

2 The IFRSs refer to the balance sheet as a "statement of financial position." However, firms are free to choose other titles. Throughout this book we will refer to the five statements as the income statement, the balance sheet, the cash flow statement, the statement of other comprehensive income, and the statement of changes in equity, which is how they traditionally have been – and still are – called by users of financial statements.

3 Firms are allowed to combine the income statement, which describes the composition of profit or loss, and the statement of other comprehensive income, which describes all other non-owner changes in equity, into one statement.

4 There is no globally accepted name for management's narrative discussion of the firm's performance. In 2010 the IASB issued a (non-binding) Practice Statement Management Commentary, advising on what firms should report in this section. Throughout this book we will refer to this section as the Management Commentary section, consistent with the IASB's labeling, and assume that it typically contains at least a Letter to the Shareholders and a review of the firm's financial performance during the fiscal year and its financial position at the end of the year.

5 These definitions paraphrase those of the IASB, "The Conceptual Framework for Financial Reporting" (also referred to as the "Conceptual Framework"). Our intent

is to present the definitions at a conceptual, not technical, level. For more complete discussion of these and related concepts, see the IASB's Conceptual Framework.

6 The EU has given its individual member states the option to permit or require private companies to use IFRS for the preparation of their single entity and/or consolidated financial statements. Similarly, member states may permit or require public companies to prepare their single entity financial statements in accordance with IFRS.

7 For a comprehensive overview of European legal liability regimes, see C. Gerner-Beuerle, P. Paech, and E.P. Schuster, "Study on Directors' Duties and Liability" (April 2013). For a description of international differences in managers' legal liability for the information that they provide in prospectuses, see R. La Porta, F. Lopez-de-Silanes, and A. Shleifer, "What Works in Securities Laws?" *The Journal of Finance* 61 (2006): 1–32.

8 See, for example, the UK HM Treasury's report (July 2008) on the "Extension of the Statutory Regime for Issuer Liability," describing motivations for making managers subject to civil liability for fraudulent misstatements only.

9 For a description of how European agencies enforced IFRS in 2006 see the results of a CESR survey described in "CESR's Review of the Implementation and Enforcement of IFRS in the EU" (November 2007).

10 See H.E. Jackson and M.J. Roe, "Public and Private Enforcement of Securities Laws: Resource-Based Evidence," *Journal of Financial Economics* 93(2) (2009): 207–238.

11 See Sarah Tasker, "Bridging the Information Gap: Quarterly Conference Calls as a Medium for Voluntary Disclosure," *Review of Accounting Studies* 3(1–2) (1998): 137–167.

12 See R. Frankel, M. Johnson, and D. Skinner, "An Empirical Examination of Conference Calls as a Voluntary Disclosure Medium," *Journal of Accounting Research* 37(1) (Spring 1999): 133–150.

13 See M. Kimbrough, "The Effect of Conference Calls on Analyst and Market Underreaction to Earnings Announcements," *The Accounting Review* 80(1) (January 2005): 189–219.

14 Research on voluntary disclosure includes M. Lang and R. Lundholm, "Cross-Sectional Determinants of Analysts' Ratings of Corporate Disclosures," *Journal of Accounting Research* 31 (Autumn 1993): 246–271; Lang and Lundholm, "Corporate Disclosure Policy and Analysts," *The Accounting Review* 71 (October 1996): 467–492; M. Welker, "Disclosure Policy, Information Asymmetry and Liquidity in Equity Markets," *Contemporary Accounting Research* (Spring 1995) 801–827; C. Botosan, "The Impact of Annual Report Disclosure Level on Investor Base and the Cost of Capital," *The Accounting Review* (July 1997): 323–350; and P. Healy, A. Hutton, and K. Palepu, "Stock Performance and Intermediation Changes Surrounding Sustained Increases in Disclosure," *Contemporary Accounting Research* 16(3) (Fall 1999): 485–521. This research finds that firms are more likely to provide high levels of disclosure if they have strong earnings performance, issue securities, have more analyst following, and have less dispersion in analyst forecasts. In addition, firms with high levels of disclosure policies tend to have a lower cost of capital and bid-ask spread. Finally, firms that increase disclosure have accompanying increases in stock returns, institutional ownership, analyst following, and share liquidity. In "The Role of Supplementary Statements with Management Earnings Forecasts," *Journal of Accounting Research* 41 (2003): 867–890, A. Hutton, G. Miller, and D. Skinner examine the market response to management earnings forecasts and find that bad news forecasts are always informative but that good news forecasts are informative only when they are supported by verifiable forward-looking statements.

15 See J. Cotter, I. Tuna, and P. Wysocki, "Expectations Management and Beatable Targets: How do Analysts React to Explicit Earnings Guidance," *Contemporary Accounting Research* 23(3) (Autumn 2006): 593–628.

16 The EU Accounting Directive (Directive 2013/34/EU), which governs the preparation of single and consolidated financial statements in the EU, defines large groups as those meeting at least two of the following three criteria in two consecutive years:
   1 Total assets above €20.0 million.
   2 Annual turnover above €40.0 million.
   3 More than 250 employees.

17 The EU Accounting Directive (Directive 2013/34/EU) defines small corporations as those failing to meet two of the following three criteria in two consecutive years:
   1 Total assets above €4.0 million.
   2 Annual turnover above €8.0 million.
   3 More than 50 employees.

18 It should be noted that although the EU regulations have partly harmonized private corporations' accounting, the accessibility of public registers varies greatly and private corporations' financial statements are therefore in practice not equally available across the EU.

19 See R. Ball and L. Shivakumar, "Earnings Quality in UK Private Firms: Comparative Loss Recognition Timeliness," *Journal of Accounting and Economics* 39 (2005): 83–128; D. Burgstahler, L. Hail, and C. Leuz, "The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms," *The Accounting Review* 81 (2006): 983–1016; E. Peek, R. Cuijpers, and W. Buijink, "Creditors' and Shareholders' Reporting Demands in Public versus Private Firms: Evidence from Europe," *Contemporary Accounting Research* 27 (2010): 49–91; and M. Clatworthy and M. Peel, "The Impact of Voluntary Audit and Governance Characteristics on Accounting Errors in Private Companies," *Journal of Accounting and Public Policy* 32 (2013): 1–25.

20 The influence of tax rules is particularly strong on single company financial statements, which in many countries are the basis for tax computations. Although the influence of tax rules on consolidated financial statements is less direct, tax considerations may still affect the preparation of these statements. For example, companies may support their aggressive tax choices by having the consolidated statements conform to the single company statements.

21 See L. Bottazzi and M. Da Rin, "Venture Capital in Europe and the Financing of Innovative Companies," *Economic Policy* April (2002): 231–269.

22 See L. Bottazzi and M. Da Rin, "Europe's 'New' Stock Markets," Working Paper, July 2002; and M. Goergen, A. Khurshed, J.A. McCahery, and L. Renneboog, "The Rise and Fall of European New Markets: On the Short and Long-Run Performance of High-Tech Initial Public Offerings," Working Paper, European Corporate Governance Institute, September 2003. To be eligible for a listing on one of the two largest new markets, the Nouveau Marché and the Neuer Markt, companies had to meet all of the following admission requirements. First, companies' equity prior to the initial public offering (IPO) had to exceed €1.5 million. Second, companies had to issue more than 100,000 shares, which had to represent more than 20 percent of the companies' nominal capital, at an amount exceeding €5 million. Third, not more than 50 percent of the shares issued were allowed to come from existing shareholders; more than 50 percent of the issued shares had to come from a capital increase. Fourth, managers were not allowed to trade their shares during a six-month period following the IPO on the Neuer Markt. Managers of companies listed on the Nouveau Marché could not trade 80 percent of their shares for a period of 12 months. The other new markets had very similar admission requirements.

23 For an illustration of the circumstances surrounding the IASB's decision to amend the reclassification rules, see P. André, A. Cazavan-Jeny, W. Dick, C. Richard, and P. Walton, "Fair Value Accounting and the Banking Crisis in 2008: Shooting the Messenger," *Accounting in Europe* 6 (2009): 3–24.

Appendix: Defining Europe

At various places in this book we refer to "Europe" and "European companies" without intending to imply that all European countries and companies are exactly alike. Because Europe's richness in diversity makes it impossible to describe the institutional details of each European country in detail, this book discusses primarily the commonalities between the countries that have chosen to harmonize the differences among their accounting systems. These countries are the 28 member states of the European Union as well as the three members of the European Economic Area (Iceland, Norway, and Liechtenstein), which are also committed to following EU Accounting Directives. Of particular importance to the topic of this book is that, since 2005, companies from these 31 countries that have their shares publicly traded on a stock exchange are required to prepare their financial statements in accordance with IFRS. A special position is occupied by Switzerland, which is neither a member of the EU nor of the European Economic Area. Many of the issues that we address in this book also apply to a large group of Swiss listed companies, because Switzerland requires its listed companies with international operations to prepare IFRS-based financial statements.

In some of the chapters in this book we summarize the financial ratios, stock returns, and operational characteristics of a representative sample of listed European companies for illustrative purposes. This sample is composed of all domestic companies that were listed on one of the primary stock exchanges (or their predecessors) in the 31 EU/EEA countries and Switzerland between January 1995 (labeled the start of fiscal year 1995) and December 2014 (labeled the end of fiscal year 2014). Table 1.1 displays the eight largest European stock exchanges, or exchange groups, at the end of December 2014 and their countries of operation.

TABLE 1.1 European stock exchanges

Stock exchange	Countries	Total market capitalization of domestic (non-financial) companies at December 2014 (in € billions)
London Stock Exchange Group (Borsa Italiana, LSE)	*United Kingdom, Italy*	2,246.3
NYSE Euronext Brussels – Paris – Amsterdam – Lisbon	*Belgium, France, the Netherlands, Portugal*	1,987.1
Deutsche Börse	*Germany*	1,128.2
SWX Swiss Exchange	*Switzerland*	935.8
OMX Exchanges Copenhagen – Tallinn – Helsinki – Reykjavik – Riga – Vilnius – Stockholm	*Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Sweden*	660.7
BME Exchanges (Bolsa y Mercados Espanõles)	*Spain*	365.3
Oslo Børs	*Norway*	146.1
Other	*Various*	273.0

Notes: Total market capitalization is calculated as the sum of the market capitalizations of all domestic non-financial companies that are included in our sample of listed European companies. Source: Standard & Poor's Compustat Global.
Euronext is a Pan-European exchange that was formed from the merger of the exchanges of Amsterdam, Brussels, Lisbon, and Paris. OMX Exchanges includes the exchanges of Copenhagen, Helsinki, Stockholm, Tallinn, Riga, and Vilnius. The reported market capitalizations of the Euronext exchange, the OMX Exchanges, and the London Stock Exchange Group represent the total sum of the sizes of the individual segments.
Other exchanges include the exchanges of Athens, Bratislava, Bucharest, Budapest, Dublin, Ljubljana, Luxembourg, Malta, Prague, Sofia, Vienna, Warsaw, and Zagreb.

CASE

The role of capital market intermediaries in the dot-com crash of 2000

The rise and fall of the internet consultants

In the summer of 1999, a host of internet consulting firms made their debut on the Nasdaq. Scient Corporation, which had been founded less than two years earlier in March 1997, went public in May 1999 at an IPO price of $20 per share ($10 on a pre-split basis). Its close on the first day of trading was $32.63. Other internet consulting companies that went public that year included Viant Corporation, IXL Enterprises, and US Interactive (see **Exhibit 1**).

The main value proposition of these companies was that they would be able to usher in the new internet era by lending their information technology and web expertise to traditional "old economy" companies that wanted to gain Web-based technology, as well as to the emerging dot-com sector. Other companies like Sapient Corporation and Cambridge Technology Partners had been doing IT consulting for years, but this new breed of companies was able to capitalize on the burgeoning demand for internet expertise.

Over the following months, the stock prices of the internet consultants rose dramatically. Scient traded at a high of $133.75 in March 2000. However, this was after a 2–1 split, so each share was actually worth twice this amount on a pre-split basis. This stock level represented a 1238 percent increase from its IPO price and a valuation of 62 times the company's revenues for the fiscal year 2000. Similar performances were put in by the other companies in this group. However, these valuation levels proved to be unsustainable. The stock prices of web consulting firms dropped sharply in April 2000 along with many others in the internet sector, following what was afterwards seen as a general "correction" in the Nasdaq. The prices of the web consultants seemed to stabilize for a while, and many analysts continued to write favorably about their prospects and maintained buy ratings on their stocks. But starting early in September 2000, after some bad news from Viant Corporation and many subsequent analyst downgrades, the stocks went into a free-fall. All were trading in single digits by February of 2001, representing a greater than 95 percent drop from their peak valuations (see **Exhibit 2**).

The dramatic rise and fall of the stock prices of the Web consultants, along with many others in the internet sector, caused industry observers to wonder how this could have happened in a relatively sophisticated capital market like that of the United States. Several well-respected venture capitalists, investment banks, accounting firms, financial analysts, and money management companies were involved in bringing these companies to market and rating and trading their shares (see **Exhibit 3**). Who, if anyone, caused the internet stock price bubble? What, if anything, could be done to avoid the recurrence of such stock market bubbles?

Gillian Elcock, MBA 2001, prepared this case from published sources under the supervision of Professor Krishna Palepu. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

CONTEXT: THE TECHNOLOGY BULL MARKET

The 1980s and 1990s marked the beginning of a global technology revolution that started with the personal computer (PC) and led to the internet era. Companies like Apple, Microsoft, Intel, and Dell Computer were at the forefront of this new wave of technology that promised to enhance productivity and efficiency through the computerization and automation of many processes.

The capital markets recognized the value that was being created by these companies. Microsoft, which was founded in 1975, had a market capitalization of over $600 billion by the beginning of 2000, making it the world's most valuable company, and its founder, Bill Gates, one of the richest men in the world. High values were also given to many of the other blue-chip technology firms such as Intel and Dell (see **Exhibit 4**).

The 1990s ushered in a new group of companies that were based on information networks. These included AOL, Netscape, and Cisco. Netscape was a visible symbol of the emerging importance of the internet: its browser gave regular users access to the World Wide Web, whereas previously the internet had been mostly the domain of academics and experts. In March 2000, Cisco Systems, which made the devices that routed information across the internet, overtook Microsoft as the world's most valuable company (based on market capitalization). This seemed further evidence of the value shift that was taking place from PC-focused technologies and companies to those that were based on the global information network.

It appeared obvious that the internet was going to profoundly change the world through greater computing power, ease of communication, and the host of technologies that could be built upon it. Opportunities to build new services and technologies were boundless, and they were global in scale. The benefits of the internet were expected to translate into greater economic productivity through the lowering of communication and transaction costs. It also seemed obvious that someone would be able to capitalize upon these market opportunities and that "the next Microsoft" would soon appear. No one who missed out on the original Microsoft wanted to do so the second time around.

A phrase that became popularized during this time was the "new economy." New economy companies, as opposed to old economy ones (exemplified by companies in traditional manufacturing, retail, and commodities), based their business models around exploiting the internet. They were usually small compared to their old economy counter parts, with little need for their real-world "bricks and mortar" structures, preferring to outsource much of the capital intensive parts of the business and concentrate on the higher value-added, information-intensive elements. Traditional companies, finding their market shares and business models attacked by a host of nimble, specialized dot-com start-ups, lived in danger of "being Amazoned." To many, the new economy was the future and old economy companies would become less and less relevant.

The capital markets seemed to think similarly. From July 1999 to February 2000, as the Nasdaq Composite Index (which was heavily weighted with technology and internet stocks) rose by 74.4 percent, the Dow Jones Industrial Average (which was composed mainly of old economy stocks) fell by 7.7 percent. Investors no longer seemed interested in anything that was not new economy.

Internet gurus and economists predicted the far-reaching effects of the internet. The following excerpts represent the mood of the time:

> *Follow the personal computer and you can reach the pot of gold. Follow anything else and you will end up in a backwater. What the Model T was to the industrial era … the PC is to the information age. Just as people who rode the wave of automobile technology – from tire makers to fast food franchisers – prevailed in the industrial era, so the firms that prey on the passion and feed on the force of the computer community will predominate in the information era.*[1]
>
> — George Gilder, 1992

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[1]Mary Meeker, Chris DePuy, "US Investment Research, Technology/New Media, The Internet Report (Excerpt) from *Life After Television* by George Gilder, 1992" Morgan Stanley (February 1996).

Due to technological advances in PC-based communications, a new medium – with the internet, the World Wide Web, and TCP/IP at its core – is emerging rapidly. The market for internet-related products and services appears to be growing more rapidly than the early emerging markets for print publishing, telephony, film, radio, recorded music, television, and personal computers.... Based on our market growth estimates, we are still at the very early stages of a powerful secular growth cycle.[2]

— Mary Meeker, Morgan Stanley Dean Witter, February 1996

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The easy availability of smart capital – the ability of entrepreneurs to launch potentially world-beating companies on a shoestring, and of investors to intelligently spread risk – may be the new economy's most devastating innovation. At the same time, onrushing technological change requires lumbering dinosaurs to turn themselves into clever mammals overnight. Some will. But for many others, the only thing left to talk about is the terms of surrender.[3]

— *Wall Street Journal,* April 17, 2000

In the new economy, gaining market share was considered key because of the benefits of network effects. In addition, a large customer base was needed to cover the high fixed costs often associated with doing business. Profitability was of a secondary concern, and Netscape was one of the first of many internet companies to go public without positive earnings. Some companies deliberately operated at losses because it was essential to spend a lot early to gain market share, which would presumably translate at a later point into profitability. This meant that revenue growth was the true measure of success for many internet companies. Of course there were some dissenting voices, warning that this was just a period of irrational exuberance and the making of a classic stock market bubble. But for the most part, investors seemed to buy into the concept, as evidenced by the values given to several loss-making dotcoms (see **Exhibit 5**).

SCIENT CORPORATION

The history of Scient, considered a leader in the internet consulting space, is representative of what happened to the entire industry. The firm was founded in November 1997. Its venture capital backers included several leading firms such as Sequioa Capital and Benchmark Capital (see **Exhibit 3**).

Scient described itself as "a leading provider of a new category of professional services called eBusiness systems innovation" that would "rapidly improve a client's competitive position through the development of innovative business strategies enabled by the integration of emerging and existing technologies."[4] Its aim was to provide services in information technology and systems design as well as high-level strategy consulting, previously the domain of companies such as McKinsey and The Boston Consulting Group.

The company grew quickly to almost 2,000 people within three years, primarily organically. Its client list included AT&T, Chase Manhattan, Johnson & Johnson, and Home-store.com.[5] As with any consulting firm, its ability to attract and retain talented employees was crucial, since they were its main assets.

By the fiscal year ending in March 2000, Scient had a net loss of $16 million on revenues of $156 million (see financial statements in **Exhibit 6**). These revenues represented an increase of 653 percent over the previous year. Analysts wrote glowingly about the firm's prospects. In February 2000 when the stock was trading at around $87.25, a Deutsche Banc Alex Brown report stated:

[2]Mary Meeker, Chris DePuy, "US Investment Research, Technology/New Media, The Internet Report," *Morgan Stanley* (February 1996).
[3]John Browning, Spencer Reiss, "For the New Economy, the End of the Beginning," *Wall Street Journal* (Copyright 2000 Dow Jones & Company, Inc).
[4]Scient Corporation Prospectus, May 1999. Available from Edgar Online.
[5]Scient Corporation website, <http://www.scient.com/non/content/clients/client_list/index.asp>.

We have initiated research coverage of Scient with a BUY investment rating on the shares. In our view Scient possesses several key comparative advantages: (1) an outstanding management team; (2) a highly scalable and leverageable operating model; (3) a strong culture, which attracts the best and the brightest; (4) a private equity portfolio, which enhances long-term relationships and improves retention; and (5) an exclusive focus on the high-end systems innovation market with eBusiness and industry expertise, rapid time-to-market and an integrated approach…. Scient shares are currently trading at roughly 27x projected CY00 revenues, modestly ahead of pure play leaders like Viant (24x) and Proxicom (25x), and ahead of our interactive integrator peer group average of just over 16x. Our 12-month price target is $120. It is a stock we would want to own.[6]

And in March 2000, when the stock was at $77.75, Morgan Stanley, which had an "outperform" rating, wrote:

All said we believe Scient continue [sic] to effectively execute on what is a very aggressive business plan…. While shares of SCNT trade at a premium valuation to its peer group, we continue to believe that such level is warranted given the company's high-end market focus, short but impressive record of execution, and deep/experienced management team. As well, in our view there is a high probability of meaningful upward revisions to Scient's model.[7]

Scient's stock reached a high of $133.75 in March 2000 but fell to $44 by June as part of the overall drop in valuation of most of the technology sector. In September the company announced it had authorized a stock repurchase of $25 million. But in December 2000 it lowered its revenue and earnings expectations for the fourth quarter due to the slowdown in demand for internet consulting services. The company also announced plans to lay off 460 positions worldwide (over 20 percent of its workforce) as well as close two of its offices, and an associated $40–$45 million restructuring charge. By February 2001 the stock was trading at $2.94.

Most of the analysts that covered Scient had buy or strong buy ratings on the company as its stock rose to its peak and even after the Nasdaq correction in April 2000. Then, in September, a warning by Viant Corporation of results that would come in below expectations due to a slowdown in e-business spending from large corporate clients, prompted many analysts to downgrade most of the companies in the sector, including Scient (see **Exhibit 7**). Several large mutual fund companies were holders of Scient as its stock rose, peaked, and fell (see **Exhibit 8**).

As the major technology indices continued their slump during late 2000 and early 2001, and the stock prices of the internet consulting firms floundered in the single digits, they received increasing attention from the press:

Examining the downfall of the eConsultants provides an excellent case study of failed business models. Rose-colored glasses, a lack of a sustainable competitive advantage, and a "me too" mentality are just some of the mistakes these companies made … The eConsultants failed to do the one thing that they were supposed to be helping their clients do – build a sustainable business model … many eConsultants popped up and expected to be able to take on the McKinseys and Booz-Allens of the world. Now they are discovering that the relationships firmly established by these old economy consultants are integral to building a sustainable competitive advantage.[8]

Seems like everything dot-com is being shunned by investors these days. But perhaps no other group has experienced quite the brutality that Web consultancies have. Once the sweethearts of Wall Street, their stocks are now high-tech whipping boys. Even financial analysts, who usually strive to be positive about companies they cover, seem to have given up on the sector…. Many of these firms were built on the back of the dot-com boom. Now these clients are gone. At the same time, pressure on bricks-and-mortar companies to build online businesses has lifted, leading to the cancellation or delay of Web projects.[9]

[6]F. Mark D'Annolfo, William S. Zinsmeister, Jeffrey A. Buchbinder, "Scient Corporation Premier Builder of eBusinesses," *Deutsche Banc Alex Brown* (February 14, 2000).
[7]Michael A. Sherrick, Mary Meeker, "Scient Corporation Quarter Update," *Morgan Stanley Dean Witter* (March 2, 2000).
[8]Todd N. Lebor, "The Downfall of internet Consultants," *Fool's Den,* Fool.com (December 11, 2000).
[9]Amey Stone, "Streetwise – Who'll Help the Web Consultants?" *BusinessWeek Online* (New York, February 15, 2001). From http://www.businessweek.com.

The analysts who were formerly excited about Scient's prospects and had recommended the stock when it was trading at almost $80 per share now seemed much less enthusiastic. In January 2001, with the stock around $3.44, Morgan Stanley wrote:

> *We maintain our Neutral rating due to greater than anticipated market weakness, accelerating pricing pressure, the potential for increased turnover and management credibility issues. While shares of SCNT trade at a depressed valuation, we continute [sic] to believe that turnover and pricing pressure could prove greater than management's assumptions. While management indicated it would be "aggressive" to maintain its people, we still believe it will be difficult to maintain top-tier talent in the current market and company specific environment.*[10]

PERFORMANCE OF THE NASDAQ

The performance of the stock prices of Scient and its peers mirrored that of many companies in the internet sector. So dramatic was the drop in valuation of these companies, that this period was subsequently often referred to as the "Dot-com crash."

In the months following the crash, the equity markets essentially closed their doors to the internet firms. Several once high-flying dot-coms, operating at losses and starved for cash, filed for bankruptcy, or closed down their operations (see **Exhibit 9).**

The Nasdaq, which had reached a high of 5,132.52 in March of 2000 closed at 2,470.52 in December 2000, a drop of 52 percent from its high. As of February 2001 it had not recovered, closing at 2,151.83.

The role of intermediaries in a well-functioning market

In a capitalist economy, individuals and institutions have savings that they want to invest, and companies need capital to finance and grow their businesses. The capital markets provide a way for this to occur efficiently. Companies issue debt or equity to investors who are willing to part with their cash now because they expect to earn an adequate return in the future for the risk they are taking.

However, there is an information gap between investors and companies. Investors usually do not have enough information or expertise to determine the good investments from the bad ones. And companies do not usually have the infrastructure and know-how to directly receive capital from investors. Therefore, both parties rely on intermediaries to help them make these decisions. These intermediaries include accountants, lawyers, regulatory bodies (such as the SEC in the US), investment banks, venture capitalists, money management firms, and even the media (see **Exhibit 10**). The focus of this case is on the equity markets in the US.

In a well-functioning system, with the incentives of intermediaries fully aligned in accordance with their fiduciary responsibility, public markets will correctly value companies such that investors earn a normal "required" rate of return. In particular, companies that go public will do so at a value which will give investors this fair rate of investment.

The public market valuation will have a trickle down effect on all intermediaries in the investment chain. Venture capitalists, who typically demand a very high return on investment, and usually exit their portfolio companies through an IPO, will do their best to ensure these companies have good management teams and a sustainable business model that will stand the test of time. Otherwise, the capital markets will put too low a value on the companies when they try to go public. Investment bankers will provide their expertise in helping companies to go public or to make subsequent offerings, and introducing them to investors.

[10]Michael A. Sherrick, Mary Meeker, Douglas Levine, "Scient Corporation. Outlook Remains Cloudy, Adjusting Forecasts," *Morgan Stanley Dean Witter* (January 18, 2001).

On the other side of the process, portfolio managers acting on behalf of investors, will only buy companies that are fairly priced, and will sell companies if they become overvalued, since buying or holding an overvalued stock will inevitably result in a loss. Sell-side analysts, whose clients include portfolio managers and therefore investors, will objectively monitor the performance of public companies and determine whether or not their stocks are good or bad investment at any point in time. Accountants audit the financial statements of companies, ensuring that they comply with established standards and represent the true states of the firms. This gives investors and analysts the confidence to make decisions based on these financial documents.

The integrity of this process is critical in an economy because it gives investors the confidence they need to invest their money into the system. Without this confidence, they would not plough their money back into the economy, but instead keep it under the proverbial mattress.

WHAT HAPPENED DURING THE DOT-COM BUBBLE?

Many observers believed that something went wrong with the system during the dot-com bubble. In April 2001, *BusinessWeek* wrote about "The Great Internet Money Game. How America's top financial firms reaped billions from the Net boom, while investors got burned."[11] The following month, *Fortune* magazine's cover asked "Can we ever trust Wall Street again?"[12] referring to the way in which, in some people's opinions, Wall Street firms had led investors and companies astray before and after the dot-com debacle.

The implications of the internet crash were far reaching. Many companies that needed to raise capital for investment found the capital markets suddenly shut to them. Millions of investors saw a large portion of their savings evaporate. This phenomenon was a likely contributor to the sharp drop in consumer confidence that took place in late 2000 and early 2001. In addition, the actual decrease in wealth threatened to dampen consumer spending. These factors, along with an overall slowing of the US economy, threatened to put the US into recession for the first time in over ten years.

On a more macro level, the dot-coms used up valuable resources that could have been more efficiently allocated within the economy. The people who worked at failed internet firms could have spent their time and energy creating lasting value in other endeavors, and the capital that funded the dot-coms could have been ploughed into viable, lasting companies that would have benefited the overall economy. However, it could be argued that there were benefits as well, and that the large investment in the technology sector positioned the US to be a world leader in the future.

Nevertheless, the question remained: how could the dot-com bubble occur in a sophisticated capital market system like that of the US? Why did the market allow the valuations of many internet companies to go so high? What was the role of the intermediaries in the process that gave rise to the stock market bubble?

The intermediaries

One way to try to answer some of these questions is to look more closely at some of the key players in the investing chain. Much of the material in the following section is derived from interviews with representatives from each sector.

VENTURE CAPITALISTS

Venture capitalists (VCs) provided capital for companies in their early stages of development. They sought to provide a very high rate of return to their investors for the associated risk. This was typically accomplished by

[11]Peter Elstrom, "The Great Internet Money Game. How America's top financial firms reaped billions from the Net boom while investors got burned," *BusinessWeek e.biz* (April 16, 2001).
[12]*Fortune,* May 14, 2001.