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CFA INSTITUTE INVESTMENT SERIES

Fourth Edition

International Financial Statement Analysis

WILEY

INTERNATIONAL FINANCIAL STATEMENT ANALYSIS

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INTERNATIONAL FINANCIAL STATEMENT ANALYSIS

Fourth Edition

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PREFACE

International Financial Statement Analysis is a practically oriented introduction to financial statement analysis. Each chapter covers one major area of financial statement analysis and is written by highly credentialed experts. By taking a global perspective on accounting standards, with a focus on international financial reporting standards (IFRS), and by selecting a broad range of companies for illustration, the book well equips the reader for practice in today's global marketplace.

The content was developed in partnership by a team of distinguished academics and practitioners, chosen for their acknowledged expertise in the field, and guided by CFA Institute. It is written specifically with the investment practitioner in mind and is replete with examples and practice problems that reinforce the learning outcomes and demonstrate real-world applicability.

The CFA Program Curriculum, from which the content of this book was drawn, is subjected to a rigorous review process to assure that it is:

- Faithful to the findings of our ongoing industry practice analysis
- Valuable to members, employers, and investors
- Globally relevant
- Generalist (as opposed to specialist) in nature
- Replete with sufficient examples and practice opportunities
- Pedagogically sound

The accompanying workbook is a useful reference that provides Learning Outcome Statements, which describe exactly what readers will learn and be able to demonstrate after mastering the accompanying material. Additionally, the workbook has summary overviews and practice problems for each chapter.

We hope you will find this and other books in the CFA Institute Investment Series helpful in your efforts to grow your investment knowledge, whether you are a relatively new entrant or an experienced veteran striving to keep up to date in the ever-changing market environment. CFA Institute, as a long-term committed participant in the investment profession and a not-for-profit global membership association, is pleased to provide you with this opportunity.

THE CFA PROGRAM

If the subject matter of this book interests you, and you are not already a CFA charterholder, we hope you will consider registering for the CFA Program and starting progress toward earning the Chartered Financial Analyst designation. The CFA designation is a globally recognized standard of excellence for measuring the competence and integrity of investment professionals.

To earn the CFA charter, candidates must successfully complete the CFA Program, a global graduate-level self-study program that combines a broad curriculum with professional conduct requirements as preparation for a career as an investment professional.

Anchored by a practice-based curriculum, the CFA Program Body of Knowledge reflects the knowledge, skills, and abilities identified by professionals as essential to the investment decision-making process. This body of knowledge maintains its relevance through a regular, extensive survey of practicing CFA charterholders across the globe. The curriculum covers 10 general topic areas, ranging from equity and fixed-income analysis to portfolio management—all with a heavy emphasis on the application of ethics in professional practice. Known for its rigor and breadth, the CFA Program curriculum highlights principles common to every market so that professionals who earn the CFA designation have a thoroughly global investment perspective and a profound understanding of the global marketplace.

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ABOUT THE CFA INSTITUTE INVESTMENT SERIES

CFA Institute is pleased to provide you with the CFA Institute Investment Series, which covers major areas in the field of investments. We provide this best-in-class series for the same reason we have been chartering investment professionals for more than 50 years: to lead the investment profession globally by promoting the highest standards of ethics, education, and professional excellence for the ultimate benefit of society.

The books in the CFA Institute Investment Series contain practical, globally relevant material. They are intended both for those contemplating entry into the extremely competitive field of investment management as well as for those seeking a means of keeping their knowledge fresh and up to date. This series was designed to be user friendly and highly relevant.

We hope you find this series helpful in your efforts to grow your investment knowledge, whether you are a relatively new entrant or an experienced veteran ethically bound to keep up to date in the ever-changing market environment. As a long-term, committed participant in the investment profession and a not-for-profit global membership association, CFA Institute is pleased to provide you with this opportunity.

THE TEXTS

Corporate Finance: A Practical Approach is a solid foundation for those looking to achieve lasting business growth. In today's competitive business environment, companies must find innovative ways to enable rapid and sustainable growth. This text equips readers with the foundational knowledge and tools for making smart business decisions and formulating strategies to maximize company value. It covers everything from managing relationships between stakeholders to evaluating merger and acquisition bids, as well as the companies behind them. Through extensive use of real-world examples, readers will gain critical perspective into interpreting corporate financial data, evaluating projects, and allocating funds in ways that increase corporate value. Readers will gain insights into the tools and strategies used in modern corporate financial management.

Equity Asset Valuation is a particularly cogent and important resource for anyone involved in estimating the value of securities and understanding security pricing. A well-informed professional knows that the common forms of equity valuation—dividend discount modeling, free cash flow modeling, price/earnings modeling, and residual income modeling—can all be reconciled with one another under certain assumptions. With a deep understanding of the underlying assumptions, the professional investor can better understand what other investors assume when calculating their valuation estimates. This text has a global orientation, including emerging markets.

International Financial Statement Analysis is designed to address the ever-increasing need for investment professionals and students to think about financial statement analysis from a global perspective. The text is a practically oriented introduction to financial statement analysis that is distinguished by its combination of a true international orientation, a structured presentation style, and abundant illustrations and tools covering concepts as they are introduced in the text. The authors cover this discipline comprehensively and with an eye to ensuring the reader's success at all levels in the complex world of financial statement analysis.

Investments: Principles of Portfolio and Equity Analysis provides an accessible yet rigorous introduction to portfolio and equity analysis. Portfolio planning and portfolio management are presented within a context of up-to-date global coverage of security markets, trading, and market-related concepts and products. The essentials of equity analysis and valuation are explained in detail and profusely illustrated. The book includes coverage of practitioner-important but often neglected topics, such as industry analysis. Throughout, the focus is on the practical application of key concepts with examples drawn from both emerging and developed markets. Each chapter affords the reader many opportunities to self-check his or her understanding of topics.

One of the most prominent texts over the years in the investment management industry has been Maginn and Tuttle's *Managing Investment Portfolios: A Dynamic Process*. The third edition updates key concepts from the 1990 second edition. Some of the more experienced members of our community own the prior two editions and will add the third edition to their libraries. Not only does this seminal work take the concepts from the other readings and put them in a portfolio context, but it also updates the concepts of alternative investments, performance presentation standards, portfolio execution, and, very importantly, individual investor portfolio management. Focusing attention away from institutional portfolios and toward the individual investor makes this edition an important and timely work.

The New Wealth Management: The Financial Advisor's Guide to Managing and Investing Client Assets is an updated version of Harold Evensky's mainstay reference guide for wealth managers. Harold Evensky, Stephen Horan, and Thomas Robinson have updated the core text of the 1997 first edition and added an abundance of new material to fully reflect today's investment challenges. The text provides authoritative coverage across the full spectrum of wealth management and serves as a comprehensive guide for financial advisers. The book expertly blends investment theory and real-world applications and is written in the same thorough but highly accessible style as the first edition.

Quantitative Investment Analysis focuses on some key tools that are needed by today's professional investor. In addition to classic time value of money, discounted cash flow applications, and probability material, there are two aspects that can be of value over traditional thinking. The first involves the chapters dealing with correlation and regression that ultimately figure into the formation of hypotheses for purposes of testing. This gets to a critical skill that challenges many professionals: the ability to distinguish useful information from the overwhelming quantity of available data. Second, the final chapter of *Quantitative Investment Analysis* covers portfolio concepts and takes the reader beyond the traditional capital asset pricing model (CAPM) type of tools and into the more practical world of multifactor models and arbitrage pricing theory.

All books in the CFA Institute Investment Series are available through all major booksellers. All titles also are available on the Wiley Custom Select platform at http://customselect.wiley.com, where individual chapters for all the books may be mixed and matched to create custom textbooks for the classroom.

INTERNATIONAL FINANCIAL STATEMENT ANALYSIS

CHAPTER 1

INTRODUCTION TO FINANCIAL STATEMENT ANALYSIS

Elaine Henry, PhD, CFA
Thomas R. Robinson, PhD, CFA

LEARNING OUTCOMES

After completing this chapter, you will be able to do the following:

- describe the roles of financial reporting and financial statement analysis;
- describe the roles of the statement of financial position, statement of comprehensive income, statement of changes in equity, and statement of cash flows in evaluating a company's performance and financial position;
- describe the importance of financial statement notes and supplementary information—including disclosures of accounting policies, methods, and estimates—and management's commentary;
- describe the objective of audits of financial statements, the types of audit reports, and the importance of effective internal controls;
- identify and describe information sources that analysts use in financial statement analysis besides annual financial statements and supplementary information;
- describe the steps in the financial statement analysis framework.

1. INTRODUCTION

Financial analysis is the process of examining a company's performance in the context of its industry and economic environment in order to arrive at a decision or recommendation. Often, the decisions and recommendations addressed by financial analysts pertain to providing capital to companies—specifically, whether to invest in the company's debt or equity securities and at what price. An investor in debt securities is concerned about the company's ability to pay interest and to repay the principal lent. An investor in equity securities is an owner with a residual interest in the company and is concerned about the company's ability to pay dividends and the likelihood that its share price will increase.

Overall, a central focus of financial analysis is evaluating the company's ability to earn a return on its capital that is at least equal to the cost of that capital, to profitably grow its operations, and to generate enough cash to meet obligations and pursue opportunities.

Fundamental financial analysis starts with the information found in a company's financial reports. These financial reports include audited financial statements, additional disclosures required by regulatory authorities, and any accompanying (unaudited) commentary by management. Basic financial statement analysis—as presented in this chapter—provides a foundation that enables the analyst to better understand other information gathered from research beyond the financial reports.

This chapter is organized as follows: Section 2 discusses the scope of financial statement analysis. Section 3 describes the sources of information used in financial statement analysis, including the primary financial statements (statement of financial position or balance sheet, statement of comprehensive income, statement of changes in equity, and cash flow statement). Section 4 provides a framework for guiding the financial statement analysis process. A summary of the key points concludes the chapter.

2. ROLES OF FINANCIAL REPORTING AND FINANCIAL STATEMENT ANALYSIS

The role of financial statements issued by companies is to provide information about a company's performance, financial position, and changes in financial position that is useful to a wide range of users in making economic decisions. The role of financial statement analysis is to use financial reports prepared by companies, combined with other information, to evaluate the past, current, and potential performance and financial position of a company for the purpose of making investment, credit, and other economic decisions. Managers within a company perform financial analysis to make operating, investing, and financing decisions but do not necessarily rely on analysis of related financial statements. They have access to additional financial information that can be reported in whatever format is most useful to their decision.

In evaluating financial reports, analysts typically have a specific economic decision in mind. Examples of these decisions include the following:

- Evaluating an equity investment for inclusion in a portfolio.
- Evaluating a merger or acquisition candidate.
- Evaluating a subsidiary or operating division of a parent company.
- Deciding whether to make a venture capital or other private equity investment.
- Determining the creditworthiness of a company in order to decide whether to extend a loan to the company and if so, what terms to offer.
- Extending credit to a customer.
- Examining compliance with debt covenants or other contractual arrangements.
- Assigning a debt rating to a company or bond issue.
- Valuing a security for making an investment recommendation to others.
- Forecasting future net income and cash flow.

These decisions demonstrate certain themes in financial analysis. In general, analysts seek to examine the past and current performance and financial position of a company in order to form expectations about its future performance and financial position. Analysts are also concerned about factors that affect risks to a company's future performance and financial position. An examination of performance can include an assessment of a company's profitability (the ability to earn a profit from delivering goods and services) and its ability to generate positive cash flows (cash receipts in excess of cash disbursements). Profit and cash flow are not equivalent. Profit (or loss) represents the difference between the prices at which goods or services are provided to customers and the expenses incurred to provide those goods and services.

In addition, profit (or loss) includes other income (such as investing income or income from the sale of items other than goods and services) minus the expenses incurred to earn that income. Overall, profit (or loss) equals income minus expenses, and its recognition is mostly independent from when cash is received or paid. Example 1 illustrates the distinction between profit and cash flow.

EXAMPLE 1 Profit versus Cash Flow

Sennett Designs (SD) sells furniture on a retail basis. SD began operations during December 2017 and sold furniture for €250,000 in cash. The furniture sold by SD was purchased on credit for €150,000 and delivered by the supplier during December. The credit terms granted by the supplier required SD to pay the €150,000 in January for the furniture it received during December. In addition to the purchase and sale of furniture, in December, SD paid €20,000 in cash for rent and salaries.

1. How much is SD's profit for December 2017 if no other transactions occurred?
2. How much is SD's cash flow for December 2017?
3. If SD purchases and sells exactly the same amount in January 2018 as it did in December and under the same terms (receiving cash for the sales and making purchases on credit that will be due in February), how much will the company's profit and cash flow be for the month of January?

Solution to 1: SD's profit for December 2017 is the excess of the sales price (€250,000) over the cost of the goods that were sold (€150,000) and rent and salaries (€20,000), or €80,000.

Solution to 2: The December 2017 cash flow is €230,000, the amount of cash received from the customer (€250,000) less the cash paid for rent and salaries (€20,000).

Solution to 3: SD's profit for January 2018 will be identical to its profit in December: €80,000, calculated as the sales price (€250,000) minus the cost of the goods that were sold (€150,000) and minus rent and salaries (€20,000). SD's cash flow in January 2018 will also equal €80,000, calculated as the amount of cash received from the customer (€250,000) minus the cash paid for rent and salaries (€20,000) *and* minus the €150,000 that SD owes for the goods it had purchased on credit in the prior month.

Although profitability is important, so is a company's ability to generate positive cash flow. Cash flow is important because, ultimately, the company needs cash to pay employees, suppliers, and others in order to continue as a going concern. A company that generates positive cash flow from operations has more flexibility in funding needed for investments and taking advantage of attractive business opportunities than an otherwise comparable company without positive operating cash flow. Additionally, a company needs cash to pay returns (interest and dividends) to providers of debt and equity capital.

The expected magnitude of future cash flows is important in valuing corporate securities and in determining the company's ability to meet its obligations. The ability to meet short-term obligations is generally referred to as **liquidity**, and the ability to meet long-term obligations is generally referred to as **solvency**. Cash flow in any given period is not, however, a complete measure of performance for that period because, as shown in Example 1, a company may be obligated to make future cash payments as a result of a transaction that generates positive cash flow in the current period.

Profits may provide useful information about cash flows, past and future. If the transaction of Example 1 were repeated month after month, the long-term average monthly cash flow of SD would equal €80,000, its monthly profit. Analysts typically not only evaluate past profitability but also forecast future profitability.

Exhibit 1 shows how news coverage of corporate earnings announcements places corporate results in the context of analysts' expectations. Panel A shows the earnings announcement, and Panel B shows a sample of the news coverage of the announcement. Earnings are also frequently used by analysts in valuation. For example, an analyst may value shares of a company by comparing its price-to-earnings ratio (P/E) to the P/Es of peer companies and/or may use forecasted future earnings as direct or indirect inputs into discounted cash flow models of valuation.

EXHIBIT 1 An Earnings Release and News Media Comparison with Analysts' Expectations

Panel A: Excerpt from Apple Earnings Release

Apple Reports Second Quarter Results
Revenue Grows 16 Percent and EPS Grows 30 Percent to New March Quarter Records
New $100 Billion Share Repurchase Authorization Announced, Dividend Raised by 16 Percent

> Cupertino, California—May 1, 2018—Apple today announced financial results for its fiscal 2018 second quarter ended March 31, 2018. The Company posted quarterly revenue of $61.1 billion, an increase of 16 percent from the year-ago quarter, and quarterly earnings per diluted share of $2.73, up 30 percent. International sales accounted for 65 percent of the quarter's revenue.
>
> "We're thrilled to report our best March quarter ever, with strong revenue growth in iPhone, Services and Wearables," said Tim Cook, Apple's CEO. "Customers chose iPhone X more than any other iPhone each week in the March quarter, just as they did following its launch in the December quarter. We also grew revenue in all of our geographic segments, with over 20 percent growth in Greater China and Japan."
>
> "Our business performed extremely well during the March quarter, as we grew earnings per share by 30 percent and generated over $15 billion in operating cash flow," said Luca Maestri, Apple's CFO. "With the greater flexibility we now have from access to our global cash, we can more efficiently invest in our US operations and work toward a more optimal capital structure. Given our confidence in Apple's future, we are very happy to announce that our Board has approved a new $100 billion share repurchase authorization and a 16 percent increase in our quarterly dividend."

EXHIBIT 1 (Continued)

The Company will complete the execution of the previous $210 billion share repurchase authorization during the third fiscal quarter.

Reflecting the approved increase, the Board has declared a cash dividend of $0.73 per share of Apple's common stock payable on May 17, 2018 to shareholders of record as of the close of business on May 14, 2018.

The Company also expects to continue to net-share-settle vesting restricted stock units.

From the inception of its capital return program in August 2012 through March 2018, Apple has returned $275 billion to shareholders, including $200 billion in share repurchases. The management team and the Board will continue to review each element of the capital return program regularly and plan to provide an update on the program on an annual basis.

Apple is providing the following guidance for its fiscal 2018 third quarter:

- revenue between $51.5 billion and $53.5 billion
- gross margin between 38 percent and 38.5 percent
- operating expenses between $7.7 billion and $7.8 billion
- other income/(expense) of $400 million
- tax rate of approximately 14.5 percent

Apple will provide live streaming of its Q2 2018 financial results conference call beginning at 2:00 p.m. PDT on May 1, 2018 at www.apple.com/investor/earnings-call/. This webcast will also be available for replay for approximately two weeks thereafter.

Source: https://www.apple.com/newsroom/2018/05/apple-reports-second-quarter-results/ (retrieved 3 November 2018).

Panel B: Excerpt from News Article: Apple Second Quarter 2018 Earnings Release

Apple reported quarterly earnings and revenue on Tuesday that beat expectations, but sold fewer iPhones than expected.

Shares rose as much 5 percent after hours, as investors digested the company's better-than-expected outlook for the current quarter, and a hefty capital return program.

The soft iPhone sales were still up from a year ago, and Apple CEO Tim Cook said in a statement that customers "chose iPhone X more than any other iPhone each week in the March quarter."

- Earnings per share: $2.73 vs. $2.67, adjusted, expected by a Thomson Reuters consensus estimate
- Revenue: $61.1 billion vs. $60.82 billion expected by Thomson Reuters consensus
- iPhone unit sales: 52.2 million vs. 52.54 million expected by a StreetAccount estimate
- Fiscal Q3 revenue guidance: $51.5 billion to $53.5 billion vs. $51.61 billion expected by Thomson Reuters consensus

Net income was $13.82 billion, up from $11.03 billion a year ago. A year ago, Apple earned $2.10 a share on revenue of $52.9 billion.

Source: https://cnbc.com/2018/05/01/apple-earnings-q2-2018.html (retrieved November 3, 2018).

Analysts are also interested in the financial position of a company. The financial position can be measured by comparing the resources controlled by the company (**assets**) in relation to the claims against those resources (**liabilities** and **equity**). The combination of liabilities and equity used to finance its assets represents the capital structure of the company. An example of a resource is cash. In Example 1, if no other transactions occur, the company should have €230,000 more in cash at December 31, 2017 than at the start of the period. The cash can be used by the company to pay its obligation to the supplier (a claim against the company) and may also be used to make distributions to the owner (who has a residual claim against the company's assets, net of liabilities).

Financial position and capital structure are particularly important in credit analysis, as depicted in Exhibit 2. Panel A of the exhibit is an excerpt from the company's annual earnings release highlighting the cumulative profitability, strong cash flow, strong balance sheet, and strong return on invested capital. Panel B of the exhibit is an excerpt from an August 2017 news article about an increase in the credit rating of Southwest Airlines due to a long history of profitability and a conservative capital structure.

EXHIBIT 2

Panel A: Excerpt from Earnings Announcement by Southwest Airlines

Southwest Airlines Reports Fourth Quarter and Record Annual Profit; 44th Consecutive Year of Profitability

DALLAS, Jan. 26, 2017 /PRNewswire/ -- Southwest Airlines Co. (NYSE:LUV) (the "Company") today reported its fourth quarter and annual 2016 results:

Fourth quarter net income of $522 million, or $.84 per diluted share, compared with fourth quarter 2015 net income of $536 million, or $.82 per diluted share.

Excluding special items, fourth quarter net income of $463 million, or $.75 per diluted share, compared with fourth quarter 2015 net income of $591 million, or $.90 per diluted share. This exceeded the First Call fourth quarter 2016 consensus estimate of $.70 per diluted share.

Record annual net income of $2.24 billion, or $3.55 per diluted share, compared with 2015 net income of $2.18 billion, or $3.27 per diluted share.

Excluding special items, record annual net income of $2.37 billion, or $3.75 per diluted share, compared with 2015 net income of $2.36 billion, or $3.52 per diluted share.

Annual operating income of $3.76 billion, resulting in an operating margin of 18.4 percent.

Excluding special items, annual operating income of $3.96 billion, resulting in an operating margin of 19.4 percent.

Record annual operating cash flow of $4.29 billion, and record annual free cash flow of $2.25 billion.

Returned $1.97 billion to Shareholders in 2016, through a combination of $222 million in dividends and $1.75 billion in share repurchases.

Annual return on invested capital (ROIC) of 30.0 percent.

Gary C. Kelly, Chairman of the Board and Chief Executive Officer, stated, "We are delighted to report record annual profits for 2016, our 44th consecutive year of profitability. Our total operating revenues reached a record $20.4 billion, with sustained demand for our legendary low fares and superior Customer Service. Our profit