

# FINANCIAL STATEMENT ANALYSIS

## Lecture 1

### INTRODUCTION TO FINANCIAL STATEMENT ANALYSIS

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Financial statement analysis (FSA) is an essential and significant part of the broader field of business analysis. **Business analysis** is the practice of appraising a company's or any other business entity economic prospects and risks. This includes analyzing a company's or any other business entity business environment, the strategies adopted based on the operating environment, and its financial position and performance as captured in the financial statements. Business analysis is beneficial in a wide variety of business decisions such:

#### 1. Revenues

Revenues are any business entity main source of cash. The quantity, quality and timing of revenues can determine long-term success. Key areas related to revenue include:

- **Revenue growth** where you should compare current period revenue with previous periods' revenues and determine whether a business performance has improved, declined or stagnated.
- **Revenue concentration** this involves considering the revenue made from a single customer in relation to the total revenue generated. If a single customer generates a high percentage of your revenues, you are exposed to higher risk of financial difficulty if that customer stops buying or fails to pay.
- **Revenue per employee** this is calculated by dividing the revenue generated with the average number of employees. This ratio is a good indicator of business's productivity. The higher the ratio, the better. For example many highly successful companies achieve over \$1 million in annual revenue per employee.

#### 2. Profits

Any business entity should produce quality profits consistently otherwise the business may not survive in the long term. Of critical consideration are the various profits which include:

- **Gross profit margin**  $(\text{Total revenues} - \text{cost of sales}) \div \text{total revenues}$ . A healthy gross profit margin allows you to absorb shocks to revenues or cost of sales without losing the ability to pay for arising obligations.
- **Operating profit margin**  $(\text{Total revenues} - \text{cost of sales} - \text{operating expenses}) \div \text{total revenues}$ . A healthy operating profit margin indicates the company's ability to make a profit regardless of how you finance operations (debt or equity). The higher the operating profit margin, the better.
- **Net profit margin**  $(\text{Total revenues} - \text{cost of sales} - \text{all expenses}) \div \text{total revenues}$ . A high net profit margin is a good indicator of financial health of a business entity.

### 3. Operational Efficiency

Operational efficiency is a measure how well a business entity is using the resources at its disposal. Poor operational efficiency will result to lower profits and weaker long term growth. Of critical consideration are the various indicators which include:

- **Accounts receivables turnover** ( $\text{net credit sales} \div \text{average accounts receivable}$ ). This ratio evaluates how efficiently a business entity is able to manage the credit extended to customers. A higher turnover value means the company is managing its credit well; a lower value is a warning sign that the entity should manage its receivables better.
- **Inventory turnover** ( $\text{cost of sales} \div \text{average inventory}$ ). This ratio evaluates how efficiently a business entity is able to manage inventory. A higher inventory turnover is a good indicator of operational efficiency while a lower value implies that the entity is either not making good sales or it is producing too much inventory in comparison to the current level of sales.

### 4. Capital Efficiency and Solvency

Capital efficiency refers to seeking to grow profitably without overinvesting to gain customers and drive revenue. Capital efficiency and solvency are of interest to lenders and investors who may focus on the following measures:

- **Return on equity** ( $\text{net income} \div \text{shareholder's equity}$ ). This ratio depicts the return investors are generating from the business entity. The higher, the better.
- **Debt to equity** ( $\text{debt} \div \text{equity}$ ). This indicates how much leverage a business entity is using to operate. Leverage should not be too high to the extent of impairing the business operations.

### 5. Liquidity

Liquidity analysis focuses on the ability of a business entity to generate sufficient cash flows to cover arising expenses. Liquidity is very critical for the survival of any business entity and thus entities should aim at maintaining healthy liquidity ratios.

### Definition of financial statement analysis

Different books and authors have defined financial statement analysis in different ways. Below are a few of such definitions:

1. Financial statement analysis is largely a postmortem of the transactional activities of a business firm as recorded in the accounts books so as to judge the operational ability, profitability and financial soundness. Each element in the financial statements carry specific meaning and may not be understood by all the users of the statements. In the financial statement analysis, effort is made to present the elements in a more understandable manner and, underlying relationship between the related elements is established. By doing so, the analyst performs his duty, assisting the users of the statements to make financial decisions. Thus, financial statement analysis serves two important functions: examinations of past activities of a business firm,

viz, operating and financial, and, providing a base for planning and forecasting future course of action on the basis of interpretations and comments (Sikidar, S., & Gautam, H., 2019).

2. Financial analysis is the use of financial statements to analyze a company's financial position and performance, and to assess future financial performance. Several questions can help focus financial analysis. One set of questions is future oriented. For example, does a company have the resources to succeed and grow? Does it have resources to invest in new projects? What are its sources of profitability? What is the company's future earning power? A second set involves questions that assess a company's track record and its ability to deliver on expected financial performance. For example, how strong is the company's financial position? How profitable is the company? Did earnings meet analyst forecasts? This includes an analysis of why a company might have fallen short of (or exceeded) expectations (Subramanyam, K. R., 2014).

**In summary, financial statement analysis** is the application of analytical tools and techniques to general-purpose financial statements and related data to derive estimates and inferences useful in business analysis. Financial statement analysis reduces reliance on hunches, guesses, and intuition for business decisions. It decreases the uncertainty of business analysis. It does not lessen the need for expert judgment but, instead, provides a systematic and effective basis for business analysis.

### **Introduction to Business Analysis**

Financial statement analysis is part of business analysis. As earlier indicated, business analysis is the appraisal of a business entity prospects and risks for the purpose of making appropriate business decisions. These business decisions extend to decisions related to credit risk assessment, equity and debt valuation, earnings predictions, audit testing, compensation negotiations, and countless other business decisions.

Business analysis helps in making knowledgeable and appropriate decisions by helping guide the decision making activities through an evaluation of a company's business environment, its strategies, and its financial position and performance.

### **Types of Business Analysis**

Financial statement analysis is an important and integral part of business analysis. The key objective of business analysis is to enhance business decisions by evaluating available information about a company's financial situation, its management, its plans and adopted strategies, and its prevailing business environment. Business analysis is critical in guiding decisions made by corporate bankers, security analysts, fund managers, investment advisors, credit raters, investment bankers, individual investors and other interested parties. The major types of business analysis include.

## 1. Credit Analysis

Credit analysis is a type of analysis that an analyst carries out on business entities to determine their ability to satisfy their debt obligations. The aim of the credit analysis is to decide on the precise level of default risk associated with investing or advancing debt in that particular entity besides determining the level of debt that can comfortably be advanced to a business entity without exposing the lender to unnecessary levels of debt default risk.

In credit financing, a significant element is the fixed nature of benefits to creditors. That is, should a business entity prosper; creditors' benefits are limited to the debt contract's rate of interest or to the profit margins on goods or services delivered. However, creditors bear the *risk of default*. This means a creditor's interest and principal are jeopardized when a borrower encounters financial difficulties. This asymmetric relation of a creditor's risk and return has a major impact on the creditor's perspective, including the manner and objectives of credit analysis.

Credit analysis can thus be said to be the evaluation of the creditworthiness of a business entity. *Creditworthiness* is the ability of a business entity to honor its credit obligations. Stated differently, it is the ability of a company to pay its bills. Accordingly, the main focus of credit analysis is on risk, not profitability. Variability in profits, especially the sensitivity of profits to downturns in business, is more important than profit levels. Profit levels are important only to the extent they reflect the margin of safety for a company in meeting its obligations.

Credit analysis focuses on downside risk instead of upside potential as the downside risk has more significant negative effect on the viability of a business entity. This includes analysis of both liquidity and solvency.

- **Liquidity** this is a business entity ability to raise cash in the short term to meet its maturing obligations. Liquidity depends on a business entity's cash flows and the makeup of its current assets and current liabilities. Any business entity should strive to maintain healthy level of liquidity.
- **Solvency** this is a business entity long run feasibility and capacity to pay long-term maturing obligations. It depends on both a business entity long-term profitability and its capital (financing) structure.

The tools of credit analysis and their benchmarks for evaluation differ with the term (maturity), type, and purpose of the debt contract. With long-term credit, including bond valuation, creditors require more detailed and forward-looking analysis. Long-term credit analysis includes projections of cash flows and evaluation of extended profitability (also called *sustainable earning power*) while for short-term credit, creditors are concerned with current financial conditions, cash flows, and the liquidity of current assets. Extended profitability is a main source of assurance of a company's ability to meet long-term interest and principal payments (Subramanyam, K. R., 2014).

## 2. Equity Analysis

Equity analysis is the process of analysing sectors and companies with the aim of determining how the shares have been performing over a given period of time. Equity investors provide funds to a company in return for the risks and rewards of ownership. Equity investors are major providers of company financing and therefore hold a significant stake in the company and are therefore concerned with the wellbeing of the company. Equity investors are therefore interested in knowing how well a given company is performing and therefore the performance of the company shares is critical to them.

When a company is having financial issues, equity investors are the first to absorb losses or lose their expected income even though their losses are usually limited to the amount invested. When a company prospers, equity investors share in the gains with unlimited upside potential. Thus, unlike credit analysis, equity analysis is symmetric in that there is need to assess both downside risks and upside potential. This exposes equity investors to all aspects of a company's financial condition and performance whether positive or negative and therefore the analysis done under equity analysis should be the most demanding and comprehensive of all types of analysis.

Two common approaches used in equity analysis include:

- **Technical analysis**, or charting, is an evaluation approach that searches for patterns in the price or volume history of a stock to predict future price movements. The diagram below depicts the trend of a given company share:

**Figure 1**  
Trend analysis graph



Source: forex.com

Experts have been able to determine that markets can only move up, down, or sideways. Prices typically move in a zigzag fashion, and as a result, price action has only two states:

- **Range:** this is when prices zigzag sideways as shown above.

- **Trend:** this is when prices either zigzag higher (up trend, or bull trend), or prices zigzag lower (down trend, or bear trend) as shown above.

Technical analysis is based on the theory that the markets are chaotic but at the same time, price action is not entirely random. Based on the mathematical Chaos Theory that argues that within a state of chaos there are identifiable patterns that tend to repeat, investors in shares can search for such patterns and leverage on them when investing.

- **Fundamental analysis,** is an evaluation approach which is more widely accepted and applied. It is the process of determining the value of a company by analyzing and interpreting key factors for the economy, the industry, and the company. A main part of fundamental analysis is evaluation of a company's financial position and performance.

A major objective of fundamental analysis is to determine intrinsic value, also called *fundamental value*. **Intrinsic value** is the value of a company (or its stock) determined through fundamental analysis without reference to its market value (or stock price). While a company's market value can equal or approximate its intrinsic value, this is not necessary. An investor's strategy with fundamental analysis is straightforward: buy when a stock's intrinsic value exceeds its market value, sell when a stock's market value exceeds its intrinsic value and hold when a stock's intrinsic value approximates its market value.

To determine intrinsic value, it is essential for a financial analyst to forecast a company's earnings or cash flows and determine its risk. This is realized through a comprehensive, in-depth analysis of a company's business projections and its financial statements. Once a company's future profitability and risk are estimated, the analyst uses a valuation model to convert these estimates into a measure of intrinsic value.

### **Users of Business Analysis information**

Business analysis and financial statement analysis are intended to inform on various issues, assist different categories of users to make appropriate financial decisions and are important in a number of other contexts. Some of the users and the contexts in which financial statement analysis is used include:

**Managers.** Analysis of financial statements can afford managers with concrete and information related to strategic changes in operating, investing, and financing activities. Managers can also analyze the businesses and financial statements of competing companies to evaluate a competitor's profitability and risk and thus have an appropriate basis of comparison. Such analysis allows for *inter firm comparisons*, both to evaluate relative strengths and weaknesses and to *benchmark* performance.

**Directors.** These are the elected representatives of the shareholders, directors are responsible for protecting the shareholders' interests by vigilantly overseeing the company's activities. Both business analysis and financial statement analysis aid directors in fulfilling their oversight responsibilities through evaluating the effectiveness of various management decisions.

**Regulators.** There are various regulators such tax authorities, institutions involved in product standardization, monitoring agencies etc. who will use the tools of financial statement analysis to audit tax returns and check the reasonableness of reported amounts besides carrying out other regulatory duties.

**Labor unions.** Labor unions will leverage on the business performance in collective bargaining negotiations. In the scenarios where the business performance has been good, they will be able to agitate for higher pay for their members by arguing that the members contributed to the superior performance.

**Customers.** In the instance where the customer has a long term relationship with the company, they will be interested in the long term performance of the business entity e.g. when a customer buys a product that will last for several years such as a car, the customer needs to be assured of constant spare parts and service.

**Public.** The activities of a business entity have a direct and indirect effect on the welfare of the surrounding community. The community is interested in an entity's contribution toward the locality in which it operates, its corporate social responsibility updates, the employment opportunities presented by the entity, its environmental track record, etc.

**Lenders.** Lenders such as banks, microfinance institutions etc. are interested in information that enables them to determine whether their loans and the interest earned on them will be paid by the business entity when due.

**Suppliers and other trade creditors.** Suppliers and other creditors are interested in information that enables them to determine whether to advance credit, whether amounts owing to them will be paid when due and whether the demand from the business entity it is trading with is going to increase, decrease, or stagnate.

**Investors and Financial Analysts:** Investors need the information to estimate the intrinsic value of the entity and to decide whether to buy, hold, or sell the entity's shares. Equity research analysts use financial statements to conduct their research on earnings expectations and price targets.

**Employee groups.** Employees and their representative groups are interested in information about the solvency and profitability of their employers to decide about their careers, assess their bargaining power, and set a target wage for themselves.

**Mergers, acquisitions, and divestitures.** Business analysis is performed whenever a company restructures its operations, through mergers, acquisitions, divestitures, and spin-offs. Investment bankers need to identify potential targets and determine their values, and security analysts need to determine whether and how much additional value is created by the merger for both the acquiring and the target companies.

**Financial management.** Managers must evaluate the impact of financing decisions and dividend policy on company value. Business analysis helps assess the impact of financing decisions on both future profitability and risk.

### **Components of Business Analysis**

Business analysis encompasses several interrelated processes. These are;

#### **1. Business Environment and Strategy Analysis**

Analysis of a company's future prospects is one of the most important aims of business analysis. It is a subjective and complex task as one measure can be interpreted differently depending on the setting and the analyst. To effectively carry out business environment and strategy analysis it is best to adopt an interdisciplinary perspective. For example SWOT and PESTLE would be appropriate when analyzing the business environment. Analysis of the business environment seeks to identify and assess a company's economic and industry circumstances. This includes analysis of its product, labor, and capital markets within its economic and regulatory setting.

Analysis of business strategy seeks to identify and assess a company's competitive strengths and weaknesses along with its opportunities and threats. Business environment and strategy analysis consists of two parts—industry analysis and strategy analysis.

- **Industry analysis** is the usual first step since the prospects and structure of its industry largely drive a company's profitability. Industry analysis is often done using the framework proposed by Porter (1980, 1985) or value chain analysis.

Under this framework, an industry is viewed as a collection of competitors that jockey for bargaining power with consumers and suppliers and that actively compete among themselves and face threats from new entrants and substitute products. Industry analysis must assess both the industry prospects and the degree of actual and potential competition facing a company.

- **Strategy analysis** is the evaluation of both a company's business decisions and its success at establishing a competitive advantage. This includes assessing a company's expected strategic responses to its business environment and the impact of these responses on its future success and growth. Strategy analysis requires scrutiny of a company's competitive strategy for its product mix and cost structure.

Business environment and strategy analysis requires knowledge of both economic and industry forces. It also requires knowledge of strategic management, business policy, production, logistics management, marketing, and managerial economics.

## 2. Accounting Analysis

**Accounting analysis** is a process of evaluating the extent to which a company's accounting reflects economic reality. This is done by studying a company's transactions and events, assessing the effects of its accounting policies on financial statements and adjusting the statements to both better reflect the underlying economics and make them more amenable to analysis. Financial statements are the primary source of information for financial analysis. This means the quality of financial analysis depends on the reliability of financial statements that in turn depends on the quality of accounting analysis. Accounting analysis is especially important for comparative analysis.

Accounting is a process involving judgment guided by fundamental principles. While accounting principles are governed by standards, the complexity of business transactions and events makes it impossible to adopt a uniform set of accounting rules for all companies and all time periods. Moreover, most accounting standards evolve as part of a political process to satisfy the needs of diverse individuals and their sometimes conflicting interests. These individuals include *users* such as investors, creditors, and analysts; *preparers* such as corporations, partnerships, and proprietorships; *regulators* such as the Financial Accounting Standards Board; and still others such as auditors, lawyers, and educators. Accordingly, accounting standards sometimes fail to meet the needs of specific individuals. Another factor potentially impeding the reliability of financial statements is error from accounting estimates that can yield incomplete or imprecise information.

These accounting limitations affect the usefulness of financial statements and can yield at least two problems in analysis. First, lack of uniformity in accounting leads to comparability problems.

**Comparability problems** arise when different companies adopt different accounting for similar transactions or events. Comparability problems also arise when a company changes its accounting across time, leading to difficulties with temporal comparability.

Second, discretion and imprecision in accounting can distort financial statement information. **Accounting distortions** are deviations of accounting information from the underlying economics. These distortions occur in at least three forms.

- (1) Managerial estimates can be subject to honest errors or omissions. This *estimation error* is a major cause of accounting distortions.
- (2) Managers might use their discretion in accounting to manipulate or window-dress financial statements. This *earnings management* can cause accounting distortions.
- (3) Accounting standards can give rise to accounting distortions from a failure to capture economic reality.

These three types of accounting distortions create accounting risk in financial statement analysis. **Accounting risk** is the uncertainty in financial statement analysis due to accounting distortions.

A major goal of accounting analysis is to evaluate and reduce accounting risk and to improve the economic content of financial statements, including their comparability. Meeting this goal usually requires restatement and reclassification of financial statements to improve their economic content and comparability. The type and extent of adjustments depend on the analysis. For example, adjustments for equity analysis can differ from those for credit analysis.

Accounting analysis includes evaluation of a company's *earnings quality* or, more broadly, its accounting quality. Evaluation of earnings quality requires analysis of factors such as a company's business, its accounting policies, the quantity and quality of information disclosed, the performance and reputation of management, and the opportunities and incentives for earnings management. Accounting analysis also includes evaluation of earnings persistence, sometimes called *sustainable earning power*.

### 3. Financial Analysis

**Financial analysis** is the use of financial statements to analyze a company's financial position and performance, and to assess future financial performance. Several questions can help focus financial analysis. One set of questions is future oriented. For example, does a company have the resources to succeed and grow? Does it have resources to invest in new projects? What are its sources of profitability? What is the company's future earning power?

A second set involves questions that assess a company's track record and its ability to deliver on expected financial performance. For example, how strong is the company's financial position? How profitable is the company? Did earnings meet analyst forecasts? This includes an analysis of why a company might have fallen short of (or exceeded) expectations.

Financial analysis consists of three broad areas—profitability analysis, risk analysis, and analysis of sources and uses of funds.

- **Profitability analysis** is the evaluation of a company's return on investment. It focuses on a company's sources and levels of profits and involves identifying and measuring the impact of various profitability drivers. It also includes evaluation of the two major sources of profitability—margins (the portion of sales not offset by costs) and turnover (capital utilization). Profitability analysis also focuses on reasons for changes in profitability and the sustainability of earnings.
- **Risk analysis** is the evaluation of a company's ability to meet its commitments. Risk analysis involves assessing the solvency and liquidity of a company along with its earnings variability. Because risk is of foremost concern to creditors, risk analysis is often discussed in the context of credit analysis. Still, risk analysis is important to

equity analysis, both to evaluate the reliability and sustainability of company performance and to estimate a company's cost of capital.

- **Analysis of cash flows** is the evaluation of how a company is obtaining and deploying+ its funds. This analysis provides insights into a company's future financing implications. For example, a company that funds new projects from internally generated cash (profits) is likely to achieve better future performance than a company that either borrows heavily to finance its projects or, worse, borrows to meet current losses.

#### 4. Prospective Analysis

**Prospective analysis** is the forecasting of future payoffs—typically earnings, cash flows, or both. This analysis draws on accounting analysis, financial analysis, and business environment and strategy analysis. The output of prospective analysis is a set of expected future payoffs used to estimate company value. While quantitative tools help improve forecast accuracy, prospective analysis remains a relatively subjective process.

Prospective analysis will aim at forecasting a business entity future performance with the aim of determining how well the company will fair in the near and long future. Through forecasting an analyst can be able to determine the financial health of the entity when the analyst focuses on the financial performance and position, the cash flows and their quality, the operating environment and strategies etc.

### QUESTIONS

1. Describe the different types of business analysis. Identify the category of users of financial statements that applies to each different type of business analysis.
2. Describe what you understand by fundamental analysis and explain its main objective.
3. Discuss the key component processes in business analysis.
4. Highlight the differences between credit analysis and equity analysis and explain how they impact the financial statement analysis.

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