

## A Study on Financial Ratio Analysis of Firms: A Tool for Decision Making

NALAJALA CHANDANA<sup>1</sup>, D. SRISAILAM<sup>2</sup>

<sup>1</sup>PG Scholar, Dept of Management, Teegala Krishna Reddy Engineering College (Autonomous), Medbowli, Meerpet, Hyderabad, Telangana, India.

<sup>2</sup>Assistant Professor, Dept of Management, Teegala Krishna Reddy Engineering College (Autonomous), Medbowli, Meerpet, Hyderabad, Telangana, India, Email: sri09143657@gmail.com.

**Abstract:** Financial analysis is a specialty in accounting that aimed at formulating a diagnosis and a prognosis relative to the situation and the financial performance of a company or an organization. This article is to present primarily the relationship between financial analysis and accounting, and the fundamental role which accounting holds, through the information it produces, into analysts' work. The research method is the bibliographic one, being studied timely books and articles of the domain. Literature does not provide concrete answers to this problem, resolutions being expected especially from practitioners.

**Keywords:** Financial Statement; Ratio Analysis; Firm Performance and Decision Making.

### I. INTRODUCTION

An efficient information system can provide relevant indicators to users based on accurate and real information and financial analysis results are based on a diagnosis of return and risk. Financial ratio analysis is a process of determining and interpreting relationships between the items of financial statements to provide a meaningful understanding of the performance and financial position of an enterprise. Ratio analysis is an accounting tool to present accounting variables in a simple, concise, intelligible and understandable form. Ratio analysis is a study of relationship among various financial factors in a business [1]. Thus, it seeks to measure the value of the entity and purpose which it pursues, financial analysis develops the steps of collecting, shaping and treatment of a range of management information which may clarify the wanted diagnosis and prognosis.

#### A. Purpose of the Study

This study examines how the use of financial ratio in accounting and financial management analysis helps the management to know the profitability, financial position and operating efficiency of an enterprise.

#### B. Object and Goals of the Study

The aim of this article is to present primarily the relationship between financial analysis and accounting, and the fundamental role which accounting holds, through the information it produces, into analysts' work. If ratio analysis is to judge the earning capacity, financial soundness and

operating efficiency of a business organization, then, the use of ratio in accounting and financial management analysis would be of helps for the management to know the profitability, financial position and operating efficiency of an enterprise. To achieve its objectives is striving to make an assessment of the level and variability of results and risks affecting the enterprise bankruptcy. Thus, it seeks to measure the value of the entity as it's stated above. Given the nature and purpose which it pursues, financial analysis develops the steps of collecting, shaping and treatment of a range of management information which may clarify the wanted diagnosis and prognosis. Financial statement analysis is an integral and important part of the broader field of business analysis while business analysis is the process of evaluating a company's economic prospects and risks.

This includes analyzing a company's business environment, its strategies, and its financial position and performance [2]. Business analysis is useful in a wide range of business decisions such as whether to invest equity or in debt securities, whether to extend credit through short- or long-term loans, how to value a business in an initial public offering (IPO), and how to evaluate restructurings including mergers, acquisitions, and divestitures. 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. Proper analysis and interpretation of information is crucial to good business analysis. This is the role of financial statement analysis. Through it, an analyst will better understand and interpret both qualitative and quantitative financial information so that reliable inferences are drawn about company prospects and risks.

### II. TYPES OF BUSINESS ANALYSIS

Financial statement analysis is an important and integral part of business analysis. The goal of business analysis is to improve business decisions by evaluating available information about a company's financial situation, its management, its plans and strategies, and its business

environment. Business analysis is applied in many forms and is an important part of the decisions of security analysts, investment advisors, fund managers, investment bankers, credit raters, corporate bankers, and individual investors. This section considers major types of business analysis.

### A. Credit Analysis

Creditors lend funds to a company in return for a promise of repayment with interest. This type of financing is temporary since creditors expect repayment of their funds with interest. Creditors lend funds in many forms and for a variety of purposes. Trade (or operating) Trade creditors do not usually receive (explicit) interest for an extension of credit. Instead, trade creditors earn a return from the profit margins on the business transacted. Nontrade creditors (or debt holders) provide financing to a company in return for a promise, usually in writing, of repayment with interest (explicit or implicit) on specific future dates. This type of financing can be either short or long term and arises in a variety of transactions. In pure credit financing, an important element is the fixed nature of benefits to creditors. That is, should a company 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. Credit analysis is the evaluation of the creditworthiness of a company. Credit worthiness is the ability of a company to honor its credit obligations. Stated differently, it is the ability of a company to pay its bills. Credit analysis focuses on downside risk instead of upside potential. This includes analysis of both liquidity and solvency. Liquidity is a company's ability to raise cash in the short term to meet its obligations. Solvency is a company's long run viability and ability to pay long-term obligations. It depends on both a company's long-term profitability and its capital (financing) structure.

### B. Equity Analysis

Equity investors provide funds to a company in return for the risks and rewards of ownership. Equity investors are major providers of company financing. Equity financing, also called equity or share capital, offers a cushion or safeguard for all other forms of financing that are senior to it. This means equity investors are entitled to the distributions of a company's assets only after the claims of all other senior claimants are met, including interest and preferred dividends. As a result, equity investors are said to hold a residual interest.

### C. Fundamental Analysis

This is more widely accepted and applied, 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 goal 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 approximate its market value. To determine intrinsic value, an analyst must forecast a company's earnings or cash flows and determine its risk. This is achieved through a comprehensive, in-depth analysis of a company's business prospects 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. Intrinsic value is used in many contexts, including equity investment and stock selection, initial public offerings, private placements of equity, mergers and acquisitions, and the purchase/sale of companies without traded securities.

### D. Other Uses of Business Analysis

Business analysis and financial statement analysis are important in a number of other contexts.

**Managers:** Analysis of financial statements can provide managers with clues to strategic changes in operating, investing, and financing activities. Managers also analyze the businesses and financial statements of competing companies to evaluate a competitor's profitability and risk. Such analysis allows for inter firm comparisons, both to evaluate relative strengths and weaknesses and to benchmark performance.

**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.

**Directors:** As 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.

**Regulators:** The Internal Revenue Service applies tools of financial statement analysis to audit tax returns and check the reasonableness of reported amounts.

**Labor unions:** Techniques of financial statement analysis are useful to labor unions in collective bargaining negotiations.

**Customers:** Analysis techniques are used to determine the profitability (or staying power) of suppliers along with

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estimating the suppliers' profits from their mutual transactions. 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. Accounting analysis is often the least understood, appreciated, and effectively applied process in business analysis. Part of the reason might be that accounting analysis requires accounting knowledge. Analysts that lack this knowledge have a tendency to brush accounting analysis under the rug and take financial statements as reported. This is a dangerous practice because accounting analysis is crucial to any successful business or financial analysis.

### III. ANALYSIS TOOLS

This section gives preliminary exposure to five important sets of tools for financial analysis: Comparative financial statement analysis; Common-size financial statement analysis; Ratio analysis; Cash flow analysis and Valuation. Ratio analysis is among the most popular and widely used tools of financial analysis. Yet its role is often misunderstood and, consequently, its importance often overrated. A ratio expresses a mathematical relation between two quantities. A ratio of 200 to 100 is expressed as 2:1, or simply 2. While computation of a ratio is a simple arithmetic operation, its interpretation is more complex. To be meaningful, a ratio must refer to an economically important relation. For example, there is a direct and crucial relation between an item's sales price and its cost. Accordingly, the ratio of cost of goods sold to sales is important. In contrast, there is no obvious relation between freight costs and the balance of marketable securities.

### IV. CLASSIFICATION OR TYPES OF RATIOS

Liquidity Ratio; Financial Structure Ratio; Activity Ratio; Profitability Ratio & Coverage Ratio Liquidity Ratio (Short Term Solvency): It measures the short-term solvency, i.e., the firm's ability to pay its current dues. They comprise of Current Ratio and Liquid Ratio. Current Ratio or Working Capital Ratio is a relationship of current assets to current liabilities. Current Assets are the assets that are either in the form of cash or cash equivalents or can be converted into cash or cash equivalents in a short time (say, within a year's time) and Current Liabilities are repayable in a short time. It is calculated as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

#### Current Liabilities:

**Significance:** The objective of calculating Current Ratio is to assess the ability of the enterprise to meet its short-term liabilities promptly. It shows the number of times the current assets can be converted into cash to meet current liabilities. As a normal rule current assets should be twice the current liabilities. Low ratio indicates inadequacy of the enterprise to meet its current liabilities and inadequate working Capital. High Ratio is an indication of inefficient utilization of funds.

An enterprise should have a reasonable current ratio. Although there is no hard and fast rule yet a current ratio of 2:1 is considered satisfactory. Current Ratio is calculated at a particular date and not for a particular period.

#### A. The following items are included in current assets and Current Liabilities:

Current Assets	Current Liabilities
1. Cash and Bank Balance	1. Creditors
2. Debtors (after deducting provision)	2. Bills Payable
3. Bills Receivable (after deducting provision)	3. Bank Overdraft
4. Stock	4. Short-term Loans
5. Marketable Securities	5. Outstanding Expenses
6. Prepaid Expenses	6. Provision for Tax
7. Advance Payments	7. Unclaimed Dividend Payable
8. Accrued Interest	8. Cash Credit

#### Important Points:

1. Working Capital = Current Assts - Current Liabilities.
2. Total Debt = Total Outsider Liability = Long term Liability + short term Liability (current Liability).
3. Total assets = fixed assets + investment + Current assets

Liquidity Ratio or Liquid Ratio or Quick Ratio or Acid Test Ratio: Liquidity Ratio is a relationship of liquid assets with current liabilities and is computed to assess the short-term liquidity of the enterprise in its correct form. This is calculated as follows:

$$\text{Liquidity Ratio} = \frac{\text{Liquid assets or quick assets}}{\text{Current Liabilities}}$$

#### Current Liabilities:

Quick assets = Current assets - (stock + Prepaid Expenses)  
Liquid assets are the assets, which are either in the form of cash or cash equivalent or can be converted into cash within a very short period. Liquid assets include cash, bills receivable, marketable securities and debtors (excluding bad and Doubtful debts), etc. Stock is excluded from liquid assets as it may take some time before it is converted into cash. Similarly prepaid expenses do not provide cash at all and are thus excluded from liquid assets. A quick ratio of 1:1 is usually considered favorable, since for every Naira of current liabilities, there is a Naira of current assets. A high liquidity ratio compared to current ratio may indicate under stocking while a low liquidity ratio while a low liquidity ratio indicated overstocking.

#### B. Problem: Following is the Balance sheet of XYZ Limited as on 31st March 2021:

Liabilities	N	Assets	N
Equity Share Capital	24,000	Machinery and Equipment	45,000
2,400 shares of Rs. 10 each (fully paid)		Stock	12,000
Profit & Loss A/C	6,000	Sundry Debtors	9,000
10% Debentures Sundry	15,000	Cash at bank	2,280
Creditors	23,400	Prepaid Expenses	720
Provision for Taxation	600	--	--
	<u>69,000</u>		<u>69,000</u>

Compute the following Ratios:

- Current Ratio
- Liquid Ratio

On the basis of these calculations write about the conclusions you draw about the company.

Solution:

$$\begin{aligned} \text{Current Ratio} &= \frac{\text{Current assets}}{\text{Current Liabilities}} \\ &= \frac{\text{Stock} + \text{Debtors} + \text{Bank} + \text{Prepaid Expenses}}{\text{Creditors} + \text{Provision for Taxation}} \\ &= \frac{12,000 + 9,000 + 2,280 + 720}{23,400 + 600} \\ &= \frac{24,000}{24,000} = 1:1 \end{aligned}$$

Normally Current Assets should be twice the current liabilities. In this case current assets are just equal to current liabilities. Hence, the short term financial position of the company cannot be said to be satisfactory.

$$\begin{aligned} \text{Liquid Ratio} &= \frac{\text{Liquid assets or quick assets}}{\text{Current Liabilities}} \\ &= \frac{\text{Debtors} + \text{Cash at Bank}}{\text{Creditors} + \text{Provision for Taxation}} \\ &= \frac{9,000 + 2,280}{23,400 + 600} \\ &= \frac{11,280}{24,000} \\ &= 0.47:1 \end{aligned}$$

For satisfactory position Liquid ratio is 1:1. In this case it is half of its obligations and hence liquidity of the company is also unsatisfactory. Financial Structure/Solvency Ratio: The term 'solvency' implies ability of an enterprise to meet its indebtedness and thus conveys an enterprise's ability to meet its long – term obligations. Important solvency ratios are: Debt-Equity Ratio; Total assets to Debts Ratio and Proprietary Ratio. Debt-Equity Ratio- It is computed to ascertain the soundness of the long-term financial position of the firm. This ratio expresses the relationship between debt (external equities) and the equity (internal equities) Debt means long term loans, i.e., debentures, long-term loans from financial institution. Equity means shareholders' funds, i.e., preference share capital, equity share capital, reserves less losses and fictitious assets like preliminary expenses. The ratio is ascertained as follows:

$$\begin{aligned} \text{Debt- equity Ratio} &= \frac{\text{Debt (long-term loans)}}{\text{Equity (shareholders' Funds)}} \end{aligned}$$

Higher Ratio indicates risky financial position while lower ratio indicates safe financial position. Acceptable Debt-Equity Ratio is 2:1 which means debt can be twice the equity.

“This ratio is significant to access the soundness of long -term financial position. It also indicates the extent to which firm depends upon outsiders for its existence. It portrays the proportion of total funds acquired by a firm by way of loans”.

Total Assets to Debt Ratio: Total Assets includes fixed as well as current assets. However, it does not include fictitious assets like preliminary expenses, underwriting commission, share issue expenses, discount on issue of share etc and debt balance of profit and loss account. Long term Debts refer to debts that will mature after one year. It includes debentures, bonds, and loans from financial institutions.

$$\text{Total Assets to Debt Ratio} = \frac{\text{Total assets}}{\text{Total debts}}$$

### Long Term Debts:

Ideal Ratio is 2:1; it measures the safety margin available to the providers of long- term debts. A higher ratio represents higher security to lenders for extending long-term loans to the business. On the other hand, a low ratio represents a risky financial position as it means that the business depends heavily on outside loans for its existence. In other words, investment by the proprietors is low. Proprietary Ratio: It establishes the relationship between proprietor's funds and total assets. Proprietors fund means share capital + reserves + surplus, both of capital and revenue nature. Loss and fictitious assets are deducted. This ratio shows the extent to which the shareholders own the business. The difference between this ratio and 100 represents the ratio of total liabilities to total assets. It is computed as follows:

$$\text{Proprietary Ratio} = \frac{\text{Proprietor's funds or share holders' funds}}{\text{Total assets (excluding fictitious assets)}}$$

Higher the ratio the better it is for all concerned. Proprietary Ratio highlights the general financial position of the enterprise. This ratio is of great importance to the creditors to ascertain the proportion of shareholders' funds in the total assets employed in the firm. A high ratio indicates adequate safety for creditors, but a very high ratio indicates improper mix of proprietor's fund and loan funds, which results in lower return on investment. A low ratio indicates inadequacy or low safety cover for the creditors. It may lead to unwillingness of creditors to extend credit to the enterprise.

### V. CONCLUSION

Historical relations between the two disciplines, allow for the accounting as an information provider for the financial analysis and the latter as a specialty and value-oriented accounting information exploitation [4]. Undoubtedly, this historical report is always running in the work of financial analysts that the financial information they feed extensively with materials analysis. Indeed, many financial databases are in the form of statistical data collection, in which the structure of accounting information is hidden; the organization of these data favours statistical criteria pertinent to the portfolio management methods. Consequently, it tends to fade accounting model underlying the production of monographic data, which is the ultimate source of information relating to companies.

### VI. REFERENCES

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