

UNIT - V

FINANCIAL ANALYSIS THROUGH RATIOS

Ratio Analysis

Absolute figures are valuable but they standing alone convey no meaning unless compared with another. Accounting ratio show inter-relationships which exist among various accounting data. When relationships among various accounting data supplied by financial statements are worked out, they are known as accounting ratios.

Accounting ratios can be expressed in various ways such as:

1. a pure ratio says ratio of current assets to current liabilities is 2:1 or
2. a rate say current assets are two times of current liabilities or
3. a percentage say current assets are 200% of current liabilities.

Each method of expression has a distinct advantage over the other the analyst will selected that mode which will best suit his convenience and purpose.

Uses or Advantages or Importance of Ratio Analysis

Ratio Analysis stands for the process of determining and presenting the relationship of items and groups of items in the financial statements. It is an important technique of financial analysis. It is a way by which financial stability and health of a concern can be judged. The following are the main uses of Ratio analysis:

- (a) Useful in financial position analysis: Accounting reveals the financial position of the concern. This helps banks, insurance companies and other financial institution in lending and making investment decisions.
- (ii) Useful in simplifying accounting figures: Accounting ratios simplify, summaries and systematic the accounting figures in order to make them more understandable and in lucid form.
- (iii) Useful in assessing the operational efficiency: Accounting ratios helps to have an idea of the working of a concern. The efficiency of the firm becomes evident when analysis is based on accounting ratio. This helps the management to assess financial requirements and the capabilities of various business units.
- (iv) Useful in forecasting purposes: If accounting ratios are calculated for number of years, then a trend is established. This trend helps in setting up future plans and forecasting.

(v) Useful in locating the weak spots of the business: Accounting ratios are of great assistance in locating the weak spots in the business even though the overall performance may be efficient.

(vi) Useful in comparison of performance: Managers are usually interested to know which department performance is good and for that he compare one department with the another department of the same firm. Ratios also help him to make any change in the organisation structure.

Limitations of Ratio Analysis: These limitations should be kept in mind while making use of ratio analyses for interpreting the financial statements. The following are the main limitations of ratio analysis.

1. False results if based on incorrect accounting data: Accounting ratios can be correct only if the data (on which they are based) is correct. Sometimes, the information given in the financial statements is affected by window dressing, i. e. showing position better than what actually is.
2. No idea of probable happenings in future: Ratios are an attempt to make an analysis of the past financial statements; so they are historical documents. Now-a-days keeping in view the complexities of the business, it is important to have an idea of the probable happenings in future.
3. Variation in accounting methods: The two firms' results are comparable with the help of accounting ratios only if they follow the some accounting methods or bases. Comparison will become difficult if the two concerns follow the different methods of providing depreciation or valuing stock.
4. Price level change: Change in price levels make comparison for various years difficult.
5. Only one method of analysis: Ratio analysis is only a beginning and gives just a fraction of information needed for decision-making so, to have a comprehensive analysis of financial statements, ratios should be used along with other methods of analysis.
6. No common standards: It is very difficult to by down a common standard for comparison because circumstances differ from concern to concern and the nature of each industry is different.
7. Different meanings assigned to the some term: Different firms, in order to calculate ratio may assign different meanings. This may affect the calculation of ratio in different firms and such ratio when used for comparison may lead to wrong conclusions.
8. Ignores qualitative factors: Accounting ratios are tools of quantitative analysis only. But sometimes qualitative factors may surmount the quantitative aspects. The calculations derived from the ratio analysis under such circumstances may get distorted.

9. No use if ratios are worked out for insignificant and unrelated figure: Accounting ratios should be calculated on the basis of cause and effect relationship. One should be clear as to what cause is and what effect is before calculating a ratio between two figures.

Ratio Analysis: Ratio is an expression of one number in relation to another. It is one of the methods of analyzing financial statements. Ratio analysis facilitates the presentation of the information of the financial statements in simplified and summarized form. Ratio is a measuring of two numerical positions. It expresses the relation between two numeric figures. It can be found by dividing one figure by another ratios are expressed in three ways.

1. Jones method
2. Ratio Method
3. Percentage Method

Classification of ratios: All the ratios broadly classified into four types due to the interest of different parties for different purposes. They are:

1. Profitability ratios
2. Turn over ratios
3. Financial ratios
4. Leverage ratios

1. Profitability ratios: These ratios are calculated to understand the profit positions of the business. These ratios measure the profit earning capacity of an enterprise. These ratios can be related to sales or capital to a certain margin on sales or profitability of capital employed. These ratios are of interest to management. Who are responsible for success and growth of enterprise? Owners as well as financiers are interested in profitability ratios as these reflect ability of enterprises to generate return on capital employed important profitability ratios are:

Profitability ratios in relation to sales: Profitability ratios are almost importance of concern. These ratios are calculated to focus the end results of the business activities which are the sole criterion of overall efficiency of organisation.

1. Gross profit ratio: $\frac{\text{gross profit}}{\text{Net sales}} \times 100$

Note: Higher the ratio the better it is

2. Net profit ratio: $\frac{\text{Net profit after interest \& Tax}}{\text{Net sales}} \times 100$

Note: Higher the ratio the better it is

3. Operating ratio (Operating expenses ratio)

$$\frac{\text{Cost of goods sold} + \text{operating expenses}}{\text{Net sales}} \times 100$$

Net: Lower the ratio the better it is

4. Operating profit ratio: $\frac{\text{Operating profit}}{\text{Net sales}} \times 100$

Note: Higher the ratio the better it is
cost of goods sold = opening stock + purchase + wages + other direct expenses - closing stock (or) sales - gross profit.

Operating expenses:

= administration expenses + selling, distribution expenses
operating profit = gross profit - operating expense.

$$\text{Expenses ratio} = \frac{\text{concern expense}}{\text{Net sales}} \times 100$$

Note: Lower the ratio the better it is

Profitability ratios in relation to investments:

1. Return on investments: $\frac{\text{Net profit after tax \& latest depreciation}}{\text{share holders funds}} \times 100$

Share holders funds = equity share capital + preference share capital + reserves & surpluses + undistributed profits.

Note: Higher the ratio the better it is

2. Return on equity capital: $\frac{\text{Net Profit after tax \& interest - preference dividend}}{\text{equity share capital}} \times 100$

Note: Higher the ratio the better it is

3. Earnings per share = $\frac{\text{Net profit after tax - preference dividend}}{\text{No. of equity shares}}$

4. Return on capital employed = $\frac{\text{operating profit}}{\text{capital employed}} \times 100$

5. Return on total assets = $\frac{\text{N. P. after tax and interest}}{\text{Total Assets}}$

Here, capital employed = equity share capital + preference share capital + reserves & surpluses + undistributed profits + debentures + public deposit + securities + long term loan + other long term liability - fictitious assets (preliminary expressed & profit & loss account debt balance)

II. Turn over ratios or activity ratios:

These ratios measure how efficiency the enterprise employees the resources of assets at its command. They indicate the performance of the business. The performance of an enterprise is judged with its ratios. It means ratios are also called efficiency ratios.

These ratios are used to know the turn over position of various things in the business. The turnover ratios are measured to help the management in taking the decisions regarding the levels maintained in the assets, and raw materials and in the funds. These ratios are measured in ratio method.

$$1. \text{ Stock turnover ratio} = \frac{\text{cost of goods sold}}{\text{average stock}}$$

Here,

$$\text{Average stock} = \frac{\text{opening stock} + \text{closing stock}}{2}$$

Note: Higher the ratio, the better it is

$$2. \text{ Working capital turnover ratio} = \frac{\text{sales}}{\text{working capital}}$$

Note: Higher the ratio the better it is working capital = current assets – essential liabilities.

$$3. \text{ Fixed assets turnover ratio} = \frac{\text{sales}}{\text{fixed assets}}$$

Note: Higher the ratio the better it is.

$$3 (i) \text{ Total assets turnover ratio is : } \frac{\text{sales}}{\text{total assets}}$$

Note: Higher the ratio the better it is.

$$4. \text{ Capital turnover ratio} = \frac{\text{Sales}}{\text{Capital employed}}$$

Note: Higher the ratio the better it is

$$5. \text{ Debtors turnover ratio} = \frac{\text{credits sales or sales}}{\text{average debtors}}$$

$$5(i) = \text{Debtors collection period} = \frac{365 \text{ (or) } 12}{\text{Turnover ratio}}$$

Here,
Average debtors = $\frac{\text{opening debtors} + \text{closing debtors}}{2}$

Debtors = debtors + bills receivable

Note: Higher the ratio the better it is.

6. Creditors turnover ratio = $\frac{\text{credit purchasers or purchases}}{\text{average creditors}}$

6 (i) creditors collection period = $\frac{365 \text{ (or) } 12}{\text{Creditor turnover ratio}}$

Here,
Average creditor = $\frac{\text{opening} + \text{closing creditors}}{2}$

Creditors = creditors + bills payable.

Note: lower the ratio the better it is.

3. Financial ratios or liquidity ratios:

Liquidity refers to ability of organisation to meet its current obligation. These ratios are used to measure the financial status of an organisation. These ratios help to the management to make the decisions about the maintained level of current assets & current liabilities of the business. The main purpose to calculate these ratios is to know the short terms solvency of the concern. These ratios are useful to various parties having interest in the enterprise over a short period – such parties include banks. Lenders, suppliers, employees and other.

The liquidity ratios assess the capacity of the company to repay its short term liabilities. These ratios are calculated in ratio method.

Current ratio = $\frac{\text{current assets}}{\text{current liabilities}}$

Note: The ideal ratio is 2:1

i. e., current assets should be twice. The current liabilities.

Quick ratio or liquid ratio or acid test ratio: $\frac{\text{quick assets}}{\text{current liabilities}}$

Quick assets = cash in hand + cash at bank + short term investments + debtors + bills receivables short term investments are also known as marketable securities.

Here the ideal ratio is 1:1 is, quick assets should be equal to the current liabilities.

$$\text{Absolute liquid ratio} = \frac{\text{absolute liquid assets}}{\text{current liabilities}}$$

Here,

Absolute liquid assets = cash in hand + cash at bank + short term investments + marketable securities.

Here, the ideal ratio is 0.5:1 or 1:2 it, absolute liquid assets must be half of current liabilities.

Leverage ratio of solvency ratios: Solvency refers to the ability of a business to honour long term obligations like interest and installments associated with long term debts. Solvency ratios indicate long term stability of an enterprise. These ratios are used to understand the yield rate of the organisation.

Lenders like financial institutions, debenture holders, banks are interested in ascertaining solvency of the enterprise. The important solvency ratios are:

$$1. \text{ Debt - equity ratio} = \frac{\text{outsiders funds}}{\text{share holders funds}} = \frac{\text{Debt}}{\text{Equity}}$$

Here,

Outsiders funds = Debentures, public deposits, securities, long term bank loans + other long term liabilities.

Share holders funds = equity share capital + preference share capital + reserves & surpluses + undistributed projects.

The ideal ratio is 2:1

$$2. \text{ Preprimary ratio or equity ratio} = \frac{\text{share holder funds}}{\text{total assets}}$$

The ideal ratio is 1:3 or 0.33:1

3. Capital - greasing ratio:

$$= \frac{(\text{equity share capital} + \text{reserves \& surplusses} + \text{undistributed projects})}{(\text{Outsiders funds} + \text{preference share capital})}$$

Here,

higher gearing ratio is not good for a new company or the company in which future earnings are uncertain.

$$11. \text{ Debt to total fund ratio} = \frac{\text{outsiders funds}}{\text{capital employed}}$$

Capital employed = outsiders funds + share holders funds = debt + equity.

The ideal ratio is 0.67 : 1 or 2:3