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RATIO ANALYSIS



Unit- V

RATIO

ANALYSIS

BASIC TERMS WITH CONCEPT

MEANING OF RATIO

A ratio is a simple arithmetical expression of the relationship of one number to another number. It is expressed when one figure is divided by another.

A ratio has been defined by some persons as follows:

1. According to Accountant's hand book by **Wixon, Kell** and **Bedford**, "A ratio is an expression of the quantitative relationship between two numbers."
2. According to **Kohler**, "A ratio is the relation of the amount, a to another, b, expressed as the ratio of a to b, a:b, or as a simple fraction, integer, decimal, fraction or percentage".

TYPES OF ACCOUNTING RATIO

1. Pure Ratio
2. Percentage Ratio
3. Rate Ratio

MEANING OF RATIO ANALYSIS

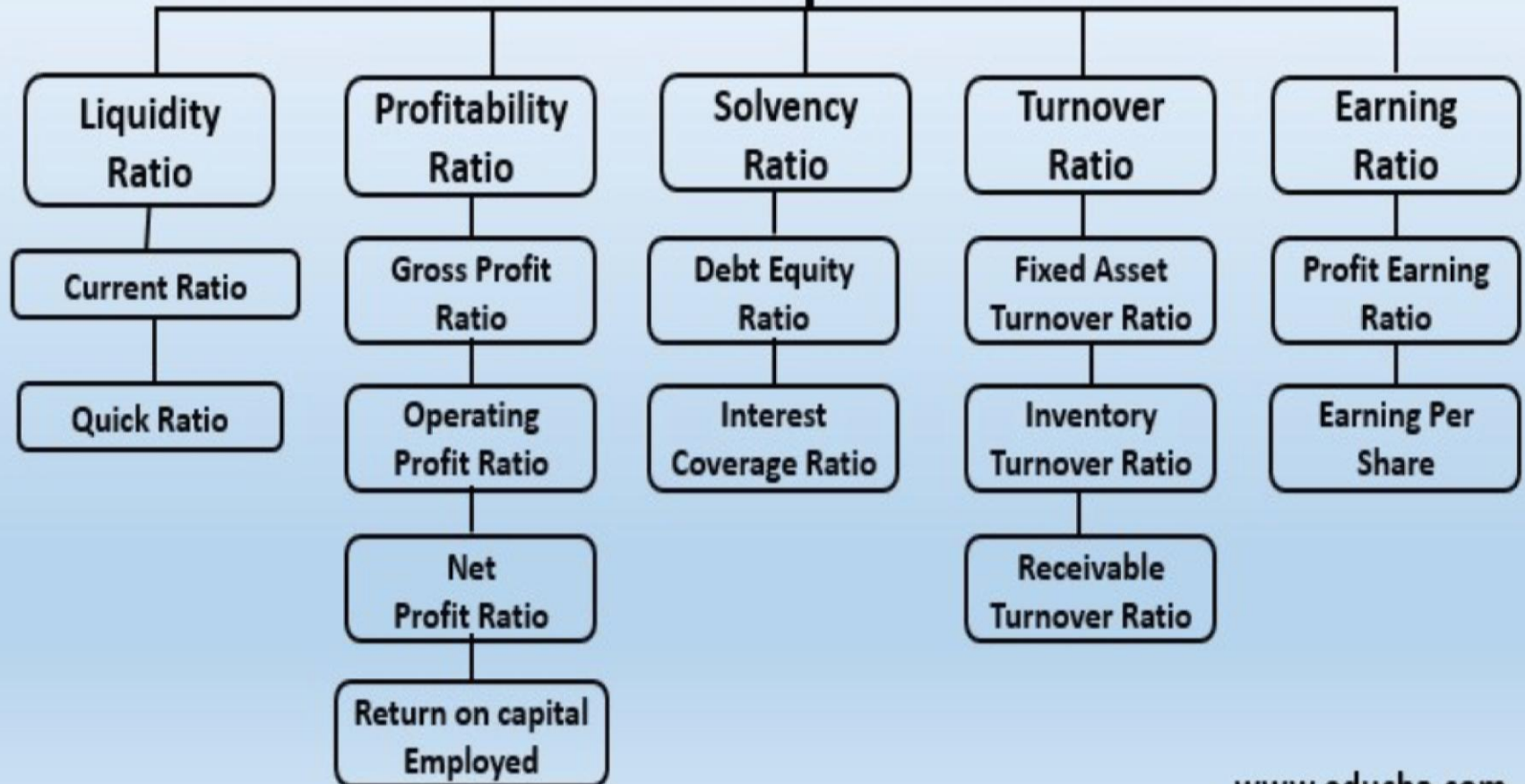
Ratio analysis is the process of examining and comparing financial information by calculating meaningful financial statement figure percentages instead of comparing line items from each financial statement.

Managers and investors use a number of different tools and comparisons to tell whether a company is doing well and whether it is worth investing in. The most common ways people analysis a company's performance are horizontal analysis, vertical analysis and ratio analysis. Horizontal and vertical analyzes compare a company's performance over time and to a base or set of standard performance numbers.

Q. What Does Ratio Analysis Mean?

Ratio analysis is much different. Ratio analysis compares relationships between financial statement accounts. This means that one income statement or balance sheet account is being compared to another. These relationships between financial statement accounts will not only give a manager or investor an idea of the how healthy the business is on a whole, it will also give them keen insights into business operations.

Ratio Analysis Types



Q. Explain types of ratio analysis?

1. Liquidity Ratios

This type of ratio helps in measuring the ability of a company to take care of its short-term debt obligations. A higher liquidity ratio represents that the company is highly rich in cash.

The types of liquidity ratios are: –

(i) Current Ratio: The current ratio is the ratio between the current assets and current liabilities of a company. The current ratio is used to indicate the liquidity of an organization in being able to meet its debt obligations in the upcoming twelve months. A higher current ratio will indicate that the organization is highly capable of repaying its short-term debt obligations.

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

(ii) Quick Ratio: The quick ratio is used to ascertain information pertaining to the capability of a company in paying off its current liabilities on an immediate basis.

(iii) The formula used for the calculation of a quick ratio is-

$$\text{Quick Ratio} = (\text{Cash and Cash Equivalents} + \text{Marketable Securities} + \text{Accounts Receivables}) / \text{Current Liabilities}$$

2. Profitability Ratios

This type of ratio helps in measuring the ability of a company in earning sufficient profits.

The types of profitability ratios are: –

(i)Gross Profit Ratios: Gross profit ratios are calculated in order to represent the operating profits of an organization after making necessary adjustments pertaining to the COGS or cost of goods sold.

The formula used for the calculation of gross profit ratio is-

$$\text{Gross Profit Ratio} = (\text{Gross Profit} / \text{Net Sales}) * 100$$

(ii)Net Profit Ratio: Net profit ratios are calculated in order to determine the overall profitability of an organization after reducing both cash and non-cash expenditures.

The formula used for the calculation of net profit ratio is-

$$\text{Net Profit Ratio} = (\text{Net Profit} / \text{Net Sales}) * 100$$

(iii)Operating Profit Ratio: Operating profit ratio is used to determine the soundness of an organization and its financial ability to repay all the short term and long term debt obligations.

The formula used for the calculation of operating profit ratio is-

$$\text{Operating Profit Ratio} = (\text{Earnings Before Interest and Taxes} / \text{Net Sales}) * 100$$

(iv)Return on Capital Employed (ROCE): Return on capital employed is used to determine the profitability of an organization with respect to the capital that is invested in the business.

The formula used for the calculation of ROCE is:

$$\text{ROCE} = \text{Earnings Before Interest and Taxes} / \text{Capital Employed}$$

3. Solvency Ratios

Solvency ratios can be defined as a type of ratio that is used to evaluate whether a company is solvent and well capable of paying off its debt obligations or not.

The types of solvency ratios are: –

(i)Debt Equity Ratio: The debt-equity ratio can be defined as a ratio between total debt and shareholders fund. The debt-equity ratio is used to calculate the leverage of an organization. An ideal debt-equity ratio for an organization is 2:1.

The formula for debt-equity ratio is-

$$\text{Debt Equity Ratio} = \text{Total Debts} / \text{Shareholders Fund}$$

(ii)Interest Coverage Ratio: The interest coverage ratio is used to determine the solvency of an organization in the nearing time as well as how many times the profits earned by that very organization were capable of absorbing its interest-related expenses.

The formula used for the calculation of interest coverage ratio is-

$$\text{Interest Coverage Ratio} = \text{Earnings Before Interest and Taxes} / \text{Interest Expense}$$

4. Turnover Ratios

Turnover ratios are used to determine how efficiently the financial assets and liabilities of an organization have been used for the purpose of generating revenues. The types of turnover ratios are: –

(i) **Fixed Assets Turnover Ratios:** Fixed assets turnover ratio is used to determine the efficiency of an organization in utilizing its fixed assets for the purpose of generating revenues.

The formula used for the determination of fixed assets turnover ratio is-

$$\text{Fixed Assets Turnover Ratio} = \text{Net Sales} / \text{Average Fixed Assets}$$

(ii) **Inventory Turnover Ratio:** Inventory turnover ratio is used to determine the speed of a company in converting its inventories into sales.

The formula used for calculating inventory turnover ratio is-

$$\text{Inventory Turnover Ratio} = \text{Cost of Goods Sold} / \text{Average Inventories}$$

(iii) **Receivable Turnover Ratio:** Receivable turnover ratio is used to determine the efficiency of an organization in collecting or realizing its account receivables.

The formula used for calculating the receivable turnover ratio is-

$$\text{Receivables Turnover Ratio} = \text{Net Credit Sales} / \text{Average Receivables}$$

5. Earnings Ratios

Earnings ratio is used for the purpose of determining the returns that an organization generates for its investors.

The types of earnings ratios are: –

(i) **Profit Earnings Ratio:** P/E ratio indicates the profit earning capacity of the company.

The formula used for the calculation of profit earnings ratio is:

$$\text{Profit Earnings Ratio} = \text{Market Price per Share} / \text{Earnings per Share}$$

(ii) **Earnings per Share (EPS):** EPS signifies the earnings of an equity holder based on each share.

The formula used for EPS is:

$$\text{EPS} = (\text{Net Income} - \text{Preferred Dividends}) / (\text{Weighted Average of Outstanding Shares})$$

INTERPRETATION OF THE RATIO

Calculation of ratios is comparatively simple, routine clerical in nature but interpretation of ratios is highly sophisticated and intricate phenomenon. The benefit of ratio analysis depends a great deal upon the correct interpretation. It needs skill, intelligence, training, farsightedness and intuition of high order on the part of the analyst.

The following are different ways in which ratios may be interpreted:

(i) Individual Ratio:

Individual ratio may have significance of its own. For example, if the current ratio unit continuously falls, it may indicate probable insolvency. But generally single ratio may not convey any sense. However single ratio may be studied with reference to certain popular rules of thumb which can only give approximations. Care must be exercised because such comparison may be erroneous or unrealistic.

(ii) Group Ratios:

Ratios may be interpreted by considering group of several related ratios. Such interpretation may be more meaningful. For example, current ratio may be studied along with liquid ratio. Similarly profitability ratios may be studied along with return on investment.

(iii) Comparison with Past:

Ratios may be interpreted by making comparison over a period of time i.e. the same ratio be studied over a period of years of the same unit. It will highlight the significant trend revealing use, decline or stability of the phenomenon. Average value of the ratio for the past number of years can serve as a standard against which current performance may be measured. While interpreting ratios from comparison over a period of time one should be careful about the changes which might have taken place during the time. For example, price index; changes in managerial policies or changes in accounting practices etc.

(iv) Comparison with Projections:

In a business unit where system of budgetary control and forecast is in existence, projected financial statements are usually drawn. Ratios calculated based on such projected financial statements shall act as the standards with which the ratios calculated from the present financial statements shall be compared. Variances shall be calculated and analyzed by reasons and persons. It shall enable to take corrective action wherever required.

(v) Inter-firm or Inter-Industry Comparison:

Ratios of one unit may be compared with the ratios of another identical unit or with the industry average at the same point of time. Such comparison is useful for evaluating relative financial position of the unit vis-à-vis other units or industry. While making such comparison, care must be taken regarding the difference of accounting methods, policies, procedures and terminology being followed by different units.

OBJECTIVES OF RATIO ANALYSIS

1. Importance of Management
2. Importance of Investors
3. Importance of Creditors
4. Importance of Employees
5. Importance of Government
6. Tax Audit Requirements



ADVANTAGES OR DISADVANTAGES OF RATIO ANALYSIS



Advantages :

advantage

- (i) It simplifies the financial statements.
- (ii) This helps in comparing companies of different sizes with each other.
- (iii) Helps to validate or disprove the *financing, investment and operating decisions* of the firm.
- (iv) Assists in trend analysis which involves comparing a single company over a period.
- (v) Highlights important information in simple form quickly. A user can judge a company by just looking at a few numbers instead of reading the whole financial statements.
- (vi) Facilitates to identify problem areas and bring the attention of the management to such areas

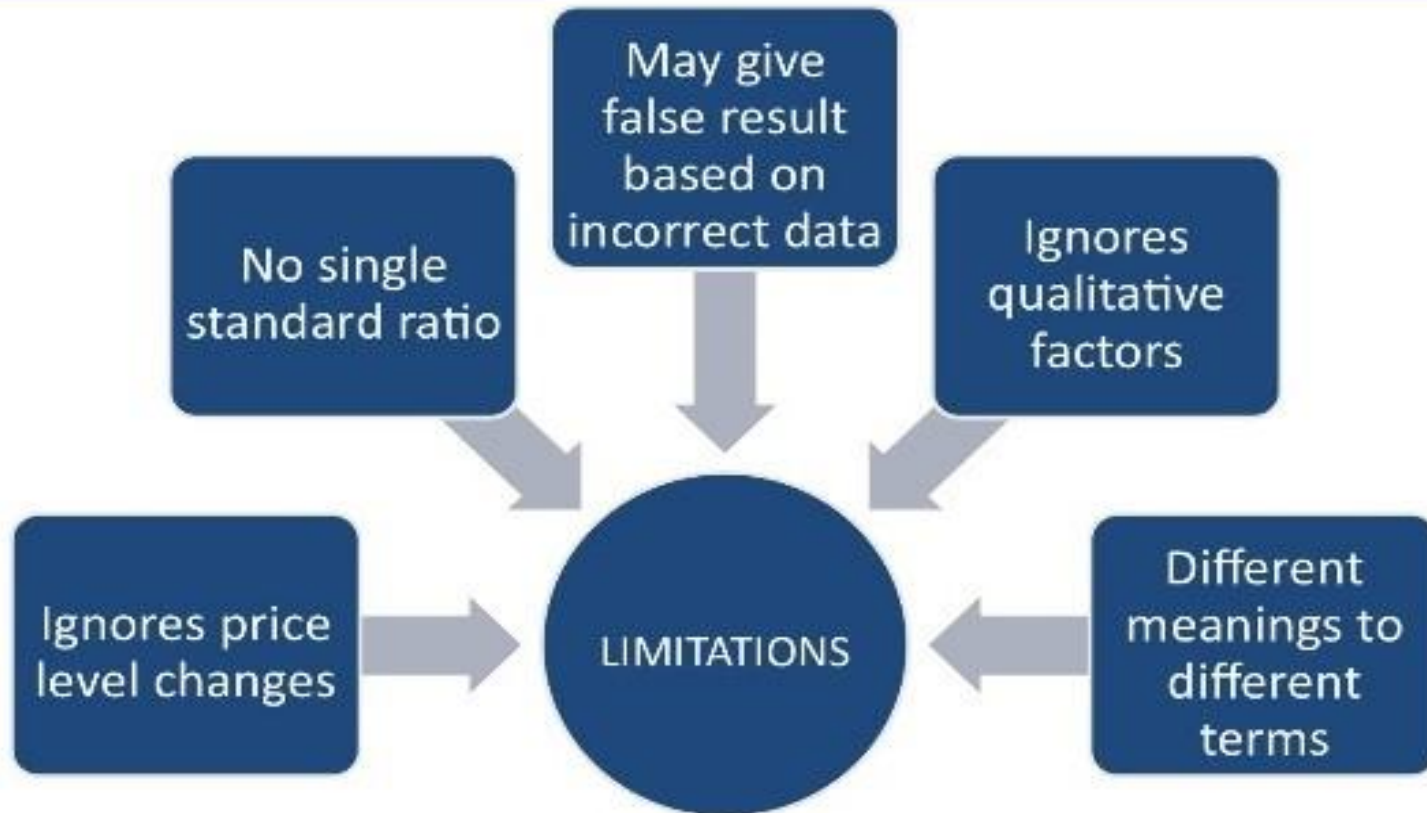
Disadvantages:

- (i) Different companies operate in different sectors, each having different environmental conditions such as regulation, market structure, etc. Such factors are so significant that a comparison of two companies from different industries might be misleading.
- (ii) Estimates and assumptions affect financial accounting information. Accounting standards allow different accounting policies, which impairs comparability, and hence ratio analysis is less useful in such situations.
- (iii) Ratio analysis explains relationships between past information while users are more concerned about current and future information.
- (iv) It ignores the price level changes due to inflation. Many ratios are calculated using historical costs, and they overlook the changes in price level between the periods. This does not reflect the correct financial situation.

LIMITATION OF RATIO ANALYSIS

1. False Results
2. Limited Comparability
3. Lack of Standard University Accepted Terminology
4. Limited use of a Single Ratio
5. Window Dressing
6. Personal Bias
7. Price Level Changes affect Ratios
8. No Single Standard Ratio
9. Misleading Results in the Absence of Absolute Data
10. Only One Method Analysis
11. No Idea of Probable Happening in Future
12. No use of Ratios if they are worked out for Insignificant and Use of Figures

LIMITATIONS OF RATIO ANALYSIS



baie dankie
dziękuję tänan suksema
tack så mycket
gràcies
dank u شكرا
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mahalo 谢谢
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gracias
teşekkür ederim
धन्यवाद
takk