**Ch-11: Accounting Ratios**

Relationship between two figures, expressed in arithmetical terms is called a ratio. Accounting ratio is one of the tools of financial analysis which requires regrouping of data by application of arithmetical relationships which provides crucial financial information and points out the areas which require investigation.

**OBJECTIVES:-**

1. To know the areas of the business which need more attention;

2. To know about the potential areas which can be improved with the effort in the desired direction;

3. To provide a deeper analysis of the profitability, liquidity, solvency and efficiency levels in the business;

4. To provide information for making cross sectional analysis by comparing the performance with the best industry standards;

5. To provide information derived from financial statements useful for making projections and estimates for the future.

**Methods of Expressing Ratios:-**

(a) Proportion Ratio Pure Ratio or Simple Ratio

(b) Rate or so many times Method

(c) Percentage Method

(d) Fraction Method.

**CLASSIFICATION OF RATIOS:-**

***A. Liquidity Ratio***

***B. Solvency Ratio***

***C. Activity Ratio***

***D. Profitability Ratio***

**A. Liquidity Ratios:**

To meet its commitments, business needs liquid funds. The ability of the business to pay the amount due to stakeholders as and when it is due is known as liquidity, and the ratios calculated to measure it are known as ‘Liquidity Ratios’. Liquidity ratios are also known as short-term solvency ratio. There are two types of Liquidity ratios, they are:-

**1.Current Ratio:-** Current Ratio is the proportion of current assets to current liabilities. It is also known as working capital ratio. The ideal ratio of current ratio is 2:1.It is expressed as follows:

**Current Ratio = Current Assets**

**Current Liabilities**

**List of Current assets:-** *Current Investments, Inventories, Trade Receivables (less provision, Cash and Cash Equivalents, Short-term loans And advances, Other Current Assets(Prepaid exp., Accrued income, Advance Tax.)*

**List of current liabilities:-** *Short-term Borrowings(including Bank overdraft), Trade payables, other current liabilities(Unpaid dividends, int. Accrued on borrowings, income received in advance, outstanding exp.) Short-term provisions (provision for tax and proposed dividend).*

**2. Liquid Ratio:-** Liquid ratio is also known as Quick Ratio or Acid Test Ratio. Current ratio is the proportion of Current Assets to Current Liabilities. An ideal Quick ratio is said to be 1:1. It is expressed as below:-

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**Quick Ratio = Quick Assets**

**Current Liabilities***.*

*Quick Assets = Current Assets – (Prepaid expenses + Closing Stock)*

**B. Solvency Ratio:-**

These ratios are calculated to assess the ability of the firm to meet its long-term liabilities as and when they become due. Some important solvency ratios are:-

**1. Debt Equity Ratio:-** Debt Equity Ratio measures the relationship between Long-term Debt and Equity. Ideal ratio of Debt Equity ratio is 2:1.

***Debt Equity Ratio = Debt***

***Equity***

*Debt here means Lon-term Debt and Equity means shareholders fund or Net worth.*

*Long-term Debt includes Long-term Borrowings and Long-term Provisions.*

*For Example:- Debentures, Mortgage Loan, Bank loan, loan from financial institutions, Public Deposits, etc. Shareholder’s Fund = Share Capital and Reserve and Surplus.*

**2. Total Assets to Debt Ratio:-** Total assets to Debt ratio establishes relationship between Total Assets and Long-term Debt.

**Total Assets to Debt Ratio= Total Assets**

**Debt**

*Total Assets = Non-Current Assets (Tangible and Intangible + Non-current Investments+ Long-term Loans and Advances) + Current Assets.*

*Debt = Long-term Borrowings and Long-term Provisions.*

**3. Proprietary Ratio:-** Proprietary ratio expresses relationship of Proprietor’s (Shareholders) funds to Net Assets and is calculated as follows :

**Proprietary Ratio = Shareholders fund**

**Total Assets.**

**4. Interest coverage Ratio:-** This ratio is calculated by dividing the Profit before Charging Interest and Income-tax by fixed interest charges. An Interest Coverage Ratio of 6 to 7 times is considered appropriate and is calculated as follows :

**Interest Coverage Ratio= Net Profit before charging Interest and Tax**

**Fixed Interest Charges.**

**5. Debt to Capital Employed Ratio = Debt**

**Capital Employed.**

**C. Activity (or Turnover) Ratios:-**

The turnover ratios basically exhibit the activity levels characterised by the capacity of the business to make more sales or turnover. The activity ratios express the number of times assets employed.

Higher turnover ratio means better utilisation of assets and signifies improved efficiency and profitability, and as such are known as efficiency ratios. The important activity ratios calculated under this category are :

**1. Inventory Turnover Ratio:-** It expresses the relationship between the cost of Revenue from operations and average inventory during the year. The higher the ratio, the better it is, since it indicates that inventory is selling quickly.

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**Inventory Turnover Ratio = Cost of Revenue from Operation**

**Average Inventory**

**Cost of Revenue from operation= Opening Inventory + Purchases + Direct Expenses. – Closing Stock**

**or**

**= Revenue from operations – Gross Profit**

**Average Inventory = Opening Inventory + Closing Inventory**

**2**

**Average Age of Inventory** = **Months/ Days in a Year**

**Inventory Turnover Ratio**

**2. Trade Receivables Turnover Ratio:-** It expresses the relationship between Credit Revenue from Operations and Average Trade Receivables during the year.

**Trade Receivables Turnover Ratio = Net Credit Revenue from Operations**

**Average Trade Receivables**

**Average Trade Receivables = Opening Trade Receivables + Closing Trade Receivables**

**2**

**Average Collection Period = Months/ Days in a Year**

**Trade Receivables Turnover Ratio**

**3. Trade Payables Turnover Ratio:-** It expresses the relationship between credit Purchase and average trade payables during the year.

**Trade Payables Turnover Ratio= Net Credit Purchase**

**Average Trade payables**

**Average Trade payable= Opening Trade Payables + Closing Trade Payables**

**2**

**Average Payment Period = Months/ Days in a Year**

**Average Trade payable**

**4. Working Capital Turnover Ratio:-** This ratio indicates the velocity of utilization of net working capital. A higher ratio measures the efficient utilization of working capital.

**Working Capital Turnover Ratio= Cost of Revenue from operations/Net Revenue from operations**

**Working Capital**

**Fixed Assets Turnover Ratio= Net Revenue from Operations**

**Average Fixed Assets**

**Net Assets Turnover Ratio= Net Revenue from Operations**

**Average Assets**

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**D. Profitability ratios**:- Profitability ratios are calculated to analyse the earning capacity of the business which is the outcome of utilisation of resources employed in the business. There is a close relationship between the profit and the efficiency with which the resources employed in the business are utilised. Following are the important profitability ratios:-

**1. Gross Profit Ratio**:- This ratio shows the relationship between Gross Profit and Revenue from operations.

**Gross Profit Ratio= Gross Profit x 100**

**Revenue from operations**

***(Gross Profit = Revenue from operations – Cost of Revenue from operations)***

**Cost of Revenue from operation= Opening Inventory + Purchases + Direct Exp. – Closing Stock**

**or**

**= Revenue from operations – Gross Profit.**

**2. Operating Ratio:-** It is computed to analyse cost of operation in relation to Revenue from operations. Lower the Operating Ratio, better it is, because it will leave higher margin of profit on Revenue from operations. It is calculated as follows:

**Operating Ratio= Cost of Revenue from operations + Operating Expenses x 100**

**Revenue from operations**

*Operating Expenses = Employee Benefit Exp. + Depreciation + Other Exp. (i.e. Office and Administration Exp. + Selling and Distribution Exp. + Discount + Bad debts + Interest on short-term loans)*

**3. Operating Profit Ratio:-** It is calculated to reveal operating margin. It may be computed directly or as a residual of operating ratio. It is calculated as follows:

**Operating Profit Ratio**= **Operating Profit x 100**

**Revenue from operations**

*Operating Expenses = Employee Benefit Exp. + Depreciation + Other Exp. (i.e. Office and Administration Exp. + Selling and Distribution Exp. + Discount + Bad debts + Interest on short-term loans)*

*Operating Profit = Gross Profit – other operating Exp. + other operating incomes Other operating incomes = commission Received + Discount Received.*

**Operating Profit Ratio = 100 – Operating Ratio.**

**4. Net Profit Ratio:-** It establishes the relationship between Net Profit and Revenue from operations. It is calculated as follows:

**Net Profit Ratio=** Net Profit x 100

Revenue from operations

*Net Profit = Gross Profit – Indirect Expenses. & losses + Other Incomes.*

*Generally, Net Profit refers to Profit after Tax (PAT).*

**5. Return on Investment:-** It is also known as Return on Capital Employed or Rate of Return Yield on Capital. It explains the overall utilisation of funds by a business enterprise. It is calculated as follows:

**Return on Investment= Net Profit before Interest, Tax & Dividend x100**

**Capital Employed**

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*Capital Employed = Shareholder’s Funds + Non-Current Liabilities (Long-term Borrowings +Long-term*

*Provisions)*

*Capital Employed = Non-current assets + working capital*

*Non-current assets = Tangible Assets + Intangible assets + Non-Current Investments + Long term Advances.*

*Working capital = Current Assets – Current Liabilities.*