1.0 Ratio Analysis

A financial ratio is a relationship of two values of financial statements. Ratios basically are mathematical expressions, which are calculated to derive certain conclusion. The ratio may be expressed as number of times, proportion or percentage. There are number of ratios, but which to consider for a particular type of analysis is left to the personal judgement of the analyst. As a matter of fact, all the ratios are for different purposes and have different objectives.

2.0 Uses of Ratios.

Sr. No.	
1	Ratios offer help in intra firm comparisons, industry comparison and also for inter-firm comparison.
2	Financial position of the entity can be studied.

3.0 Limitations & problems of Ratio analysis:

Sr. No.	Limitations
1	Ratios are based on financial statements, so contain almost all of the deficiencies of those accounts.
2	Some ratios are open for manipulation and need to be interpreted with care. E.g. stock levels may be kept artificially low at year-end, creating an impression of high efficiency in this area.
3	Inter-firm comparisons are faced with the problem that different organizations might use rather different accounting policies. E.g. depreciation methods etc.
4	Detailed knowledge of a company's markets is seldom obtainable from the published accounts, but is extremely important for assessing future profitability.
5	Ratios are useful when comparing similar organizations operating under similar conditions. Comparisons with different types of organizations can be misleading.
6	There is a real danger that ratio analysis can lead to conclusions, which are over-simplified. e.g. high current ratio.

4.0 Types of Ratios.

Sr. No.	Type of Ratio	Various ratios
1	Turnover Ratios	Debtors, Creditors, Inventory
2	Liquidity Ratios	Current, Acid test
3	Profitability Ratios	Gross profit, Net profit
4	Solvency Ratios	Debt Equity, Interest coverage, DSCR

Sr. No.	Ratios	Formula / Interpretation
1.0	**Turnover Ratios:**	
1.1	Debtors Turnover Ratio	Average Debtors x 365 divided by Sales. **Average Collection period.**
1.2	Creditors Turnover Ratio.	Average Creditors x 365 divided by Credit purchases. **Average payment period.**
1.3	Inventory Turnover Ratio.	Average inventory x 365 divided by material cost **Holding period of stock**

Sr. No.	Ratios	Formula / Interpretation
2.0	**Liquidity Ratios:**	
2.1	Current Ratio	Current Assets / Current Liabilities.
2.2	Acid Test Ratio	Quick Assets / Quick liabilities.

Sr. No.	Ratios	Formula / Interpretation
3.0	**Profitability Ratios:**	
3.1	Gross Profit Ratio	Gross profit / Net sales x 100
3.2	Net Profit Ratio	Net profit / Net sales x 100
3.3	Material cost ratio	Material cost / Net sales x 100
3.4	Expenses Ratios	Expenses / Net sales x 100
3.5	Return on Capital	PBIT / Capital employed x 100
3.6	Return on Proprietor's Funds	PAT / Proprietor's Funds

Sr. No.	Ratios	Formula / Interpretation
4.0	**Solvency Ratios:**	
4.1	Debt Equity Ratio	Total outside debt / Equity or Shareholders' funds.
4.2	Proprietary Ratio	Proprietor's funds /Total Assets x 100
4.3	Interest coverage Ratio	PBIT / Fixed interest charges
4.4	Debt coverage Ratio	PATID / (Interest + Repayment installments)

Notes	Ratio	Components
1	Average debtors	Opening debtors + Closing debtors divided by 2
2	Current assets	Stock + debtors + cash & bank balance + loans & advances + Prepaid expenses
3	Current liabilities	Creditors + BP + O/S expenses + IT payable + Dividend payable + Bank overdraft (not if permanent)
4	Quick Assets	Current Assets less (Stock + prepaid expenses)
5	Quick Liabilities.	Current liabilities less Bank overdraft
6	Gross Profit	Sales less material cost.
7	Net Profit	Sales less all expenses + any other income.
8	Debt	Long term loans + debentures + Bank overdraft
9	Equity	Equity share capital + Preference share capital +Free Reserves – (Accumulated losses + deferred revenue expenditure) = Net worth = Proprietor's funds.
10	PBIT	Profit before Tax + interest.
11	PATID	Profit after Tax + Interest + Depreciation. = Annual cash flow.
12	PAT	Profit less I. Tax.
13	Capital employed	Net Fixed Assets + Current assets less Current liabilities.

5.0 Interpretation of various Ratios:

Sr. no.	Ratio
1.0	**Turnover Ratios:**
1.1	**Debtors Turnover Ratio:** This ratio measures the average number of day's credit given to debtors. It helps to assess the efficiency of the debt collection department. Debt collection period should be kept as low as possible, consistent with maintaining customer goodwill and market trend.
1.2	**Creditors Turnover Ratio:** This ratio measures the average number of days credit is exploited from suppliers. Credit given by suppliers depends on various factors such as demand & supply position of material, industry trends, competition etc.
1.3	**Inventory Turnover Ratio:** This ratio measures the average number of days for which stock is held. It helps to assess the efficiency of stock utilization. Various factors affect the stock level held by the organization such as product, production-seasonal or otherwise, demand pattern, competition, funds availability etc.

2.0	**Liquidity Ratios:**
2.1	**Current Ratio:** This ratio is concerned with the assessment of an organization's ability to meet its short-term obligations. The ratio must be high enough for safety. However, high current assets do not normally lead to high profits in themselves, so the usual trade-off between risk and return exists. **Industry norm is 2:1**
2.2	**Acid Test Ratio:** This ratio is also concerned with short-term liquidity. In a sense it is more appropriate measure since liquid assets represent the source of funds from which current liabilities will probably be met. **Industry norm is 1:1**
3.0	**Profitability Ratios:**
3.1	**Gross Profit Ratio:** GP / Margin on sales
3.2	**Net Profit Ratio:** Net profit on sales. It indicates organization's ability to generate profits from sales.
3.3	**Material cost ratio:** Material cost to sales
3.4	**Expenses Ratios:** Expenses to sales.
3.5	**Return on Capital:** This ratio is expressed as a percentage. Generally higher the return the better.
3.6	**Return on Proprietor's Funds:** This ratio provides a measure of the percentage return on the investment made by the owners.
4.0	**Solvency Ratios:**
4.1	**Debt Equity Ratio:** This ratio is concerned with establishing the relationship between external and internal long-term financing. The use of long-term debt in the capital structure has both advantages and disadvantages, and in practice the level of debt actually existing is the result of a balancing process. The main advantage of debt is that it provides an opportunity for greater returns to shareholders. **Industry norm is 2:1**
4.2	**Proprietary Ratio:** It measures the owner's contribution of funds.
4.3	**Interest coverage Ratio:** This ratio measures the safety available to Bank for recovery of interest. **Industry norm is 2:1**
4.4	**Debt coverage Ratio:** This ratio measures the safety available to Bank for recovery of interest & loan installment. **Industry norm is 2.5 : 1**

6.0 Other Ratios:		

6.1	**Employees Ratios:**	
➢	Sales per employee:	Sales / staff strength
➢	Sales generation:	Sales / salaries & wages
➢	Profit per employee:	PBT / staff strength
➢	Profit generation:	PBT / salaries & wages
➢	Remuneration level:	Salaries & wages / staff strength
6.2	**Shareholder's Ratios:**	
➢	Earnings per share:	PAT less Pref. Dividend / number of shares
➢	Dividend per share:	Dividend / Number of shares
➢	Dividend pay out ratio:	Dividend / Earnings per share
➢	Dividend yield:	Dividend per share / Market price per share
➢	Book value per share:	Ordinary shareholder's equity / number of shares
➢	Price-earnings ratio:	Market price per share / Earnings per share.