# CHAPTER 8 RATIO ANALYSIS

## PART A: THEORY

### ❖ FINANCIAL STATEMENT ANALYSIS

Financial Statement Analysis involves the examination of the relationship between financial statement numbers and the trends in those numbers over a period of time. From an investor's point of view, predicting the future is what financial statement analysis is all about, while from a management's standpoint, financial statement analysis is useful in helping anticipate future conditions and, more importantly, as a for starting point in planning actions that will improve the firm's future performance.

It is defined as the process of identifying the financial strengths and weaknesses of a firm by adeptly establishing a relationship between the details of the Balance Sheet and the Profit & Loss Account of the enterprises.

It is a study of the relationship among various financial factors active in a business, as disclosed by a single set of statement. Moreover, a series of statements helps the analyses to study the trends of these factors.

### ❖ OBJECTIVE OF FINANCIAL STATEMENTS

- Helps in preparing budgets
- Helps in analysing past performances with respect to current earnings and financial position
- Helps in projections
- Helps in inter- firm comparison
- To provide financial information regarding economic resources and obligations of a business enterprise.
- To study solvency and liquidity
- To provide information about available resources
- To show strengths and weaknesses of the organisation
- To provide better insights to stakeholders for evaluation of organisation's performance

## ❖ USERS OF FINANCIAL STATEMENTS

Preparation of Financial Statements is the beginning of ratio analysis. It doesn't usually provide detailed answers to the management's questions but it does identify the areas in which further data should be generated.

**Shareholders**

Financial Statements act as an important source for the shareholders of the company. They can help in examining efficiency and effectiveness of the management and position, progress and prospects of the company.

**Investors:**

A purchaser of business would like to ascertain the value of shares on the basis of the earnings of the company as revealed in the Financial Statements. A small investor may like to know the dividends paid by the company in the past as shown in the Financial Statements to ascertain the value of shares. A company wishing to take over or absorb another company may want to study the Financial Statements of the absorbed company to ascertain its financial position and the price to be paid for the acquisition. Thus, potential investors have to study the Financial Statements before deciding upon whether to buy or not a business or shares

**Lenders**

Short-term as well as long-term solvency information is needed by the lenders of the company to accurately assess the position of the business. Trade creditors are interested in short-term solvency, whereas debenture holders, long-term loan provider are interested in long-term solvency.

**Management**

Financial statements help the management in acquiring accurate information regarding the progress, position and prospects of business. They help the management in finding out the relationship between the working and progress of the business; and therefore, help the management in analyzing the trends in the present and future prospectus of the enterprise.

**Public**

Various groups such as financial analysts, lawyers, trade associations, researchers, financial press, labour unions are interested in the trend analysis, working and growth of a business. With the help of published financial information or statement of the enterprise, these interested groups are able to analyze and interpret, and therefore judge the working and growth of an enterprise.

**Government**

The growth of the economy is associated with the growth of the companies registered in the country. Any fraudulent activity or unscrupulous act affects the industry which percolates the growth of the economy. This can retard the economic growth of the country which would have an adverse effect on our national economy.

**Labour and Trade Union**

In India, workers are entitled to bonus under the payment of bonus act. Thus, the statement of Profit & Loss becomes greatly important to the workers.

## ❖ SOURCES OF FINANCIAL STATEMENT ANALYSIS

Financial statements are prepared on the basis of:

a) Recorded facts
b) Accounting conventions
c) Postulates
d) Personal judgements
e) Accounting standards and guidance notes

## ❖ TECHNIQUES USED FOR FINANCIAL STATEMENT ANALYSIS

Following techniques are used for analyzing financial statements:

a) Comparative Statements
b) Common – Size Statements
c) Trend Analysis
d) Ratio Analysis
e) Fund Flow Analysis
f) Cash Flow Analysis

## ❖ COMPARATIVE STATEMENTS

A business concern does not exist in isolation. It co-exists with other competing concerns in the same industry. It has to therefore constantly compare its performance with such competing concerns to find out where it scores over its rivals and where it lags behind them. Such comparison is called inter-firm comparison.

It also needs to compare its own past performance with its current performance to ascertain its progress or decline over the years. This is known as inter-period comparison. Such statement proves that "the accounts of one period are but an installment of the continuous history of a going concern".

## ❖ COMMON SIZE STATEMENTS

In common size financial statements, all items on the statement are expressed as a percentage of the base item. Common size statements are useful for seeing how significant the components of the individual items of the statements are.

Generally the Financial Statements show odd amounts such as 67,689.92 and 57,324.96 and so on. It is a difficult job to compare such odd amounts especially if the Financial Statements run into many pages. Accountants have devised a short-cut known as Common Size Statements for a quick comparison of the items in the Financial Statements shown in odd amounts.

The inability of financial analyst to understand and interpret the changes in the total assets, liabilities or Proprietors Funds and their composition, financial statements are reduced to percentage statements. This facilitates comparison of two or more business entities with a common base.

In the case of balance sheet, total assets or liabilities or capital can be taken as the common base and in the case of income statement, net sales can be taken as the base.

These common size statements are often called "common measurement" or "Component Percentage" or "100 percent" statements, since each statement is reduced to the total of 100 and each individual component of the statement is represented as a percentage of the total of 100 which invariably serves as the base.

Thus, the statement prepared to bring out the ratio of each asset or liability to the total of the balance sheet and the ratio of each item of expense or revenue to net sales is known as the common size statement.

## ❖ TREND ANALYSIS

Trend Analysis treats year 1 as the base year and compares the figures of all the years (year 2, year 3) with those of the base year to ascertain the trend in figures. Thus trend analysis of sales will reveal whether as compared to the base year, i.e. Year I, the sales show a trend of increase or decrease in subsequent years, i.e. Year 2, Year 2, Year 3 ….. And so on.

Trend Analysis is useful because:

(a) Trends show the direction (up or down) of the changes.
(b) Trends are easy to calculate and interpret.
(c) It is a quick method of analysis.
(d) It is more accurate because it is based on percentages and not absolute figures.

Trend ratios can be defined as index numbers of the movements of the various financial items in the financial statements for a number of periods. It is a statistical device applied to the analysis of financial statements to reveal the trend of the items with the passage of time. Trend ratios show the nature and rate of movements in various financial factors. They provide a horizontal analysis of comparative statements and reflect the behaviour of various items with the passage of time.

## ❖ FUND FLOW ANALYSIS

Fund Flow Statement also referred to as statement of "Source and Application of Funds" presents the movement of funds and helps to understand the changes in the structure of assets, liabilities and equity capital. Whereas, the Balance Sheet provides only a summary of the assets and liabilities at a particular point of time. It reveals the financial state of any organization the assets side of a balance sheet shows the deployment of resources, while the liabilities side indicates its obligations. The statement of Profit and Loss shows the operating result of the business during a specified period. Both the statements provide the essential basic information about the financial activities of the business, but their usefulness is limited to analysis and planning process. From the management point of view, the usefulness of information provided by these income statements functions effectively and efficiently.

## ❖ CASH FLOW ANALYSIS

When it is required to explain to management the sources of cash and its uses during a particular period of time, a statement known as Cash Flow is prepared. The statement of cash flow reports the inflows (receipts) and outflows (payments) of cash and its equivalents of an organization during a particular period. It provides important information that compliments Statement of Profit & Loss and balance sheet. The statement of cash flow reports cash receipts and payments classified according to the entities' major activities - operating, investing and financing during the period. This statement reports a net cash inflow or net cash outflow for each activity and for the overall business. It also reports from where cash has come and how it has been spent. It explains the causes for the changes in the cash balance. In substance, the cash flow statement summarizes a myriad of specific cash transactions into a few categories for a business entity. The statement of cash flow reports the cash receipts, cash payments, and net changes in cash resulting from operating, investing and financing activities of an enterprise during a period in a format that reconciles the beginning and ending of cash balances.

## ❖ RATIO ANALYSIS

A ratio shows the relationship between two numbers. Accounting ratio shows the relationship between two accounting figures. Ratio analysis is the process of computing and presenting the relationships between the items in the financial statement. It is an important tool of financial analysis, because it helps to study the financial performance and position of a concern. Ratios show strengths and weaknesses of the business.

## ❖ OBJECTIVES OF RATIO ANALYSIS

Inter company comparison is a technique of comparing the information of other similar concerns for Assessing company's own performance. Reasons for any difference in efficiency can be ascertained with the help of such comparison.

Ratio Analysis has been widely used as a tool for analyzing the performance of the company over the years. Trend of the ratios indicates whether the company is moving in the right direction or not. There are certain ratios for which no standard is available to compare the performance with e.g. Gross Profit ratio, operating ratio etc. These ratios can be studied & interpreted only when they compared with the last years' ratios. Such comparison is known as inter-period comparison of the same company.

- To show the firm's relative strengths and weaknesses.
- To help to analyze the past performance of the firm and to make future projections.
- To allow interested parties like shareholders, investors, creditors and the government to analyze and make evaluation of certain aspects of firm's performance.
- To concentrate on inter-relationship among the figures appearing in the financial statements.
- To provide an easy way to compare present performance with the past.
- To depict the areas in which the business is competitively advantageous and disadvantageous.
- To determine the financial condition and performance of the firm.
- To help to make suitable corrective measures when the financial conditions and financial performance are unfavourable to the firm.

## ❖ ADVANTAGES OF RATIO ANALYSIS

**Simplifies Financial Statements**

Ratio analysis simplifies the comprehension of financial statements. Ratios tell the whole story of changes in the financial condition of a business.

**Analyze Past and Forecast Future**

It helps to analyze and understand the financial health and trend of a business, indicating past performance and making it possible to forecast the future trends.

**Decision-Making and Cost Control**

It serves as a useful tool in management control process for decision-making and cost control purpose.

**Summaries Accounting Figures**

It makes the accounting figures easy to understand and highlight the inter-relationship between various segments of the business.

**Overall Profitability**

Different users of accounting information make use of specific ratios to meet or satisfy their requirements. But the management is always interested in overall profitability and efficiency of the business enterprise.

**Liquidity Position**

The short-term creditors are more interested in the liquidity position of a firm in the sense that their money would be repaid on due dates. The ability of the firm to pay short-term obligations can be found by computing liquidity ratios.

**Long term Solvency**

This is required by long-term creditors, security analyst and the present and potential shareholders of the company. The help of capital structure ratios kept the above in assessing the financial status of the organization.

## ❖ LIMITATIONS OF RATIO ANALYSIS

The ratio analysis is not a full-proof method in financial statement analysis. It suffers from a number of limitations. Some of the important one are:

**Ratios ignore qualitative factors**

Ratios are obtained from the figures expressed in monetary terms. In this way, qualitative factors, which may be important are ignored.

**Trends are not the actual ratios**

The different ratios calculated from the financial statements of a business enterprise for one single year are of limited value. It would be more useful to calculate the important figures in the case of income, dividends, working capital, etc., for a number of years. Such trends are more useful than absolute ratios.

**Defective accounting information**

The ratios are calculated from accounted data in the financial statements. It means if the information is defective then the calculation of ratios would be wrong. Thus, the deliberate omissions would affect the ratios too.

**Change in accounting procedures**

A comparison of result of two firms becomes difficult when we find that the firms are using different procedures related to certain items, such as inventory valuation and treatment of intangible assets.

**Variations in general operating conditions**

While interpreting the results based on ratio analysis, all business enterprises have to work within given general economic conditions, state of the industry in which the firms are operating and the position of the individual companies within the industry. For example, if the firm is forced by the government to sell their products at a fixed price, its comparison with other firms would become impossible.

**Single ratio not sufficient**

It is very necessary to take into account the combined effect of various ratios so that the results are correctly interpreted regarding the financial condition and the profit-making performance of the business. Each ratio plays a part in interpreting the financial statement.

**The use of standard ratio**

The financial statements represent historical data and, therefore, the ratios based on them would only disclose what happened in the past.

## ❖ CLASSIFICATION OF RATIOS

**Profitability Ratios:**

Profitability ratios gives some yardstick to measure the profit in relative terms with reference to sales, assets or capital employed. These ratios highlight the end result of business activities. The main objective is to judge the efficiency of the business.

**Turnover Ratios or Activity Ratios:**

These ratios are used to measure the effectiveness of the use of capital/assets in the business. These ratios are usually calculated on the basis of sales or cost of goods sold, and are expressed in integers rather than as percentages.

**Financial Ratios or Solvency Ratios:**

These ratios are calculated to judge the financial position of the organization from short-term as well as long-term solvency point of view.

Thus, it can be subdivided into:

(a) Short term Solvency Ratios (Liquidity Ratios)

(b) Long term Solvency Ratios (Capital Structure Ratios)

**Market Test Ratios:**

These are of course, some profitability ratios, having a bearing on the market value of the shares.

The ratio analysis in made under the following categories:

| FINANCIAL RATIOS SOLVENCY RATIOS | ACTIVITY RATIOS TURNOVER RATIOS | PROFITABILITY RATIOS | MARKET TEST RATIOS |
|---|---|---|---|
| Short Term Solvency Ratios | Stock Turnover Ratio | Gross Profit Ratio | Earnings Per Share |
| Current Ratio | Debtors Turnover Ratio | Net Profit Ratio | Price Earnings Ratio |
| Liquidity Ratio | Creditors Turnover Ratio | Cash Profit Ratio | Dividend Payout |
| Cash Ratio | Fixed Assets Turnover Ratio | Return on Investment | Dividend Yield Ratio |
| Long Term Solvency Ratios | Total Assets Turnover Ratio | Return on Net Worth | |
| Debt Equity Ratio | Working Capital Turnover | Debt service Coverage | |
| Capital Gearing Ratio | Sales to Capital Employed | Operating Ratio | |
| Fixed Asset Ratio | | | |
| Proprietary Ratio | | | |
| Interest Cover | | | |
| Dividend Cover | | | |

## ❖ DIFFERENT FORMS IN WHICH RATIO CAN BE EXPRESSED

There are three different forms in which an accounting ratio can be expressed:

a) Pure ratio
b) Percentage
c) Rate

**Pure Ratio:**

A pure ratio is a simple division of one number by another. The relationship between Current Assets & Current Liabilities is expressed in this way. If the Current assets are Rs. 2,00,000 and Current Liabilities Rs. 1,00,000, the ratio is derived by dividing Rs. 2,00,000 by Rs. 1,00,000. It will be expressed as 2:1

**Percentage :**

Certain accounting ratios become more meaningful if expressed as a percentage. The relationship between profits and sales is expressed in this way. For example, if sales are Rs. 4,00,000 and Gross Profit is Rs. 2,00,000 then it is expressed as gross profit being 50% of sales.

**Rate:**

Sometimes ratios are expressed as rates i.e. 'number of times' over a certain period. Relationship between stock and sales is expressed in this way. If stock turnover rate is said to be '8' times in a year, it means that the stock is converted into sales 8 times in 12 months.

## ❖ EXPLAIN OVER - CAPITALISATION AND UNDER - CAPITALISATION

**OVER-CAPITALISATION**

A company is said to be over capitalized, when total capital of the company is much more than its requirements. As a result company is unable to use its funds and produce good results. Returns of the company are just not sufficient to pay the fair dividend to the equity shareholders. Over-capitalization may be due to under-trading.

**UNDER-CAPITALISATION**

When capital employed is low in relation to the turnover, the concern is said to be under-capitalized. Also, when owned capital of the business is lesser than the borrowed capital, it is a sign of under capitalization. It means company is more dependent on borrowed funds for its day-to-day operations. Under capitalization may be the result of over-trading. Business expands with the help of borrowed funds. This is not a favourable situation as company does not have a sound base of shareholders' fund. Compulsory interest payments are very high and in depression it might lead to insolvency.

# FORMAT OF VERTICAL BALANCE SHEET

| Particulars | Rs. | Rs. | Rs. |
|---|---|---|---|
| **I. SOURCES OF FUNDS** | | | |
| **1. Shareholder's Funds/ Proprietor's Funds/ Owners Funds/ Net Worth** | | | |
| A. Capital | | | |
| ............. | xx | | |
| ............. | xx | xx | |
| B. Reserves and Surplus | | | |
| ............. | xx | | |
| ............. | xx | xx | |
| C. Less: Fictitious Assets | | | |
| ............. | xx | | |
| ............. | xx | (xx) | XX |
| **2. Loan Funds** | | | |
| A. Secured Loans | | | |
| ............. | xx | | |
| ............. | xx | xx | |
| B. Unsecured Loans | | | |
| ............. | xx | | |
| ............. | xx | xx | XX |
| **CAPITAL EMPLOYED** | | | **XX** |
| **II. APPLICATION OF FUNDS** | | | |
| **1. Fixed Assets** | | | |
| ............. | | xx | |
| ............. | | xx | XX |
| **2. Investments (Long Term)** | | | |
| ............. | | xx | |
| ............. | | xx | XX |
| **3. Working Capital** | | | |
| A. Current Assets | | | |
| ............. | xx | | |
| ............. | xx | xx | |
| B. Less: Current Liabilities | | | |
| ............. | xx | | |
| ............. | xx | (xx) | XX |
| **CAPITAL EMPLOYED** | | | **XX** |

**NOTES FOR VERTICAL BALANCE SHEET**

| Particulars | Total |
|---|---|
| **1. Items included in Capital** | |
| Preference Share Capital | xx |
| Equity Share Capital | xx |
| Add: Share Forfeiture | xx |
| Less: Calls – in – Arrears | (xx) |
| | **XX** |
| **2. Items included in Reserves and Surplus** | |
| Capital Reserve | xx |
| Capital Redemption Reserve | xx |
| Share Premium or Securities Premium | xx |
| General Reserve | xx |
| Profit and Loss Account (Credit Balance - Profit) | xx |
| Debenture Redemption Fund | xx |
| Dividend Equalization Reserve | xx |
| Sinking Fund | xx |
| | **XX** |
| **3. Items included in Fictitious Assets** | |
| Profit and Loss Account (Debit Balance - Loss) | xx |
| Miscellaneous Expenditure | xx |
| Preliminary Expenses | xx |
| Share Issue Expenses | xx |
| Discount on issue of Shares and Debentures | xx |
| Deferred Revenue Expenditure | xx |
| Underwriting Commission | xx |
| | **XX** |
| **4. Items included in Secured Loans** | |
| Debentures | xx |
| Bonds | xx |
| Loan from Banks | xx |
| Loan from Financial Institutions | xx |
| | **XX** |
| **5. Items included in Unsecured Loans** | |
| Loan from Friends | xx |
| Loan from Relatives | xx |
| Public Deposits | xx |
| | **XX** |
| **6. Items Included in Fixed Assets** | |
| Land and Building (Less: Depreciation) | xx |
| Plant and Machinery (Less: Depreciation) | xx |
| Furniture and Fittings (Less: Depreciation) | xx |
| Vehicles (Less: Depreciation) | xx |
| Computer (Less: Depreciation) | xx |
| Equipment (Less: Depreciation) | xx |
| Premises | xx |
| Freehold Property | xx |
| Leasehold Property | xx |

| | |
|---|---|
| Capital work-in-progress | xx |
| Livestock | xx |
| Goodwill | xx |
| Patents | xx |
| Trademarks | xx |
| Copyrights | xx |
| Designs | xx |
| | **XX** |
| **7. Items included in Investments (Long Term)** | |
| Trade Investments | xx |
| Long Term Investments | xx |
| Government Securities | xx |
| Government Bonds | xx |
| Government Promissory Note | xx |
| Investment in Immovable Properties | xx |
| Investment in Capital of Partnership Firms | xx |
| Investment in Shares of Co-operative Society | xx |
| Long term Investment in Shares or Debentures of other | xx |
| Company | xx |
| Long term loans given | |
| | **XX** |
| **8. Items included in Current Assets** | |
| Short term investments | xx |
| Marketable investments | xx |
| Loose tools | xx |
| Loans and Advances | xx |
| Prepaid Expenses | xx |
| Advance Tax | xx |
| Advances to Suppliers | xx |
| Stock of Raw Material or stores or spare parts | xx |
| Stock of WIP | xx |
| Stock of Finished Goods | xx |
| Debtors (Less: Provision for Bad Debts) | xx |
| Accounts receivables | xx |
| Cash in hand | xx |
| Bank Balances | xx |
| Bills receivables | xx |
| Interest accrued or receivable on investments | xx |
| | **XX** |
| **9. Items included in Current Liabilities** | |
| Creditors | xx |
| Accounts payables | xx |
| Bills payable | xx |
| Trade payables | xx |
| Advances received | xx |
| Outstanding expenses | xx |
| Accrued interest | xx |
| Provision for tax | xx |

| | |
|---|---|
| Proposed dividend | xx |
| Unclaimed dividend | xx |
| Short term loans taken | xx |
| Bank overdraft | xx |
| | **XX** |

**IMPORTANT ITEMS TO REMEMBER**

| **Particulars** | **Heads** |
|---|---|
| Profit and Loss Account (Credit Balance) | Reserves and Surplus |
| Profit and Loss Account (Debit Balance) | Fictitious Assets |
| Trade Investments | Investments |
| Government Securities | Investments |
| Government Bonds | Investments |
| Government Promissory Note | Investments |
| Long Term Loans given | Investments |
| Marketable Investments | Current Assets |
| Short term investments | Current Assets |
| Loose Tools | Current Assets |
| Loans and advances given | Current Assets |
| Proposed Dividend | Current Liabilities |
| Provision for tax | Current Liabilities |
| Unclaimed Dividend | Current Liabilities |
| Short term loans | Current Liabilities |

# FORMAT OF VERTICAL REVENUE STATEMENT

| Particulars | Rs. | Rs. | Rs. |
|---|---|---|---|
| **Sales** | | | **XX** |
| Less: Cost of Goods Sold | | | (XX) |
| **Gross Profit** | | | **XX** |
| Less: Operating Expenses | | | |
| A. Office and Administration Expenses | | | |
| ………… | xx | | |
| ………… | xx | xx | |
| B. Selling and Distribution Expenses | | | |
| ………… | xx | | |
| ………… | xx | xx | (XX) |
| **Operating Profit before Interest** | | | **XX** |
| Less: Interest | | | (XX) |
| **Operating Profit after Interest** | | | **XX** |
| Add: Non Operating Incomes | | | XX |
| Less: Non Operating Expenses | | | (XX) |
| **Net Profit before Tax** | | | **XX** |
| Less: Tax | | | (XX) |
| **Net Profit after Tax** | | | **XX** |
| Add: Profit and Loss Account (Opening Balance) | | | XX |
| **Total Profit Available** | | | **XX** |
| Less: Appropriations | | | (XX) |
| **Retained Earnings** | | | **XX** |

**Another Format to find Net Profit interest and tax**

| Particulars | Rs. |
|---|---|
| **Operating Profit before Interest** | **XX** |
| Add: Non Operating Incomes | XX |
| Less: Non Operating Expenses | (XX) |
| **Earnings before Interest and Tax** | **XX** |
| Less: Interest | (XX) |
| **Net Profit before Tax** | **XX** |
| Less: Tax | (XX) |
| **Net Profit after Tax** | **XX** |
| Add: Profit and Loss Account (Opening Balance) | XX |
| **Total Profit Available** | **XX** |
| Less: Appropriations | (XX) |
| **Retained Earnings** | **XX** |

NOTES FOR VERTICAL REVENUE STATEMENT

| Particulars | Total |
|---|---|
| **1. Items included in Sales** | |
| Cash Sales | xx |
| Credit Sales | xx |
| | **XX** |
| **2. Items included in Cost of Goods Sold** | |
| Opening stock of Raw Materials | xx |
| Add: Purchases of Raw Materials | xx |
| Add: Carriage inwards, Octroi, Freight, Duty | xx |
| Less: Closing stock of Raw Materials | (xx) |
| Less: Sale of Material scrap | (xx) |
| | XX |
| Direct Wages | xx |
| Direct Expenses | xx |
| Factory Power | xx |
| Lighting and Heating | xx |
| Factory Manager's Salary | xx |
| Factory Supervisor's Salary | xx |
| Defective work (Cost of Rectification) | xx |
| Drawing and Designing Expenses | xx |
| Factory Rent, Rates and Insurance | xx |
| Technical Director's Fees | xx |
| Power and Fuel | xx |
| Motive Power | xx |
| Coal, Gas and Water | xx |
| Royalty on Production | xx |
| Royalty on Purchases | xx |
| Custom Duty | xx |
| Excise Duty | xx |
| Depreciation on Plant and Machinery | xx |
| Depreciation on Factory Building | xx |
| Depreciation on Patterns and Patents | xx |
| Less: Sale of Factory Scrap | (xx) |
| | XX |
| Add: Opening stock of WIP | xx |
| Less: Closing stock of WIP | (xx) |
| | |
| Opening stock of Finished goods | xx |
| Add: Purchases or Production of Finished goods | xx |
| Less: Closing stock of finished goods | (xx) |
| | **XX** |
| **3. Items included in Office and Administration Expenses** | |
| Office Rent, Rates and Insurance | |
| Director's Fees | xx |
| Depreciation on Office Furniture | xx |
| Office Lighting | xx |
| General Expenses | xx |

| | |
|---|---|
| Printing and Stationery | xx |
| Legal Expenses | xx |
| Postage and Telephone Expenses | xx |
| Audit Fees | xx |
| Clerical Salaries and Management Expenses | xx |
| Cleaning and Maintenance Expenses | xx |
| Repairs and Renewal | xx |
| Refreshment | xx |
| Sundry Expenses | xx |
| | xx |
| | **XX** |
| **4. Items included in Selling and Distribution Expenses** | |
| Carriage outwards | xx |
| Salesmen salaries and commission | xx |
| Depreciation on Delivery Van | xx |
| Travelling Expenses | xx |
| Fees paid to Brand Ambassador | xx |
| Advertisement and Publicity Expenses | xx |
| Exhibition Expenses | xx |
| Trade Fair Expenses | xx |
| Showroom rent and expenses | xx |
| Normal Bad Debts | xx |
| Discount allowed | xx |
| | **XX** |
| **5. Items included in Interest** | |
| Interest on Debentures | xx |
| Interest on Bonds | xx |
| Interest on Loans | xx |
| Interest on Public Deposits | xx |
| Interest on short term loans | xx |
| | **XX** |
| **6. Items Included In Non Operating Incomes** | |
| Dividend Received On Shares | xx |
| Interest Received On Debentures | xx |
| Interest Received On Loans | xx |
| Damages Received | xx |
| Profit on Sale of Assets | xx |
| Profit on sale of Investments | xx |
| Royalty Received | xx |
| Share Transfer Fees Received | xx |
| Rent Received | xx |
| Discount Received | xx |
| Commission received | xx |
| Bad Debts recovery | xx |
| | **XX** |

| | |
|---|---|
| **7. Items included in Non Operating Expenses** | |
| Damages paid | xx |
| Loss on sale of Assets | xx |
| Loss on Sale of Investment | xx |
| Fines paid | xx |
| Penalty paid | xx |
| Preliminary Expenses w/off | xx |
| | **XX** |
| **8. Items included in Appropriations** | |
| Dividend paid | xx |
| Transfer to reserves | xx |
| Transfer to Sinking Fund | xx |
| | **XX** |

**IMPORTANT ITEMS TO REMEMBER**

| **Particulars** | **Heads** |
|---|---|
| Carriage Inwards | COGS |
| Custom Duty and Excise Duty | COGS |
| Legal Expenses | Office and AdmnExp |
| General Expenses | Office and AdmnExp |
| Carriage outwards | Selling and DistrnExp |
| Trade Fair Expenses | Selling and DistrnExp |
| Normal Bad Debts | Selling and DistrnExp |
| Discount allowed | Selling and DistrnExp |
| Abnormal Bad Debts | Finance Charges |
| Interest paid | Interest |
| Interest received | Non Operating Income |
| Dividend received and Discount received | Non Operating Income |
| Bad Debts recovery | Non Operating Income |
| Preliminary Expenses w/off | Non Operating Expenses |
| Dividend paid | Appropriations |

## IMPORTANT FORMULAS

| | | |
|---|---|---|
| a. | Shareholders' Funds<br>**Shareholders' Funds are also known as Owners Funds, Proprietors Funds, Net Worth** | Preference Share Capital + Equity Share Capital + Reserves and Surplus – Fictitious Assets |
| b. | Equity Shareholders Funds | Equity Share Capital + Reserves and Surplus – Fictitious Assets |
| c. | Capital Employed<br><br>Capital Employed | Shareholders' Funds + Loan Funds<br><br>Fixed Assets + Investments + Working Capital |
| d. | Working Capital | Current Assets – Current Liabilities |
| e. | COGS<br><br>COGS | Sales – Gross Profit<br><br>Opening stock + Purchases (including factory expenses) – Closing Stock |

## SHORT TERM SOLVENCY RATIOS

| | | |
|---|---|---|
| a. | Current Ratio | $\frac{\text{Current Assets}}{\text{Current Liabilities}}$ |
| b. | Quick Ratio<br><br>Quick Assets = CA – Stock – Prepaid Expenses<br>Quick Liabilities = CL – Bank Overdraft<br><br>**Quick Ratio is also known as Liquid Ratio and Acid Test Ratio** | $\frac{\text{Quick Assets}}{\text{Quick Liabilities}}$ |
| c. | Stock to Working Capital Ratio | $\frac{\text{Stock}}{\text{Working Capital}}$ |
| d. | Absolute Cash Ratio | $\frac{\text{Cash + Bank + Short term Invs}}{\text{Current Liability}}$ |
| e. | Defence Interval Ratio | $\frac{\text{Current Assets}}{\text{Daily Operating Expenses}}$ |

## LONG TERM SOLVENCY RATIOS

| | | |
|---|---|---|
| a. | Debt Equity Ratio | $\frac{\text{Loan Funds}}{\text{SH Funds}}$ |
| b. | Capital Gearing Ratio | $\frac{\text{Loan Funds + PSC}}{\text{ESH Funds}}$ |
| c. | Proprietary Ratio<br><br>**Total Assets will not include Fictitious Assets** | $\frac{\text{Proprietor Funds}}{\text{Total Assets}} \times 100$ |

**PROFITABILITY RATIOS**

| | | |
|---|---|---|
| a. | Gross Profit Ratio | $\frac{\text{Gross Profit}}{\text{Sales}} \times 100$ |
| b. | Operating Ratio | $\frac{\text{COGS + O\&A + S \&D}}{\text{Sales}} \times 100$ |
| c. | COGS Ratio | $\frac{\text{COGS}}{\text{Sales}} \times 100$ |
| d. | Office Expense Ratio | $\frac{\text{O \& A}}{\text{Sales}} \times 100$ |
| e. | Selling Expense Ratio | $\frac{\text{S \& D}}{\text{Sales}} \times 100$ |
| f. | Net Profit Ratio | $\frac{\text{Net Profit before Tax}}{\text{Sales}} \times 100$ <br> OR <br> $\frac{\text{Net Profit after Tax}}{\text{Sales}} \times 100$ |

**TURNOVER RATIOS**

| | | |
|---|---|---|
| a. | Stock Turnover Ratio <br><br> Stock Holding Period | $\frac{\text{COGS}}{\text{Average Stock}}$ <br><br> $\frac{\text{Average Stock}}{\text{COGS}} \times 365/52/12$ |
| b. | Debtors Turnover Ratio <br><br> Debtors Collection Period <br><br> **Debtors include Bills Receivables** | $\frac{\text{Credit Sales}}{\text{Average Debtors}}$ <br><br> $\frac{\text{Average Debtors}}{\text{Credit Sales}} \times 365/52/12$ |
| c. | Creditors Turnover Ratio <br><br> Creditors Payment Period <br><br> **Creditors include Bills Payables** | $\frac{\text{Credit Purchases}}{\text{Average Creditors}}$ <br><br> $\frac{\text{Average Creditors}}{\text{Credit Purchases}} \times 365/52/12$ |

**Note:**

a) Turnover ratio will always be expressed in Times
b) Always remember whenever turnover ratios are asked, there will be Average in Denominator
c) Whenever Calculation of Average is not Possible, take closing in denominator

## TURNOVER RATIOS (BASED ON SALES)

| | | |
|---|---|---|
| a. | Total Asset Turnover Ratio | Sales / Average Total Assets |
| b. | Fixed Assets Turnover Ratio | Sales / Average Fixed Assets |
| c. | Working Capital Turnover Ratio | Sales / Average Working Capital |
| d. | Capital Employed Turnover Ratio | Sales / Average Capital Employed |
| e. | Proprietors Fund Turnover Ratio | Sales / Average Proprietors Funds |

**Note:**

a) Turnover ratio will always be expressed in Times
b) Always remember whenever turnover ratios are asked, there will be Average in Denominator
c) Whenever Calculation of Average is not Possible, take closing figures in denominator

## INCOME STATEMENT

| | |
|---|---|
| Sales<br>Less: Variable Cost | xx<br>(xx) |
| Contribution<br>Less: Fixed Cost | xx<br>(xx) |
| EBIT (Earnings before interest and tax)<br>Less: Interest | xx<br>(xx) |
| EBT (Earnings before tax)<br>Less: Tax | xx<br>(xx) |
| NPAT (Net Profit after tax)<br>Less: Preference Dividend | xx<br>(xx) |
| Net Profit for Equity Shareholders<br>Less: Equity Dividend | xx<br>xx |
| Retained Earnings | xx |

## INVESTMENT RATIOS (RETURN RATIOS)

| | | |
|---|---|---|
| a. | Return on Capital Employed<br>(Return on Total Assets)<br>(Return on Investment) | EBIT / Average Capital Employed X 100 |
| b. | Return on Proprietor' Funds<br>(Return on SH Funds) | NPAT / Average Proprietors' Funds X 100 |
| c. | Return on ESH Funds | Net Profit for ESH / Average ESH Funds X 100 |
| d. | Return on Equity Share Capital | Net Profit for ESH / Average ESC X 100 |

**Note:**

a) Always remember whenever Return ratios are asked, there will be Average in Denominator
b) Whenever Calculation of Average is not Possible, take closing figures in denominator

## MARKET TEST RATIOS

| | | |
|---|---|---|
| a. | Earnings per Share (EPS) | Net Profit for ESH / No. of Equity Shares |
| b. | Dividend Payout Ratio | Dividend Per Share (DPS) / Earnings Per Share (EPS) |
| c. | Retention Ratio | EPS – DPS / EPS |
| d. | Price Earnings Ratio (PE Ratio) | Market Price Per Share (MPS) / Earnings Per Share (EPS) |
| e. | Earnings Yield Ratio | EPS X 100 / MPS |
| f. | Dividend Yield Ratio | DPS X 100 / MPS |

## OTHER RATIOS

| | | |
|---|---|---|
| a. | Interest Coverage Ratio | EBIT / Interest |
| b. | Pref Dividend Coverage Ratio | NPAT / Preference Dividend |
| c. | Equity Dividend Coverage Ratio | Net Profit for ESH / Equity Dividend |
| d. | Debt Service Coverage Ratio | NPAT + Depreciation + Interest / Interest + Installments on Loans |

## PART B: PRACTICAL

**Q.1.** Following is the Balance Sheet of JBL Ltd. as on 31st March,2020

| **Liabilities** | **Rs.** | **Assets** | **Rs.** |
|---|---|---|---|
| Equity Share Capital | 2,00,000 | Goodwill | 70,000 |
| 8% Preference Share Capital | 2,00,000 | Land and Buildings | 4,40,000 |
| 16% Debentures | 80,000 | Plant and Machinery | 2,00,000 |
| 15%Bank Loan | 40,000 | Furniture | 60,000 |
| Reserves | 3,00,000 | Investments | 40,000 |
| Creditors | 1,20,000 | Debtors | 1,40,000 |
| Bank Overdraft | 80,000 | Prepaid Insurance | 20,000 |
| Outstanding Rent | 14,000 | Stock | 60,000 |
| Provision for tax | 40,000 | Cash in Hand | 14,000 |
| Proposed Dividend | 20,000 | Cash at Bank | 70,000 |
| Profit and Loss A/c | 40,000 | Preliminary Expenses | 20,000 |
| | **11,34,000** | | **11,34,000** |

**You are required to calculate the following ratios:**

(a) Proprietary Ratio
(b) Stock Working Capital Ratio
(c) Capital Gearing Ratio
(d) Current Ratio
(e) Liquid Ratio
(f) Debt equity ratio.

**Q.2.** Following are the ratios of the trading activities of National Traders Limited

| | |
|---|---|
| Debtors velocity | 3 months |
| Stock velocity | 8 months |
| Creditors Velocity | 2 months |
| Gross Profit ratio | 25% |

Gross Profit for the year ended 31st March, 2019 amounted to Rs. 4,00,000. Closing stock of the year is Rs. 10,000 more than the opening stock. Bills receivable amount to Rs. 25,000. Bills payable amount to Rs. 10,000.

**Find out:**

a) Opening and Closing Stock
b) Purchases
c) Average Sundry Debtors
d) Average Sundry Creditors