## 1. Details of Module and its structure

| Module Detail | |
|---|---|
| Subject Name | Accountancy |
| Course Name | Accountancy 04 (Class XII, Semester – 2) |
| Module Name/Title | Accounting Ratios – Part 1 |
| Module Id | leac_20501 |
| Pre-requisites | Basic knowledge of Ratios |
| Objectives | At the end of the lesson, the learners will be able to:<br>• Explain meaning of Accounting Ratios<br>• Define Ratio Analysis<br>• List objectives of Ratio Analysis<br>• Analyse advantages of Ratio Analysis<br>• List limitations of Ratio Analysis<br>• List types of Ratios |
| Keywords | Accounting Ratio, Ratio Analysis, Liquidity, Solvency, Profitability, Turnover |

## 2. Development Team

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## 1.1 Introduction

The financial details that are prepared by the business enterprisers so as to meet the information requirement of the decision-makers are known as Financial Statements. These statements provide financial data that require analysis, comparison and interpretation for taking decision by the external as well as internal users of accounting information. This act is termed as financial statement analysis. The most commonly used techniques of financial statements analysis are comparative statements, common size statements, trend analysis, accounting ratios and cash flow analysis. These techniques are regarded as an integral and important part of accounting.

This module and the next four modules will cover the technique of accounting ratios for analysing the information contained in financial statements for assessing the solvency, efficiency and profitability of the enterprises.

## 2.1 Meaning of Accounting Ratios

A ratio is a mathematical number calculated as a reference to relationship of two or more numbers and can be expressed as a:

- Fraction (a / b)
- Proportion (a:b)
- Percentage and (%)
- Number of times (Times)

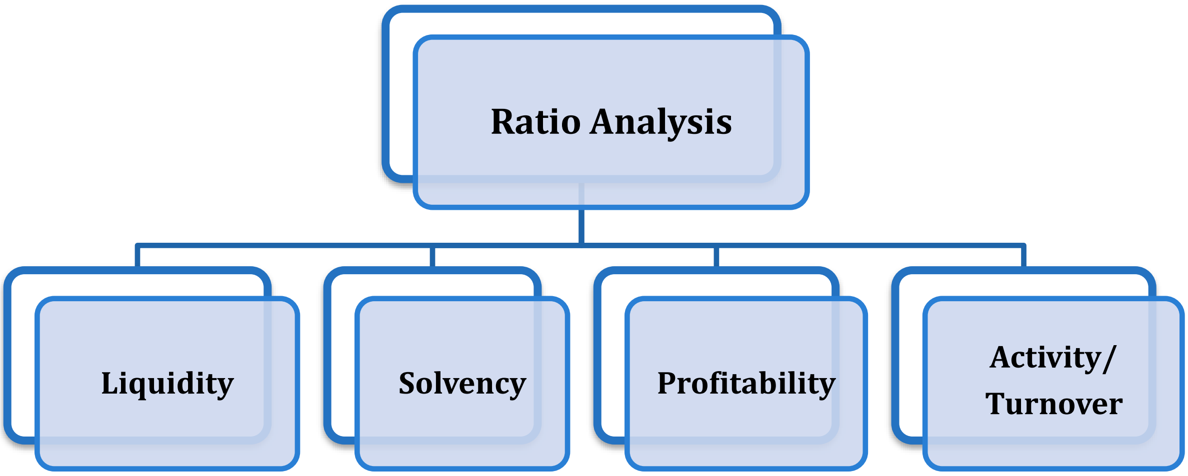
Accounting ratios are a group of metrics used to measure the efficiency and profitability of a company based on its financial reports. They are important tool of financial statements analysis and provide a way of expressing the relationship between one accounting data points to another.

Accounting ratios are used both by the company to make improvements or monitor progress as well as by investors to determine the best investment option. Accounting Ratios can be used to evaluate a company’s fundamentals and provide information about the performance of the company over the last quarter or fiscal year.

They are the basis of ratio analysis and include the debt-to-equity ratio, the quick ratio, the dividend pay-out ratio, gross margin, and operating margin.

### 3.1 Meaning of Ratio Analysis

Ratio analysis is a quantitative method of gaining insight into a company's liquidity, operational efficiency, and profitability by studying its financial statements such as the Balance Sheet and Income Statement.
A ratio must be calculated using numbers which are meaningfully correlated. A ratio calculated by using two unrelated numbers would hardly serve any purpose. Thus, ratio analysis compares similar data from a company's financial statements to reveal insights regarding profitability, liquidity, operational efficiency, and solvency.




Hence, ratio analysis can mark a company’s performance over time, while comparing a company to another within the same industry or sector.

**Example**:

**Question**: The income for the year from operations i.e. Revenue from Operations or Net Sales is Rs. 5,00,000 for a given year. The Purchases and other direct expenses cost around Rs. 1,00,000 Calculate Gross Profit Ratio

**Answer**: Gross Profit of the year is Rs. 4,00,000

(5,00,000- 1,00,000 = 4,00,000) [Revenue from Operations – Cost of Goods Sold = Gross Profit

**Gross Profit Ratio = Gross Profit X 100**

**Net Sales**

$$= \frac{4,00,000}{5,00,000} \times 100$$

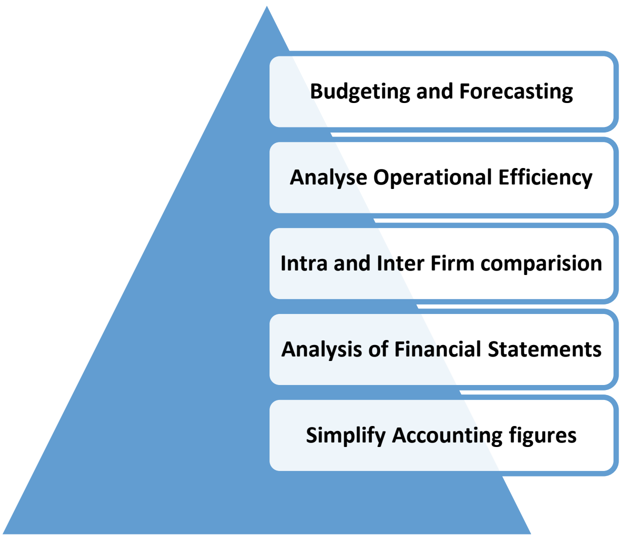
$$= 80\%$$

Hence, it can be stated that the Gross Profit is 80% of Sales Revenue.

### 4.1 Objectives of Ratio Analysis

Ratio analysis provides users with crucial financial information and points out the areas which require investigation. Ratio analysis is a technique which involves regrouping of data by application of arithmetical relationships and then interpret its results. Thus, it is an indispensable part of interpretation of results revealed by the financial statements.

The main objectives of ratio analysis are:




- **Help in budgeting and forecasting** - To know about the potential areas that can be improved with the effort in the desired direction.

- **Analyse the operational efficiency of a business** - To provide a deeper analysis of the profitability, liquidity, solvency and efficiency levels in the business.

- **Facilitate intra-firm and inter-firm comparison of performance -** To provide information for making cross-sectional analysis by comparing the performance with the best industry standards.

- **Facilitate analysis of financial statements** - To provide information derived from financial statements useful for making projections and estimates for the future.

- **Simplify accounting figures** – To make them clear and understandable in layman's language.

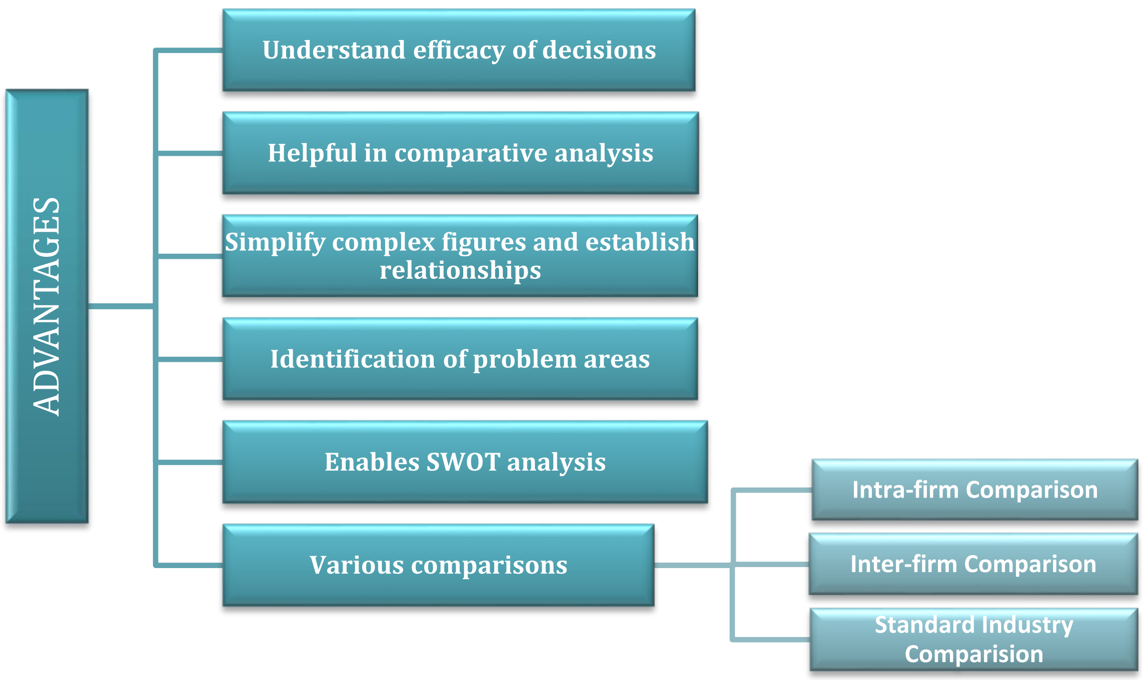
### 5.1 <u>Advantages of Ratio Analysis</u>

Ratio analysis improves the users' understanding of the efficiency with which the business is being conducted. The numerical relationships throw light on many latent aspects of the business.

It makes us understand various problem areas as well as the bright spots of the business. The knowledge of problem areas helps management to take care of them in future. The knowledge of areas which are working better helps to improve the situation further.

It must be emphasised that ratios are means to an end rather than the end in themselves. Their role is essentially indicative and that of a whistle blower i.e. they help in giving indications of both problems and prospects.

There are many advantages derived from ratio analysis. These are summarised as follows:




1. **Helps to understand efficacy of decisions:**
   The ratio analysis helps you to understand whether the business firm has taken the right kind of operating, investing and financing decisions. It indicates how far they have helped in improving the performance.

2. **Simplify complex figures and establish relationships:**

   Ratios help in simplifying the complex accounting figures and bring out their relationships. They help summarise the financial information effectively and assess the managerial efficiency, firm's credit worthiness, earning capacity, etc.

3. **Helpful in comparative analysis:**

   The ratios are not be calculated for one year only. When many year figures are kept side by side, they help a great deal in exploring the trends visible in the business. The knowledge of trend helps in making projections about the business which is a very useful feature.

4. **Identification of problem areas:**

   Ratios help business in identifying the problem areas as well as the bright areas of the business. Problem areas would need more attention and bright areas will need polishing to have still better results.

5. **Enables SWOT analysis:**

   Ratios help a great deal in explaining the changes occurring in the business. The information of change helps the management a great deal in understanding the current threats and opportunities and allows business to do its own SWOT (Strength- Weakness-Opportunity-Threat) analysis.

6. **Various comparisons:**

   Ratios help comparisons with certain bench marks to assess as to whether firm's performance is better or otherwise. For this purpose, the profitability, liquidity, solvency, etc., of a business, may be compared:

   (i) Over a number of accounting periods with itself (Intra-firm Comparison/Time Series Analysis),

   (ii) With other business enterprises (Inter-firm Comparison/Cross-sectional Analysis)

   (iii) With standards set for that firm/industry (comparison with standard (or industry expectations).

## 6.1 Limitations of Ratio Analysis

The ratios are derived from the financial statements, any weakness in the original financial statements will also creep in the derived analysis in the form of ratio analysis. Thus, the limitations of financial statements also form the limitations of the ratio analysis.

The limitations of ratio analysis which arise primarily from the nature of financial statements are as under:

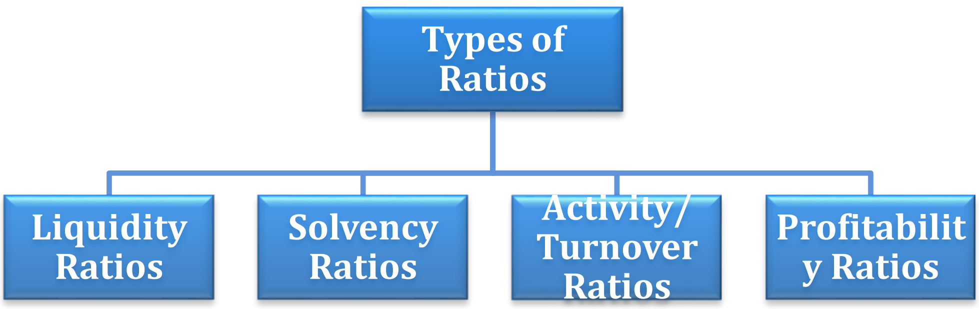
1. **Means and not the End**: Ratios are means to an end rather than the end by itself.
2. **Lack of ability to resolve problems**: Their role is essentially indicative and of whistle blowing and not providing a solution to the problem.
3. **Lack of standardised definitions**: There is a lack of standardised definitions of various concepts used in ratio analysis. For example, there is no standard definition of liquid liabilities. Normally, it includes all current liabilities, but sometimes it refers to current liabilities less bank overdraft.
4. **Lack of universally accepted standard levels**: There is no universal yardstick which specifies the level of ideal ratios. There is no standard list of the levels universally acceptable, and, in India, the industry averages are also not available.
5. **Ratios based on unrelated figures**: A ratio calculated for unrelated figures would essentially be a meaningless exercise. For example, creditors of Rs. 1,00,000 and furniture of Rs. 1,00,000 represent a ratio of 1:1. But it has no relevance to assess efficiency or solvency.
6. **Ignore Qualitative or Non-monetary Aspects**: It provides information about quantitative (or monetary) aspects of business. Hence, it reflects only the monetary aspects, ignoring completely the non-monetary (qualitative) factors.
7. **Forecasting**: It is not possible to plan the future of the business solely on the basis of analysis of ratios as they do not reflect the non- monetary factors of a business.
8. Hence, ratios should be used with due consciousness of their limitations while evaluating the performance of an organisation and planning the future strategies for its improvement.

## 7.1 Types of Ratios

The basic purpose of accounting is to throw light on the:

- Financial performance (profitability)
- Financial position (its capacity to raise money and invest them wisely)
- Changes occurring in financial position (possible explanation of changes in the activity level).

Thus to measure all of the above the types of ratios are:



1. **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'. These are essentially short-term in nature.

   Liquidity ratios include:

   - **Current Ratio** (Working Capital ratio),
   - **Quick Ratio**

2. **Solvency Ratios:**

   Solvency of business is determined by its ability to meet its contractual obligations towards stakeholders, particularly towards external stakeholders, and the ratios calculated to measure solvency position are known as 'Solvency Ratios'. These are essentially long-term in nature.

   Solvency ratios include:

   - **Debt-Equity Ratios**
   - **Total Assets to Debt Ratio**
   - **Proprietary Ratio**
   - **Interest coverage ratios**

3. **Activity (or Turnover or Performance) Ratios**:

   This refers to the ratios that are calculated for measuring the efficiency or performance of operations of business based on effective utilisation of resources. Hence, these are also known as 'Efficiency or Performance Ratios'.

   Activity ratios include:

   - Inventory Turnover Ratio
   - Trade Receivables Turnover Ratio
   - Trade Payables Turnover Ratio
   - Working Turnover Ratio

4. **Profitability Ratios:**

   It refers to the analysis of profits in relation to revenue from operations or funds (or assets) employed in the business and the ratios calculated to meet this objective are known as 'Profitability Ratios'.

   Profitability Ratios include:

   - Gross Profit Ratio
   - Net Profit Ratio
   - Operating Profit Ratio

- Operating Ratio
- Return on Investments or Return on Capital Employed.

**SUMMARY**

The financial details that are prepared by the business enterprisers so as to meet the information requirement of the decision-makers are known as financial statements. These statements provide financial data that require analysis, comparison and interpretation for taking decision by the external as well as internal users of accounting information. This act is termed as financial statement analysis. The most commonly used technique of financial statements analysis is accounting ratios.

Accounting ratios are a group of metrics used to measure the efficiency and profitability of a company based on its financial reports. They are an important tool of financial statements analysis and provide a way of expressing the relationship between one accounting data point to another.

Ratio analysis is a quantitative method of gaining insight into a company's liquidity, operational efficiency, and profitability by studying its financial statements such as the balance sheet and income statement. Thus, ratio analysis compares similar data from a company's financial statements to reveal insights regarding profitability, liquidity, operational efficiency, and solvency.

The objective of ratio analysis is to help in budgeting and forecasting, Analyse the operational efficiency of a business, Facilitate intra firm and inter firm comparison of performance, Facilitate analysis of financial statements, Simplify accounting figures.

Ratio analysis offers many advantages including enabling financial statement analysis, helping understand efficacy of decisions, simplifying complex figures and establish relationships, being helpful in comparative analysis, identification of problem areas, enables SWOT analysis, and allows various comparisons.

There are many limitations of ratio analysis too like - Ratios are means to an end rather than the end by itself, Lack of ability to resolve problems, Lack of standardised definitions, Lack of universally accepted standard levels, Ratios based on unrelated figures, Ignore Qualitative or Non-monetary Aspects and it is also not possible to plan the future of the business solely on the basis of analysis of ratios as they do not reflect the non- monetary factors of a business.

There are many types of ratios, viz., liquidity, solvency, activity and profitability ratios. The liquidity ratios 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’. These are essentially short-term in nature. Liquidity ratios include: the current ratio, quick ratio, and working capital ratio.

Solvency ratios are Solvency of business is determined by its ability to meet its contractual obligations towards stakeholders, particularly towards external stakeholders, and the ratios calculated to measure solvency position are known as ‘Solvency Ratios’. These are essentially long-term in nature. Solvency ratios include: debt-equity ratios, debt-assets ratios, and interest coverage ratios.

Activity ratios refers to the ratios that are calculated for measuring the efficiency of operations of business based on effective utilisation of resources. Hence, these are also known as ‘Efficiency Ratios’. Activity ratios include: turnover ratio, inventory turnover, and days' sales in inventory.

The analysis of profits in relation to revenue from operations or funds (or assets) employed in the business and the ratios calculated to meet this objective are known as ‘Profitability Ratios’. Profitability Ratios include: Profit margin, return on assets, return on equity, return on capital employed, and gross margin ratios.