# Chapter 2

## Profitability Analysis- An Overview

<table>
<thead>
<tr>
<th>No.</th>
<th>Sub No.</th>
<th>Particulars</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td></td>
<td>Introduction</td>
<td>35</td>
</tr>
<tr>
<td>2.1</td>
<td></td>
<td>Meaning And Definition of Profitability</td>
<td>35</td>
</tr>
<tr>
<td>2.2</td>
<td></td>
<td>Profit and Profitability</td>
<td>36</td>
</tr>
<tr>
<td>2.3</td>
<td></td>
<td>Concepts of Profitability</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>2.3.1</td>
<td>Accounting Profitability</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>2.3.2</td>
<td>Social Profitability</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>2.3.3</td>
<td>Value Added Profitability</td>
<td>38</td>
</tr>
<tr>
<td>2.4</td>
<td></td>
<td>Factors Affecting Profitability</td>
<td>38</td>
</tr>
<tr>
<td>2.5</td>
<td></td>
<td>Analysis of Financial Statements</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>2.5.1</td>
<td>Analyzing Profitability through Ratio</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>2.5.2</td>
<td>Meaning And Definition of Ratio</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>2.5.3</td>
<td>Classification of Ratio</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>2.5.4</td>
<td>Profitability Ratios – An Overview</td>
<td>47</td>
</tr>
<tr>
<td>2.6</td>
<td></td>
<td>Advantages of Ratio Analysis</td>
<td>53</td>
</tr>
<tr>
<td>2.7</td>
<td></td>
<td>Limitations of Ratio Analysis</td>
<td>54</td>
</tr>
<tr>
<td>2.8</td>
<td></td>
<td>Why Ratio Analysis is Superior to Other Tools?</td>
<td>55</td>
</tr>
<tr>
<td>2.9</td>
<td></td>
<td>Profitability Ratios Taken into Consideration for Present Research work</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td></td>
<td>References</td>
<td>58</td>
</tr>
</tbody>
</table>
Chapter 2
Profitability Analysis- An Overview

2.0 Introduction:
The primary motive of a business is to earn Profit. The definition of the business says that “It is any economic activity done for the purpose of earning profit”. So, the definition of business itself says that its primary purpose is to earn profit. Whether a business is efficient or inefficient can be measured in terms of profit. It is the barometer of the success of the business. Profit is the pivot around which all the activities of the business are focused. The survival of any business depends on its earning capacity. If the business fails to earn profit, its capital gets worn. If this situation continues for the long time, the existence of the enterprise is in danger. In short, profit is the life blood of the business. Without profit, the business becomes life less. A profitable company is effective not only in terms of customer satisfaction but also giving promotion opportunities, better job prospects and motivation to the employees.

Profit and Profitability are the different terms. Profit refers to the absolute amount of profit (Revenue – Expenditure), whereas Profitability means profit earning capacity of the business. An analysis of profitability is required to judge the operational efficiency of the business. It is also used to compare the efficiency of one business or unit with that of another business or unit. An analysis of profitability reveals that how efficiently each operation of the business was undertaken. Such analysis is particularly useful to the investors for taking investment decision.

2.1 Meaning and Definition of Profitability:
The word profitability is made up of two words i.e. Profit and ability. The term profit means revenue minus expenditure. Ability means the power of a firm to earn profit. The ability of an enterprise also denotes its earning power and operating efficiency.

Thus, profitability can be defined as “the ability of a given instrument to earn a return from its use”.¹

¹ Howard, B., B., and Upton, M., “Introduction to Business Finance”, P. 147
According to Weston and Brigham profitability can be defined as “the net surplus of a large number of policies and decisions”.

Thus, profitability differs from profit in a certain manner. Profitability is not measured in terms of money, but in terms of return on some assets. Profitability measures how much output can affirm generate by employing a certain amount of asset.

Profitability is usually expressed in terms of ratio such as percentage. However, the term Profitability is not the same as Efficiency. Profitability is only the index of efficiency. Though, the profitability is the gauge of efficiency, it can happen that a business earning profit can also be inefficient and vice versa is also possible.

Profit is an absolute figure and hence it fails to indicate the adequacy of income and improvement in the efficiency of the business. For historical comparison or inter-firm comparison, the figures of profit do not give exact idea. Such problem can be easily solved with the help of figures of profitability. Such inter firm comparison or historical comparison can easily be done with the help of ratios or percentage. Such ratios are named as profitability ratios. Thus, profitability can be considered as a relative term which can be useful to establish relationship between two firms or the relationship with other elements.

### 2.2 Profit and Profitability:

Profit is regarded as absolute expression whereas profitability is regarded as relative expression.

Profit means residual income after meeting all manufacturing and administrative expenses whereas profitability is the profit making ability of the business.

The figures of profit show the amount of earning during fixed period of time whereas profitability explains whether this profit is constant, improving or deteriorating.

The figures of profit in two business firms may be the same still we cannot say that both the businesses have similar efficiency whereas if two business firms having similar profitability will have similar efficiency.

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2 Weston, J., F., and Brigham, E., F., “Essentials of Managerial Finance”, P., 48
Thus, the term profit and profitability plays different roles in the business organization. Both of them are important for decision making.

2.3 Concepts of Profitability:

2.3.1 Accounting Profitability:

Accounting profitability is measured in terms of input-output relationship. As we know that the profitability is the measurement of efficiency of the business. The best way to measure this efficiency is to analyse the input-output relationship. By relating the output as a proportion of input, the profitability can be measured. This is useful for comparing the efficiency of two businesses or two operations. This is generally referred to as Return on Investment. It is measured by comparing the capital invested i.e. input with earning i.e. output. It is regarded as overall profitability ratio. It has two components i.e. Net Profit Ratio and Turnover Ratio.

\[
\text{Return on Investment} = \frac{\text{Net Profit Ratio} \times \text{Turnover Ratio}}{}
\]

\[
\text{Return on Investment} = \frac{\text{Operating Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Capital Employed}}
\]

\[
\text{Return on Investment} = \frac{\text{Operating Profit}}{\text{Capital Employed}}
\]

This method is increasingly used for the measurement of performance and capability. Thus, the better profitability can be achieved by improving Net Profit Ratio and Turnover Ratio of the business. The Net Profit Ratio reflects the margin made in each sale in terms of percentage. The Turnover Ratio shows the rotation of capital for affecting the sales proceed.

2.3.2 Social Profitability:

As we know that the business has the economic objective of earning profit. Besides economic objective, the business has social objective also. Besides undertaking economic activities of manufacturing and selling the products, the business has to undertake the social activities of providing employment opportunities, better working conditions, better community services, conservation of resources, etc. this is known as social responsibility of a business. When such initiatives are undertaken, the social
image of the organization improves and the organization gets favor of customers. As a result the sales increases and profit also increases. Therefore, it is known as social profitability. Certain initiatives like elimination of pollution involve huge cost and as a result, the profitability of the firm reduces.

2.3.3 Value Added Profitability:
The main aim of a business is to earn profit, but the business that focuses only on earning profit cannot survive for long time. Instead, the business should focus on Wealth Creation rather than only profit making. Wealth generation is essential for an enterprise. The wealth generated during a specific period by the manufacturing operations is known as net value added and hence it is known as value added profitability. Profit is a narrow concept, whereas value added is a broad concept. Value added refers to reinvestment of profit into the business to maximize the wealth of the business. If the wealth of the business is maximized, the value of the shareholders, debenture holders, creditors, employees, etc. will be maximized. Hence, the business should try to focus not only on maximizing the profit, but also on maximizing the value added.  

2.4 Factors Affecting Profitability:
As of now it is clear that profitability means the profit earning ability of the firms. There are chances that the profit of a firm is increasing but the profit earning ability is not rising. There are several factors that affect the profitability of the firm. Following factors affect the profitability of the firm.

(1) Efficiency of the Management:
The first factor that affects the profitability of the firm is efficiency of the management. If the management of the firm is inefficient, its profit will decrease and as a result the profitability will also decrease.

(2) Goal of the Management:
The goal of the management also affects the profitability of the firm. Generally, it has been seen that the firm has the goal of maximizing the profit. Rather the management should have the goal of maximizing the profitability.

(3) Trade Cycle:
In any country, the trade cycle of boom and recession is always working. In the situation of recession, the demand of the product falls and as a result, the profit and

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profitability decreases. In the situation of boom, the demand of the product increases and as a result, the profit and profitability increases.

(4) **Labor Force:**
If in the business, the labor force is efficient and more productive, naturally, the production of the firm will increase and as a result, the profit earning capacity of the firm will also increase.

(5) **Availability of Technology:**
If the firm has modern technology available for the production, it production and productivity both will increase and as a result the profitability of the firm will also increase.

(6) **Effective Control Policy:**
If the firm has effective control policy, the wastage of material, time, energy, human capacity, etc. can be avoided. If such wastage is avoided or reduced, the firm’s profit earning ability improves.

(7) **Government Policy:**
The policy of the government also affects the profitability of the firm. The policy about export-import, taxes, etc. affects the profit earning capacity of the firm. If these policies are favorable, the firm will be able to earn more profit and the profitability will improve.

(8) **Natural factors:**
The natural factors also affect the profitability of the business. If these factors are favorable, the profitability will improve and if these factors are not favorable, the profit earning ability will be lower.

2.5 **Analysis of Financial Statement:**
Financial Statement can be broadly categorized into two i.e. Income Statements (Trading Account, Profit and Loss Account) and Balance Sheet. Presentation of financial statements is an important part of the accounting process of the firm. To provide more clear and meaningful information to the owners, investors, creditors or outsiders, the financial statements are useful. More accurate information is required to take the purposeful decision about the profitability of the business. To provide such accurate information, the analysis of financial statements is to be done. The analysis of financial statements can be done through various methods. Following are the commonly used methods for analyzing the financial statements.

(1) Comparative Financial Statements
(2) Common Size Statements
(3) Trend Analysis
(4) Fund Flow or Cash Flow Analysis
(5) Ratio Analysis

(1) Comparative Financial Statements:
Under this method comparative profit and loss account and comparative balance sheet are prepared. Such comparative statements are prepared for the comparison of various figures of two or more periods. They are also useful to explain the relationship between various elements included in the profit and loss account and balance sheet. This helps us to understand the operational efficiency and financial soundness of the business.

(2) Common Size Statements:
This method is designed to avoid the limitations of Comparative Financial Statements. Under this method, the financial statements are analysed by measuring the relationship of various figures with some common base. For example, to prepare the common size profit and loss account, total sales is taken as a base and other items are expressed as a percentage of it. In the same manner, to prepare the common size balance sheet, total assets and total liabilities are taken as a common base and other figures are presented as a percentage of total assets and total liability.

(3) Trend Analysis:
Trend analysis is one of the most important techniques for analysis and interpretation of financial statements. To apply this method, it is necessary to select a base year in order to determine the percentage relationship of each item in the financial statement comparing with the base year. In order to determine the trend the earliest or the first year is taken as a base. This method is useful for forecasting or for framing the suitable policies.

(4) Fund Flow or Cash Flow Analysis:
Fund Flow Analysis is also important method for the analysis of financial statements. The statement of fund flow analysis is supplementary to profit and loss account and balance sheet. Fund Flow Analysis is useful to determine the changes in financial position on working capital basis or cash basis. It gives information about the sources of funds and use of fund during a particular period.
(5) Ratio Analysis:

Ratio analysis is one of the most important techniques to analyse the financial condition of the firm. It is useful to analyse the relationship between two interrelated accounting figures based on financial information. This tool is useful for the management for decision making. It is useful ascertaining the efficiency and liquidity of the firm.

Thus, there are several methods for the analysis of financial statements, but out of all these methods, the ratio analysis is widely used tool for the analysis and interpretation of financial statements. In this research work, the researcher is aimed at analyzing the profitability of selected pharmaceutical companies. For this purpose, the researcher has selected the technique of ratio analysis. Hereafter, the detailed information about the Ratio Analysis is given in the subsequent sections.

2.5.1 Analyzing Profitability through Ratio:

The analysis of financial statements or the interpretation of financial results through ratio is the easy method to make analysis about the financial condition of the firm. This analysis is commonly termed as ratio analysis. The system of ratio analysis was designed and presented by Alexander Wall in 1909.

2.5.2 Meaning and Definition of Ratio:

A good tool for measuring the performance of a business organization is Ratio analysis. Ratio Analysis indicates the relationship between financial data in the financial statements, and indicates the quotient of two mathematical expressions. Ratio Analysis is a powerful tool of financial analysis and it provides systematic interpretation of information received from balance sheet, income statement or fund statement. It means that the interpretation of two or more financial variables of the financial statement can be possible through the ratio analysis and this interpretation can be useful for decision making.

Besides that, through the ratio analysis the analyst gets better idea about the financial strengths and weaknesses of the business. Thus, financial analysis is not possible without ratio analysis.
According to Olowe “Financial ratio analysis is the relationship between financial data in the financial statements to aid the financial condition and performance of the firm.”

According to Pandey “A ratio is the indicated quotient of two mathematical expressions and as the relationship between two or more things.”

According to Gerald “Ratios are used to compare the risk and return of different firms in order to help equity investors and creditors make intelligent investment and credit decisions.”

Thus, a primary advantage of ratio analysis is that they can be used to compare the risk and return relationships of firms of different sizes. Ratios can also provide a profile of a firm, its economic characteristics, and competitive strategies.

2.5.3 Classification of Ratios:

The ratio analysis is a useful tool for analysing the profitability of a firm. The ratios are of various types. They can be classified as follows.

A. Traditional Classification:

The traditional classification of the ratios is based on the types of financial statement on which this ratio is calculated. This classification depends on the three categories viz. Balance Sheet Ratios, P & L Statement Ratios and Composite Ratios. The following chart shows the type of ratios on the basis of traditional classification.
A. **Functional Classification:**

The functional classification of the ratio is dependent on the functions performed by the ratio. Some ratios are useful for analysing the liquidity, profitability, turnover, solvency or overall profitability. On the basis of the functions performed, the ratios can be classified as follows.
(i) **Liquidity Ratios:**
Liquidity Ratios are also known as Short term solvency ratio. The term liquidity refers to the capability of converting the assets into money for paying short term obligations. It means that liquidity ratios give idea about firm’s ability of meeting its current liabilities. It does not show how the cash is managed in the firm. In order to measure the liquidity of the firm following ratios are commonly used.

(a) Current Ratio
(b) Quick Ratio or Acid Test Ratio
(c) Absolute Liquidity Ratio or Cash Position Ratio

(ii) **Profitability Ratios:**
the term profitability means profit earning ability of a firm. The profit earning can be judged on the basis of volume of profit margin of any activity. It calculated by subtracting the cost of any operation from the revenue of the same. Thus, the profitability ratios are used to measure the financial performance of the firm. The following are the important Profitability ratios.
(a) Gross Profit Ratio
(b) Operating Ratio
(c) Operating Profit Ratio
(d) Net Profit Ratio
(e) Return on Investment Ratio
(f) Return on Capital Employed Ratio
(g) Earning per Share Ratio
(h) Dividend Payout Ratio
(i) Dividend Yield Ratio
(j) Price Earning Ratio
(k) Net Profit or Net Worth Ratio
(l) Net Profit to Total Assets Ratio

(iii) **Turnover Ratio:**
Turnover ratios are also known as efficiency ratios, performance ratios or activity ratios. Turnover means the number of times the assets are turned over into sales. This ratio indicates the effectiveness with which different assets are utilised in the business.

Following are the important Turnover Ratios.

(a) Inventory Ratio or Stock Turnover Ratio (Stock Velocity)
(b) Debtor’s Turnover Ratio or Receivable Turnover Ratio (Debtor’s Velocity)
(c) Debtor’s collection Period Ratio
(d) Creditor’s Turnover Ratio or Payable Turnover Ratio (Creditors Velocity)
(e) Debt Payment Period Ratio
(f) Working Capital Turnover Ratio
(g) Fixed Assets Turnover Ratio
(h) Capital Turnover Ratio

(iv) **Solvency Ratios:**
the term solvency means the ability of the firm to meet its short term and long term obligations. Short term obligations involves the creditors, bank loan, bills payable, etc. Long term obligations involves the debentures, long term bank loan, long term creditors, etc. Solvency Ratio shows sound financial condition of the firm. Following solvency ratios are important to analyse the financial condition of the firm.

(a) Debt-Equity Ratio
(b) Proprietary Ratio
(c) Capital Gearing Ratio
(d) Debt Service Ratio or Interest Coverage Ratio
(v) Overall Profitability Ratio:
Overall Profitability Ratio shows the overall efficiency of the firm in terms of operating capacity. This ratio shows the relationship between profitability on sales and the profitability on investment turnover. The following formula is used to measure the Overall Profitability Ratio.

\[
\text{Overall Profitability Ratio} = \frac{\text{Net Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}}
\]

B. Classification from the View Point of Users:
2.5.4 Profitability Ratios – An Overview:
As mentioned above, there are various types of ratio used for financial analysis, but here the researcher’s aim is to measure the profitability of the pharmaceutical industry, so the explanation about the ratios useful for measuring profitability only is given here.

(1) **Gross Profit Ratio:**
Gross Profit Ratio shows the relationship between gross profit and net sales. It can be calculated by dividing the gross profit by sales. This ratio is usually indicated in terms of percentage. It can be shown through following formula.

\[
\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Net Sales}} \times 100
\]

**Gross Profit = Sales – Cost of Goods Sold**

**Net Sales = Gross Sales – Sales Return**

The higher this ratio, the higher the profitability of the firm is. This ratio shows the effective standard of performance of the firm. This ratio is an indicator of the degree to which the selling price of the goods per unit may decline without resulting in losses from operations to the firm. This ratio is also helpful in determining whether the average percentage mark up on the goods is maintained.

(2) **Operating Ratio:**
Operating Ratio measures the relationship between total operating cost and sales. Total operating expenses includes the expenses like cost of goods sold, office and administrative expenses, selling and distribution expenses, etc. In short, this ratio shows firm’s ability to cover the operating expenses. Following formula is used to calculate this ratio.

\[
\text{Operating Ratio} = \frac{\text{Operating Cost}}{\text{Net Sales}} \times 100
\]

**Operating Cost = Cost of Goods Sold + Administrative Expenses + Selling and Distribution Expenses**

**Net Sales = Sales – Sales Return**

(3) **Operating Profit Ratio:**
This ratio shows the relationship between operating profit and net sales. This ratio measures operational efficiency of the firm. It is calculated to measure firm’s ability to cover the total operating expenses. The following formula is used to calculate this ratio.
Operating Profit Ratio = \frac{Operating Profit}{Net Sales} \times 100

Operating Profit = Net Sales – Operating Cost

Or

= Net Sales – (Cost of Goods Sold + Office and Administrative Expenses + Selling and Distribution Expenses)

Or

= Gross Profit – Operating Expenses

Or

= Net Profit – Non-operating Expenses – Non-operating Income

Or

Net Sales = Sales – Sales Return

This ratio is useful for testing the operational efficiency with which the business is being carried out. The operating ratio should be low enough to leave a portion of sales to give a fair return to the investors. With the help of this ratio, it can be known that whether the cost component is high or low in the figure of sales. If this ratio increases, it means that the cost of sales is increasing which is an adverse signal. The management is advised to check the increase.

(4) Net Profit Ratio:

The other names of Net Profit Ratio are Sales Margin Ratio or Profit Margin Ratio or Net Profit to Sales Ratio. This ratio shows the relationship between net profit (before or after Taxes) and sales. It shows firms overall efficiency in operating the business.

The following formula is used to calculate this ratio.

Net Profit Ratio = \frac{Net Profit After Tax}{Net Sales} \times 100

Net profit includes both profit and non-operating income. Non-operating income includes dividend received, interest on investment, profit on sales of fixed assets, commission received, discount received, etc. Profit or sales margin means the margin available after deduction of cost of production, other operating expenses and income tax from the sales revenue. Higher Net Profit Ratio indicates better standard of performance of the firm.

This ratio is useful in deciding how effectively the operations of business are managed. If this ratio shows an increase over the previous year’s ratio, it means that there is improvement in the operational efficiency of the business. Thus, this ratio is
an effective measure of checking the profitability of the business. Before making an investment, an investor has to judge whether this ratio is adequate or not by taking into account the cost of capital, the return in the industry as a whole and market conditions during that period. If this ratio is constantly increasing year after year, it is a definite indication of improvement in the efficiency of the business.

(5) **Return on Investment Ratio:**

This ratio is popularly abbreviated as ROI. This ratio is useful to measure owners’ or shareholders’ investment. It shows the relationship between net profit after interest and taxes and owners’ investment. This ratio is presented in percentage. It can be calculated in the following manner.

\[
\text{Return on Investment} = \frac{\text{Net Profit (after interest and taxes)}}{\text{Shareholders’ Fund or Investment}} \times 100
\]

\[
\text{Shareholders’ Investment} = \text{Equity Share Capital} + \text{Preference Share Capital} + \text{Reserve and Surplus} – \text{Accumulated Losses}
\]

\[
\text{Net Profit} = \text{Net Profit} – \text{Interest and Taxes}
\]

The Return on Capital Investment is a concept that measures the profit which a firm earns on investing a unit of capital. Another name of this ratio is ‘Yield on Capital’. It is advisable for each firm to measure this periodically. This ratio measures efficiency or inefficiency of the departments of a business collectively. On the basis of this ratio, the comparison of the efficiency of one department can be possible with other department.

(6) **Return on Capital Employed Ratio:**

This ratio is also known as Return on Investment Ratio. Return on Capital Employed Ratio shows the relationship between profit and capital employed. Here, the term return means profit or net profit and capital employed means total investment made in the business. The concept of Return on Capital Employed Ratio can further be explained in following four ways.

(a) \[\text{Gross Capital Employed} = \text{Fixed Assets} + \text{Current Assets}\]

(b) \[\text{Net Capital Employed} = \text{Total Assets} – \text{Current Liabilities}\]

(c) \[\text{Average Capital Employed} = \frac{\text{Opening Capital Employed} + \text{Closing Capital Employed}}{2}\]

Or
PROFITABILITY ANALYSIS - AN OVERVIEW

Average Capital Employed = Net Capital Employed + \( \frac{1}{2} \) Of Profit After Tax

(d) Proprietors’ Net Capital Employed = Fixed Assets + Current Assets – Outstanding Liability (both short term and long term)

In order to calculate the Return on Capital Employed Ratio following formulas are used.

(i) Return on Capital Employed = \( \frac{\text{Net Profit After Taxes}}{\text{Gross Capital Employed}} \times 100 \)

(ii) Return on Capital Employed = \( \frac{\text{Net Profit After Taxes before Interest}}{\text{Gross Capital Employed}} \times 100 \)

(iii) Return on Capital Employed = \( \frac{\text{Net Profit After Taxes before Interest}}{\text{Average Capital Employed or Net Capital Employed}} \times 100 \)

This ratio is useful and important for money lenders or investors. If the Gross Profit Ratio and Net Profit Ratio are satisfactory, the investor should not take the decision of investment, but the comparison of this ratio is also required. One should compare the ratio with the prevailing rates in the market and inter-industry comparison and inter-firm comparison to know the satisfactory level of this ratio.

(7) Earnings Per Share Ratio:

Earnings per Share Ratio measures the relationship between net profit after tax and preference dividend and number of equity shares. This ratio shows the earning capacity of the firm from the owners’ view point. This ratio is also useful in determining the price of equity share of the firm in the market. Following formula is used to measure the Earnings Per Share Ratio.

Earnings Per Share Ratio = \( \frac{\text{Net Profit after Tax and Preference Dividend}}{\text{No. of Equity Shares}} \)

This ratio is useful to highlight the capacity of the firm to pay dividend to the shareholders. It is used as a yard stick to measure the overall performance of the firm. A comparison of earnings per share of the company with another will facilitate in deciding whether the equity share capital is being used effectively or not.
(8) Dividend Payout Ratio:
This ratio is useful to measure the relationship between payment of dividend on equity share capital and the profit available after tax and preference dividend. This ratio reflects the firm's policy of dividend payment. It talks about management policy of utilizing the divisible profit to pay dividend or to retain the earning or both. This ratio can be calculated by using the following formula.

\[
\text{Dividend Payout Ratio} = \frac{\text{Equity Dividend}}{\text{Net Profit after Tax and Preference Dividend}} \times 100
\]

Or

\[
= \frac{\text{Dividend per Equity Share}}{\text{Earning per Equity Share}} \times 100
\]

The payout ratio and the retained earnings ratio are indicators of the amount of earnings that have been reinvested in the business. If the payout ratio is lower, it means that the more profit is reinvested in the business and if the payout ratio is higher, it means that the less amount of profit is reinvested in the business. A lower payout ratio or a higher retained earning ratio means a stronger financial position of the company.

(9) Dividend Yield Ratio:
This ratio is used to indicate the relationship between dividend per share and market value per share. This ratio is useful to determine the dividend income from the investor's viewpoint. This ratio can be calculated by using the following formula.

\[
\text{Dividend Yield Ratio} = \frac{\text{Dividend per Share}}{\text{Market Value per Share}} \times 100
\]

This ratio is useful for the prospective investor in knowing how much dividend he or she is going to get from his or her proposed investment. On the basis of this he or she can decide whether to make investment or not.

(10) Price Earning Ratio:
This ratio reflects the relationship market price of an equity share and the earning per equity share. This ratio highlights the earnings per share reflected by the market share. This ratio is useful to find out whether firm's equity shares are undervalued or overvalued. This ratio can be useful in financial forecasting. It can be calculated by using the following formula.
Price Earning Ratio = \frac{\text{Market Price per Equity Share}}{\text{Earning per Share}}

Price earning ratio helps an investor in deciding whether to buy or not to buy the shares of a company at a particular time and particular market price.

(11) **Net Profit to Net Worth Ratio:**

This ratio shows the relationship between net profit and shareholders’ net worth. This ratio is used to measure the profit return on investment. It shows the reward of assuming the risk of ownership of the business. It can be calculated by using the following formula.

\[
\text{Net Profit to Net Worth} = \frac{\text{Net Profit After Taxes} \times 100}{\text{Shareholders’ Net Worth}}
\]

Shareholders’ Net Worth = Total Tangible Net Worth

Total Tangible Net Worth = Company’s Net Asset – Long Term Liability

Or

= Shareholders’ Fund + Profit Retained in Business

This ratio determines the incentives to the owners. This ratio indicates the overall effectiveness of the management. It shows the effectiveness with which the firms’ resources are employed.

(12) **Capital Turnover Ratio:**

This ratio is useful to measure the efficiency of utilisation of capital into the business. This ratio shows the relationship between cost of sales or sales and capital employed or shareholders’ fund. This ratio can be calculated by using the following formula.

\[
\text{Capital Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Capital Employed}}
\]

Or

= \frac{\text{Sales}}{\text{Capital Employed}}

Capital Employed = Shareholders’ Fund + Long Term Loans

Or

= Total Assets – Total Liability

Capital Turnover Ratio = \frac{\text{Cost of Sales}}{\text{Shareholders’ Fund}}

Or
2.6 Advantages of Ratio Analysis:
The ratio analysis is the important technique for analysing and interpretation of various financial information. It establishes relationship between two accounting information which is useful to measure the operational efficiency of the firm and making the decisions. Following are the advantages of ratio analysis.

1. It is useful for summarising and simplifying the accounting information in the most convenient format.

2. It reflects the relationship between various facts and figures of different segments of the business.

3. With the help of ratio analysis, the management can identify all types of wastages and inefficiency and take the steps to remove the same.

4. It provides easy to understand information to the management for prompt decision making.

5. Ratio analysis helps the management to execute the functions like planning, organising, staffing, controlling, etc.

6. Ratio analysis is the yardstick for effective control by the management.

7. Ratios are the effective means of communication about the financial soundness of the business to the investors, creditors and other parties.

8. It is useful for measuring operating results of the business enterprise.

9. With the help of ratio analysis, the control on the functions and resources of the business can be possible.

10. Ratio analysis guides the management to fix the responsibilities of the various departments of the business.

11. Ratio analysis helps to determine the liquidity, profitability, solvency position of the business.

12. Ratios are useful for the budgetary control also. Where the system of budgetary control is applied, to prepare various reports, ratios are useful.

13. Some ratios are also useful to know the efficiency of the employees or departments. The turnover ratios are guide to the efficiency of the employees of various departments.
2.7 Limitations of Ratio Analysis:

As we discussed above, the ratio analysis is an important method for measuring the financial soundness of the business. Though it is a very good technique, it has some limitations. Following are the major limitations of ratio analysis.

1. Ratio analysis is fully dependent on the financial statements. Hence, all the limitations of financial statements would affect the quality of ratio analysis.
2. Ratio analysis fully involves quantitative information. It ignores the qualitative data and hence, it may not reflect the accurate picture of the financial situation of the firm.
3. Some of the ratios lack the standards for ideal ratio and hence, it results into poor measurement of performance.
4. Ratio analysis is merely a tool for the analysis of financial statements. It cannot replace the analysis of financial statements.
5. When the comparison of the information of two companies is made, it is questionable because both the companies may have used different accounting techniques.
6. Ratio analysis does not consider the changes in prices and as a result it does not reflect the true picture of the financial condition of the company.
7. While calculating the ratios, accounting information of the past years is used and the decisions are to be taken for the future. It is not compulsory that whatever happened in the past will be repeated in the future. So the ratio analysis may not be trustworthy for future decision making.
8. Sometimes, it may happen that the accounting data itself is wrong or it is prepared to mislead the outside parties. In this situation, the ratio analysis will never present the correct picture.
9. If the ratio is calculated on the basis of two irrelevant figures, it will generate some answer, but it is of no use because it does not have any meaning.
10. When the ratio for a single year is calculated, it does not become more useful, because it lacks in showing the trend or comparison.
11. Comparison of the ratio of one year with the ratios of previous year may be misleading because the management may have used different policies in different years.
12. It must be noted that the ratios provide just the information about the financial position of the firm. They are not the controlling tool. Ratios are the
first step of controlling process on the basis of which further investigation must be done.

2.8 Why Ratio Analysis is Superior to Other Tools?:

As it is discussed above, there are several tools for the analysis of financial statements. All these tools are useful for analysing the financial capacity of the firm, but ratio analysis proves to be superior to the other tools. Following are the reasons why ratio analysis proves to be superior.

(1) Other tools of the analysis of financial statements provides information in terms of rupees or other monetary factor whereas ratio analysis provides information in terms of percentage, which is more accurate than the others.

(2) Ratio analysis is useful to measure the effects of external factors on the financial health of the firm. This analysis gives idea about whether the changes in external factors affected the financial health of the firm favorably or unfavorably.

(3) With the help of ratio analysis the effects of internal factors on the financial health of the firm can also be analysed.

(4) Ratio analysis shows mathematical relationship between two or more variables whereas the other tools show statistical relationship between two or more variables. Mathematical analysis proves to be more accurate than the statistical analysis.

(5) Ratio analysis is the component wise analysis of the firm. It gives idea about each and every component of the profit and loss account and balance sheet. That is why ratio analysis is known as micro analysis of the firms financial condition. Other tools of financial statements analysis analyse the financial health on macro angle, which does not provide the exact idea about the situation.

(6) Ratio analysis is a detailed analysis of the financial health of the firm. It gives idea about the solvency, profitability, turnover, capacity and activity of the firm. As a result the financial health of the firm can be analysed from each and every angle.

(7) Ratio analysis is also known as functional analysis because the accounting and financial situation of each function of the firm can be analysed through ratio.

(8) Common Size Statement is one of the tool for the analysis of financial statements, but it is useful to make the comparison of financial position of one
firm with that of the other. It does not provide accurate picture of the financial health of the firm, which is possible in the ratio analysis.

(9) Comparative Analysis is useful for making comparison of financial situation of a company in one time period with that of other time period. It does not give idea about the financial position of the firm, which is possible through ratio analysis.

(10) Trend Analysis is another tool for financial statement analysis which shows the trend of business performance for some years. It give overall idea about the decline or growth of the firm but it does not give exact picture of the firm. Ratio analysis provides this better and therefore, it is better than trend analysis.

(11) Ratio Analysis is a tool which is useful to all the outside or inside parties of the firm whereas other tools of financial statement analysis are made for particular purpose and they serve a particular party at a time. Hence, Ratio Analysis is better than other tools.

From the above discussion, it is proved that the Ratio Analysis is a better tool than other tools for analysis of financial statements. Therefore, the researcher has selected this tool for analyzing the profitability of the companies in pharmaceutical industry in India.

2.9 Profitability Ratios Taken into Consideration for the Present Research Work:

There are so many ratios used to make the analysis of profitability of a business entity. All these ratios provide understanding about the profitability of a business from different angels. In this research work the researcher has used following ratio to make the analysis of profitability of sampled pharmaceutical companies.

(1) Gross Profit Ratio
(2) Net Profit after Tax Ratio
(3) Net Profit Ratio
(4) Return on Capital Employed Ratio
(5) Adjusted Return on Net-woth Ratio
(6) Dividend per Share Ratio
(7) Return on Long Term Fund Ratio
(8) Return on Assets Ratio
(9) Dividend Payout Ratio

56
(10) Operating Profit Margin Ratio
(11) Earnings per Share Ratio

Thus, all these above given ratios are used to make the analysis of the profitability of the sampled pharmaceutical companies.
References:

- Chauhan, P.L (2007), Accounting for Managers, Saurashtra University Publication, Rajkot
- Maheshwari, S.N. (1997), Management Accounting for Bankers, Sultan Chand & Sons, New Delhi