Original Research

A STUDY ON FINANCIAL PERFORMANCE OF PHARMACEUTICAL INDUSTRY

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Abstract :

A firm's performance measurement has been the subject matter of discussion for decision-makers as managers, planners, economists, and academic staff since long many years. It is the process of measuring the results of a firm's policies and operations in monetary terms. Financial performance analysis includes analysis and interpretation of financial statements in such a way that it undertakes the full diagnosis of the profitability and financial soundness of the business. This term is also used as a general measure of a firm's overall financial health over a given period of time and can be used to compare similar firms across the same companies or to compare companies or sectors in aggregation. Financial analysts often assess the firm's production and productivity performance, profitability performance, liquidity performance, leverage performance, asset utilization performance, and growth performance. The financial performance analysis identifies the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and profit and loss account. In this paper, an attempt has been made to analyse the profitability position of five leading pharmaceutical companies in India with the help of mean, standard deviation, ratio analysis and one way anova. The study is conducted by taking into account of the data for five years from 2016-2017 to 2020-2021. The Pharmaceutical companies selected for study are Lupin, Cipla, Biocon, Sun pharma, and Reddy. The financial performance of these companies is evaluated and found that the profitability of the selected pharmaceutical companies in India during the study period is satisfactory.

Keywords: *Financial Analysis, Ratio, Pharmaceutical Companies, Profitability, Liquidity, Capital Structure.*

Introduction :

Finance plays a significant role in the successful operation of a business firm. The idiom "Finance" is by and large referred to the "Business Finance". It can be considered as a master key to access the sources which are required to run any business activities according to financial needs of involved business. Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate

revenues. It is used to measure 2 firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. The financial performance analysis identifies the financial strengths and weaknesses of the firm by properly establishing relationships between the items of the balance sheet and profit and loss account. Objective of Financial performance is to help management in exercising organizational control, diagnose the strength and weakness. As the world's third-largest industry by volume and thirteenth largest in word of value, Indian Pharmaceutical industry is likely to be a leader in manufacturing soon. From the last 30 years Indian pharmaceutical industry has risen as one of the major leader in drug manufacturing from almost nothing. In prior multinational companies used to import drugs either in fully formulated or bulk form. The credit for this steep curve in progress can be given to the twin benefit, first the increase in domestic consumption capacity of India and secondly to the various export opportunities available in India. Pharmaceutical sector is one of the major contributors to Indian economy with a growth percentage of 7-8%. Indian pharmaceutical industry is predicted to outperform the global pharmaceutical industry expected to grow at 5% per annum as it is forecast to grow at 15 per cent per annum between 2014-2015 and 2018-2029. Indian industry is assume to grow to US $ 55 billion by 2020. Finance can be broadly divided into four categories public finance, corporate finance , social finance , social finance. Further there are types of financial performance analysis External , Internal , horizontal and vertical analysis. Operational Efficiency of an organization is the ability utilizes its available resources to the maximum extent Operational Efficiency can be judged in the light of financial efficiency.

Review of Literature :

Review collected for important studies and different concept relating to the financial performance are show below.

1. **Kaushik, Jain** : The paper entitled – "Technical Analysis Of Selected Pharmaceutical companies Of India". The research study was carried out on the top 6 pharmaceutical companies stock prices taken on a daily basis for the last five years. Moving Average Convergence and Divergence (MACD), Rate of Change (ROC) and Relative Strength Index (RSI) were some of the technical tools used for analysing daily closing price and Sensex. It can be concluded that technical analysis indicates downward trend currently, which means companies are moving downward in a low range, indicating towards correction in the Results suggest that investing in the current period for long-term purpose requires fundamental analysis along with technical analysis.

2. **Shaji &Ganesan :** The paper entitled – "Financial performance of Indian pharmaceutical industry" measures the firm's liquidity, profitability, and other indicators that the business is conducted in a rational and normal way. The study covers two public sector drug &pharmaceutical enterprises listed on BSE. The study has been undertaken for the period of twelve years . In order to analyse financial performance in terms of liquidity, solvency, profitability and financial efficiency, various accounting ratios have been used. Statistical measures i.e., linear multiple regression analysis and test of hypothesis – t test has been used.

3. **Purohit :** In his thesis entitled : "Financial Appraisal Of Selected Pharmaceuticals Companies In Gujarat "attempts to analyse the environment affecting the pharmaceutical industry and on the basis of this analysis well defined strategies are suggested for survival and growth for the industry in post patent era. In order to achieve this objective information has been collected mostly from secondary sources. The study also focuses certain other issues related to the pharmaceutical industry.

Research Methodology :

Objective of study :

- To understand the basic nature and composition of Pharmaceutical industry.
- To review the profitability, Liquidity, capital structure trend of Pharmaceutical industry in India.
- To suggest ways and means to improve performance of selected Pharmaceutical industry in India.

Sample design :

This is an empirical research of five Indian pharmaceutical companies from BSE 100 Index on the basis of their sales and revenue . The study used a non-probability technique called judgment sampling.

1. Biocon Ltd
2. Cipla Ltd
3. Sun pharmaceuticals
4. Dr. Reddy's Laboratories
5. Lupin Ltd

Collection of Data :

Secondary data are used in this study, which were collected from Shodh Ganga and various research papers. Variables pertaining to behaviour of liquidity , profitability and capital structure were collected from the balance sheet and profit and loss account of the selected pharmaceutical companies for a period of 5years from 2016-2017 to 2020-2021. Besides the corporate database, reports were collected from Bulletin, Money control .com and Research Publications.

Period :

Study is for a period of 5 years from 2017 to 2021.

Scope of Study :

The study attempts to measure the firm's liquidity, profitability, and others. The pharmaceuticals industry is acknowledged as one of the most promising industries in India; therefore this study should make a significant contribution to the practice. The study is based on financials of 5 companies in pharmaceutical sector. It is an attempt to analyse the complete financial performance of the selected companies in the Indian pharmaceutical industry during the period 2017 to 2020.

Statement of Problem :

The development of industries depends on several factors such as finance, personnel, technology, quality of the product and marketing. Out of these, financial and operating aspects assume a significant role in determining the growth of industries. Most of the data covering operational areas are however outside the direct responsibility of the financial executive. Unless the top management appreciates the value of a good financial and operating analysis, there will be continuing problems for the financial executives to find the profitability position of the concern.

Limitations :

1. The formula for calculating each ratio is not well standardized.
2. No standard ratios are available for evaluating the significance of each ratio.
3. The ratios are generally calculated from the past financial statement and thus, are no indicators of future.

4. Ratio ignores non-monetary factors like general economic climate, government and management policies, which vitally affect the financial health of the enterprise.

5. If too many ratios are calculated, they are likely to confuse, Instead of revealing meaningful conclusions.

Financial Tools :

*   **Mean :** The arithmetic mean, more commonly known as "the average," is the sum of a list of numbers divided by the number of items on the list. The mean is useful in determining the overall trend of a data set or providing a rapid snapshot of data.

*   **Standard Deviation :** In a portfolio of data analysis methods, the standard deviation is useful for quickly determining dispersion of data points.

*   **Variance :** The variance is defined as the sum of the standard deviations from the mean, divided by n-1.

*   **Anova (One way) :** The one-way ANOVA compares the means between the groups you are interested in and determines whether any of those means are statistically significantly different from each other.

*   **Ratio Analysis :** The technique of ratio analysis is the process of determining and interpreting numerical relationship based on the financial statements.

*   **List of Ratios :**

Table no.1

Liquidity	Profitability	Capital structure
Current ratio	Net Profit ratio	Debt equity ratio
Quick ratio	Operating profit ratio	Interest coverage ratio
	Ebitda ratio	

Null Hypothesis :

Liquidity Analysis :

1. There is no significant difference between the CURRENT RATIO of selected pharmaceuticals companies.

2. There is no significant difference between the QUICK RATIO of selected pharmaceuticals companies.

Profitability Analysis :

1. There is no significant difference between the EBITDA RATIO of selected pharmaceuticals companies.

2. There is no significant difference between the NET PROFIT RATIO of selected pharmaceuticals companies.

3. There is no significant difference between the OPERATING RATIO of selected pharmaceuticals companies.

Capital Structure Analysis :

1. There is no significant difference between the TOTAL DEBT EQUITY RATIO of selected pharmaceuticals companies.

2. There is no significant difference between the INTEREST COVERAGE RATIO of selected pharmaceuticals companies.

Data Analysis :

Table no. 2

Summary of Ratio analysis of selected pharmaceuticals companies from 2016 to 2021.

Ratio	Company	Mean	Standard Deviation	Maximum
Current	Biocon	2.27	**0.62**	3.16
	Cipla	2.19	0.57	2.79
	Sun	0.70	0.26	1.07
	Reddy	1.81	0.29	2.25
	Lupin	**3.02**	0.39	**3.59**
Quick	Biocon	10.4	1.85	13.0
	Cipla	9.2	2.04	13.0
	Sun	**15.2**	6.58	**27.0**
	Reddy	9.4	1.85	12.0
	Lupin	9.0	**3.69**	16.0
Operating Profit	Biocon	16.0	2.74	19.0
	Cipla	7.0	3.16	12.0
	Sun	13.8	**6.02**	**22.0**
	Reddy	10.4	2.07	13.0
	Lupin	13.6	4.83	**22.0**
EBITDA	Biocon	**26.4**	1.4	**28.0**
	Cipla	19.2	2.0	23.0
	Sun	20.6	3.2	26.0
	Reddy	21.8	**3.9**	27.0
	Lupin	21.2	3.5	**28.0**
Interest coverage	Biocon	0.19	0.04	0.26
	Cipla	**0.21**	0.05	0.27
	Sun	0.20	**0.16**	**0.51**
	Reddy	0.19	0.04	0.26
	Lupin	0.09	0.04	0.16
Debt Equity	Biocon	**0.49**	0.16	**0.77**
	Cipla	0.12	0.06	0.20
	Sun	0.27	0.02	0.30
	Reddy	0.18	0.07	0.25
	Lupin	0.27	**0.17**	0.41

Net Profit	Biocon	10.4	1.85	13.0
	Cipla	9.2	2.04	13.0
	Sun	**15.2**	**6.85**	**27.0**
	Reddy	9.4	1.85	12.0
	Lupin	9.0	3.69	16.0

Ratio is well known and most widely tool of financial analysis can be defined as "the indicated quotient of two mathematical expression." as operation definition or ratio is the relationship between one item to another in a simple mathematical form." a ratio is simply one number expressed interims of anther. It is found by dividing one number the base into the other". The technique of ratio analysis is the process of determining and interpreting numerical relationship based on the financial statements. According to Batty "accounting ratio describe the significant relationship which exist between figures shown in a Balance sheet, in a profit and loss account, in a budgetary control system or another part of accounting organization". Above Table is the summary of ratio analysis of selected pharmaceutical companies during the study period.

- Current ratio shows moderate fluctuation during the period and reveals that the highest mean is of Lupin ltd of 3.02 times and sun pharmaceuticals has lowest mean .Biocon has highest standard deviation of 0.62.
- Sun pharmaceuticals has the highest mean quick ratio of 15.2 times and Standard deviation was highest of Lupin ltd 3.69.
- Operating profit shows fluctuation due to inability to keep operating expenses properly controlled for level of sales achieved. Biocon has the highest average of 16 times and sun pharmaceuticals has highest standard deviation of 6.02 .
- Biocon has highest EBITDA of 26.4 times and standard deviation of Reddy was highest compared to others.
- Interest coverage ratio has highest mean in Cipla of 0.21 times and standard deviation is high in Sun pharmaceuticals.
- Biocon has highest average Debt equity ratio of 0.49 times ,while standard deviation is high in Lupin ltd. The ratios were highly fluctuating during the period.
- Average net profit as well as standard deviation is high in Sun pharmaceuticals. There was moderate fluctuation which indicates the firm's capacity to face adverse economic condition such as price competition, low demand .

Table no. 3

Summary of one way Anova F-Test

Ratios	P-value	Result	Hypothesis
Current ratio	0.00004	Rejected	H1-There is significant difference in the Current Ratio of selected companies of Pharmaceutical industry
Quick ratio	0.0002	Rejected	H1-There is significant difference in the Quick Ratio of selected companies of Pharmaceutical industry

Operating profit	0.02	Rejected	H1-There is significant difference in the Operating profit Ratio of selected companies of Pharmaceutical industry
EBITDA	0.03	Rejected	H1-There is significant difference in the EBITDA Ratio of selected companies of Pharmaceutical industry
Net profit	0.13	Accepted	Ho-There is no significant difference in the Net Profit Ratio of selected companies of Pharmaceutical industry
Interest coverage	0.27	Accepted	Ho-There is no significant difference in the Interest coverage Ratio of selected companies of Pharmaceutical industry
Debt Equity	0.0005	Rejected	H1-There is significant difference in the Debt Equity Ratio of selected companies of Pharmaceutical industry

Above table shows summary of one way Anova F- test of pharmaceutical companies for the study period. Anova measures the relationship between means of the data and one way Anova is used when there is one independent variable. Level of significance is take as 5% for this study. If p- value is less than level of significance then null hypothesis(H0) is rejected and F calculated value should also be more than F- critical value in such cases.

Here P-value of Current ratio, Quick ratio, operating profit ratio ,EBITDA ratio and Debt equity ratio are less than level of significance of 0.05 and also their F-calculated value is less than F- critical value . So we reject null hypothesis and conclude that there is significant difference between these ratios of selected companies of pharmaceutical industry. While the P-value of Net profit ratio and Interest coverage ratio is more than 0.05 and their F critical value is more than the F- calculated value so we do not reject null hypothesis i.e they are accepted and conclude that there is no significant difference between these ratios of selected companies of pharmaceutical industry during 2016-2021.

Findings :

- In this study five companies are selected and ratios on the basis of profitability, liquidity and capital structure are calculated. The Current profit ratio of all the companies were doing good except than that of sun pharmaceuticals as it was not up to the mark in initial years from 2017 and then started to improve.

- Quick ratio of all companies were satisfied except that of sun pharmaceuticals. Net profit ratio of sun was more than other companies which states that it earned profit during the period of study.

- Operating profit of Lupin and sun was better than others. EBIDTA of Biocon was more which was a sign that company was making good revenue.

- Sun and Cipla's Debt equity ratio showed less deviation over these years is more than other which means that it had enough equity to meet its debt and liabilities.

Conclusion :

In this present study it is concluded that the financial management has great importance in making management decisions. The financial soundness of a company can be achieved maintaining liquidity and profitability of the company. The purpose of this study was to measure the financial performance i.e. profitability of the selected pharmaceutical companies. Study concluded that the profitability of selected pharmaceutical companies very

fair, except few companies, they need effort to stabilize their financial position to meet domestic and global competition. The analysis of financial performance was carried out by analysing their profitability, capital structure, Liquidity. To study financial performance of selected companies of India, one way ANOVA-test was used to compare the financial ratios related to their profitability, capital structure and Liquidity. The investigation of the impact of financial performance of steel industry in India shows that in all these areas of financial performance there is a significant change. Hence the analysis of financial performance of pharmaceutical industry in India showed that Biocon had the best (highest) performance among the selected companies, followed by Cipla, Lupin ,Reddy and Sun had the lowest performance among the identified units in the pharmaceutical industry.

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