



TITLE: FINANCIAL EVALUATION OF CHOSEN PHARMACEUTICAL COMPANIES

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ABSRTACT

The pharmaceutical industry, a key player in global healthcare, continually adapts to emerging technologies, changing healthcare paradigms, and societal expectations. This study delves into the financial performance of Sun Pharmaceutical Industries Ltd, Cipla Ltd, Dr. Reddy's Laboratories Ltd, Torrent Pharma, and Zydus Lifesciences Ltd over the period FY 2018-19 to FY 2022-23. Using ratio analysis, mean, standard deviation, coefficient of variance, multiple regression analysis, and one-way ANOVA, the study assesses key profitability indicators. Limitations include the reliance on secondary data and the study's focus on a five-year period, which may impact the generalizability of results. The profitability of selected Indian pharmaceutical companies remained satisfactory over the study period. The results indicate a significant relationship between profitability ratios for most companies, providing valuable insights for stakeholders and decision-makers. Notably, Zydus Lifesciences Ltd stands out as an exception, with no significant relationship found in the analysis. These findings contribute to a deeper understanding of the financial dynamics within the pharmaceutical industry, aiding stakeholders in making informed decisions and shaping strategic initiatives.

Keywords: *Pharmaceutical industry, Financial Performance Analysis, Ratio Analysis*

INTRODUCTION

The pharmaceutical industry stands at the forefront of scientific innovation and plays a pivotal role in global healthcare by researching, developing, manufacturing, and distributing medications that improve and save lives. Pharmaceutical companies are dedicated to addressing unmet medical needs, combating diseases, and enhancing overall well-being. The industry's primary objective is to develop safe and effective medications to diagnose, treat, prevent, or alleviate various health conditions. This involves a complex and resource-intensive process that often spans several years, from initial research to regulatory approval. In addition to its

crucial role in healthcare, the pharmaceutical industry significantly contributes to economic growth and job creation. In this rapidly evolving landscape, the pharmaceutical industry continues to adapt to emerging technologies, changing healthcare paradigms, and societal expectations.

In this fleetly evolving geography, the pharmaceutical industry continues to acclimatize to arising technologies, changing healthcare paradigms, and societal prospects.

fiscal performance is a private measure of how well a establishment can use means from its primary mode of business and induce earnings. The term is also used as a general measure of a establishment's overall fiscal health over a given period. Various types of financial analysis include:

1. Liquidity Analysis
2. Financial structure Analysis
3. Activity Analysis
4. Profitability Analysis

REVIEW OF LITERATURE

Partha Ghosh and Assistant Professor (2019), Comparative Financial Performance of Selected Indian Oil Refineries: A Study Conducted Between 2005 and 2018. Finding the discrepancies between a firm's financial situation and performance is the goal here. Secondary data were employed in the analysis. The data were subjected to mean, variance, and f tests in order to determine the significant conclusion.

Dr. Ashok Kumar Panigrahi (2019) Studied Analysis of Financial Performance: A Study of Selected Pharmaceutical Companies” He found that profitability of the selected pharmaceutical companies in India during the study period is satisfactory. During the period of study there were a few ups and downs in the profitability but it did not affect the operations of the companies to a great extent.

Sandhar (2013) utilized regression analysis to investigate the relationship between liquidity and profitability of a subset of Indian cement companies. The results showed that the return on assets (ROA), return on investment (ROI), and cash turnover ratio are all negatively correlated with the current ratio and liquid ratio.

Neeraj and Devesh (2013) examined the financial situation and effects on Tata Steel's and the Indian Steel Authority's profitability. The study concluded that there is a positive correlation between the liquidity position and profitability through a variety of techniques, and that a low average collection period and proper coordination between the finance, production, and sales departments can improve the liquidity position.

Nandhini Thakur (2020): The study examines HDFC Bank's financial statements for the years 2013–14 through 2017–18. Ratio analysis, cash and fund flow analysis, and trend analysis were the tools used in this investigation. The goal is to gauge how effective each bank's different attributes are. Researchers discover that the bank has great financial performance and recommend that additional housing loans be given to support the growth of Indian citizens.

Ahmed and Ahmed (2014) carried out research to examine the impact of mergers on the financial performance of Pakistan's manufacturing sectors. According to the analysis, there was little to no improvement in the acquiring manufacturing businesses' overall financial performance following the merger. Following the merger, the efficiency declined while the chosen companies' liquidity, profitability, and capital position barely improved. Ultimately, it was shown that different manufacturing sectors were affected differently by mergers.

PROBLEM OF THE STUDY

Industry growth is influenced by a number of variables, including funding, human resources, technology, product quality, and marketing. Among these, operating and financial factors have a big impact on how quickly an industry grows. Almost every aspect of the business's operations has an impact on its cash flow. However, the finance executive does not have direct control over the majority of the data pertaining to operational sectors. There would be four persistent issues for the financial executives to determine the profitability situation of the business until the upper management recognizes the importance of a sound

financial and operating analysis. The researcher is interested in analyzing the financial performance of pharmaceutical companies in this particular scenario. This is the reason behind the current study, which is titled "An analysis of financial performance of Indian pharmaceutical companies."

OBJECTIVES OF THE STUDY

The following are the specific objectives of the study.

1. To evaluate the financial standing of a few Indian pharmaceutical companies.
2. To examine the variables impacting the profitability of particular Indian pharmaceutical companies.
3. To present the results, recommendations, and analysis of this investigation.

RESEARCH METHODOLOGY

Ratio analysis is the technique used for analysis, and general financial statements are interpreted to evaluate the profitability position. Statistical procedures such as mean, standard deviation, coefficient of variance, multiple regression analysis, and analysis of variance are employed to conduct a thorough analysis.

Research design

In this study, descriptive research was employed to minimize bias and maximize the dependability of the data gathered. In order to critically evaluate the material that was available, the researcher had to use fact and information that was already available through financial records from prior years. Thus, by designing the research to be both analytical and descriptive in nature.

Secondary Data

The majority of the study's necessary data are secondary in nature, and they are gathered from the company's audited reports. The company's annual reports for the FY 2018–19 to FY 2022–23 serve as the data sources.

Sample Design

Convenience sampling method used to choose the data for this study because it is not possible to obtain a complete source list of all pharmaceutical companies. As of March 31, 2023, the top 5 pharmaceutical companies in India by market capitalization are listed on two major stock exchanges in the country: the Bombay Stock Exchange and the National Stock Exchange of India. The pharmaceutical companies that were chosen for this investigation are listed below.

1. Sun Pharmaceutical Industries Ltd.
2. Cipla Ltd. India.
3. Dr. Reddy's Laboratories Ltd.
4. Torrent Pharmaceuticals Ltd.
5. Zydus Lifesciences Ltd

LIMITATIONS OF THE STUDY

Based on the provided information, the study focused on data from 2018-2019 to 2022-2023, limiting the analysis to a five-year period. The study relied on secondary data collected from www.moneycontrol.com and the websites of sample companies. The accuracy and reliability of the study depend on the quality of the secondary data source, and approximations and relative measures might affect the results. The study specifically examined top five companies in the Pharmaceutical Industry in India on basis market

capitalisation, selected from the companies listed in BSE. The accuracy of the results is based solely on the data from these sample units, and including more sample units could lead to slightly different results.

DATA ANALYSIS

Analysis of the profitability ratio's

- Gross Profit Ratio
- Net Profit Ratio
- Operating Profit Ratio
- Return on Equity
- Earnings Per Share

Table 1: Gross Profit Ratio:

Name of Company	Mean	S.D.	C.V.
Sun Pharma	26.71	2.44	0.09
Cipla Ltd.	22.51	1.39	0.06
Dr. Reddy's Laboratory	22.39	4.69	0.21
Torrent Pharma	29.60	1.99	0.07
Zydus Lifesciences	23.03	1.55	0.07

- Table 1 Shows that the Gross profit ratio of pharmaceutical companies in India during the period FY 2018-19 to FY 2022-23. The torrent Pharma has the highest average gross profit ratio of 29.60% and the Dr. Reddy's Laboratory has the lowest average gross profit ratio 22.39 %.
- Dr. Reddy's Laboratory has highest Standard Deviation of Gross profit ratio as 4.69 % which indicated fluctuated gross profit ratio. Cipla Ltd. has lowest Standard Deviation of Gross profit ratio as 1.39 % it shows the Stable gross profit ratio.
- The Dr. Reddy's Laboratory has the highest co-efficient variance of gross profit ratio of 21 %. The Torrent Pharma and Zydus lifesciences has the lowest co-efficient variance of net profit ratio of 7 %.

Table 2: Net Profit Ratio:

Name of Company	Mean	S.D	C.V.
Sun Pharma	11.78	4.86	0.41
Cipla Ltd.	11.00	1.74	0.16
Dr. Reddy's Laboratory	12.30	3.41	0.28
Torrent Pharma	11.26	3.88	0.34
Zydus Lifesciences	15.73	8.35	0.53

- Table 2 Shows that the Net profit ratio of pharmaceutical companies in India during the period FY 2018-19 to FY 2022-23. The Zydus Lifesciences has the highest average net profit ratio of 15.73 % and the Cipla ltd. has the lowest average net profit ratio 11.00 %.
- Zydus Lifesciences has highest Standard Deviation of net profit ratio as 8.35 % which indicated fluctuated net profit ratio. Cipla Ltd. has lowest Standard Deviation of net profit ratio as 1.74 % it shows the Stable net profit ratio.
- Zydus Lifesciences has the highest co-efficient variance of net profit ratio of 53 %. The Cipla ltd. has the lowest co-efficient variance of net profit ratio of 16 %.

Table 3: Operating Profit Ratio

Name of Company	Mean	S.D	C.V.
Sun Pharma	20.75	2.67	0.13

Cipla Ltd.	16.40	2.45	0.15
Dr. Reddy's Laboratory	16.21	5.20	0.32
Torrent Pharma	21.68	2.08	0.10
Zydus Lifesciences	18.44	1.71	0.09

- Table 3 Shows that the Operating profit ratio of pharmaceutical companies in India during the period FY 2018-19 to FY 2022-23. The torrent Pharma has the highest average operating profit ratio of 21.68% and the Dr. Reddy's Laboratory has the lowest average operating profit ratio 16.21%.
- Dr. Reddy's Laboratory has highest Standard Deviation of operating profit ratio as 5.20 % which indicated fluctuated operating profit ratio. Zydus Lifesciences has lowest Standard Deviation of operating profit ratio as 1.71 % it shows the Stable operating profit ratio.
- The Dr. Reddy's Laboratory has the highest co-efficient variance of operating profit ratio of 32 %. Torrent Pharma has the lowest co-efficient variance of operating profit ratio of 10 %.

Table 4: Return on Equity Ratio

Name of Company	Mean	S.D	C.V.
Sun Pharma	8.58	3.75	0.44
Cipla Ltd.	11.43	1.39	0.12
Dr. Reddy's Laboratory	13.73	3.35	0.24
Torrent Pharma	17.01	5.55	0.33
Zydus Lifesciences	16.63	6.21	0.37

- Table 4 Shows that the return on equity ratio of pharmaceutical companies in India during the period FY 2018-19 to FY 2022-23. The Torrent Pharma has the highest average return on equity ratio of 17.01% and the Sun Pharma has the lowest average return on equity ratio 8.58 %.
- Zydus Lifesciences has highest Standard Deviation of return on equity ratio as 6.21 % which indicated fluctuated return on equity ratio. Cipla Ltd. has lowest Standard Deviation of return on equity ratio as 1.39 % it shows the Stable return on equity ratio.
- The Sun pharma has the highest co-efficient variance of return on equity ratio of 44 %. The Cipla ltd has the lowest co-efficient variance of return on equity ratio of 12 %

Table 5: EPS

Name of Company	Mean	S. D	C.V.
Sun Pharma	17.56	10.07	0.57
Cipla Ltd.	26.78	7.25	0.27
Dr. Reddy's Laboratory	13.73	3.35	0.24
Torrent Pharma	48.61	19.07	0.39
Zydus Lifesciences	16.63	6.21	0.37

- Table 5 Shows that the EPS ratio of pharmaceutical companies in India during the period FY 2018-19 to FY 2022-23. The Torrent Pharma has the highest average EPS ratio of 48.61 % and the Dr. Reddy's Laboratory has the lowest average EPS ratio 13.73 %.
- Torrent pharma has highest Standard Deviation of EPS ratio as 19.07 % which indicated fluctuated EPS ratio. Dr. Reddy's laboratory has lowest Standard Deviation of Gross profit ratio as 3.35 % it shows the Stable EPS ratio.
- Sun pharma has the highest co-efficient variance of EPS ratio of 57 %. The Dr. reddy's laboratory has the lowest co-efficient variance of EPS ratio of 24 %.

Table 6: Multiple Regression Anlysis

Name of Company	Model	R	R ²	Adjusted R ²	Standard Error
Sun Pharmaceutical Industries Ltd.	1	0.994127	0.988288	0.95315306	1.052077997
Cipla Ltd.	1	0.999876	0.999751	0.999004373	0.05496772
Dr. Reddy's Laboratory	1	0.99935	0.9987	0.994798874	0.24611157
Torrent Pharma	1	0.991831	0.98373	0.934918167	0.990362414
Zydus Lifesciences Ltd.	1	0.98689	0.973951	0.895805982	2.696376842

Table.6 These findings present the results of multiple regression analysis for selected pharmaceutical companies. The R-squared values indicate the proportion of the dependent variable's (Net Profit) variance that is explained by the independent variable (Gross profit, Operating profit, Return on equity).

Statistical significance of the model according to the Sun Pharmaceutical Industries Ltd. The R² value of the model is 0.988288. The three independent variables (Gross profit ratio, Operating profit ratio, and return on equity capital) have a combined impact of 98.82 % on the dependent variable (Net profit ratio) which is significant at the 5% level.

Statistical significance of the model according to the Cipla Ltd. The R² value of the model is 0.999751. The three independent variables (Gross profit ratio, Operating profit ratio, and return on equity capital) have a combined impact of 99.97 % on the dependent variable (Net profit ratio) which is significant at the 5% level.

Statistical significance of the model according to the Dr. Reddy's Laboratory The R² value of the model is 0.9987. The three independent variables (Gross profit ratio, Operating profit ratio, and Return on equity capital) have a combined impact of 99.87 % on the dependent variable (Net profit ratio) which is significant at the 5% level.

Statistical significance of the model according to the Torrent pharma The R² value of the model is 0.98373. The three independent variables (Gross profit ratio, Operating profit ratio, and return on equity capital) have a combined impact of 98.37 % on the dependent variable (Net profit ratio) which is significant at the 5% level.

Statistical significance of the model according to the Zydus life sciences The R² value of the model is 0.973951. The three independent variables (Gross profit ratio, Operating profit ratio, and Return on equity capital) have a combined impact of 97.39 % on the dependent variable (Net profit ratio) which is significant at the 5% level.

ONE-WAY ANOVA

Following tables show a One way ANOVA of selected pharmaceuticals companies during the the period of FY 2018-19 to FY 2022-23.

Table 7: Sun Pharmaceutical Industries Ltd.

Source of Variation	SS	df	MS	F	P-value	Sig.
Between Groups	1031.604	3	343.8679	27.08312	1.66E-06	0.00000
Within Groups	203.1482	16	12.69676			
Total	1234.752	19				

Table 7 Indicate the calculated F-value of Sun Pharmaceutical Industries Ltd through one-way ANOVA for variables such as 27.08312 which is greater than the critical value of 3.24 at 5% significant level. Therefore, there is a significant relationship between profitability ratios.

Table 8: Cipla Ltd.

Source of Variation	SS	df	MS	F	P-value	Sig.
Between Groups	433.2365	3	144.4122	44.77504	5.23E-08	0.00000
Within Groups	51.60452	16	3.225283			
Total	484.841	19				

Table 8 Indicate the calculated F-value of Cipla Ltd through one-way ANOVA for variables such as 44.77504 which is greater than the critical value of 3.24 at 5% significant level. Therefore, there is a significant relationship between profitability ratios.

Table 9: Dr. Reddy's Laboratories Ltd.

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>Sig.</i>
Between Groups	298.5528	3	99.51759	5.530138	0.008451	0.00000
Within Groups	287.928	16	17.9955			
Total	586.4808	19				

Table 9 Indicate the calculated F-value of Dr. Reddy's Laboratories Ltd. through one-way ANOVA for variables such as 5.530138 which is greater than the critical value of 3.24 at 5% significant level. Therefore, there is a significant relationship between profitability ratios.

Table 10: Torrent Pharma

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>Sig.</i>
Between Groups	901.9595	3	300.6532	22.21242	6E-06	0.00000
Within Groups	216.5658	16	13.53536			
Total	1118.525	19				

Table 10 Indicate the calculated F-value of Torrent Pharma through one-way ANOVA for variables such as 22.21242 which is greater than the critical value of 3.24 at 5% significant level. Therefore, there is a significant relationship between profitability ratios.

Table 11: Zydus Lifesciences Ltd.

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>Sig.</i>
Between Groups	158.3989	3	52.79963	1.857428	0.177519	0.00000
Within Groups	454.8194	16	28.42621			
Total	613.2183	19				

Table 11 Indicate the calculated F-value of Zydus lifesciences Ltd. through one-way ANOVA for variables such as 1.857428 which is less than the critical value of 3.24 at 5% significant level. Therefore, there is a no significant relationship between profitability ratios.

CONCLUSION

The analysis practically reveals that gross profit ratio, operating ratio, return on equity capital, and earnings per share, have significant effect on the net profit ratio of the selected pharmaceutical companies during the study period. Nonetheless, the chosen Indian pharmaceutical businesses' profitability throughout the study period was satisfactory. It also presents the results of multiple regression analysis and the one-way ANOVA. The conclusion is that there is a significant relationship between profitability ratios for most companies, except for Zydus lifesciences Ltd. These findings provide valuable insights for stakeholders and decision-makers, helping them better understand the financial dynamics of these pharmaceutical companies. The results of the analysis conducted on the profitability ratios of Sun Pharmaceutical Industries Ltd, Cipla Ltd, Dr. Reddy's Laboratories Ltd, Torrent Pharma, and Zydus Lifesciences Ltd, using one-way ANOVA, reveal compelling insights.

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