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A COMPARATIVE STUDY ON PROFITABILITY ANALYSIS OF SELECTED PHARMA COMPANIES IN INDIA

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ABSTRACT

In the dynamic landscape of the pharmaceutical industry, this study analyses the profitability of five prominent companies listed on the NSE over a five-year period from 2017-18 to 2021-22. Analyzing the key ratios such as Net Profit Ratio, Return on Shareholders' Funds, Return on Capital Employed, and Return on Assets. The study shows the insights into companies' profitability and efficiency in resource utilization. The study is based on secondary data which has been taken from the annual reports of the respective companies and from external money control. Statistical tools and Profitability ratios have been used for the study. Zydus Lifesciences Ltd emerges as a consistent performer, while Sun Pharmaceutical Industries Ltd displays more variability in its financial results. Torrent Pharmaceuticals excels in delivering investor returns and Cipla Ltd shows the efficient capital and asset management.

KEYWORDS: Financial Performance, Pharmaceutical Industry, Profitability

INTRODUCTION:

According to (VanDyke, 2019) "The pharmaceutical industry is defined as the discovery, development, and manufacture of drugs and medications." The Indian Pharmaceuticals industry plays a prominent role in the global pharmaceuticals industry. The Indian pharmaceuticals market is third largest in terms of volume and thirteen largest in terms of value (Vithalani & Joshi, 2016). The significantly lower rank in terms of value reflects the fact that Indian pharmaceutical companies predominantly operate in the sector of low-cost generic pharmaceuticals, which has a highly heterogeneous product mix and firm sizes (Tyagi & Nauriyal, 2017).

In this background, undertaking a study to measure the consistency in profitability of major Indian pharmaceutical companies. The remainder parts of the study have been structured into five sections. The present study focuses on the analysis of profitability of the selected pharmaceutical companies of India such as Sun Pharmaceutical Industries Ltd, Dr. Reddy's Laboratories Ltd, Cipla Ltd, Torrent Pharmaceuticals Ltd, and Zydus Lifesciences Ltd. In order to achieve the objectives of the study, four parameters of profitability have been selected. The parameters are Net profit ratio, Return on Shareholders fund, Return on capital employed and Return on Assets.

LITERATURE REVIEW

The profitability of Indian pharmaceutical companies has been the subject of several studies conducted in recent years. Some of those, till reviewed are as below:
(Swadia, 2018) examined the profitability of selected pharmaceutical companies for the period from 2007-08 to 2016-17. The researcher found that pharmaceutical companies had very good profitability in the year 2008 whereas, the lowest profitability of all the times in the year 2015. (DHANALAKSHMI & RAJESWARI, 2016) investigated the number of pharmaceutical companies to measure the impact of merger and acquisition on the profitability of these companies. The companies had been selected from companies listed under Bombay Stock Exchange (BSE). The researcher has used the statistical tools such as mean, standard deviation, coefficient of variation and Paired T test. The study shows that there has been significant difference between before and after merger of the pharma companies.

(Oza & Dave, 2018) studied the profitability of the five pharmaceutical companies from the period 2007-08 to 2016-17. The researcher has used ratio analysis, F-test and one way ANOVA for conducting the study. The researcher focused on the two parameters for conducting the study i.e., net profit margin and EPS.

(Bijendra & Singhvi, 2017) analyzed the liquidity and profitability of the pharmaceutical companies of India. The study has covered the time period from 2010-11 to 2013-14. The researcher has selected four companies i.e., Ranbaxy, Cipla, DRL, and Lupin. The study concluded that Cipla was found to be the best company having the strongest financial performance out of all selected companies in terms of profitability.

(Basak, 2019) examined the consistency in profitability of the top ten Indian pharmaceutical companies. The researcher has measured the profitability with the help of three relevant financial ratios such as Return on Networth, Return on Capital Employed and Return on Assets. The researcher has also used statistical technique such as ANOVA. The study concludes that profitability is not a challenge for the sector but maintaining steadiness in profitability is the challenge.(GOWD, KIRAN, & RAO, 2013) investigated the impact of profitability ratios and profitability performance of Dr. Reddy's Laboratory's Ltd. The study covers the period from 2002-03 to 2011-12. Correlation and multiple regression have been used for the purpose. The results shows that selected profitability ratios have significant impact on Return on Equity.

(Raval, Mandaviya, & Gajera, 2021) analyzed the financial performance of selected Indian pharmaceutical companies. The study found that the Indian pharmaceutical industry is a promising sector for investment, with consistent growth and good performance in terms of return and growth. However, the industry also faces significant risks due to factors such as regulatory changes and competition. The study's findings provide valuable insights into the financial health of the Indian pharmaceutical industry and its key players, which can help investors and stakeholders make informed decisions.

(PANIGRAHI, RAUL, & GIJARE, 2018) examined the importance of effective working capital management for Indian pharmaceutical companies to balance their liquidity and profitability goals. The study found that companies with higher working capital have sufficient liquidity, are more successful because of liquidity, and can expand business optimally. However, a company with higher working capital needs higher revenue to maintain a healthy operating ratio. The study also suggests that managing inventory levels, optimizing accounts receivable and payable, and maintaining adequate cash reserves are some best practices for achieving this balance.

(Vithalani & Joshi, 2016) studied the Indian pharmaceutical industry, including its growth prospects, key drivers, and changes in patent laws. The study aimed to analyze the profitability performance of leading pharmaceutical companies and comparison amongst them over a ten-year period from 2004-05 to 2013-14. The secondary data has been selected from the annual reports of the companies. The research is based on analyzing the profitability of selected companies.

(Tyagi & Nauriyal, 2017) examined the Indian drugs and pharmaceutical industry, including its evolution, profitability determinants, and strategies for adapting to changes in the economic environment. The study found that the net profit margin (NPM) was the dependent variable, while the independent variables included industry-specific variables such as industrial concentration (HHI) and a dummy for stronger patent regime (SPR). The industry had to adapt to radical changes in the macroeconomic environment by engaging in contract R&D, dossier-licensing, supply contracts with multinationals with enough ready capacity, and other measures. Companies alsohad to adopt the best manufacturing practices and upgrade product quality to the global standard to gain access to more markets and credibility in the long run.

RESEARCH METHODOLOGY

Objectives of the study

1. To examine the profitability of the selected pharma companies.
2. To compare the profitability of the selected pharma companies.

Sampling design

The study encompasses all companies listed on the NSE, with a specific focus on the pharmaceutical industry. The selection criteria for inclusion in the study are primarily based on market capitalization and the availability of relevant data. The following five prominent companies within the pharmaceutical sector have been purposefully chosen for an in-depth examination: Sun Pharmaceutical Industries Ltd, Dr. Reddy's Laboratories Ltd, Cipla Ltd, Torrent Pharmaceuticals Ltd, and Zydus Lifesciences Ltd. It is noteworthy that the adoption of a convenience sampling technique is deemed appropriate for this research, given the practical considerations of accessibility and data availability associated with the selected companies.

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Types of Data
The study exclusively relies on secondary data sources for research, specifically extracting financial data from annual reports, Moneycontrol, and the official websites of the selected pharma companies.

Data Analysis Tools
In this research, the profitability of selected pharma companies has been analyzed using the key ratios such as Net Profit Ratio, Return on Shareholders' Funds, Return on Capital Employed, and Return on Assets. The data analysis has involved the application of statistical tools and techniques, including calculating averages, standard deviations, coefficients of variation, and performing ANOVA.

Limitations of the study
1. The primary limitation of the study is that from the universe of the companies, only five pharma companies have been selected.
2. The study period is restricted to only five years i.e., from the year 2017-18 to 2021-22.
3. Quantitative data for the research study has been collected from moneycontrol. If there is any discrepancy in the database, then same might become the limitation of the present study.

DATAANALYSIS
The study includes a thorough investigation of five major pharmaceutical companies throughout a five-year period from 2017–18 to 2021–22: Sun Pharmaceutical Industries Ltd., Dr. Reddy's Laboratories Ltd., Cipla Ltd., Torrent Pharmaceuticals Ltd., and Zydus Lifesciences Ltd.

Net Profit Ratio

Table 1: Net Profit Ratio

Year	Sun Pharmaceutical Industries Ltd	Dr. Reddy's Laboratories Ltd	Cipla Ltd	Torrent Pharmaceuticals Ltd	Zydus Lifesciences Ltd
2017-18	3.39%	6.05%	12.89%	11.34%	18.77%
2018-19	7.92%	12.02%	15.26%	12.93%	24.60%
2019-20	25.62%	24.78%	18.31%	15.21%	22.25%
2020-21	16.71%	16.37%	17.75%	17.63%	18.97%
2021-22	-0.64%	11.26%	22.59%	14.70%	10.74%
Mean	**10.60%**	**14.10%**	**17.36%**	**14.36%**	**19.07%**
S. D.	**10.59%**	**7.01%**	**3.63%**	**2.38%**	**5.25%**
C. V.	**99.89%**	**49.71%**	**20.93%**	**16.59%**	**27.53%**

The above table 1 represents the Net profit ratio for the selected pharma companies over the period of five years from 2017-18 to 2021-22. The net profit ratio shows the percentage of net profit in relation to the total revenue and serves as a key indicator of the company's profitability. From the mean values, Zydus Lifesciences Ltd have the highest mean value followed by Cipla Ltd indicating consistent profitability over the years. The standard deviation measures the dispersion from the mean, indicating the extent of variability in the net profit ratios. Sun Pharmaceutical Industries ltd exhibits a notably high S. D. of 10.59 % and highest Coefficient of variation with 99.89%, whichshows considerable fluctuations in the profitability over the years. Torrent Pharmaceuticals Ltd shows the lowest C. V. of 16.59% exhibits relatively stable performance over the years.

ANOVA – Net Profit Ratio
H0: There is no significant difference between Net Profit Ratio of selected pharma companies. H1: There is significant difference between Net Profit Ratio of selected pharma companies.

Table 2: Net Profit Ratio - ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.021	4	.005	1.284	.310
Within Groups	.083	20	.004		
Total	.104	24			

It is observed from table 2 that F value is less than 3.84 and p value is 0.310 which is greater than the standard value of 0.05, which exhibits that there is no significant difference between net profit ratio of the selected companies. Thus, null hypothesis is accepted at 5% significance level.

Return on Shareholders' Funds

Table 3: Return on Shareholders' Funds

Year	Sun Pharmaceutical Industries Ltd	Dr. Reddy's Laboratories Ltd	Cipla Ltd	Torrent Pharmaceuticals Ltd	Zydus Lifesciences Ltd
2017-18	1.36%	4.80%	10.40%	10.57%	14.08%
2018-19	3.57%	10.07%	11.96%	14.86%	17.33%
2019-20	13.16%	19.33%	13.32%	18.32%	12.54%
2020-21	8.54%	12.87%	12.38%	18.86%	11.58%
2021-22	-0.40%	8.85%	13.13%	15.62%	6.47%
Mean	**5.25%**	**11.18%**	**12.24%**	**15.65%**	**12.40%**
S. D.	**5.55%**	**5.40%**	**1.17%**	**3.31%**	**3.97%**
C. V.	**105.82%**	**48.28%**	**9.53%**	**21.17%**	**32.00%**

Table 3 represents the Return on Shareholders' Funds for the selected pharma companies during the period of five years from 2017-18 to 2021-22. Return on Shareholders' Funds is a crucial financial indicator that assesses a company's ability to generate profits from the funds invested by shareholders. The study shows that the Torrent Pharmaceuticals Ltd have the highest mean value of 15.65% followed by Zydus Lifesciences Ltd with mean value of 12.40%. Sun Pharmaceutical Industries Ltd shows that highest S. D. of 5.55% indicating substantial fluctuations in the returns over the period. Sun Pharmaceutical Industries Ltd also shows the highest C. V. of 105.82 % which is not good sign for the company whereas, Cipla Ltd shows the lowest C. V. at 9.53%, indicating a more stable trend in the Return on Shareholders' Funds.

ANOVA – Return on Shareholders' Funds
H0: There is no significant difference between Return on Shareholders' Funds of selected pharma companies.
H1: There is significant difference between Return on Shareholders' Funds of selected pharma companies.

Table 4: Return on Shareholders' Funds - ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	288.164	4	72.041	4.091	.014
Within Groups	352.204	20	17.610		
Total	640.368	24			

From the above table 4, it exhibits analysis of variance of Return on Shareholders' Funds. The F value is greater than 3.84 and p value is 0.014 which is less than the standard value of 0.05, indicating that there is significant difference between Return on Shareholders' Funds of selected companies. Thus, null hypothesis is rejected at 5% significance level.

Table 5: Return on Shareholders' Funds – Homogenous subset

Companies	N	Subset for alpha = 0.05	
		1	2
Sun Pharmaceutical Industries Ltd	5	5.246000	
Dr. Reddy's Laboratories Ltd	5		11.184000
Cipla Ltd	5		12.238000
Zydus Lifesciences Ltd	5		12.400000
Torrent Pharmaceuticals Ltd	5		15.646000
Sig.		.090	.467

Table 5 represents the homogenous subset from the Post hoc test for Return on Shareholders' Funds. The results shows that there can be 2 subsets. Subset 1 includes Sun Pharmaceutical Industries Ltd, with an average return on shareholders' funds of 5.246%. Subset 2 comprises Dr. Reddy's Laboratories Ltd, Cipla Ltd, Zydus Lifesciences Ltd and Torrent Pharmaceuticals Ltd with average returns ranging from 11.154% to 15.646%. There is no significant difference within the subsets while there is significant difference of return on shareholders' funds between these subsets.

Return on Capital Employed

Table 6: Return on Capital Employed

Year	Sun Pharmaceutical Industries Ltd	Dr. Reddy's Laboratories Ltd	Cipla Ltd	Torrent Pharmaceuticals Ltd	Zydus Lifesciences Ltd
2017-18	6.68%	6.13%	13.93%	5.45%	11.63%
2018-19	10.12%	13.34%	15.63%	15.84%	16.85%
2019-20	13.45%	18.46%	16.86%	18.20%	14.07%
2020-21	8.15%	18.17%	16.75%	18.53%	14.27%
2021-22	8.20%	12.25%	15.72%	19.50%	11.80%
Mean	**9.32%**	**13.67%**	**15.78%**	**15.50%**	**13.72%**
SD	**2.61%**	**5.05%**	**1.18%**	**5.78%**	**2.14%**
CV	**28.03%**	**36.97%**	**7.47%**	**37.27%**	**15.58%**

The table 6 indicates the Return on Capital Employed for the selected companies over the five- year period. Return on Capital Employed is a crucial indicator which measures the company's ability to generate earnings from its invested capital. Examining the mean values, Cipla Ltd stands out the highest average with 15.78% followed by Torrent Pharmaceuticals Ltd at 15.50%. Torrent Pharmaceuticals Ltd has relatively high standard deviation and C.V. of 5.78% and 37.27% respectively. Cipla Ltd shows the lower C.V. at 7.47% indicating more stable trend in returns on capital employed.

ANOVA – Return on Capital Employed

H0: There is no significant difference between Return on Capital Employed of selected Pharma companies.
H1: There is significant difference between Return on Capital Employed of selected Pharma companies.

Table 7: Return on Capital Employed - ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	133.538	4	33.381	2.327	.091
Within Groups	286.882	20	14.344		
Total	420.420	24			

It is observed from table 7 that F value is less than 3.84 and p value is 0.091 which is greater than the standard value of 0.05 which indicates that there is no significant difference between Return on Capital Employed of the selected companies. Thus, Null hypothesis is accepted at 5% significance level.

Return on Assets

Table 8: Return on Assets

Year	Sun Pharmaceutical Industries Ltd	Dr. Reddy's Laboratories Ltd	Cipla Ltd	Torrent Pharmaceuticals Ltd	Zydus Lifesciences Ltd
2017-18	0.83%	3.31%	8.59%	4.07%	8.96%
2018-19	2.16%	7.86%	10.25%	6.19%	10.86%
2019-20	8.36%	15.08%	11.36%	7.89%	8.53%
2020-21	5.48%	10.10%	10.74%	9.67%	7.99%
2021-22	-0.24%	6.62%	11.62%	8.88%	4.83%
Mean	**3.32%**	**8.59%**	**10.51%**	**7.34%**	**8.23%**
SD	**3.55%**	**4.38%**	**1.20%**	**2.24%**	**2.19%**
CV	**106.86%**	**50.95%**	**11.42%**	**30.55%**	**26.58%**

Table 8 represents the Return on Assets for the selected companies over the five years. Return on Assets is a crucial indicator which measures the company's efficiency in generating earnings from its total assets. The mean value of Cipla Ltd shows the highest average of 10.51% followed by Dr. Reddy's Laboratories Ltd at 8.59%. Dr. Reddy's Laboratories Ltd shows the relatively high standard deviation of 4.38% indicating the fluctuations over the period. Sun Pharmaceutical Industries Ltd shows the highest C.V. at 106.86% which is not a good sign for the company. On the other hand, Cipla Ltd shows the lower C. V. at 11.42% suggest more stable returns during the period.

ANOVA – Return on Assets

H0: There is no significant difference between Return on Assets of selected pharma companies. H1: There is significant difference between Return on Assets of selected pharma companies.

Table 9: Return on Assets - ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	141.364	4	35.341	4.109	.014
Within Groups	172.016	20	8.601		
Total	313.380	24			

It is observed from table 9 that F value is greater than 3.84 and p value is 0.014 which is less than the standard value of 0.05 which indicates that there is no significant difference between Return on Assets of selected companies. Thus, Null hypothesis is rejected at 5% significance level.

Table 10: Return on Assets - Homogenous subset

Companies	N	Subset for alpha = 0.05	
		1	2
Sun Pharmaceutical Industries Ltd	5	3.318000	
Torrent Pharmaceuticals Ltd	5		7.340000
Zydus Lifesciences Ltd	5		8.234000
Dr. Reddy's Laboratories Ltd	5		8.594000
Cipla Ltd	5		10.512000
Sig.		.067	.450

Table 10 represents the homogenous subsets from the post hoc Tukey test for Return on Assets. The result shows that there can be 2 subsets. There is no significant difference within these subsets while there is significant difference of Return on Assets between the subsets. It is observed that only Sun Pharmaceutical Industries Ltd is substantially different in comparison to all the five companies. Therefore, two different subsets are derived. Subset 1 comprises of Sun Pharmaceutical Industries Ltd with average return on capital employed of 3.318% and Subset 2 comprises of Torrent Pharmaceuticals Ltd, Zydus Lifesciences Ltd, Dr. Reddy's Laboratories Ltd and Cipla Ltd with average returns ranging from 7.340 % to 10.512%.

FINDINGS

- It is found that Zydus Lifesciences Ltd consistently showed the highest average net profit ratio (19.07%), indicating sustained profitability. Sun Pharmaceutical Industries Ltd exhibits substantial fluctuations, reflected in its high standard deviation (10.59%) and coefficients of variation (99.89%) which indicates high inconsistency. It is found that there is no significant difference between net profit ratio of all five companies.
- The study found that there is significant difference between return on shareholders' fund of all five companies but there is no significant difference between Dr. Reddy's Laboratories Ltd, Cipla Ltd, Zydus Lifesciences Ltd and Torrent Pharmaceuticals Ltd. Torrent Pharmaceuticals Ltd shows the highest average return on shareholders' funds of 15.65% whereas, Sun Pharmaceutical Industries Ltd exhibits high inconsistency as it has high standard deviation of 5.55% and coefficient of variation of 105.82%.
- Cipla Ltd shows outstanding performance with the highest average return on capital employed of 15.78% indicating efficient utilization of invested capital. The high variability has been displayed in the performance of Torrent Pharmaceuticals Ltd. The study found that there is no significant difference between return on capital employed of all the selected companies.
- Average return on assets is highest of Cipla Ltd (10.51%) indicating greater efficiency in generating earnings from total assets. Sun Pharmaceutical Industries Ltd exhibits substantial variability. Detailed investigation is also required as it shows the high variations during the period.

CONCLUSION

After analyzing the profitability positions of selected pharmaceutical companies, it's evident that Zydus Lifesciences consistently stood out with strong and steady profits, making it a reliable player in the market. On the other hand, Sun Pharmaceutical Industries showed more fluctuation in its profits over the years, indicating a less consistent performance. Torrent Pharmaceuticals emerged as a top performer in providing attractive returns to investors. Cipla demonstrated efficient use of its resources, showcasing good returns and stability. Sun Pharmaceutical Industries exhibited more unpredictable financial patterns, the study helps investors and businesses understand the financialstrengths and weaknesses of these pharmaceutical companies, enabling informed decision-making in the dynamic market.

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