A Comparative Study on Profitability Analysis of Sun Pharma and Lupin Ltd.

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Abstract:
The role and significance of pharmaceutical industry in India's GDP is immense. The contribution of this sector towards building GDP of the country is vital. During the last decade, this industry has boomed and touched new heights. Pharmaceutical industry has boomed in India due to the several reasons such as clinical research, research and development related to various vaccines etc. Pharmaceutical industry is one of the largest industries in India which ranks 3rd worldwide in terms of volume. Due to this reason an attempt is made by the researcher to analyses the profitability of pharmaceutical companies of India, for which the researcher has selected top two companies based on the revenue of operations. The companies are Sun Pharma and Lupin. Comparative analysis has been done between this two companies with the help of t-test for the period from 2013 to 2017 i.e. for five years. The profitability ratios selected for the study was operating profit margin, gross profit margin, net profit margin, cash profit margin and return on capital employed.

Keywords: *Pharmaceutical Industry, Lupin, Sun Pharma. and Profitability analysis*

1. Introduction

Profitability is a source to determine the operational efficiency of a business. It is the magic eye that can measure operating efficiency of the whole organisation. The return on capital employed can be the best judged by profit and not by the investment made by the investors. Profitability is the net result of a large number of policies and decision. Profitability is analysed with reference to operations of business keeping in mind short term and long term objectives. So, the study of profitability is very much useful in order to derive proper conclusion.

2. Objectives of the Study

1. To analyse the profitability position of Sun Pharma and Lupin during the study period.
2. To compare the profitability of Sun Pharma and Lupin during the study period.

3. Significance of the Study

This research is very important because pharmaceutical industry's role in development of the country is very important. So it becomes necessary to find out the causes and solution of serious financial problem of this industry which impact profitability. Thus, the analysis will be useful to all the stakeholders as well as the society.

4. Hypothesis of the Study

H_0: There is no significant difference in the mean of the Profitability ratios between the companies during the study period.

5. Research Methodology

1.Selection of Sample

On the basis of Operational Revenue highest to lowest in financial year 2016-17, top two companies are selected which are Sun Pharma and Lupin.

6. Source of Data

The study is based on secondary data for which the data was collected from various annual reports of selected Pharmaceutical companies and Money control website.

7. Period of the study

The present study is conducted for five years i.e. from 2012-13 to 2016-17.

8. Tools of Analysis

Accounting Tools: Ratios which are Operating Profit Margin ratio, Gross Profit ratio, Net Profit ratio, Cash profit ratio and Return on Net worth.

Statistical Tools: t-test and Average

8.1 Analysis and Interpretation

1.Operating Profit Margin

Year	Sun Pharma.	Lupin
2013	21.07	26.45
2014	0.60	32.57
2015	-6.96	34.58
2016	-5.71	35.53
2017	1.48	35.53

(Source: www.moneycontrol.com)

Analysis of t-test: Two Sample Assuming Equal Variances

	Sun Pharma.	Lupin		
Mean	**2.096**	**32.932**	**t-Stat**	**-5.807077**
Variance	126.39373	14.5906	P(T<=t) one tail	0.000200954
Observations	5	5	t Critical one-tail	1.859548038
Pooled Variance	70.492175		P(T<=) two tail	0.000401909
Hypothesized Mean Difference	0		**t critical two-tail**	**2.306**
Df	**8**			

As per the calculation of t-statistics, the mean of Operating Profit Ratio of Sun Pharma was 2.096 and Lupin was 32.93. The calculated value of "t" was **-5.81** and the table value is **2.306** at 8 degree of freedom. Here, the calculated value is more than the table value. So, null hypothesis is rejected and can be concluded that there is significant difference in the mean of operating profit ratio of the selected companies during the study period.

2.Gross Profit Ratio

Year	Sun Pharma.	Lupin
2013	17.55	24.34
2014	-3.00	30.70
2015	-15.20	31.13
2016	-11.80	32.81
2017	-4.01	32.63.

(Source: www.moneycontrol.com)

Analysis of Gross Profit Ratio for t-test: Two Sample Assuming Equal Variances:

	Sun Pharma.	Lupin		
Mean	**-3.292**	**30.322**	**t-Stat**	**-5.6929**
Variance	162.294	12.0243	P(T<=t) one tail	0.000023
Observations	5	5	t Critical one-tail	1.85955
Pooled Variance	87.1592		P(T<=) two tail	0.00046
Hypothesized Mean Difference	0		**t critical two-tail**	**2.306**
Df	**8**			

As per the calculation of t-statistics, the mean of Gross Profit Ratio of Sun Pharma was -3.292 and Lupin was 30.32. The calculated value of "t" was **-5.69** and the table value is **2.306** at 8 degree of freedom. Here, the calculated value is more than the table value. So, null hypothesis is rejected and can be concluded that there is significant difference in the mean of Gross Profit ratio of the selected companies during the study period.

3.Net Profit Margin

Year	Sun Pharma.	Lupin
2013	21.23	17.69
2014	-99.99	25.99
2015	-18.38	24.58
2016	-14.09	25.23
2017	-0.29	24.87

(Source: www.moneycontrol.com**)**

Analysis of Net Profit Ratio for t-test: Two Sample Assuming Equal Variances:

	Sun Pharma.	Lupin		
Mean	**-22.304**	**23.672**	**t-Stat**	**-2.22**
Variance	2124.452	11.4611	P(T<=t) one tail	0.028393
Observations	5	5	t Critical one-tail	1.859548
Pooled Variance	1067.957		P(T<=) two tail	0.056786
Hypothesized Mean Difference	0		**t critical two-tail**	**2.306**
Df	**8**			

As per the calculation of t-statistics, the mean of Net Profit Ratio of Sun Pharma was –22.30 and Lupin was 23.67. The calculated value of "t" was **-2.22** and the table value is **2.306** at 8 degree of freedom. Here, the calculated value is less than the table value. So, null hypothesis is accepted and can be concluded that there is no significant difference in the mean of Net Profit ratio of the selected companies during the study period.

4.Cash Profit Margin

Year	Sun Pharma.	Lupin
2013	22.57	19.73
2014	4.95	26.63
2015	-9.88	27.52
2016	-6.70	27.49
2017	4.87	27.58

(Source: www.moneycontrol.com)

Analysis of Cash Profit Ratio for t-test : Two Sample Assuming Equal Variances

	Sun Pharma.	Lupin		
Mean	**3.162**	**25.79**	**t-Stat**	**-3.834**
Variance	162.5343	11.6291	P(T<=t) one tail	0.0024947
Observations	5	5	t Critical one-tail	1.859548
Pooled Variance	87.08171		P(T<=) two tail	0.0049895
Hypothesized Mean Difference	0		**t critical two-tail**	**2.306**
Df	**8**			

As per the calculation of t-statistics, the mean of Cash Profit Ratio of Sun Pharma was 3.162 and Lupin was 25.79. The calculated value of "t" was **-3.834**and the table value is **2.306** at 8 degree of freedom. Here, the calculated value is more than the table value. So, null hypothesis is rejected and can be concluded that there is significant difference in the mean of Cash Profit ratio of the selected companies during the study period.

5.Return on Capital Employed

Year	Sun Pharma	Lupin
2013	8.47	32.52
2014	0.94	44.39
2015	-3.57	35.47
2016	-1.72	31.44
2017	0.80	27.38

(Source: www.moneycontrol.com**)**

Analysis of Return on Capital Employed for t-test: Two Sample Assuming Equal Variances

	Sun Pharma.	Lupin		
Mean	**0.984**	**34.24**	**t-Stat**	**-9.4723**
-Variance	21.03163	40.59835	P(T<=t) one tail	6.35169E-06
Observations	5	5	t Critical one-tail	1.859548038
Pooled Variance	30.81499		P(T<=) two tail	1.27034E-05
Hypothesized Mean Difference	0		**t critical two-tail**	**2.306**
Df	**8**			

As per the calculation of t-statistics, the mean of Return on Capital Employed of Sun Pharma was 0.984 and Lupin was 34.24. The calculated value of "t" was **-9.4723**and the table value is **2.306** at 8 degree of freedom. Here, the calculated value is more than the table value. So, null hypothesis is rejected and can be concluded that there is significant difference in the mean of Return on Capital Employed of the selected companies during the study period.

9. Findings
1. The Operating Profit Ratio was maximum in the year 2013 of Sun Pharma i.e. 21.07 and it was minimum in the year 2015 i.e. -6.96. The ratio was highest in Lupin in the year 2016 and 2017 i.e. 35.53 and it was least in the year 2013 i.e. 26.45.

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2. The Gross Profit Ratio was highest in Sun Pharma in the year 2013 i.e. 17.55 and it was least in the year 2015 i.e. -15.2. The ratio was maximun in Lupin in the year 2016 i.e. 32.81 and it was lowest in the year 2013 i.e. 24.34.

3. The Net Profit Ratio was maximum in Sun Pharma in the year 2013 i.e. 21.23 and it was minimum in the year 2014 i.e. -99.99. The ratio was highest in Lupin 25.99 in the year 2014 and it was least in the year 2013 i.e. 17.69.

4. The Cash Profit Ratio was maximum in Sun Pharma in the year 2013 i.e. 22.57 and it was least in the year 2015 i.e. -9.88. The ratio was maximum in Lupin in the year 2017 i.e. 27.58 and it was least in the year 2013 i.e. 19.73.

5. The Return on Capital Employed was highest in Sun Pharma in the year 2013 i.e. 8.47 and it was minimum in the year 2015 i.e. -3.57. The ratio was maximum in Lupin in the year 2014 i.e. 44.39 and it was minimum in the year 2017 i.e. 27.38.

6. Fluctuation in all ratios is highest in Sun Pharma in comparison of Lupin which shows higher risk, lack of operational and financial efficiency. Sun Pharma. is very difficult to predict for future.

10. Conclusion

In comparison of these two companies, Lupin Company is better than Sun Pharma. Research concluded that in all five perspectives which were Operating Profit Margin ratio, Gross Profit ratio, Net Profit ratio, Cash profit ratio and Return on Net worth, Lupin performance is better and stable than Sun Pharma.

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