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Research Paper on Liquidity & Profitability Analysis of the Pharmaceutical Companies of India

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Introduction

In the era of liberalization, privatization, and globalization, working capital management an integral part of any business situation. Businesses are nowadays managed with flexibility where the strategic aspects largely depend of the stand of competitors. In such a scenario finance manager has to blend his long-term and short-term resources in best possible combination so that firm can deal with any uncertainty in optimum manner.

Working capital management largely involves investment and financing for the short-term period. In case of pharmaceutical firms where the large focus of business is on long-term assets because of its efforts on research and development, managing profitability becomes vital important for the finance managers.

Maintaining profit level that would satisfy long-term interest of the firm is not so simple task in volatile business environment. Especially in case of pharmaceutical companies, the case is even more difficult. Pharmaceutical firms are dealing with stiff competition on one hand and strict regulations on the other hand. In such a scenario, lot of inorganic business activities such as mergers, acquisitions, spin off etc. keep on taking place in pharmaceutical industry.

Globally some attention has been given to the phenomenon of financial performance of the Pharmaceutical companies to provide much insight into their annual reports; United States, (Goodman, 2009) and in India (Nair,2013) and (Kheradmand & Bahar, 2013). But still financial performance of the industry is not well known (Nsiah and Aidoo, 2015).

Literature Review

Ogbru (2009) studied that the pharmaceutical sector, in coming years, will require huge capital investments for medicinal compounds discovery. This may hamper the profitability situation of the pharmaceutical companies.

Bhunia and Sarkar (2011) found the few financial ratios can be used to predict the financial soundness of the pharmaceutical firms in India.

Sheila and Karthikeyan (2012) studied Indian pharmaceutical firms in terms of profitability. They found that Cipla was the best company having strongest financial performance out of all selected companies. They also found that ROE & ROI are the most comprehensive measure for profitability of a firm.

Vataliya (2012) also studied profitability performance of pharmaceutical companies in India. He also found that Cipla performed the best out of all selected companies. They also remarked about consistency of performance of Cipla.

Karamehic (2013) analyzed the financial performance of the United States Pharmaceutical industry. He forecasted that financial performance will go down in coming future.

Research Methodology

The study is aimed at studying profitability scenario of sample pharmaceutical companies in India. The time period for which the companies are studied is of four years from 2010-'11 to 2013-'14. In order to study pharmaceutical industry four major companies of the industry were chosen. These were;

1. Ranbaxy Laboratories
2. Cipla Pharmaceuticals
3. Dr. Reddy's Laboratories
4. Lupin Pharmaceuticals

In order to achieve the objective of studying the profitability of sample companies six profit parameters were chosen for the study. These were;

1. Gross Profit Margin
2. Operating Profit Margin
3. Net Profit Margin
4. Return on Capital Employed
5. Return on Net Worth
6. Earnings Per Share

The requisite data were sourced through the websites of National Stock Exchange of India (www.nseindia.com), Money Control (www.moneycontrol.com) and the annual reports of the companies given on companies' website. Descriptive statistics and ANOVA test was used to perform statistical analysis and 5% level of significance was used.

Hypotheses

Gross Profit Margin

$H_{(0)}$: The gross profit margin ratio does not differ significantly among different pharmaceutical firms.

$H_{(1)}$: The gross profit margin ratio differs significantly among different pharmaceutical firms.

Operating Profit Margin

$H_{(0)}$: The operating profit margin ratio does not differ significantly among different pharmaceutical firms.

$H_{(1)}$: The operating profit margin ratio differs significantly among different pharmaceutical firms.

Net Profit Margin

$H_{(0)}$: The net profit margin ratio does not differ significantly among different pharmaceutical firms.

$H_{(1)}$: The net profit margin ratio differs significantly among different pharmaceutical firms.

Return on Capital Employed

$H_{(0)}$: The net profit margin ratio does not differ significantly among different pharmaceutical firms.

$H_{(1)}$: The net profit margin ratio differs significantly among different pharmaceutical firms.

Return on Net Worth

$H_{(0)}$: The return on net worth ratio does not differ significantly among different pharmaceutical firms.

$H_{(1)}$: The return on net worth ratio differs significantly among different pharmaceutical firms.

Earning Per Share

$H_{(0)}$: The earning per share ratio does not differ significantly among different pharmaceutical firms.

$H_{(1)}$: The earning per share ratio differs significantly among different pharmaceutical firms.

Data Analysis and Discussion

Descriptive statistics like trend of defined performance measures from the year 2010-‘11 to 2013-‘14, mean, standard deviation, minimum and maximum are used to analyze the data. Anova test is performed to analyze the difference in various performance measures among different pharmaceutical companies.

Gross Profit Margin (%)

Table 1 Gross Profit Margin (%)

Year	Ranbaxy	Cipla	DRL	Lupin
2010-‘11	18.31	16.94	18.72	19.01
2011-‘12	10.52	21.68	19.7	20.58
2012-‘13	2.07	20.88	14.11	17.18
2013-‘14	7.51	17.16	12.58	18.83
Mean	9.60	19.17	16.28	18.90
S.D.	6.78	2.47	3.47	1.39
Minimum	5.39	20.27	17.42	19.43
Maximum	22.35	24.63	24.76	22.79

Table 1 depicts that Cipla had the highest gross profit margin on average basis. The table also shows that Ranbaxy had the highest variation in its gross profit margin. Until 2011-’12 gross profit of all the sample companies witnessed a significant up trend which started taking u-turn from 2012-’13. This happens largely as pharmaceutical is a defensive sector. It generally moves downward when entire market moves upward. However, a few sample companies like, Cipla, DRL, and Lupin exhibited strong positive trend during study time period.

Operating Profit Margin (%)

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Table 2 Operating Profit Margin (%)

Year	Ranbaxy	Cipla	DRL	Lupin
2010-‘11	22.35	20.86	23.5	21.33
2011-‘12	13.62	24.63	24.76	22.79
2012-‘13	5.39	23.78	18.95	19.43
2013-‘14	9.31	20.27	17.42	21.01
Mean	12.67	22.39	21.16	21.14
S.D.	7.28	2.14	3.53	1.38
Minimum	5.39	20.27	17.42	19.43
Maximum	22.35	24.63	24.76	22.79

The scenario of operating profit margin was also no different from gross profit margin. Here also, Cipla had the highest average operating profit margin whereas the variation was highest in case of Ranbaxy. Generally, the trends of gross profit will be carried forward in the operating profit. Here also, the performance of sample companies start weakened after 2011-’12. And, four companies, Cipla, DRL, and Lupin and witnessed significant positive and constant growth in operating profits.

Net Profit Margin (%)

Table 3 Net Profit Margin (%)

Year	Ranbaxy	Cipla	DRL	Lupin
2010-‘11	19.74	15.16	16.84	18.02
2011-‘12	11.72	18.97	18.48	17.52
2012-‘13	-22.02	14.58	13.2	14.09
2013-‘14	14.33	16.43	13.57	16.3
Mean	5.94	16.29	15.52	16.48
S.D.	18.94	1.95	2.56	1.75
Minimum	-22.02	14.58	13.2	14.09
Maximum	19.74	18.97	18.48	18.02

Out of sample companies Cipla outperformed other companies in terms of gross profit margin, operating profit margin as well as net profit margin. The net profit margin portrays the efforts of marketing that a firm needs to do in order to sell the products. Moreover, the key USP of pharmaceutical companies is their strong R and D capacity. These all gets well reflected in the measure of net profit margin to exhibit the inherent

strength of the firm. The R and D strength of pharmaceutical firms cannot be undermined. Cipla, DRL, and Lupin reported strong and constant net profit margin with stability.

Return of Capital Employed (%)

Table 4 Return on Capital Employed (%)

Year	Ranbaxy	Cipla	DRL	Lupin
2010-‘11	12.82	16.52	14.2	21.08
2011-‘12	8.03	22.16	15.87	22.49
2012-‘13	2.52	22.39	13.46	22.04
2013-‘14	4.93	18.17	10.55	27.58
Mean	7.08	19.81	13.52	23.30
S.D.	4.44	2.93	2.22	2.91
Minimum	2.52	16.52	10.55	21.08
Maximum	12.82	22.39	15.87	27.58

Operating profit margin, gross profit margin and net profit margin are absolute measures of firms’ performance. Performance of any firm is less absolute and more relative. For pharmaceutical companies, ROCE is more important in order to map the performance from the view point of effectiveness of their research and development efforts.

Lupin consistently exhibited strong trends of return on capital employed. Ranbaxy has very efficient research and development but still it fails to outcompete the other sample companies. One of the reasons can be it has employed more capital with relatively longer term vision. So, in the coming years it would be reflected in the ROCE of Ranbaxy.

Return on Net Worth (%)

Table 5 Return on Net Worth (%)

Year	Ranbaxy	Cipla	DRL	Lupin
2010-‘11	22.41	14.54	14.84	25.69
2011-‘12	14.44	18.31	14.3	25.64
2012-‘13	-29.5	17.89	10.66	30.31
2013-‘14	24.34	18.72	9.87	33.66
Mean	7.92	17.37	12.42	28.83
S.D.	25.31	1.91	2.52	3.90
Minimum	-29.5	14.54	9.87	25.64
Maximum	24.34	18.72	14.84	33.66

On the front of return on net worth also, Lupin exhibited the strongest performance. Net worth is an appropriate measure for firms' overall efficiency. The performance of DRL was the weakest on absolute basis while, because of the performance of 2012-'13 the average performance of Ranbaxy was seen at the least.

Earnings Per Share (Rs.)

Table – 6 Earnings Per Share (Rs)

Year	Ranbaxy	Cipla	DRL	Lupin
2010-'11	27.28	11.96	52.78	18.15
2011-'12	13.61	13.47	50.11	72.96
2012-'13	-24.85	9.99	33.29	50.35
2013-'14	16.56	9.02	28.26	54.02
Mean	8.15	11.11	41.11	48.87
S.D.	22.77	1.99	12.16	22.75
Minimum	-24.85	9.02	28.26	18.15
Maximum	27.28	13.47	52.78	72.96

The earnings per share of DRL and Lupin were the highest. In fact the earnings per share of both of these companies were substantially higher in comparison of Ranbaxy and Cipla. Earnings per share relate the companies' performance from the view point of shareholders. The same gets reflected in the stock returns of all the companies. DRL and Lupin have constantly outperformed market by achieving comparatively higher price appreciation.

Hypotheses Testing

Table 7 Anova test

Ratio	F	Sig.	Ho	Remarks
Gross Profit Margin	2.058	.022	Rejected	Significant Difference
Operating Profit Margin	2.982	.029	Rejected	Significant Difference
Net Profit Margin	1.581	.513	Accepted	No Significant Difference
ROCE	5.996	.000	Rejected	Significant Difference
RONW	3.314	.007	Rejected	Significant Difference
EPS	4.123	.000	Rejected	Significant Difference

The objective of employing anova test is to test whether the performance of all sample firms differ significantly across study period. The table 7 comprehend the results of all anova tests. Out of total six

earning parameters, companies differ significantly in their performances. In cases of gross profit margin, operating profit margin, ROCE, RONW, and EPS the significance values were lower than 0.05 and hence null hypotheses were rejected.

Whereas, in case of net profit margin the significance value was seen at 0.513, which is substantially higher than 0.05 and falls under acceptance region. That means researcher failed to reject null hypothesis in case of net profit margin and confer that there is no significant difference in the values of net profit margin among sample companies.

Conclusion

The study period taken in sample was quite challenging for the pharmaceutical sector and Indian economy in all. 2008 was the commencement of the downturn in the economy. Moreover, it was the year of certain economic shocks internationally. Starting from the Lehman Brothers, the recession spread across the globe. In these challenging times it was very difficult for all businesses to perform with its efficiency.

In this backdrop, the study undertook here aims at analyzing profitability position of the Indian pharmaceutical sector. The seven years time period chosen for analyzing pharmaceutical industry's profitability was quite a roller coaster ride for companies. In initial years the profitability was not quite encouraging. Later on, after 2009 the companies started exhibiting positive trends in profitability.

Pharmaceutical sector is distinguished in two facets: One, it is a defensive sector, as it is also one of the basic necessities. Second, it involves very high cost of research and development, which does not guarantee any assured returns. In this regards, the profitability of some firms like Ranbaxy did not show encouraging results. To target these both issues, different six profitability parameters were chosen to address the profitability of pharmaceutical sector in an appropriate manner. However, as expected, different ratios shown diverse results. For any firm, for which the focus is on research and development, operating profit and gross profit matters more, as their efforts for research and development will generate fruits after longer time period.

Similarly, the companies involved in medication for critical illnesses like Cancer, HIV will be having higher assets employed. This will affect their ROCE and RONW.

References:

1. Bhunia, A. & Sarkar, R., (2011). A Study of Financial Distress based on MDA. Journal of Management Research, 3(2), pp. 1-11.
2. Goodman, M., (2009). Pharmaceutical industry financial performance. Nature Reviews Drug Discovery, pp. 927-928.
3. Karamehic, e., 2013. hwww.ncbi.nlm.nih.gov/pubmed/24511277. [Online] Available at:
4. http://www.ncbi.nlm.nih.gov [Accessed 7 8 2014].

5. Kheradmand, A. & Bahar, M. N. (2013). Analysis Of Financial Statements: Case Study: Elder And Fdc Pharmaceutical Companies. International Journal of Research Finance and Market, 3(5), pp. 32-43.
6. Nair, J. (2013). Performance Analysis And Solvency Prediction Of Indian Pharma Companies. International Journal of Marketing, Financial Services & Management Research, 2(5), pp. 34-43.
7. Nsiah, F. & Aidoo, P. (2015). Financial Performance of Listed Pharmaceutical Companies on Ghana Stock Exchange. Research Journal of Finance and Accounting. Vol.6, No.2.
8. Ogbru, O., 2009. http://www.medicinenet.com/script/main/art.asp?articlekey=18892. [Online] Available at: http://www.medicinenet.com [Accessed 2 8 2014].
9. Sheela, C.S. and Karthikeyan. K (2012). Financial Performance of Pharmaceutical Industry in India using DuPont Analysis. European Journal of Business and Management. Vol 4, No.14. http://pakacademicsearch.com/pdf-files/ech/517/84- 91%20Vol%204,%20No%2014%20(2012).pdf
10. Vataliya, K.S. (2012). Profitability and Consistency Analysis of Pharmacy Sector in India. International Journal of Financial Research. Vol. 3, No. 3 - URL: http://dx.doi.org/10.5430/ijfr.v3n3p17