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A Study on profitability position of Pharmaceutical Industry in India

A. Geethalakshmi¹Ph.D Research Scholar
Department of Commerce
Karpagam University
Coimbatore-21 – India**Dr. K. Jothi²**Associate Professor
Department of Commerce
Karpagam University
Coimbatore-21 – India

Abstract: *The Indian Pharmaceutical sector is highly fragmented with more than 20,000 registered units. It has expanded drastically in the last two decades. The Pharmaceutical Industry in India meets around 70 of the country's demand for bulk drugs, drug intermediates, pharmaceutical formulation, chemicals, tablets, orals and injectibles. There are approximately 250 large units and about 8000 small scale units, which form the core of the Pharmaceutical Industry in India (including 5 central public sector units) Looking ahead, the worldwide pharma market is estimated to more than double to \$1.3 billion by the year 2020. The Indian Pharmaceutical Industry is developing drastically every year. Hence an attempt has been made to analyze the profitability position of the industry with the help of mean, standard deviation, coefficient of variation. The increase in profitability will not only yield greater efficiency but also improve financial performance in future.*

Keywords: *Financial Performance, Technology, Ratio Analysis, Fragmented.*

I. INTRODUCTION

The Indian Pharmaceutical Industry today is in the front rank of India's science based industries with wide ranging capabilities in the complex field of drug manufacture and technology. It ranks very high in the third world, in terms of technology, quality and range of medicines manufactured. From simple headache pills to sophisticated antibiotics and complex cardiac compounds, almost every type of medicine is now made indigenously playing a key role in promoting and sustaining development in the vital field of medicines.

International companies associated with this sector have stimulated, assisted and spearheaded this dynamic development in the past 53 years and helped to put India on the pharmaceutical map of the world. The Indian Pharmaceutical sector is highly fragmented with more than 20,000 registered units. It has expanded drastically in the last two decades. The leading 250 Pharmaceutical Companies control 70 percent of the market with market leader holding nearly 7 percent of the market share. It is an extremely fragmented market with severe price competition and government price control.

The Pharmaceutical Industry in India meets around 70 percent of the country's demand for bulk drugs, drug intermediates, pharmaceutical formulations, chemicals, tablets, capsules, orals and injectibles. There are about 250 large units and about 8000 Small Scale Units, which form the core of the Pharmaceutical Industry in India (including 5 Central Public Sector Units). These units produce the complete range of pharmaceutical formulations, i.e., medicines ready for consumption by patients and about 350 bulk drugs, i.e., chemicals having therapeutic value and used for production of pharmaceutical formulations.

II. STATEMENT OF THE 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. All of the company's operations virtually affect its need for cash. 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.

III. OBJECTIVES OF THE STUDY

1. To analyze the profitability position of selected Pharmaceutical Companies in India.
2. To analyze the factors influencing the profitability of selected Pharmaceutical Companies in India.
3. To offer findings and suggestions and conclusion of this study.

IV. SCOPE OF THE STUDY

The present study aims at assessing the profitability position of Pharmaceutical Industry in India. The study could help the company as well as the investors to understand its financial efficiency. It aims to help the management to find out its financial problems at present and the Specific areas in the business, which might need some effort for more effective and efficient utilization of its resources.

V. REVIEW LITERATURE

S. Christina Sheela, Dr. K. Karthikeyan (2012),” Financial Performance of Pharmaceutical Industry in India using DuPont Analysis”. This study attempts basically to measure the financial performance of the Pharmaceutical Industry taking top three companies like Cipla, Dr. Reddy’s Laboratories, Ranbaxy for the period 2003-2012. In order to achieve our goals in this paper we have measured the ratios of ROE, ROA applying the DuPont analyses, which have been demonstrated with the aim of tables to show the change periodically. DuPont analysis (ROI and ROE) is an important tool for judging the operating financial performance. It is an indication of the earning power of the firm. ROE & ROI is the most comprehensive measure of profitability of a firm. It considers the operating and investing decisions made as well as the financing and tax-related decisions.

Amalendu Bhunia(2010),”Financial Performance of Indian Pharmaceutical Industry A Case Study”. The present study covers two public sector drug & pharmaceutical enterprises listed on BSE. The study has been undertaken for the period of twelve years from 1997-98 to 2008-09. In order to analyze 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.

V.Vijayalakshmia and M.Srividya (2014),”A Study On Financial Performance Of Pharmaceutical Industry In India”. The Indian Pharmaceutical Industry is developing drastically every year. Hence an attempt has been made to analyze the profitability position of the industry with the help of mean, standard deviation, co-efficient of variation, multiple regression, and analysis of variance. The increase in profitability will not only yield greater efficiency but also improve financial performance in future.

Enekwe, Chinedu Innocent Agu, Charles Ikechukwu and Eziedo Kenneth Nnagbogu (2014),” The Effect of Financial Leverage on Financial Performance: Evidence of Quoted Pharmaceutical Companies in Nigeria”. The main objective of this study is to determine the effect of financial leverage on financial performance of the Nigeria pharmaceutical companies over a period of twelve (12) years (2001 – 2012) for the three (3) selected companies. This work employed three (3) financial leverage for the independent variables such as: debt ratio (DR); debt-equity ratio (DER) and interest coverage ratio (ICR) in determining their effect on financial performance for Return on Assets (ROA) as dependent variable. The management should also monitor the interest charged on debt financing to avoid liquidation of the company.

VI. METHODOLOGY

Sources of Data

Secondary data is used for the study.

Period of the Study

The study covers a period of Ten years from the financial year 2006-2007 to 2015-2016

Tools used

Ratio analysis is a technique adopted to analysis and interpret general financial statements to assess the profitability position Further a comprehensive analysis is carried by applying statistical techniques namely mean, standard deviation, coefficient of variance.

Sample Design

The data for this study is selected based on convenience sampling method. Among the companies listed with major stock exchange of India namely, Bombay Stock Exchange and National Stock Exchange of India, 5 companies with consistent financial data are selected.

The following are the selected Pharmaceutical companies of this study

- Sun Pharma Industries
- Dr.Reddy's Laboratories Ltd
- Cadila Health Care
- Aurobindo
- Lupin

VII. ANALYSIS OF PROFITABILITY

- Gross Profit Ratio
- Net Profit Ratio
- Cash profit margin
- Operating Profit Ratio
- Return on capital employed
- Return on net worth

Table No.4.1 GROSS PROFIT RATIO

Year/ Company	Sun Pharma	Dr.Reddy	Cadila	Aurobindo	Lupin
2015-2016	24.32	18.19	16.97	18.4	24.94
2014-2015	40.99	19.48	13.82	22.46	24.29
2013-2014	40.35	18.23	14.79	10.45	20.09
2012-2013	36.32	19.49	17.8	7.79	17.18
2011-2012	30.69	15.4	19.43	8.46	17.29
2010-2011	26.07	14.82	17.91	18.95	17.8
2009-2010	40.68	14.65	17.13	14.16	17.55

2008-2009	43.29	9.79	15.04	9.93	16.93
2007-2008	27.7	20.22	14.41	9.59	14.08
2006-2007	26.29	7.98	6.82	6.75	14.81
MEAN	33.67	15.83	15.41	12.69	18.50
STDEV	7.39	4.19	3.52	5.47	3.62
CV(%)	21.94	26.48	22.82	43.06	19.56

It reveals the gross profit ratio of selected Pharmaceutical Companies in India from 2006-2007 to 2015-2016. This gross profit ratio shows a fluctuating trend during the study period. The Sun Pharma has the highest mean value of 33.67 and the Aurobindo has the lowest mean value of 12.69. The Sun Pharma has the highest standard deviation of gross profit ratio of 7.39. The Cadila with lowest standard deviation of gross profit ratio of 3.52. The Aurobindo has the highest coefficient variance of gross profit ratio of 43.06 per cent. The Lupin has the lowest coefficient variance of gross profit ratio of 19.56 per cent and it is found that there is a consistency in gross profit ratio than the other Pharmaceutical Companies.

Table No.4.2 NET PROFIT RATIO

Year/ Company	Sun Pharma	Dr.Reddy	Cadila	Aurobin do	Lup in
2015-2016	16.54	15.55	13.29	13	18.81
2014-2015	19.53	14.69	11.12	14.48	16.27
2013-2014	26.39	12.83	10.27	5.01	13.63
2012-2013	33.12	13.25	12.36	-2.66	12.24
2011-2012	31.7	13.32	15.35	3.56	14.82
2010-2011	34.61	5.02	13.92	15.63	14.12
2009-2010	42.47	-13.32	10.42	3.25	13.02
2008-2009	44.24	8.79	11.17	9.82	14.91
2007-2008	36.78	14.61	12.73	9.42	14.07
2006-2007	34.99	6	11.04	4.34	9.85
MEAN	32.04	9.07	12.17	7.59	14.17
STDEV	8.98	8.70	1.66	5.84	2.38
CV(%)	28.02	95.87	13.65	77.01	16.78

Interpretation

The table shows that the net profit ratio of selected Pharmaceutical Companies in India from 2006-2007 to 2015-2016. The net profit ratio shows the fluctuating trend during the study period. The Sun Pharma has the highest mean value of 32.04 and the Aurobindo has the lowest mean value of 7.59. The Sun Pharma has the highest standard deviation of net profit ratio of 8.98. The Cadila with lowest standard deviation of net profit ratio of 1.66 and it is found to be stable in net profit ratio. The Dr. Reddy has the highest co-efficient variance of net profit ratio of 95.87 percent. The Cadila has the lowest co-efficient variance of net profit ratio of 13.65 per cent and it is found that there is a consistency in net profit ratio than the other Pharmaceutical Companies

Table No.4.3 CASH PROFIT MARGIN

Year/ Company	Sun Pharma	Dr.R eddy	Cad ila	Aurobi ndo	Lup in
2015-2016	24.73	20.24	17.0 4	15.58	22.1 3
2014-2015	40.92	19.29	14.4 9	18.23	18.6 8
2013-2014	37.6	17.69	13.6 7	9.18	17.2 9
2012-2013	39.27	19.64	15.7 8	8.54	15.7 1
2011-2012	34.77	18.5	18.5 8	7.65	17.9 8
2010-2011	34.27	17.44	19.2 2	16.23	16.7 6
2009-2010	44.21	17.34	16.2 6	15.02	15.9 4
2008-2009	46.67	15.67	15.1 1	10.76	17.2 9
2007-2008	36.56	20.28	16.1 4	12.94	16.2 3
2006-2007	33.15	12.47	15.8 2	6.91	12.7 7
MEAN	37.22	17.86	16.2 1	12.10	17.0 8
STDEV	6.18	2.39	1.71	4.02	2.39
CV(%)	16.61	13.39	10.5 5	33.24	14.0 1

Interpretation

The table shows that the net profit ratio of selected Pharmaceutical Companies in India from 2006-2007 to 2015-2016. The cash profit margin shows the fluctuating trend during the study period. The Sun Pharma has the highest mean value of 37.22 and the Aurobindo has the lowest mean value of 12.10. The Sun Pharma has the highest standard deviation of cash profit margin of 6.18. The Cadila with lowest standard deviation of cash profit margin of 1.71 and it is found to be stable in cash profit margin. The Aurobindo has the highest co-efficient variance of cash profit margin of 33.24 percent. The Cadila has the lowest co-efficient variance of cash profit margin of 10.55 per cent and it is found that there is a consistency in net profit ratio than the other Pharmaceutical Companies.

Table No 4.4 OPERATING PROFIT RATIO

Year/ Company	Sun Pharma	Dr.Red dy	Cad ila	Aurobin do	Lup in
2015-2016	28.67	23.25	20.2 9	21.15	28.3 4
2014-2015	43.54	24.33	16.6 1	26.32	26.6
2013-2014	43.33	22.86	17.6 9	14.7	23.5 4
2012-2013	39.95	24.77	20.8	12.12	20.3 9
2011-2012	34.27	20.71	22.1 7	16.32	20.2 4
2010-2011	30	20.73	21.4 5	23.09	20.3 7
2009-2010	43.56	21.88	20.9 8	18.31	19.8 4
2008-2009	46.17	17.85	19.2 4	14.07	19.3
2007-2008	31.51	26.02	18.9 2	14.31	16.3 8

2006-2007	30.01	14.82	11.9	11.32	17.1
MEAN	37.10	21.72	19.0	17.17	21.2
STDEV	6.86	3.38	3.02	4.95	3.84
CV(%)	18.49	15.56	15.8	28.81	18.1

Interpretation

The table shows that the operating profit ratio of selected Pharmaceutical Companies in India from 2006-2007 to 2015-2016. The operating profit ratio shows the fluctuating trend during the study period. The Sun Pharma has the highest mean value of 37.10 and the Aurobindo has the lowest mean value of 17.17. The Sun Pharma has the highest standard deviation of operating profit ratio of 6.86. The Cadila with lowest standard deviation of operating profit ratio of 3.02 and it is found to be stable in operating profit ratio. The Aurobindo has the highest co-efficient variance of operating profit ratio of 28.81 percent. The Dr.Reddy's has the lowest co-efficient variance of operating profit ratio of 15.56 per cent and it is found that there is a consistency in operating profit ratio than the other Pharmaceutical Companies.

Table No 4.5 RETURN ON CAPITAL EMPLOYED

Year/ Company	Sun Pharma	Dr.Reddy	Cadila	Aurobindo	Lupin
2015-2016	21.72	22.32	23.1	25.8	36.6
2014-2015	33.99	23.1	18.4	24.95	38.1
2013-2014	32.57	24.32	17.3	10.69	31.8
2012-2013	27.07	24.88	21.3	7.84	22.4
2011-2012	21.45	18.86	28.5	15.34	23.5
2010-2011	17.3	21.1	27.4	17.59	23.6
2009-2010	26.69	19.12	22.3	12.86	25.9
2008-2009	31.03	9.04	19.9	8.73	24.6
2007-2008	19.8	21.21	21.4	7.55	25.9
2006-2007	16.35	4.87	18.7	5.88	17.5
MEAN	24.80	18.88	21.8	13.72	27.0
STDEV	6.37	6.66	3.72	7.14	6.53
CV(%)	25.71	35.25	17.0	52.02	24.1

Interpretation

The table shows that the return on capital employed of selected Pharmaceutical Companies in India from 2006-2007 to 2015-2016. The return on capital employed shows the fluctuating trend during the study period. The Lupin has the highest mean value of 27.02 and the Aurobindo has the lowest mean value of 13.72. The Aurobindo has the highest standard deviation of return on capital employed of 7.14. The Cadila with lowest standard deviation of return on capital employed of 3.72 and it is found to be stable in return on capital employed. The Aurobindo has the highest co-efficient variance of return on capital employed of 52.02 percent. The Cadila has the lowest co-efficient variance of return on capital employed of 17.01 per cent and it is found that there is a consistency in return on capital employed than the other Pharmaceutical Companies.

Table No.4.6 RETURN ON NET WORTH

Year/ Company	Sun Pharma	Dr.Reddy	Cadila	Aurobindo	Lupin
2015-2016	17.74	23.71	27.06	30.56	27.08
2014-2015	16.95	24.96	23.36	31.27	26.49
2013-2014	19.9	23.97	22.19	11.27	25.25
2012-2013	21.71	26.07	25.32	-5.27	21.62
2011-2012	19.15	24.77	32.74	23.04	26.28
2010-2011	17.25	9.3	32.08	30.8	26.54
2009-2010	25.8	-26.01	26.28	8.07	35.2
2008-2009	29.78	9.74	25.04	21.21	31.9
2007-2008	28.29	24.16	27.67	22.68	35.37
2006-2007	36.07	7.09	22.27	8.55	27.79
MEAN	23.26	14.78	26.40	18.22	28.35
STDEV	6.46	16.20	3.68	12.15	4.43
CV(%)	27.76	109.63	13.92	66.72	15.63

Interpretation

The table shows that the return on networth of selected Pharmaceutical Companies in India from 2006-2007 to 2015-2016. The return on networth shows the fluctuating trend during the study period. The Lupin has the highest mean value of 28.35 and the Dr.Reddy has the lowest mean value of 14.78. The Dr.Reddy has the highest standard deviation of return on networth of 16.20. The Cadila with lowest standard deviation of return on networth of 3.68 and it is found to be stable in return on networth. The Dr.Reddy has the highest co-efficient variance of return on networth of 109.63 percent. The Cadila has the lowest co-efficient variance of return on networth of 13.92 per cent and it is found that there is a consistency in return on networth than the other Pharmaceutical Companies.

VIII. FINDINGS

Profitability ratios

- The Aurobindo has the highest coefficient variance of gross profit ratio of 43.06 per cent. The Lupin has the lowest coefficient variance of gross profit ratio of 19.56 per cent and it is found that there is a consistency in gross profit ratio than the other Pharmaceutical Companies.
- The Dr. Reddy has the highest co-efficient variance of net profit ratio of 95.87 percent. The Cadila has the lowest co-efficient variance of net profit ratio of 13.65 per cent and it is found that there is a consistency in net profit ratio than the other Pharmaceutical Companies.
- The Aurobindo has the highest co-efficient variance of cash profit margin of 33.24 percent. The Cadila has the lowest co-efficient variance of cash profit margin of 10.55 per cent and it is found that there is a consistency in net profit ratio than the other Pharmaceutical Companies.
- The Aurobindo has the highest co-efficient variance of operating profit ratio of 28.81 percent. The Dr.Reddy's has the lowest co-efficient variance of operating profit ratio of 15.56 per cent and it is found that there is a consistency in operating profit ratio than the other Pharmaceutical Companies.
- The Aurobindo has the highest co-efficient variance of return on capital employed of 52.02 percent. The Cadila has the lowest co-efficient variance of return on capital employed of 17.01 per cent and it is found that there is a consistency in return on capital employed than the other Pharmaceutical Companies.

- The Dr.Reddy has the highest co-efficient variance of return on networth of 109.63 percent.The Cadila has the lowest co-efficient variance of return on networth of 13.92 per cent and it is found that there is a consistency in return on networth than the other Pharmaceutical Companies.

IX. SUGGESTIONS

- The companies should utilize an innovative technology and it may increase the product range. This will increase the export sales. The result will be increasing the foreign exchange earnings.
- The companies may concentrate on their cost of production, investment in fixed assets and their sales turnover to improve their profitability.

X. CONCLUSION

The financial health plays a significant role in the successful management of a company. 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. However, 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 company to a great extent. If the Pharmaceutical Industry has to perform well, it has to invest more capital and has to do more sales, only then it will improve its performance level.

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