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A study on financial performance of pharmaceutical industry in india

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ABSTRACT: The Indian Pharmaceutical sector is highly fragmented with more than 20,000 registered units. It has expended drastically in the last two decades. The pharmaceutical and chemical industry in India is an extremely fragmented market with severe price competition and government price control. The Pharmaceutical Industry in India meets around 705 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, 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.

Keywords:capabilities,technology,medicines,sophisticated,antibiotics,fragmented.

INTRODUCTION

“The Indian Pharmaceutical Industry is a success story providing employment for millions and ensuring that essential drugs at affordable prices are available to the vast population of this sub-continent.”

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 indigenouslyplaying a key role in promoting and sustaining development in the vital field of medicines. Indian Pharma Industry boasts of quality producers and many units have been approved by the regulatory authorities in USA and UK. 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.

Following the de-licensing of the Pharmaceutical Industry, industrial licensing for most of the drugs and pharmaceutical products has been done away with. Manufacturers are free to produce any drug duly approved by the drug control authority. Technologically strong and totally self-reliant, the Pharmaceutical Industry in India has low costs of production, low R&D costs, innovative scientific manpower, strength of national laboratories and an increasing balance of trade. The Pharmaceutical Industry, with its rich scientific talents and research capabilities, supported by intellectual property protection regime is well set to take on the international market.

REVIEW OF LITERATURE

This chapter presents a review of previous studies relating to the research problem selected for the present study and enables the researcher to have an in-depth knowledge over the various concept of research problem. A review of the important studies and different concepts relating to the financial performance has been presented. In this regard, the researcher has referred to various academic journals, magazines, books etc.

Bhabatosh Banerjee (1982) in his study on "Corporate liquidity and profitability in India" has identified the relationship of liquidity with profitability by analyzing the trend of liquidity position of medium and large public limited companies in India covering the period 1971-78. His study reveals that the industrial groups belonging to publishing, ferrous and non-ferrous products and shipping have a direct relationship between the liquidity and profitability and vice versa, but tobacco, silk and rayon textiles have an indirect relationship.

LathaArun Reddy (1983) has conducted a study on "Profitability and growth- Indian Manufacturing Industries" with the main objective of examining the relationship between growth and profitability using regression models and compound growth rate. Her study covers a period of 24 years from 1950-52 to 1973-74. The author observes that the paper industry exhibits a strong positive correlation between growth and profitability.

Sharma and Reddy (1985) have identified the factors influencing liquidity by conducting a study on the liquidity position of pharmaceutical companies for a period of eight years. It concluded that government policy with respect to input and outputs has the significant influence on the liquidity position of the company.

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.

In this context the researcher is interested in undertaking an analysis to find the financial performance of Pharmaceutical Industry. Hence, the present study entitled “a study on financial performance of Pharmaceutical Industry in India” has been undertaken.

OBJECTIVES OF THE STUDY

The following are the specific 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.

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.

METHODOLOGY

Sources of Data

Secondary data is used for the study. The required data for the study is collected and compiled from “PROWESS” database of Centre for Monitoring Indian Economy (CMIE) for the period from 2009-2010 to 2013-2014 which is a reliable and empowered corporate database. In addition to this, supportive data is collected from books, journals, annual reports and various news-papers.

Techniques of Analysis

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, co-efficient of variance, multiple regressions and analysis of variance.

Sample Design

As the complete source list of all the Pharmaceutical Companies is not available, 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, 10 companies with consistent financial data are selected. Certain companies are excluded owing to irregular and/or inconsistent financial data support.

The following are the selected Pharmaceutical companies of this study

- Ranbaxy Laboratories Ltd
- Sun Pharma Industries
- Dr.Reddy"s Laboratories Ltd
- Cadila Health Care
- Cipla
- Alpa
- Aurobindo
- Aventis Pharma
- Ipca Laboratories
- Glaxo Smith Kline

Period of the Study

The study covers a period of five years from the financial year 2009-2010 to 2013-2014.

ANALYSIS OF PROFITABILITY

The profitability can be measured with the help of the given ratios.

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

Table 1 shows the gross profit ratios of Pharmaceutical Companies in India during the period from 2009-2010 to 2013-2014.

Table 1
Gross Profit Ratio

(Rs. in crores)

Company Name	Mean	S.D	C.V
Ranbaxy	**75.1998**	**3.5231**	**4.6851**
Sun	**103.032**	**1.8175**	**1.764**
Dr.Reddy	**108.603**	**1.6028**	**1.4759**
Cadila	**98.8443**	**3.7996**	**3.844**
Cipla	**96.4846**	**3.003**	**3.1125**
Aventis	**90.8781**	**6.5367**	**7.1928**
Alpa	**100.116**	**5.9532**	**5.9463**
Aurobindo	**86.2863**	**47.7337**	**55.3201**
Ipca	**95.106**	**2.8638**	**3.0112**
Glaxo Smith Kline	**92.85**	**5.5745**	**6.0038**

Source: Compiled and Calculated from the data published in CMIE

Table 1 reveals the gross profit ratio of selected Pharmaceutical Companiesin India from 2009-2010 to 2013-2014. This gross profit ratio shows a fluctuating trend during the study period. It implies the high cost of goods sold due to unfavorable purchasing policies and lesser sales. The Dr.Reddy Laboratories Ltd has the highest average gross profit ratio of 108.6026 per cent and the Ranbaxy Laboratories Ltd has the lowest average gross profit ratio 75.1998 per cent. The AurobindoPharma Ltd has the highest standard deviation of gross profit ratio of 47.7337 per cent. The Dr.Reddy Laboratories Ltd with lowest standard deviation of gross profit ratio of 1.6028 per centand it is found to be stable in gross profit ratio.

The AurobindoPharma Ltd has the highest co-efficient variance of gross profit ratio of 55.32013 per cent. The Dr.Reddy Laboratories Ltd has the lowest co-efficient variance of gross profit ratio of 1.4759 per centand it is found that there is a consistency in gross profit ratio than the other Pharmaceutical Companies.

Table 2 shows the Net profit ratios of Pharmaceutical Companies in India during the period from 2009-2010 to 2013-2014.

Table 2
Net Profit Ratio

(Rs. in crores)

Company Name	Mean	S.D	C.V
Ranbaxy	**6.6745**	**16.8014**	**251.723**
Sun	**42.1325**	**5.3716**	**12.7494**
Dr.Reddy	**17.826**	**8.0472**	**45.143**
Cadila	**17.4524**	**7.5817**	**43.4426**
Cipla	**17.9913**	**2.2143**	**12.308**
Aventis	**17.3711**	**2.1052**	**12.1193**
Alpa	**3.6666**	**2.8536**	**77.8285**
Aurobindo	**7.6106**	**6.4576**	**84.8501**
Ipca	**10.7135**	**2.92218**	**27.2756**
Glaxo Smith Kline	**10.7135**	**2.9221**	**27.2756**

Source: Compiled and Calculated from the data published in CMIE

Table 2 reveals the net profit ratio of selected Pharmaceutical Companies in India from 2009-2010 to 2013-2014. The net profit ratio shows the fluctuating trend during the study period. This fluctuation indicates the firm‟s capacity to face adverse economic condition such as price competition, low demand etc. The Sun Pharma Ltd has the highest average net profit ratio of 42.1325 per cent and the Alpa has the lowest average net profit ratio of 3.6666 per cent.

The Ranbxy Laboratories Ltd has the highest standard deviation of net profit ratio of 16.8014 per cent. The Aventis Pharma Ltd with lowest standard deviation of net profit ratio of 2.1052 per centand it is found to be stable in net profit ratio.

The Ranbaxy Laboratories Ltd has the highest co-efficient variance of net profit ratio of 251.7230 per cent. The Aventis Pharma Ltd has the lowest co-efficient variance of net profit ratio of 12.1193 per cent and it is found that there is a consistency in net profit ratio than the other Pharmaceutical Companies.

Table 3 shows the operating profit ratios of Pharmaceutical Companies in India during the period from 2009-2010 to 2013-2014.

Table 3
Operating Profit Ratio

(Rs. in crores)

Company Name	Mean	S.D	C.V
Ranbaxy	**16.3035**	**7.7342**	**47.439**
Sun	**5.7238**	**4.9851**	**87.0938**
Dr.Reddy	**20.297**	**6.9591**	**34.2864**
Cadila	**14.002**	**4.774**	**34.0956**
Cipla	**22.439**	**1.6504**	**7.3552**
Aventis	**21.7099**	**3.3057**	**15.2267**
Alpa	**6.5098**	**4.2792**	**65.7343**
Aurobindo	**16.0409**	**4.3512**	**27.1257**
Ipca	**10.4892**	**2.9351**	**27.9827**
Glaxo Smith Kline	**36.2936**	**3.4832**	**9.5973**

Source: Compiled and Calculated from the data published in CMIE

Table 3 reveals the operating profit ratio of selected Pharmaceutical Companiesin India from 2009-2010 to 2013-2014. The operating profit ratio shows a fluctuating trend during the study period. This fluctuation implies inability to keep operating expenses properly controlled for level of sales achieved. The Glaxo Smith Kline has the highest average operating profit ratio of 36.2936 per cent and Sun Pharma Ltd has the lowest average operating profit ratio of 5.7238 per cent.

The Ranbaxy Laboratories Ltd has the highest standard deviation of operating profit ratio of 7.7342 per cent. The Cipla has the lowest standard deviation of operating profit ratio of 1.6504 per centand it is found to be stable in operating profit ratio.

The Sun Pharma Ltd has the highest co-efficient variance of operating profit ratio of 87.0938 per cent. The Cipla has the lowest co-efficient variance of operating profit ratio of 7.3552 per cent and it is found that there is a consistency in operating profit ratio than the other Pharmaceutical Companies.

Table 4 shows the return on equity capital profit ratios of Pharmaceutical Companies in India during the period from 2009-2010 to 2013-2014.

Table 4
Return on equity capital
(Rs. in crores)

Company Name	Mean	S.D	C.V
Ranbaxy	**171.211**	**394.863**	**230.63**
Sun	**763.123**	**425.718**	**55.7862**
Dr.Reddy	**837.194**	**364.5**	**43.5382**
Cadila	**515.892**	**242.262**	**46.9598**
Cipla	**613.465**	**243.138**	**39.6336**
Aventis	**753.86**	**144.879**	**19.2182**
Alpa	**32.807**	**30.8591**	**94.0625**
Aurobindo	**860.492**	**624.893**	**72.6204**
Ipca	**501.549**	**220.405**	**43.9448**
Glaxo Smith Kline	**645.979**	**29.2018**	**4.5205**

Source: Compiled and Calculated from the data published in CMIE

Table 4 reveals the return on equity capital ratio of selected Pharmaceutical Companiesin India from 2009-2010 to 2013-2014. The return on equity capital ratio shows fluctuating trend during the study period. This fluctuation indicates profit earned by the company and those profits which can be made non-available to pay dividends to equity shareholders. The AurobindoPharma Ltd has the highest average return on equity capital ratio of 860.492 per cent and Alpa has the lowest average return on equity capital ratio of 32.807 per cent.

The AurobindoPharma Ltd has the highest standard deviation of return on equity capital ratio of 624.8928 per cent. The Glaxo Smith Kline has the lowest standard deviation of return on equity capital ratio of 29.2018 per centand it is found to be stable in equity capital ratio.

The Ranbaxy Laboratories Ltd has the highest co-efficient variance of return on equity capital ratio of 230.63 per cent. The Glaxo Smith Kline has the negative co-efficient variance of return on equity capital ratio of 4.5205 per cent and it is found that there is a consistency in equity capital ratio than the other Pharmaceutical Companies.

Table 5 shows the earnings per share profit ratios of Pharmaceutical Companies in India during the period from 2009-2010 to 2013-2014.

Table 5
Earnings Per Share

(Rs. in crores)

Company Name	Mean	S.D	C.V
Ranbaxy	**8.1993**	**21.2123**	**258.709**
Sun	**42.1568**	**14.1366**	**33.5333**
Dr.Reddy	**41.8555**	**18.2257**	**43.5445**
Cadila	**24.7134**	**10.7267**	**43.4042**
Cipla	**10.2449**	**6.1136**	**59.6745**
Aventis	**75.3827**	**14.4872**	**19.2182**
Alpa	**0.0325**	**0.0308**	**94.8437**
Aurobindo	**27.9236**	**13.3548**	**47.8262**
Ipca	**36.6954**	**16.2864**	**44.3827**
Glaxo Smith Kline	**64.5917**	**2.9199**	**4.5205**

Source: Compiled and Calculated from the data published in CMIE

Table 5 reveals the earnings per share ratio of selected Pharmaceutical Companies in India from 2009-2010 to 2013-2014. The earnings per share ratio show a fluctuating trend during the study period. This fluctuation indicates whether or not the earning power of the company has decreased. The Aventis Pharma Ltd has the highest average earnings per share is 75.3827 per cent and Alpa has the lowest average earnings per share is 0.0325 per cent.

The Ranbaxy Laboratories Ltd has the highest standard deviation of earnings per share ratio of 21.2123 per cent. The Alpa has the lowest standard deviation of earnings per share ratio of 0.0308 per centand it is found to be stable in earnings per share ratio.

The Ranbaxy Laboratories Ltd has the highest co-efficient of earnings per share ratio of 258.7089 per cent. The Glaxo Smith Kline has the lowest co-efficient variance of earnings per share ratio of 4.5205 per centand it is found that there is a consistency in earnings per share ratio than the other Pharmaceutical Companies.

MULTIPLE REGRESION ANALYSIS

Table.6 shows the Multiple Regression Analysis of Pharmaceutical Companies in India during the period of 2009-2010 to2013-2014.

Table.6
Multiple Regression Analysis of Pharmaceutical Companies in India

Company Name	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Ranbaxy	1	.998(a)	.996	.984	2.12142
Sun	1	.997(a)	.995	.979	.77110
Dr.Reddy	1	.997(a)	.995	.979	.77110
Cadila	1	.994(a)	.996	.997	.44695
Cipla	1	.906(a)	.820	.281	1.87759
Aventis	1	.968(a)	.937	.748	1.05734
Alpa	1	.988(a)	.977	.908	.86677
Aurobindo	1	.996(a)	.992	.970	1.12695
Ipca	1	.992(a)	.994	.999	.08165
Glaxo Smith Kline	1	.995(a)	.991	.964	.81311

a Predictors: (Constant), ROEC, GP, OP

Table.6 represents the multiple regression analysis of Pharmaceutical Companies in Indiastatistical significance of the model. The R^2 value are states that all the four independent variables that is gross profit ratio, operating profit ratioand return on equity capital ratio have influence on the dependent variable of net profit ratio.

The Ranbaxy Laboratories Ltdstatistical significance of the model. The R^2 value at .996 states that the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital have 99.6 per cent influence on the dependent variable of net profit ratio which is significant at 5 per cent level.

The Sun Laboratories Ltdstatistical significance of the model. The R^2 value at .995 states that the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital have 99.5 per cent influence on the dependent variable of net profit ratio which is significant at 5 per cent level.

The Dr.Reddy‟s Laboratories Ltdstatistical significance of the model.The R^2 value at .996 states that the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital have 99.6 per cent influence on the dependent variable of net profit ratio which is significant at 5 per cent level.

The Cadila statistical significance of the model.The R^2 value at .996 states that the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital have 99.6 per cent influence on the dependent variable of net profit ratio which is significant at 5 per cent level.

The Ciplastatistical significance of the model.The R^2 value at .820 states that the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital have 82.0 per cent influence on the dependent variable of net profit ratio which is significant at 5 per cent level.

The AventisPharma Ltdstatistical significance of the model.The R^2 value at .937 states that the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital have 93.7 per cent influence on the dependent variable of net profit ratio which is significant at 5 per cent level.

The Alpa statistical significance of the model.The R^2 value at .977 states that the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital have 97.7 per cent influence on the dependent variable of net profit ratio which is significant at 5 per cent level.

The AurobindoPharma Ltd statistical significance of the model.The R^2 value at .992 states that the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital have 99.2 per cent influence on the dependent variable of net profit ratio which is significant at 5 per cent level.

The Ipca Laboratories Ltdstatistical significance of the model.The R^2 value at .994 states that the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital have 99.4 per cent influence on the dependent variable of net profit ratio which is significant at 5 per cent level.

The Glaxo Smith Klinestatistical significance of the model.The R^2 value at .991 states that the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital have 99.1 per cent influence on the dependent variable of Net profit ratio which is significant at 5 per cent level.

ONE-WAY ANOVA

Table 7 exhibits the One Way ANOVA of the Ranbaxy Laboratories Ltd during the study period from 2009-2010 to 2013-2014.

Table 7
One Way ANOVA of the Ranbaxy Laboratories Ltd

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	99673.228	4	24918.307	.795	.542
Within Groups	626884.299	20	31344.215		
Total	726557.527	24			

Table 7 shows the one way ANOVA of the Ranbaxy Laboratories Ltdcalculated F value of the variables such as .795 which are less than the table value of 2.866 at 5 per cent significant level. So, the null hypothesis is accepted.

Table 8 exhibits the one way ANOVA of the Sun PharmaLtd during the study period from 2009-2010 to 2013-2014.

Table 8
One Way ANOVA of the Sun Pharma Ltd

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2068528.073	4	517132.018	14.247	.000
Within Groups	725969.709	20	36298.485		
Total	2794497.782	24			

Table 8 shows the one way ANOVA of the Sun Pharma Ltd calculated F value of the variables such as 14.247 which are more than the table value of2.866 at 5 per cent significant level. So, there is a significant relationship between profitability ratios.

Table 9 exhibits the one way ANOVA of the Dr.Reddy‟s Laboratories Ltd during the study period from 2009-2010 to 2013-2014.

Table 9
One Way ANOVA of the Dr.Reddy's Laboratories Ltd

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2523637.848	4	630909.462	23.664	.000
Within Groups	533232.427	20	26661.621		
Total	3056870.275	24			

Table 9 shows the one way ANOVA of the Dr.Reddy"s Laboratories Ltd. calculated F value of the variables such as 23.664 which are more than the table value of 2.866 at 5 per cent significant level. So, there is a significant relationship between profitability ratios.

Table 10 exhibits the one way ANOVA of the Cadila Health Care Ltd during the study period from 2009-2010 to 2013-2014.

Table 10
One Way ANOVA of the Cadila Health Care Ltd

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	935016.641	4	233754.160	19.843	.000
Within Groups	235602.335	20	11780.117		
Total	1170618.976	24			

Table 10 shows the one way ANOVA of the Cadila Health Care Ltd calculated F value of the variables such as 19.843 which are more than the table value of 2.866 at 5 per cent significant level. So, there is a significant relationship between profitability ratios.

Table 11 exhibits the one way ANOVA of the Cipla during the study period from 2009-2010 to 2013-2014.

Table 11
One Way ANOVA of the Cipla

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1354351.216	4	338587.804	28.611	.000
Within Groups	236681.308	20	11834.065		
Total	1591032.524	24			

Table 11 shows the one way ANOVA of the Cipla calculated F value of the variables such as 28.611 which are more than the table value of 2.866 at 5 per cent significant level. So, there is a significant relationship between profitability ratios.

Table 12 exhibits the one way ANOVA of the AventisPharma Ltd during the study period from 2009-2010 to 2013-2014.

Table 12
One Way ANOVA of the Aventis Pharma Ltd

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1995028.996	4	498757.249	117.311	.000
Within Groups	85031.283	20	4251.564		
Total	2080060.279	24			

Table 12 shows the one way ANOVA of the Aventis Pharma Ltd calculated F value of the variables such as 117.311 which are more than the table value of 2.866 at 5 per cent significant level. So, there is a significant relationship between profitability ratios.
Table 18 exhibits the multiple regression analysis of the Alpa during the study period from 2009-2010 to 2013-2014.

Table 13 exhibits the one way ANOVA of the Alpa during the study period from 2009-2010 to 2013-2014.

Table 13
One Way ANOVA of the Alpa

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	35289.709	4	8822.427	43.495	.000
Within Groups	4056.727	20	202.836		
Total	39346.436	24			

Table 13 shows the one way ANOVA of the Alpa Calculated F value of the variables such as 43.495 which are more than the table value of 2.866 at 5 per cent significant level. So, there is a significant relationship between profitability ratios.

Table 14 exhibits the one way ANOVA of the AurobindoPharma Ltd during the study period from 2009-2010 to 2013-2014.

Table 14
One Way ANOVA of the AurobindoPharma Ltd

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2748222.827	4	687055.707	8.741	.000
Within Groups	1572034.041	20	78601.702		
Total	4320256.868	24			

Table 14 shows the one way ANOVA of the AurobindoPharma Ltd calculated F value of the variables such as 8.741 which are more than the table value of 2.866 at 5 per cent significant level. So, there is a significant relationship between profitability ratios.

Table 15 exhibits the one way ANOVA of the Ipca Laboratories Ltd during the study period from 2009-2010 to 2013-2014.

Table 15
One Way ANOVA of the IpcaLaboratories Ltd

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	882399.175	4	220599.794	22.571	.000
Within Groups	195475.645	20	9773.782		
Total	1077874.820	24			

Table 15 shows the one way ANOVA of Ipca Laboratories Ltd calculated F value of the variables such as 22.571 which are more than the table value of 2.866 at 5 per cent significant level. So, there is a significant relationship between profitability ratios.

Table 16 exhibits the one way ANOVA ofthe Glaxo Smith Kline during the study period from 2009-2010 to 2013-2014.

Table 16
One Way ANOVA of the Glaxo Smith Kline

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1402928.826	4	350732.207	27.66	.000
Within Groups	3691.234	20	184.562		
Total	1406620.060	24			

Table 16 shows the one way ANOVA of the Glaxo Smith Kline calculated F value of the variables such as 27.66 which are more than the table value of 2.866 at 5 per cent significant level. So, there is a significant relationship between profitability ratios.

FINDINGS

PROFITABILITY RATIOS

Gross Profit

The Dr.Reddy Laboratories Ltd has the highest average gross profit ratio of 108.6026 per cent and the Ranbaxy Laboratories Ltd has the lowest average gross profit ratio 75.1998 per cent. The AurobindoPharma Ltd has the highest standard deviation of gross profit ratio of 47.7337 per cent. The Dr.Reddy Laboratories Ltd with lowest standard deviation of gross profit ratio of 1.6028 per centand it is found to be stable in gross profit ratio.

The AurobindoPharma Ltd has the highest co-efficient variance of gross profit ratio of 55.32013 per cent. The Dr.Reddy Laboratories Ltd has the lowest co-efficient variance of gross profit ratio of 1.4759 per centand it is found that there is a consistency in gross profit ratio than the other Pharmaceutical Companies.

Net Profit

The Sun Pharma Ltd has the highest average net profit ratio of 42.1325 per cent and theAlpa has the lowest average net profit ratio of 3.6666 per cent.

The Ranbxy Laboratories Ltd has the highest standard deviation of net profit ratio of 16.8014 per cent.The Aventis Pharmahas the lowest standard deviation of net profit ratio of 2.1052 per centand it is found to be stable in net profit ratio.

The Ranbaxy Laboratories Ltd has the highest co-efficient variance of net profit ratio of 251.7230 per cent.The Aventis Pharma has the lowest co-efficient variance of net profit ratio of 12.1193 per centand it is found that there is a consistency in net profit ratio than the other Pharmaceutical Companies.

Operating Profit

The Glaxo Smith Kline has the highest average operating profit ratio of 36.2936 per cent and Sun Pharma has the lowest average operating profit ratio of 5.7238 per cent.

The Ranbaxy Laboratories Ltd has the highest standard deviation of operating profit ratio of 7.7342 per cent. The Cipla has the lowest standard deviation of operating profit ratio of 1.6504 per centand it is found to be stable in operating profit ratio.

The Sun Pharma has the highest co-efficient variance of operating profit ratio of 87.0938 per cent. The Cipla has the lowest co-efficient variance of operating profit ratio of 7.3552 per cent and it is found that there is more consistency in operating profit ratio than the other Pharmaceutical Companies.

Return on Equity Capital

The Dr.Reddy Laboratories Ltd has the highest average return on equity capital ratio of 837.1944 per cent and Alpa has the lowest average return on equity capital ratio of 32.807 per cent.

The Aurobindo has the highest standard deviation of return on equity capital ratio of 624.8928 per cent. The Glaxo Smith Kline has the lowest standard deviation of return on equity capital ratio of 29.2018 per centand it is found to be stable in equity capital ratio.

The Ranbaxy Laboratories Ltd has the highest co-efficient variance of return on equity capital ratio of 230.63 per cent. The Glaxo Smith Kline has the negative co-efficient variance of return on equity capital ratio of 4.5205 per cent and it is found that there is a consistency in equity capital ratio than the other Pharmaceutical Companies.

Earnings Per Share

The Aventis Pharma has the highest average earnings per share is 75.3827 per cent and Alpa has the lowest average earnings per share is 0.0325 per cent.

The Ranbaxy Laboratories Ltd has the highest standard deviation of earnings per share ratio of 21.2123 per cent. The Alpa has the lowest standard deviation of earnings per share ratio of 0.0308 per centand it is found to be stable in earnings per share ratio.

The Ranbaxy Laboratories Ltd has the highest co-efficient of earnings per share ratio of 258.7089 per cent. The Glaxo Smith Kline has the lowest co-efficient variance of earnings per share ratio of 4.5205 per centand it is found that there is a consistency in earnings per share ratio than the other Pharmaceutical Companies.

MULTIPLE REGRESSIONS FOR PROFITABILITY ANALYSIS

In Ranbaxy Laboratories Ltd the multiple regression between net profit ratio and the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital is found to be .998(R) with R Square .996.It means that all the independent variables have contributed 99.6 per cent on dependent variable of net profit ratio which is significant at 5 percent level.

In Sun Pharma Ltd, the multiple regression between net profit ratio and the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital is found to be .997(R) with R Square .995.It means that all the independent variables have contributed 99.5 per cent on dependent variable of net profit ratio which is significant at 5 percent level.

InDr.Reddy‟s Laboratories Ltd, the multiple regression between net profit ratio and the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital is found is to be .998(R) with R Square .996.It means that all the independent variables have contributed 99.6per cent on dependent variable of net profit ratio which is significant at 5 percent level.

InCadila Health Care Ltd, the multiple regression between net profit ratio and the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital found is to be .994(R) with R Square .996.It means that all the independent variables have contributed 99.6 per cent on dependent variable of net profit ratio which is significant at 5 percent level.

InCipla, the multiple regression between net profit ratio and the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital is found to

be .906(R) with R Square .820.It means that all the independent variables have contributed 82.0 per cent on dependent variable of net profit ratio which is significant at 5 percent level.

In Aventis Pharma,the multiple regression between net profit ratio and the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital is found to be .968(R) with R Square .937.It means that all the independent variables have contributed 93.7 per cent on dependent variable of net profit ratio which is significant at 5 percent level.

InAlpa,the multiple regression between net profit ratio and the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital is found to be .988(R) with R Square .977.It means that all the independent variables have contributed 97.7 per cent on dependent variable of net profit ratio which is significant at 5 percent level.

InAurobindo ,the multiple regression between net profit ratio and the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital is found to be .996(R) with R Square .992.It means that all the independent variables have contributed 99.2 per cent on dependent variable of net profit ratio which is significant at 5 percent level.

InIpca ,the multiple regression between net profit ratio and the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital is found to be .992(R) with R Square .994.It means that all the independent variables have contributed 99.4 per cent on dependent variable of net profit ratio which is significant at 5 percent level.

InGlaxo Smith Kline, the multiple regression between net profit ratio and the three independent variables that is gross profit ratio, operating profit ratio, and return on equity capital is found to be .995(R) with R Square .991.It means that all the independent variables have contributed 99.1 per cent on dependent variable of net profit ratio which is significant at 5 percent level.

ONE WAY ANOVA FOR PROFITABILITY

The hypothesis is accepted in Ranbaxy Laboratories Ltd and there is no significant relationship between profitability ratios.

The hypothesis is not accepted in Sun Pharma Ltd, Dr.Reddy‟s Laboratories Ltd, Cadila Health Care Ltd, Cipla, Aventis Pharma,Alpa, Aurobindo,Ipca, and Glaxo Smith Kline.Hence, there is a significant relationship between profitability ratios.

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.

CONCLUSION

The financial health plays a significant role in the successful management of a company. The analysis practically reveals thatgross 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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