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**IMPACT OF PROFITABILITY ON THE FINANCIAL PERFORMANCE OF INDUSTRIES  
(A STUDY ON SELECT PHARMACEUTICAL INDUSTRIES IN INDIA)**

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**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 main objective of my study clearly indicates the pharmaceutical companies have been done exceptionally well not only in healthcare sector but also strengthening the economy of the country through their performances. Hence an attempt has been made to analyze the impact of financial performance on the profitability cause; the increase in profitability will not only yield greater efficiency but also improve financial performance in future. However, keeping in mind, the constraints and limitations of my research project, I opted select selected pharmaceutical industries in India, which are not only confined to state and nation but also have global share in the field of export to other foreign countries. So I preferred to work on this gap as a dimension of study of my research project.

Key words: Indian pharmaceutical industry, financial performance, profitability, net profit ratio, operating profit ratio, liquidity ratio, solvency ratio.

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**INTRODUCTION**

The Indian pharmaceuticals market is the third largest in terms of volume and thirteenth largest in terms of value, as per a report by Equity Master. India is the largest provider of generic drugs globally with the Indian generics accounting for 20 per cent of global exports in terms of volume. Of late, consolidation has become an important characteristic of the Indian pharmaceutical market as the industry is highly fragmented.

India enjoys an important position in the global pharmaceuticals sector. The country also has a large pool of scientists and engineers who have the potential to steer the industry ahead to an even higher level. Presently over 80 per cent of the antiretroviral drugs used globally to combat AIDS (Acquired Immuno Deficiency Syndrome) are supplied by Indian pharmaceutical firms.

The UN-backed Medicines Patent Pool has signed six sub-licenses with Aurobindo, Cipla, Desano, Emcure, Hetero Labs and Laurus Labs, allowing them to make generic anti-AIDS medicine TenofovirAlafenamide (TAF) for 112 developing countries.

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## REVIEW OF LITERATURE

Jawade Avinash,(2014). "capital structure and its impact on profitability: an empirical study for pharmaceutical companies with special reference to their market capitalization", *Abhinav National Monthly Refereed Journal of Research in Commerce & Management.*, Volume 3, 6 June, 2014. The objective of this study is to study the impact of leverage on profitability of company through Du pont analysis and to analyse the aspects of trade off theory and pecking order theory for companies of different market capitalization.

This paper investigates the influence of capital structure on performance of pharmaceutical companies across various market capitalizations. Firms have to tradeoff between the tax saving benefit of debt and bankruptcy costs to optimize a capital structure which balances growth prospect, maintain solvency and give decent return to stakeholders without dilution of management control. The study asserts that the companies studied have been cautious in their approach for bringing in optimal capital structure. Irrespective of capitalization, companies have not particularly shown an inclination for pecking order theory or chosen the option of leverage even if in best position to do so. There however were some exceptions which indeed followed the theory of resorting to pecking order but it could be measured as an aberration rather than a rule. This study showed the impact of leverage on profitability of company through Du pont analysis. This study also analysed the aspects of trade off theory and pecking order theory for companies of different market

Yadav Pavitra,(2014). "Liquidity Analysis of Selected Pharmaceutical Companies: A Comparative Study", *International journal of advance research in computer science and management studies*, Volume 2, August 2014. The objective of the study is to analyse the liquidity position of the selected Pharmaceutical companies. Ratios used are 1. Current ratio, Quick ratio, Absolute Liquidity ratio. Sample units are: Procter and Gamble Ltd, Reddy Pharmaceutical Ltd, Cipla Ltd.

This Paper conducted an investigation on liquidity analysis of selected pharma companies like Procter and Gamble Ltd., Reddy Pharmaceutical Ltd., and Cipla Ltd and compared them using current ratio, absolute liquidity ratio, quick ratio to evaluate which company have more liquidity and whose financial performance is best among them. This study revealed that liquidity position of Cipla Ltd. is best when current ratio and quick ratios are concerned but when absolute liquid ratio is concerned, mixed results are found.

Praveen.M and HajaMohideen.O.M,(2014). "a study on financial performance of pharmaceutical company using five power analyses", *Journal of Management and Science*, Volume 4, September 2014. The primary objective of this study is to determine the financial performance of Cipla pharmaceutical company using five power analyses. The secondary objectives are to examine the relationship between Inventory turnover, Debtors turnover, Creditors turnover and Total asset turnover with Gross profit margin. Sample unit used is: Cipla Pharmaceutical Ltd.

This study provided an insight into concept of financial performances using five power analyses consists of Inventory turnover ratio, Creditors turnover ratio, Total asset turnover ratio and Gross profit margin. Descriptive analysis is used to help researcher to describe the relevant aspect of financial performance and Quantitative analysis to measure the degree of association between different variables under consideration and researcher used regression analysis to examine the relationship of independent variable with dependent variable. The sample of the study is Cipla pharmaceutical limited. By using the analysis it was found that the Debtors Turnover Ratio and Gross Profit Margin have the highest standard deviation. Debtors Turnover Ratio enables funds for the transaction because the Cipla pharmaceutical company collects their debts quickly from their customer. Cipla pharmaceutical company has quite satisfactory because collection period is very short. Assets turnover ratio has high negative relationship with profitability.

Mrs Vadivu Senthil.S and Mrs Mehalai Mani.M (2014). "A Study on Financial Health of Select Indian Pharmaceutical Companies". *Peer Reviewed International Journal* Vol. No. II Issue No. 9 September 2014, Volume 2, 9 September 2014. The objective of this study is to study liquidity position of 'select' Indian Pharmaceutical companies and to analyse the long-term solvency position of these pharmaceutical companies. Sample Units used are Aurobindopharma, Cadila Health Care, Cipla, Dr.Reddy'sLabs & Ranbaxy Labs.

This paper focuses on "A Study on Financial Health of Select Indian Pharmaceutical Companies". This paper conducted a study on liquidity position of 'select' Indian Pharmaceutical companies to analyse the long-term solvency position of these pharmaceutical companies. The sample units are: Aurobindo pharmacy, Cadila

Health Care, Cipla, Dr.Reddy'sLabs & Ranbaxy Labs. The study analyse the liquidity and long term solvency of 'select' Indian pharmacy companies for a period of 8 years from 2004-05 to 2011-12. Financial tools namely ratio analysis, Z-score and Statistical tools namely Mean, Standard deviation, coefficient of variation and CAGR have been used for analysis. This report provides an insight for policy-makers of pharmacy companies a show to make their company move in future. This report provides an insight into the financial structure currently prevalent in the industry. This report builds a profiling for major contributions in the industry and analyses their relative short-term and long term solvency position.

Vijayalakshmi.V and Srividya.M,(2014). "A STUDY ON FINANCIAL PERFORMANCE OF PHARMACEUTICAL INDUSTRY IN INDIA", Journal of Management and Science, Volume4, September 2014. The objective of this study is to analyze the profitability position of selected Pharmaceutical Companies in India and to analyze the factors influencing the profitability of selected Pharmaceutical Companies in India. And to offer findings and suggestions and conclusion of this study. Sample units used are Ranbaxy Laboratories Ltd, Sun Pharma Industries,Dr.Reddy"s Laboratories Ltd, Cadila Health Care, Cipla, Alpa, Aurobindo, Aventis Pharma, Ipca Laboratories, Glaxo Smith Kline. This study analysed the profitability position of the industry with the help of mean, standard deviation, co-efficient of variation, multiple regression, and analysis of variance for the time period of 2009-10 to 2013-14. The analysis practically revealed 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.

BOLDEANU Dana-Maria (2014). As main goal the paper identifies several financial performance influence factors at the level of a number of companies from pharmaceutical sector, in order to generate a particular econometric model. Sample Units are European Pharmaceutical Market, including Romanian Pharmaceutical Market. The paper provides an overview of current situation of the global pharmaceutical industry, with focus placed on the EU pharmaceutical market, including also the Romanian pharmaceutical market evolution synthesized into a SWOT analysis. The findings of the paper focus on the prediction of Return on Equity (ROE) ratio as the main performance measurement considered significant for the industry our and a large number of factors which contribute to its changes. Thereof, using regression analysis, the paper investigates the relationship between various influence indicators or factors resulting from the financial situation of a company and the performance thereof and generates conclusions for the decisions makers at the level of the companies.

Shi Yuqian and Gu Wenlin, (2014). The most important goal is to maximize corporate profits and remain stable development.\_Sample units are 22 financial indicators of 129 listed companies in China's Pharmaceutical Industry. This paper selected 129 listed companies in the pharmaceutical industry as the research object. Establish the multiple linear regression models based on the factors that affect profitability. These factors include research and development ability (R&D ability), development capacity, solvency, operational capacity, marketing capabilities, cost Management, capital structure, cash flow management and level of risk. The sample selected is twenty-two financial indicators of listed companies in China's pharmaceutical industry from 2011 to 2013. Among the indicators, Earning per Share (EPS), Rate of Return on Total Assets (ROA), Rate of Return on Common Stockholders' Equity (ROE) and Operating Profit Ratio are as dependent variables to measure the profitability of the pharmaceutical industry. This paper uses econometric software Eviews to analyse samples by panel data and selects four fixed effects models by F test and Hausman test. According to the models, analyse the current development of China's pharmaceutical industry and put forward some advices.

Agha Hina, (2014) The main purpose of this study is to empirically test the impact of working capital management on profitability. Sample units are secondary data from Glaxo Smith Kline pharmaceutical company registered in Karachi stock exchange for the period of 1996-2011. The main purpose of this study is to empirically test the impact of working capital management on profitability .To investigate this relationship between these two, the author collected secondary data from Glaxo Smith Kline pharmaceutical company registered in Karachi stock exchange for the period of 1996-2011. For this purpose, in this study they used variable of return on assets ratio to measure the profitability of company and variables of account receivable

turnover, creditor's turnover, inventory turnover and current ratio as working capital management criteria. The results of the research show that there is a significant impact of the working capital management on profitability of company. Therefore, managers may enhance the profitability of their firms by minimizing the inventory turnover, account receivables ratio and by decreasing creditors turnover ratios but there is no significant effect of increasing or decreasing the current ratio on profitability. So, the results indicate that through proper working capital management the company can increase its profitability. This study will benefit the Pharmaceutical companies in the management of their working capital in such an efficient manner so that they can multiply their profitability.

7.Karamehic Jasenko and Ridic Ognjen, "Financial Aspects and the Future of the Pharmaceutical Industry in the United States of America". The goal of this review paper is to show the present conditions and future trends of the pharmaceutical industry in the US. Sample Units are Pharmaceutical Industry of United States of America. This study analysed the financial aspects and the future of the aspects and the future of the pharmaceutical industry in United States Of America. This paper stated the present conditions and future trends of the pharmaceutical industry in United States of America.

This study concluded that for U.S. and other big pharmaceutical companies in the world, the challenge will be to make strategic actions, first in order to survive today, and second to position themselves for the next phases of deterministic growth. When this transition occurs, the U.S. based pharmaceutical companies will be very differently shaped enterprises in comparison from what they look like today.

8.Enekwe, Innocent Chinedu; Agu, Ikechukwu Charles and Nnagbogu Eziedo Kenneth, "The Effect of Financial Leverage on Financial Performance: Evidence of Quoted Pharmaceutical Companies in Nigeria.", IOSR Journal of Economics and Finance, Volume5, September- October 2014.

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 ex-post facto research design was used for this study. The secondary data were obtained from the financial statement (Comprehensive income statement and Statement of financial position) of the selected pharmaceutical companies' quoted on the Nigerian Stock Exchange (NSE). The results of the analysis showed that debt ratio (DR) and debt-equity ratio (DER) have negative relationship with Return on Assets (ROA) while interest coverage ratio (ICR) has a positive relationship with Return on Assets (ROA) in Nigeria pharmaceutical industry. The analysis also revealed that all the independent variables have no significant effect on financial performance of the sampled companies. The results further suggested that only 16.4% of the variations on the dependent variable are caused by the independent variables in our model suggesting that 83.6% of the variations in financial performance are caused by other factors outside this model. Based on the above findings, the researchers now recommend that companies' management should ensure that financial decisions made by them are in consonance with the shareholders' wealth maximization objectives which encompasses the profit maximization objective of the firm.

#### **METHODOLOGY STUDY**

**Regression analysis:** For my study I have chosen Regression analysis because In statistical modeling, **regression analysis** is a statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables (or 'predictors'). More specifically, regression analysis helps one understand how the typical value of the dependent variable (or 'criterion variable') changes when any one of the independent variables is varied, while the other independent variables are held fixed. Regression may refer specifically to the estimation of continuous response variables, as opposed to the discrete response variables used in classification.

**Sample:**In the present research work the five top pharmaceutical companies in India which are selected namely: Cipla Ltd, Dr.Reddy's laboratories, Lupin Ltd, Pfizer's, Sun Pharmaceuticals.

Variables:

- Net profit ratio.
- Solvency.
- Liquidity.
- Operating profit.
- Earnings per share.
- Operating profit.

#### Hypothesis:

**H1:** There is no significant relationship between solvency and net profit.

**H2:** There is no significant relationship between operating profit and liquidity.

**H3:** There is no significant relationship between operating profit and Earnings per share.

#### Research Gap

The objective of my study clearly indicates the pharmaceutical companies have been doing exceptionally well not only in health care sector but also strengthening the economy of the country through their performances. However, keeping in mind, the constraints and the limitations of my research project I opted to select pharmaceutical industries of the country .These companies also have a global share in the field of export of pharmaceuticals to other foreign countries. Hence I will obtain the mean value, Standard deviation, by applying multiple regression model on data.

#### Objectives

- 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 study liquidity position of selected pharmaceutical companies in India.
- 4) To analyze the long term solvency position of these pharmaceutical companies.
- 5) To examine the relation between solvency of the company with net profit margin.
- 6) To examine the relation between liquidity of the company with operating profit margin.
- 7) To examine the relation between operating profit margin with earnings per share.
- 8) To offer findings and suggestions and conclusions of the study.

#### Analysis and Interpretation

**1. Hypothesis-H1:** There is no significant relationship between solvency and net profit.

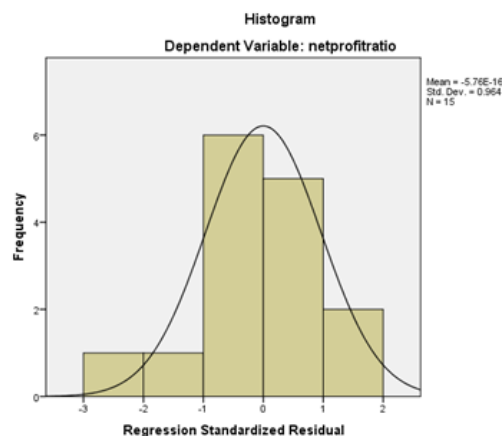
**Pfizer: linear regression:**

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	245.297	1	245.297	8.627	.012 <sup>b</sup>
	Residual	369.644	13	28.434		
	Total	614.941	14			

a. Dependent Variable: net profit ratio.

b. Predictors: (Constant), interest cover.



**Analysis and interpretation:** There is a significant relationship between net profit ratio and solvency in Pfizer pharmaceutical company. The analysis indicates that net profit ratio and interest cover ratio is at correlation of 1% exists between both the values and each holds at 5% level of significance. The result indicates a strong and positive association between the two variables. The value drives after testing the hypothesis indicates that the balance between Net profit ratio and Solvency ratio is balanced by the company and the null hypothesis is rejected. So, the measure taken by the company in regards is appreciated.

#### HYPOTHESIS H2:

There is no significant relationship between operating profit and liquidity.

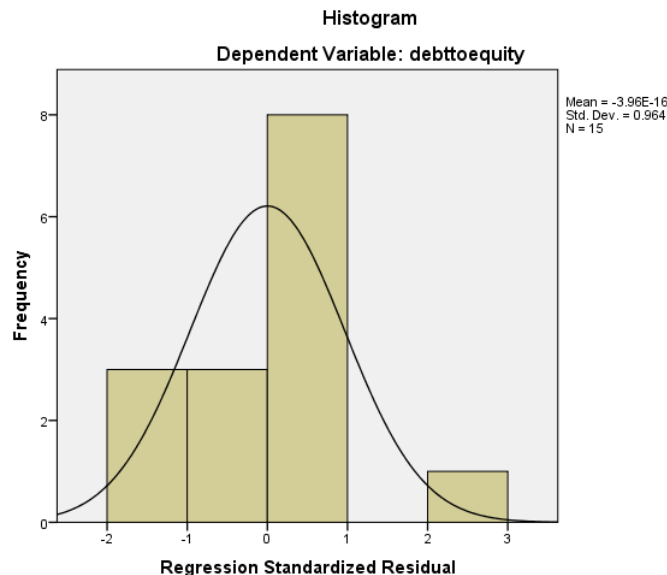
#### LUPIN LTD:

##### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.291	1	3.291	15.361	.002 <sup>b</sup>
	Residual	2.785	13	.214		
	Total	6.075	14			

a. Dependent Variable: debtttoequity.

b. Predictors: (Constant), operatingprofitratio.



**Analysis and Interpretation:** There is strong and significant relationship between operating profit and liquidity in lupin ltd. The analysis indicates that net profit ratio and interest cover ratio is at correlation of 2% exists between both the values and each holds at 5% level of significance. The result indicates a strong and positive association between the two variables. The value drives after testing the hypothesis indicates that the balance between Operating profit and liquidity ratio is balanced by the company and the alternate hypothesis is rejected. So, the measure taken by the company in regards is not appreciated.

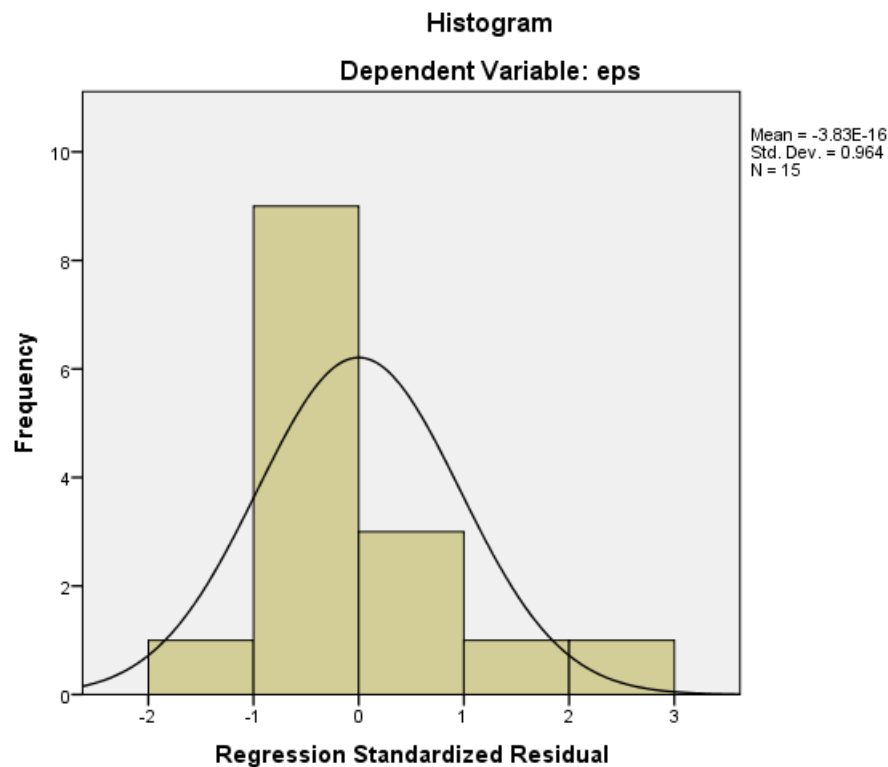
**HYPOTHESIS-H3:** There is no significant relationship between operating profit and Earnings per share.

#### PFIZER:

##### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.221	1	2.221	5.588	.034 <sup>b</sup>
	Residual	5.167	13	.397		
	Total	7.388	14			

- a. Dependent Variable: eps
- b. Predictors: (Constant), operatingprofitratio



#### Analysis and Interpretation:

The analysis indicates that the operating profit and earnings per share is at correlation of 3% exists between both the values and each holds at 5% level of significance. The result indicates a strong and positive association between the two variables in Pfizer. The value drives after testing the hypothesis indicates that the balance between Operating profit and earnings per share is balanced by the company and the alternate hypothesis is accepted. So, the measures taken by the company are highly appreciated.

#### Findings

1. The health sector is considered to be very important to any industrial support to the health care of the people of the country.
2. The pharma industries play a dominating role in the Indian corporate structure as well as global structure in playing very important role.
3. The present topic was finalized after making a thorough review of literature and after finding a gap.
4. The very objective of the study was to know the financial performance of the selected pharma industries and capacity to generate the revenue.
5. Five companies were randomly selected with financial statements of 15 years from 2002-2016.
6. The objective of the study was to establish the relationship between the select dependent and independent variables.
7. Some of the dependent variables are net profit ratio, liquidity ratio, earning per share ratio, as independent variable and its impact on net profit and operating profit ratios.
8. As many as three hypotheses were constructed to standardize the data through ratio analysis and to load the data in SPSS package to run simple linear regression model and to validate the result at a given level of significance.
9. All the 3 hypotheses supported the study and there was a very good response between the combination of dependent and independent variables. So it is clear that there is an impact of profitability on the financial performance of the pharma companies. However, consistency in efforts must be put so that there is a good balance between the financial performance and profitability of the companies.



### Future Study

Using different sample size and different analysis model and different variables, the study can be refined and with the new research gap, efficient results can be obtained.

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