INTRODUCTION

Each organisation engages the implementation of capital for doing their businesses. The employed capital shall consist of equity such as the ownership contribution and with debt. The debt is any outside funding that becomes repayable with an associated cost for it. This cost shall be directly shown in the form of interest payment or indirectly in the form of agency cost. These debts might be short term in nature which is for less than one year or long term which is for more than a year. Organisations shall implement various nature of debt like taking the credit facility from the financial institution, by issuing warrants or issuing convertible bonds, also taking lease financing or utilizing the trade credit to fund their businesses. These debts can become more complex like the use of derivative instruments like the forward and futures contracts or by engaging swaps. Debt to equity mixture consists of capital structure of an organisation (Brealey et al, 2008). The main focus of the financial management is to reduce the cost and enhance the wealth of share holders. This shall be gained by the proper mixture of leverage i.e. through debt and equity. An ideal capital structure will be arrived when the full cost of capital becomes less. The management shall make correct decisions to reach the organisations investment needs. The management must have to come with the best combination of debt and equity to get the best combination of capital mixture that will help to reach the optimum leverage of the organisation.

This study is an attempt to evaluate the leverage and performance of the select pharma companies in India during the period from 2009-2010 to 2018-2019. Model developed Impact of Leverages on Profitability of select Pharma Companies. In brief, this study discussed the introduction to Pharma industry, statement of the problem, objectives, methodology, limitations, analysis and results and finally, the results of the study summarized as findings, suggestions and conclusion.

PHARMA INDUSTRY

The Indian pharmaceutical market supplies more than 50 percentage of the world demand for many vaccines, 40 percentage of the demand for generic drug for US and 25 percentages for all the medicines across UK. The Indian market shares the second biggest share of pharma and biotech work force in the globe. The domestic pharmaceutical market in India reached a turnover of Rs 1.4 lakh crores (US$ 20.03 billion) during the year 2019, increasing by 9.8 percentage year on year from Rs 1.29 lakh crores (US$ 18.12 billion) in the year 2018. During May 2020, the sales of pharmaceutical drugs enhanced by 9 percentage year on year to Rs 10,342 crores (US$ 1.47 billion).
The Government of India based Department of Pharmaceuticals concept ‘Pharma Vision 2020’ is focused to create India as a main hub of end-to-end drug discovery works. This sector has received a total Foreign Direct Investment (FDI) of US$ 16.50 billion between the years April 2000 till March 2020. The allocation in the Union Budget 2020-21, for the Ministry of Health and Family Welfare is for Rs 65,012 crores (US$ 9.30 billion), also an allocation of Rs 6,429 crores (US$ 919 million) is towards the health insurance schemes called the Ayushman Bharat coming under the Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) scheme. During the year November 2019, the Indian Cabinet did a go ahead on the extension or renewal of extending Pharmaceuticals Purchase Policy (PPP) with the earlier terms and conditions and adding one more product namely the Alcoholic Hand Disinfectant (AHD) to the already existing schedule of 103 medicines until the last closure or a strategic disinvestment in the Pharma CPSUs. The Government of India is planning to establish around Rs 1 lakh crores (US$ 1.3 billion) fund for giving energy to the companies for manufacturing ingredients for the domestic pharmaceutical market by the year 2023.

Figure 1: Overall Performance of Pharmaceutical Industry in India

REVIEW OF LITERATURE

As per Sunil Vakayi and Priyadharshini. R, (2018), leverages are the combinations of debt and equity, so their equation is important for the companies when calculating the amount of capital needed. The study aims to analyse the connection between the liquidity, capital structure and profit making across the pharmaceutical companies in India. The period of reference in the study for five years that is from 2013 till 2017 and is fully depended on the secondary form of data collected through many sources. It is recommended that the companies must be cautious in confirming the investment methods for calculating the strategy of investment in the process of making profit.
Monalisa Mohanty, (2020), in his paper compared the financial performance of the selected pharmaceutical organizations. Financial statements selected for 5 years period from 2015 to 2019. Findings reveals that the Pharma companies are highly liquid and solvent but showed inconsistency in effectively generating profits.

**STATEMENT OF THE PROBLEM**

To develop the economy manufacturing sector play significant role where there is much attention paid to this sector by the countries globally. Inflation rate in India is quite high during the recent past due to the major impact of interest rates and foreign currencies affecting the cost of finance very high as like the situation faced in other parts of the world. Therefore, external borrowing to improve or expand the business increases the debt situation of companies that can adversely affect the capital structure of the firms also influence the profitability positions. In this regard there are very few studies researched and available in India that developed interest to conduct a study taking the Pharma sectors to evaluate the impact of leverages on profitability. This places a strong emphasis in identifying the present situation to understand how far the leverages affects the profitability and performance of the select firms.

**OBJECTIVES OF THE STUDY**

- To examine the influence of leverages on profitability of select Pharma companies in India.

**RESEARCH METHODOLOGY**

Research in common parlance to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. Methodology, in turn, depends on the nature of the project work. The use of proper methodology is an essential part of any research. Research design is the arrangement of activities for the collection and analysis of the data in a manner that aims to combine relevance to the purpose with economy in procedure. The study carried out here is an Analytical Research. The secondary data collection during the period from 2009-10 to 2018-19 was considered for the study. There are 85 Pharmaceutical companies listed in the NSE out of which five companies selected randomly are Cipla Ltd., Sun Pharmaceutical Industries Ltd., Lupin Ltd., Alkem Laboratories Ltd., Dr.Reddy’s Laboratories.

**PLS MODEL**

This study adopted return on equity (ROE) and Return on Assets (ROA) as dependent variables for measuring the firms financial performance, while a set of independent variables with different expected signs were used to measures the effect on firms’ profitability.

![Figure 1: PLS Model showing Relationship of Variables](image)
Table 1: Variables definition and predicted relationship

<table>
<thead>
<tr>
<th>Variables</th>
<th>Full name</th>
<th>Measure</th>
<th>Predicted Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>Return on Assets</td>
<td>Net Income / Total Assets</td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>Return on Equity</td>
<td>Net Income / Total Shareholders’ Equity</td>
<td></td>
</tr>
<tr>
<td><strong>Independent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STD</td>
<td>Short-Term Debt</td>
<td>Current Liabilities / Total Assets</td>
<td>+/-</td>
</tr>
<tr>
<td>LTD</td>
<td>Long-Term Debt</td>
<td>Long term Liabilities / Total Assets</td>
<td>+/-</td>
</tr>
<tr>
<td>TD</td>
<td>Total Debt</td>
<td>Total Liabilities / Total assets</td>
<td>+/-</td>
</tr>
<tr>
<td>DER</td>
<td>Debt to Equity</td>
<td>Total Liabilities / Total Equity</td>
<td>+/-</td>
</tr>
<tr>
<td>SZ1</td>
<td>Size1</td>
<td>Log of total sales</td>
<td>+</td>
</tr>
<tr>
<td>SZ2</td>
<td>Size2</td>
<td>Log of total assets</td>
<td>+</td>
</tr>
</tbody>
</table>

The direct effect of the independent variables (Debt and Size) on Dependent variable (Profitability) is measured and the results explains the direct effect relationship between select predictors on profitability.

When the impact of leverages is strong the firms performance, Correlation between Leverages and profitability is also expected to be strong. In this regard the literature supporting empirical researches provided as literature and concept in the theory and introduction part of the study.

**ANALYSIS AND RESULTS**

The primary objective of the analysis is to investigate the impact of capital structure on profitability of select manufacturing companies in India. The data were analyzed using Partial Least Square and the hypothesis were tested at 5% level of significance taking 95% as the confidence level. The data collected from 10 manufacturing companies for the periods from 2009-10 to 2018-19. Ten years data comprising ten active companies provided 100 data observations as samples for the study.

**FRAMED HYPOTHESIS OF THE STUDY (DIRECT EFFECTS)**

Relationship (+/-) expected between

Return on Equity (Dependent)
Short Term debt and Return on Equity
Long Term debt and Return on Equity
Total Debt and Return on Equity
Debt Equity and Return on Equity

Whereas, Positive relationship expected between

Total Assets (Size-1) and Return on Equity
Sales (Size-2) and Return on Equity
ROA (Dependent)
Short Term debt and Return on Asset
Long Term debt and Return on Asset
Total Debt and Return on Asset
Debt Equity and Return on Asset
Whereas, Positive relationship expected between

Total Assets (Size-1) and Return on Asset
Sales (Size-2) and Return on Asset

Figure 2: Impact of Leverages on Profitability of select Pharma Companies
(Regression Weights and T-Value)

Figure 3: Path analysis measuring Relationship between Leverages and Profitability of select Pharma Companies
(Regression Weights and P-Value)
Path analysis shows there is no significant direct relationship between Capital Structures and Profitability (RoE) for the Pharma companies

- Short Term Debt and Return on Equity ($\beta=0.106$, $t=0.084$, Sig.0.933) accepting $H_0$.
- Long Term Debt and Return on Equity ($\beta=0.278$, $t=0.601$, Sig.0.548) accepting $H_0$.
- Total Debt and Return on Equity ($\beta=-1.105$, $t=5.281$, Sig.0.000) rejecting $H_0$.
- Debt Equity and Return on Equity ($\beta=0.107$, $t=0.078$, Sig.0.938) accepting $H_0$.
- Total Assets and Return on Equity ($\beta=-1.105$, $t=5.281$, Sig.0.000) rejecting $H_0$.
- Sales and Return on Equity ($\beta=0.701$, $t=3.462$, Sig.0.000) rejecting $H_0$.

Table 2: Path analysis measuring relationship between Capital Structures and Profitability of Pharma Companies

<table>
<thead>
<tr>
<th>Direct effect</th>
<th>Beta</th>
<th>t-Value</th>
<th>P-Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Term Debt $\rightarrow$ Return on Equity</td>
<td>0.106</td>
<td>0.084</td>
<td>0.933</td>
<td>Not Related</td>
</tr>
<tr>
<td>Long Term Debt $\rightarrow$ Return on Equity</td>
<td>0.278</td>
<td>0.601</td>
<td>0.548</td>
<td>Not Related</td>
</tr>
<tr>
<td>Total Debt $\rightarrow$ Return on Equity</td>
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<td>5.281</td>
<td>0.000</td>
<td>Related</td>
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<td>Not Related</td>
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<tr>
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<td>5.281</td>
<td>0.000</td>
<td>Related</td>
</tr>
<tr>
<td>Sales $\rightarrow$ Return on Equity</td>
<td>0.701</td>
<td>3.462</td>
<td>0.001</td>
<td>Related</td>
</tr>
<tr>
<td>Short Term Debt $\rightarrow$ Return on Asset</td>
<td>-0.093</td>
<td>0.089</td>
<td>0.929</td>
<td>Not Related</td>
</tr>
<tr>
<td>Long Term Debt $\rightarrow$ Return on Asset</td>
<td>0.182</td>
<td>0.481</td>
<td>0.631</td>
<td>Not Related</td>
</tr>
<tr>
<td>Total Debt $\rightarrow$ Return on Asset</td>
<td>-0.621</td>
<td>2.117</td>
<td>0.035</td>
<td>Related</td>
</tr>
<tr>
<td>Debt Equity $\rightarrow$ Return on Asset</td>
<td>0.223</td>
<td>0.196</td>
<td>0.845</td>
<td>Not Related</td>
</tr>
<tr>
<td>Total Asset $\rightarrow$ Return on Asset</td>
<td>-1.024</td>
<td>5.304</td>
<td>0.000</td>
<td>Related</td>
</tr>
<tr>
<td>Sales $\rightarrow$ Return on Asset</td>
<td>0.627</td>
<td>3.462</td>
<td>0.004</td>
<td>Related</td>
</tr>
</tbody>
</table>
Path analysis shows there is no significant direct relationship between Capital Structures and Profitability (RoA) for the Pharma companies

- Short Term Debt and Return on Asset ($\beta=-0.093, t=0.089, \text{Sig.}0.929$) accepting $H_0$.
- Long Term Debt and Return on Asset ($\beta=0.182, t=0.481, \text{Sig.}0.631$) accepting $H_0$.
- Total Debt and Return on Asset ($\beta=-0.621, t=2.117, \text{Sig.}0.035$) rejecting $H_0$.
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- Sales and Return on Asset ($\beta=0.627, t=3.462, \text{Sig.}0.000$) rejecting $H_0$.

Profitability is the relationship between profits and capital, i.e., the static resources set aside to earn those profits. If profitability exceeds the cost of the firm’s capital, that is the weighted average cost of firms equity and borrowed money, it can call itself successful. The investment of excess cash, minimisation of inventories, speedy collection of receivables and elimination of unnecessary and costly short term financing that all contribute to the maximisation of the profitability. Hence, it is pertinent to discuss the importance of capital structure management, its various components and their impact on profitability made the researcher to identify the hypothetical relationship between capital structure and its impact on profitability of select pharma manufacturing companies for a 10 Years period from 2009-10 to 2018-19. The results are summarized as findings, suggestions and conclusion. Scope for further research is included in the final part of the study.

**DIRECT EFFECT**

When measuring for the direct effect between the variables of Capital Structure measuring profitability of select Pharma companies shows

Direct significant relationship observed between

- Total Debt and Return on Asset
- Total Asset and Return on Asset
- Total Asset and Return on Equity
- Sales and Return on Equity
- Sales and Return on Asset

**SUGGESTIONS**

- Stiglitz (1969) who showed that if the rate of debt went up, the value of the firm would decrease, because of the existence of the risk of bankruptcy. On the other hand, it was indicated that an increased level of leverage tends to raise the value of firm because of tax savings (Pathirawasam 2013, p.65). Although the relationship between capital structure and financial performance of a firm can be either negative or positive (Pathirawasam, 2013, p. 65), Umer (2014) confirmed that the majority of empirical studies showed that a capital structure had a negative correlation with profitability. In this regard, the result of the PLS Model are compared with the specified literatures and found only significant relationships between certain factors of Pharma Industry, whereas, no relationship exists between the leverages and profitability of the pharma companies selected for the study. It is recommended that the long term liability, debt and equity needed to be efficiently managed that will lead to the profitability of the Pharmaceutical companies.

**CONCLUSION**

The analysis of the data has provided the conclusion that in terms of financial variables considered the ratio analysis indicated that the selected Pharma companies are in favourable position. Though the firms have experienced a positive growth in terms of profitability, there is a significant difference in terms of growth rate.
REFERENCES


