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# CAPITAL STRUCTURE ANALYSIS IN FERTILIZERS INDUSTRY

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**ABSTRACT**

*Capital structure, or what's generally known as capital mix, is extremely important to manage the general cost of capital so as to boost the earnings per share of share holders. After globalisation and liberalisation, various financial sector reforms were started by governments, like reducing rates of interest etc., which directly affected the capital structure planning of firms. Because of this example, the fertilizer industry also reorganized their capital structure. The financing of a capital structure decision could be a significant managerial decision. Initially, the corporate will need to plan its capital structure at the time of its promotion. Subsequently, whenever funds need to be raised for finance and investment, a capital structure decision is involved. The debt-equity ratio is calculated to live the extent to which debt financing has been utilized in a business. The ratio indicates the proportionate claims of householders and outsiders against the firm's assets. The aim is to urge a plan of the cushion available to outsiders on the liquidation of the firm. As a general rule, there should be an approximate mixture of owner's funds and outsider's funds in financing the firm's assets. During this research article, researchers attempt to evaluate the concept of capital structure, capital structure planning and patterns of capital structure in TATA Chemicals and Chambal Fertilizers We found that both companies are using the most possible long-term debt in their capital structure planning. During the study period, both the businesses raised more and more long-term funds to fulfill their development and expansion needs because debt may be a cheaper source of finance, especially from 2015-16 to 2019-20 onwards when rates of interest decreased regularly within the New Delhi market.*

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***Keywords:*** *Fertilizers, Ratio Analysis, Capital Structure, Capital Planning, Debt-Equity Ratio.*

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## Introduction

An optimal capital structure is defined as the mixture of debt, preference shares, and customary equity that minimizes the weighted monetary value of capital, and maximizes the firm value. In other words capital structure is primarily a mix of debt & equity and is mostly represented by the debt equity ratio. The capital structure formulation is one among the foremost critical decisions taken by the Chief money handler (CFO) of the corporate because it includes a future impact on firm's performance. The priority of the CFO is what quantity the firm should borrow i.e. what mixture of capital structure or leverage is best? Because the mixture chosen will affect both the danger and value of the firm, the quandary for the manager is whether or not debt should be included/increased within the existing capital structure? On the opposite hand, outsiders want those shareholders (owners) to take a position and risk a proportionate share of their investments. Therefore, the interpretation of this ratio depends upon the financial policy of the firm and upon the firm's nature of business. In order to run and manage a corporation funds are needed right from the promotional stage up to the top, finances play a crucial role in an exceedingly company's life. If funds are inadequate, the business suffers and if the funds aren't properly managed, the complete organization suffers. It is, therefore, necessary that an accurate estimate of this and future need of capital be made to possess an optimum capital structure,

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which can help an organization to run its work smoothly and with none stress. The capital structure is formed from debt and equity securities and refers to the permanent financing of a firm. It's composed of long-term debt, preference share capital and Shareholder's funds. Keeping this background in sight, an endeavor has been made by the researchers to judge the 'capital structure' of TATA Chemicals and Chambal Fertilizers, who are leading fertilizer manufacturers and distributors within the cooperative and personal sectors in India.

**Objectives of Study**

This research study fulfils the subsequent objectives:

- To review the concept of capital structure thoroughly and theories of capital structure proposed by various experts.
- To check the government policies and its effects since its inception and examine the present conditions prevailing within the Fertilizer Industry.
- To look at the components of capital structure of leading Fertilizer companies in India.
- To analyse the debt equity ratio of leading Fertilizer companies in India.
- To analyze the impact of components of capital structure on debt equity ratio of the Fertilizer Industry as a full in India.

**Review of Literature**

**J. H. Chua and R. S. Woodward Source (1993)** examined the capital structure of 43 private companies in Canada from 1993-1998 and confirmed the hierarchy hypothesis of reluctance to issue new equity to outsiders and utilizing internal funds first. Also, liquidity is a very important determinant of capital structure. They confirmed that debt is negatively associated with internal generated income, positively to the requirement for external funds to finance growth, and negatively to liquidity.

**Laxmi Shyam Sunder and Stewart C. Myers (1999)** tested the standard trade off model against the hierarchy Models for corporate financing in 157 industrial firms in US from 1971 to 1989.The empirical evidence suggested that order theory is a wonderful descriptor of finance for mature corporations. The study showed that firms arrange to finance anticipated deficits with debt. But they also doubted if ladder model would move for growth companies investing heavily in intangible assets. Their overall results proved that chain of command model is driven by the very fact that firm would go for external financing only there's internal financial deficit and it also overpowered the static trade off model which predicts that every firm gradually moves towards an optimal debt ratio.

**Robert S. Chirinko and Anuja R. Singha (2000)** in their studies on "Testing static trade off against chain of command models of capital structure" of 157 U.S. firms during the amount from 1971 to 1989, argued against the support of ladder Model documented by Shyam-Sunder and Myers. The empirical evidence didn't support either the ladder or Static Trade off Models.

**Olatundun Adelegan (2002)** in their studies on "The hierarchy hypothesis and company dividend pay out: Nigerian evidence" concluded that financial leverage includes a positive influence on dividend payout ratio while investment incorporates a negative influence on dividend payout ratio. The results showed that dividend doesn't have a big effect on aggregate financial leverage and investment, however dividend payout ratio has significant effect on financial leverage of enormous firms and investment of small sized firms. Moreover, there's a negative interaction between investment and financial leverage of moderate sized firms. The results partly supports the validity of the ladder hypothesis in explaining dividend payments of firms in Nigeria.

**Frank and Goyal (2003)** tested the order theory of capital structure of broad cross-section of publicly traded American firms over the amount 1971–1998. They found evidence inconsistent with the ladder hypothesis especially for smaller firms but agreed that larger firms follow the chain of command hypothesis. They found that internal financing isn't enough to hide the investment spending and over a period of your time the support of chain of command model declines. Equity becomes more important and that they found results contradictory to hierarchy model i.e. external financing is heavily used. Also the financing deficit doesn't challenge the role of the traditional leverage factors.

**Eldomiaty, Tarek I (2007)** They examined the effect of the assumptions of the three theories of capital structure i.e. trade off, pecking order and free income on firms decisions to alter its leverage. As per the study the ladder determinants were growth & profitability and trade off theory determinants were bankruptcy risk, debt equity ratio and taxes. The empirical results revealed that capital structure decisions are largely addicted to both the theories i.e. chain of command and trade off theory. They also concluded the existence of common determinants in developed moreover as emerging economies.

**Rational of Study**

Substantial work has been done on capital structure theories and its determinants. Many theories were developed for examining the determinants of capital structure and central theme of of these theories focused on identifying the many determinants affecting the capital structure decisions of the firm. Two major theories applicable in most of the Industries across countries and corporations are ladder and trade off theory. Six decades of intensive research but still there's a surprising lack of consensus among researchers about the essential empirical facts regarding the theories followed and also the influential determinants. Initially the research work was confined to US, UK, and Canadian firms but recently the researchers have explored the capital structure topic involving different attributes for emerging economies and diversified industries. The hunt for a model that explains corporate capital structure completely continues to be current because the topic is wide, inconclusive, and still debatable amongst the financial experts. This creates an urge to grasp the capital structure of firms in India with precise target Automobile firms. Supported the above facts, the subsequent questions emerge as a component of capital structure analysis of leading automobile companies in India:

- Whether the components of capital structure are similar across the companies?
- Which particular component affects the capital structure the most?
- Which significant factors determine the debt-equity choice of the leading Fertilizer companies'?
- Is capital structure having any direct impact on the financial performance of the leading Fertilizer companies?
- Does ownership structure influence the capital structure decisions of the leading Fertilizers companies?
- Are the businesses and also the Industry during which it operates, influenced in a very similar way?
- Do only trade off and hierarchy theory exist in Indian context or agency theory is additionally applicable?

**Hypothesis for Study**

**$H_{01}$** There is not any significant difference within the components of capital structure among the leading Fertilizer companies in India.

**$H_{0\,2}$** There isn't any significant difference within the debt equity ratio among the leading Fertilizer companies in India

**Research Methodology**

It includes the framework of research design and data analysis. Research design is that the overall operational framework of the research study that stipulates what information is to be collected, its sources and also the procedures. It's a sophisticated planning of the methods to be adopted for collecting the relevant data and therefore the techniques to be used for the info analysis.

- **Sample Design:** The study has been administered by selecting a two company namely TATA Chemicals and Chambal Fertilizers, which are leading companies within the Indian Fertilizer Industries.
- **Data Source:** the knowledge required to finish the study has been collected from the published consolidated annual reports of the two companies.
- **Study Period:** The study has been conducted over a awfully limited period of 5 years only i.e. 2015-2016 to 2019-2020
- **Tools and Techniques of Data Analysis:** the information collected from the published annual reports of the two companies and various websites for the five year period are suitably rearranged, classified and tabulated as per requirements of the study.

**Results and Analysis**

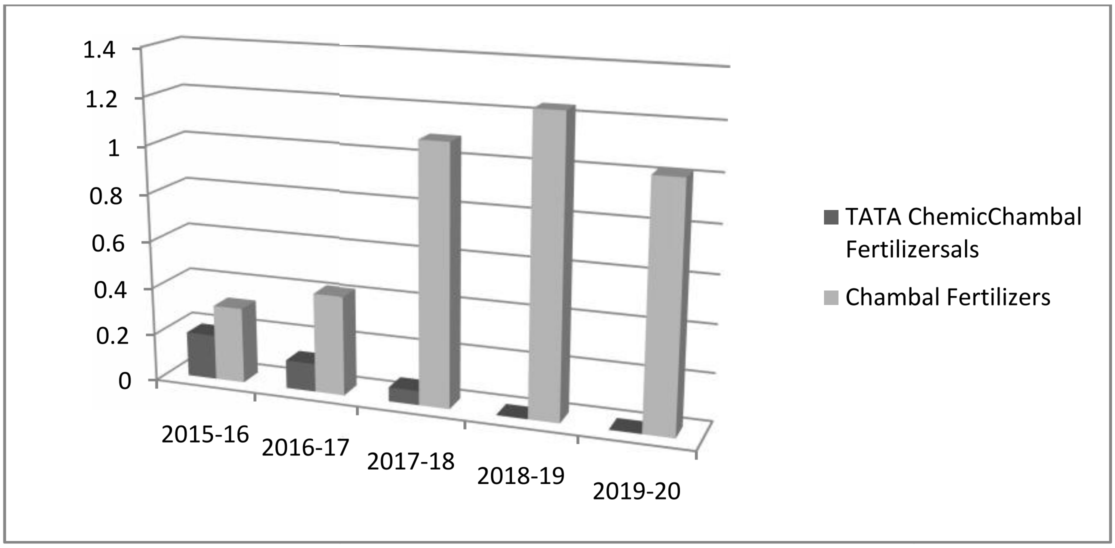
- **Debt-Equity Ratio**

As a general rule, there should be an approximate mix of owner's funds and outsider's funds in financing the firm's assets. However, the owners want to carry on their business with a maximum of outsider's funds in order to reduce the risk of their investments and to increase their earning per share by paying a lower fixed rate of interest to outsiders. Therefore, the interpretation of this ratio depends upon the financial policy of the firm and upon the firm's nature of business.

- **Debt-Equity Ratios**

| Year | TATA Chemicals | | | Chambal Fertilizers | | |
|---|---|---|---|---|---|---|
| | Debt | Equity | Ratio | Debt | Equity | Ratio |
| 2015-16 | 1551.47 | 8086.25 | .19 | 710.04 | 2206.09 | .32 |
| 2016-17 | 1100.13 | 8855.45 | .12 | 1078.62 | 2535.24 | .42 |
| 2017-18 | 691.86 | 11324.14 | .06 | 3159.30 | 2898.42 | 1.09 |
| 2018-19 | 24.20 | 12364.97 | .002 | 4035.47 | 3240.54 | 1.24 |
| 2019-20 | 21.08 | 11977.32 | .002 | 3994.39 | 3915.88 | 1.02 |
| Average | - | - | .0748 | - | - | .818 |

Source: MoneyControl.Com




As shown in above Table, the debt equity ratio of TATA Chemicals is continuously decreasing with an overall average for the five years of 0.748, which is near to the normal standard of 1:1. Similarly, in the case of Chambal Fertilizers, the ratio is increasing continuously with exception in 2019-20 when it decreased, with an overall average for the five years of 0.818. The increase in debt equity ratio indicates that size of debt of the company is increasing which is at all not a good sign. This significantly impacts the portion of equity of the company. However the position of the TATA Chemicals is better specially in year 2018-19 and onwards company has repaid the substantial portion of its debt which is good indicator for the company as it increases the actually worth of the company's equity.

**Conclusion and Recommendations**

Proper capital structure leads the firm to attain the higher performance and ensures the sustainability in its operation. While there are several factors contribute to the institutional performance, determinants of the capital structure play a crucial role. Therefore, it's necessary to spot that what are the factors contribute to the firms' capital structure composition in its operation. Hence, the current study was undertaken with the target of sorting out the connection between capital structure determinants and leverage level of the select manufacturing sectors. Finally, all companies have their own specific business models, financial needs and management which make capital structure decisions. These decisions may rely on both objective and subjective factors. a number of them may be measured, while others cannot. the current research work may be a rewarding exercise to the scholar and therefore the researcher are delighted if the suggestions are incorporated by the policy makers of the select manufacturing organizations to earn good return on equity. The restructuring of capital, where the industries are suffering with sickness will enhance a decent and viable financial performance. For academics, trainers and consultants, the current research will help them to seem thereon with a brand new insight and analyze the identical with various dimensions within the sample industries. To access equity capital and to figure at structuring deals that minimizes perception of threats to regulate. it's concluded that the capital structure of the firm influences profitability. Interest on debt could be a tax-deductible expense and hence reduces the tax burden. The advantage of a diminution motivates the corporate to boost more loans from the market.

The market price of the firm would increase with the decreased tax burden. Although interest on debt is tax deductable, a better level of debt increases default risk, which successively, increases the possibility of bankruptcy for the firm. Therefore, the industry should think about using an optimal capital structure by including debt. It's "The best" debt/equity ratio for the firm, which successively, will minimize the price of capital, i.e., the price of financing the company's operations. Additionally, it'll reduce the possibilities of bankruptcy. Therefore, so as to create the capital structure possible, the industry should opt for issue of debentures and other loans.

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