



IMPACT OF CAPITAL STRUCTURE ON PROFITABILITY OF SELECTED STEEL COMPANIES IN INDIA

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Abstract

The capital structure is how a firm finances its overall operations and growth by using different sources of funds. Debt comes in the form of bond issues or long-term notes payable, while equity is classified as common stock, preferred stock or retained earnings. For this, two steel companies like Tata Steel Limited and Maharashtra Seamless Limited have taken which are listed in BSE and NSE. In this research, profitability has been measured by Return on Assets. From the CMIE data base, the selected two companies financial data were collected for the past 10 years from 2007-08 to 2016-17. For examining the determinants of the capital structure, the researcher has used Size of firm, Tangibility, Growth, Profitability, Earning Risk and Business Risk. The selected six variables are used to examine the capital structure of the selected companies. Pearson correlation analysis and multiple regression analysis have been used in this study. The result found that in Maharashtra Seamless Limited, no one variables are influenced the capital structure of the company. But in the company Tata Steel Company, the variables size of the firm, growth, profitability and earning risk are having significant influence on capital structure of the company.

Keywords : *Capital Structure, Profitability, Automobile Industry, Steel Company.*

1. Introduction

The study objective is to discover the impact of capital structure on profitability of the selected steel companies. Capital structure is important along with each decision of capital investment because such determinations affect firm's profitability. Capital structure the overall total of payable long-term securities of mutually debt and equity by Taylor and Venhorn, (1996). Capital structures the long-term finance used by the companies such as long term debt, preferred stock and equity acknowledged by Weston and Bingham, (1978). Capital structure is important element of balance sheet and capital structure of the firm is blend of debt, equity and preference shares. Profitability is the ability of a business to earn profit. It indicates through return on asset (ROA) and return on equity (ROE). It is necessary that each individual firm have to give special attention towards the main questions of sum of capital structure and related cost of capital. Numerous finance researchers found that capital structure is the best mainly element between other elements which can influence the profitability of firms.

2. Review of Literature

Robert Ouko Obonyo, (2017) discussed in their study that to analyze the effect of capital structure on financial performance of companies listed at the Nairobi Securities Exchange in Kenya. The study concluded that there was a weak positive relationship between capital structure and financial performance of the listed companies. From the analysis, it was concluded that debt ratio had a weak positive relationship with return on assets and equity. According to Navaneetha et al., (2017), the capital structure was measured through the ratio analysis and leverage. The study found the optimum capital structure of Tata Motors Limited could be ascertained by using various ratios and leverage. Also, from the study, the equity and reserves of the firm should be sufficient to meet out the fixed bearing expenses and it had to lower the degree of financial leverage in order to overcome the financial risk in future.

A study conducted to examine the impact of capital structure on profitability by Muhammad Ashraf, et al., (2017), who found that debt ratio and long term debt ratio had significantly negative relationship with return on asset (ROA) and return on equity (ROE), while short term debt have significantly positive link with ROA and ROE. Also, the authors Yang Ying, et al., (2016) disclose the effects of firm's financial, macroeconomic and human

resource variables in determining the capital structure decisions of firms in the industrial and consumer sectors of China. This research provided insights on the variables which explain the level and types of leverage of Chinese firms in both the consumer and industrial sectors.

3. Objectives of the study

- To study the impact of capital structure variables on profitability of the selected two steel companies.

4. Hypothesis of the study

- There is no significant prediction of the selected independent variables on capital structure (debt-equity ratio) of the selected Steel companies.

5. Research Design

The study is purely based on secondary data which collected CMIE data base. Tata Steel Limited and Maharashtra Seamless Limited have been selected for this study. The study covers a period of 10 years from 2007-08 to 2016-17. For examining the impact of capital structure on profitability correlation analysis and multiple regression analysis have been used appropriately.

6. Data Analysis

In this section, the researcher has to examine the impact of capital structure variables on profitability and other variables also. For this Size of firm, Tangibility, Growth, Profitability, Earning Risk and Business Risk has been taken for this research. By correlation analysis and multiple regression analysis, the researcher has found the relationship and prediction of the capital structure variable debt-equity ratio for the selected companies Tata Steel Limited and Maharashtra Seamless Limited. The results are discussed in the following table.

6.1 Correlation Analysis between Capital Structure Variables of Tata Steel Limited

The relationship among the Components of capital structure in Tata Steel Limited in terms of correlation matrix for the period from 2007-2008 to 2016-2017 are given in Table 1.

Table 1 : Correlation Analysis Between Capital Structure Variables of Tata Steel Limited

	Size of firm	Tangibility	Growth	Profitability	Earning Risk	Business Risk
Size of firm	1.000					
Tangibility	0.634**	1.000				
Growth	0.507 ^{NS}	0.290 ^{NS}	1.000			
Profitability	-0.636**	-0.862*	-0.531 ^{NS}	1.000		
Earning Risk	-0.648**	-0.790*	-0.521 ^{NS}	0.986*	1.000	
Business Risk	0.570 ^{NS}	0.921*	0.505 ^{NS}	-0.973*	-0.923*	1.000

Note : * - Significant at 1% level; ** - Significant at 5% level; NS – Not Significant.

It is evaluated from the above table that with respect to the Tata Steel Limited, it has a few motivating facts about the correlation matrix among these independent variables. It is found that whenever the 'Earning Risk' 'Business Risk' increases their 'Tangibility' and 'Profitability' also positively increases. Further, the factors 'Profitability', 'Earning Risk' and 'Business Risk' increase 'Size of firm' and 'Tangibility' decreases.

6.2 Correlation Analysis between Capital Structure Variables of Maharashtra Seamless Limited

The relationship among the Components of capital structure in Maharashtra Seamless Limited in terms of correlation matrix for the period from 2007-2008 to 2016-2017 are given in Table 2.

Table 2 : Correlation Analysis Between Capital Structure Variables of Maharashtra Seamless Limited

	Size of firm	Tangibility	Growth	Profitability	Earning Risk	Business Risk
Size of firm	1.000					
Tangibility	0.659**	1.000				
Growth	-0.026 ^{NS}	0.375 ^{NS}	1.000			
Profitability	-0.726**	-0.175 ^{NS}	0.600 ^{NS}	1.000		
Earning Risk	-0.716**	-0.173 ^{NS}	0.592 ^{NS}	0.999*	1.000	
Business Risk	0.591 ^{NS}	-0.042 ^{NS}	-0.621 ^{NS}	-0.958*	-0.960*	1.000

Note : * - Significant at 1% level; ** - Significant at 5% level; NS – Not Significant.

It is divulged from the above table that with respect to the Maharashtra Seamless Limited the table explains some interesting facts about the correlation matrix among these independent variables. It is found that whenever the 'Earning Risk' and 'Tangibility' increases their 'Size of firm' and 'Profitability' also positively increases. Further, the factor 'Profitability', 'Earning Risk' and 'Business Risk' increases 'Size of firm' and 'Earning Risk' decreases.

6.3 Determinants of Capital Structure (Tata Steel Limited)

The prediction of selected independent variables on debt-equity ratio for Tata Steel Limited shown is discussed with the help of multiple regression analysis in the following Table.

Table 3 : Determinants of Capital Structure (Tata Steel Limited)

No.	Variables	Coefficient	SE	't' value	'p' value
	(Constant)	1.371			
1.	Size of firm	1.621	0.074	21.908	0.000*
2.	Tangibility	-0.218	0.094	-2.315	0.104 ^{NS}
3.	Growth	-0.151	0.011	-13.786	0.001*
4.	Profitability	-2.669	0.534	-4.995	0.015**
5.	Earning Risk	2.146	0.361	5.950	0.009*
6.	Business Risk	-0.565	0.236	-2.393	0.096 ^{NS}
	R² Value	0.999			
	F Value	395.169*			

Note : * - Significant at 1% level; ** - Significant at 5% level; NS – Not Significant.

Table 3 explained that the result of regression analysis represents that the value of R square ($R^2 = 0.999$ or 99.9 per cent) which indicates that independent variables explain only 99.9 per cent of variation on dependent variable. As the 'F' value shows 395.169 and which is significant at 1 percent level, so the model is fitted. As look into the individual variables, all the independent variables Size of firm and Earning Risk are positively related with the dependent variable Debt Equity Ratio in Tata Steel Limited. It is found from the analysis that the size of firm and earning risk are having Positive significant association with the debt equity ratio in Tata Steel Limited.

6.4 Determinants of Capital Structure (Maharashtra Seamless Limited)

The prediction of selected independent variables on debt-equity ratio for Maharashtra Seamless Limited shown is discussed with the help of multiple regression analysis in the following Table.

Table 4 : Determinants of Capital Structure (Maharashtra Seamless Limited)

No.	Variables	Coefficient	SE	't' value	'p' value
	(Constant)	-83.710			
1.	Size of firm	31.366	29.204	1.074	0.362 ^{NS}
2.	Tangibility	-2.476	10.680	-0.232	0.832 ^{NS}
3.	Growth	-1.484	2.453	-0.605	0.588 ^{NS}
4.	Profitability	40.888	80.243	0.510	0.645 ^{NS}
5.	Earning Risk	-30.377	74.532	-0.408	0.711 ^{NS}
6.	Business Risk	3.420	17.528	0.195	0.858 ^{NS}
	R² Value	0.515			
	F Value	0.530^{NS}			

Note : NS – Not Significant.

From the R² value, the above model has fitted moderately. It is found from the analysis that all the selected variables are having any significant influence on capital structure of the Maharashtra Seamless Limited. On the other hand, the variables size of the firm, profitability and business risk are having positive influence on debt-equity ratio of the company.

7. Findings

1. The correlation analysis found in Tata Steel Company that whenever the 'Earning Risk' 'Business Risk' increases then 'Tangibility' and 'Profitability' also positively increases. Further, the factors 'Profitability', 'Earning Risk' and 'Business Risk' increase 'Size of firm' and 'Tangibility' decreases.
2. It is found from the correlation analysis of Maharashtra Seamless Limited that whenever the 'Earning Risk' and 'Tangibility' increases their 'Size of firm' and 'Profitability' also positively increases. Further, the factor 'Profitability', 'Earning Risk' and 'Business Risk' increases 'Size of firm' and 'Earning Risk' decreases.
3. It is found from the analysis that the size of firm and earning risk are having Positive significant association with the debt equity ratio in Tata Steel Limited.
4. From the analysis, it is noted that all the selected independent variables are not having any significant influence on prediction of capital structure variable debt-equity ratio of Maharashtra Seamless Limited. But there is a positive influence on debt-equity ratio by the variables size of the firm, profitability and business risk.

8. Recommendations and Conclusion

1. It is recommended to the Tata Steel Limited that they should concentrate to increase the Tangibility and business risk because that have not any significant influence on debt-equity ratio of the company. Also, the profitability influenced on debt-equity ratio i.e., capital structure of the company negatively. So, the company takes necessary steps to increase the profitability that also structures the capital of the company.
2. Particularly the company Maharashtra Seamless Limited does not have any influence of any selected independent variables. But these variables are the major influencing variables on capital structure. So, the company is in the bankruptcy position to maintain its capital structure. Hence, the company should concentrate to maintain the debt and equity position in an efficient way that leads to position the capital structure.



9. References

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