



A COMPARATIVE ANALYSIS OF CAPITAL STRUCTURE ADJUSTMENT WITH RESPECT TO PARTIAL CAPITAL STRUCTURE ADJUSTMENT IN THE SELECTED BSE LISTED INDIAN MANUFACTURING COMPANIES

□ Vikas R. Adhegaonkar*
Dr. E.B. Khedkar**

ABSTRACT

The dynamic capital structure adjustment phenomenon is drawing the academic researchers' attention to develop the innovative statistical and mathematical model. The partial capital structure adjustment model is the dynamic in nature and the finance manager sets the optimum capital structure to achieve in challenging business environment. The question is really the finance manager sets the optimum capital structure to enhance the shareholder's equity. The modern financial management is more complex to understand and execute as function in the globally connected business environment. The capital structure is influenced by the firm specific and macroeconomic factors and the researchers develop the financial model to understand the capital structure behaviour. Apart from firm specific and macroeconomic factors, the qualitative variables like management opinion, business history has considerable influence on the capital structure choice. In this study, the findings of the selected BSE listed auto industry and engineering industry companies compared with the partial capital structure adjustment. The significance of the study is it captures the capital structure adjustment post the Global Financial Crisis of 2008.

Keywords:- Trade off theory, partial capital structure adjustment, dynamic capital structure, BSE

I. INTRODUCTION

The capital structure is the combination of long-term sources of finance that raised to finance the business operations considering the future prospectus. Today the finance manager executes the managerial functions under challenging and complex business environment to achieve the sustainable business. The modern financial management considers to enhance the shareholder's equity as a key role to play for the finance manager. The debt equity combination presents the opportunity to create the shareholder's wealth and the finance manager select the optimum financing mix that enhances

residual earnings. The debt is double edge weapon that build and destroy the business value, the interest payment is fixed expense with tax deduction that results in effective tax rate reduction. However, the debt obligation increases with the debt amount and financial distress cost, the financial distress cost is linearly related with the debt. The interest debt tax shield saves the tax outlays and transfer the saved tax amount to the business owners and enhances the business value by creating the shareholder's equity. The Stewart C. Myers (1984) proposed two contesting theories trade off theory and pecking order theory where both

*Research student, Dr.D.Y.Patil School of Management ,Pune

**Research Guide: -, Dr.D.Y.Patil School of Management, Pune

theories debate on the relevance and irrelevance of the capital structure. Trade off theory accepts claim that the finance manager sets the optimum capital structure to pursue it and pecking order hypothesis states the capital structure is outcome of investment and dividend decision. In this study, the capital structure decision is analysed to examine the capital structure adjustment in the selected Indian manufacturing companies. The findings of the study can accept or reject the claim that Indian companies select the optimum capital structure to build the shareholder's wealth.

The first section of the study introduces to the topic, second part discusses the literature review, third part presents the research methodology, followed by data analysis and interpretation and last section concludes the study.

II. LITERATURE REVIEW

Modigliani and Miller (1958) :- The Modigliani and Miller's proposed that capital structure decision affects business market value under predefined propositions. The assumptions of the study criticized by the academic researchers due to its non-validity in the real world and over the period relaxed the assumptions to develop and explore the various aspects of the capital structure.

Modigliani and Miller (1963): - Modigliani and Miller's (1963) claims that the capital structure decision is relevant to decide the market value of the business and company's financing decision affect the business valuation. Modigliani and Miller's proposed that the value of the leveraged company is greater than the unleveraged company by the interest tax shield and the saved tax amount that the shareholders enjoy.

Miller's Neutral mutation: - Miller's neutral mutation idea suggests that the company follows in a capital structure mix and stick to it, the finance manager is not interested to change the financing combination. The capital structure

mix remain constant and suitable capital structure changes are easy to anticipate whenever required by the outsiders.

Pecking order hypothesis: - The pecking order hypothesis is based on the information asymmetry problem and the theory states that the information asymmetry problem between insiders and outsiders design the capital structure. The theory proposes that the finance managers consume internal earnings, then the debt is used to finance the operations once the internal earnings get exhausted and equity capital is raised as the last resort.

Trade-off theory: - The trade-off theory accepts the concept the optimum capital structure and the finance manager set the optimum capital structure to enhance the shareholder's equity. The adjustment cost for capital structure changes resulted in the time lag to cover the gap between actual and optimum capital structure. The adjustment speed varies and inversely related to the adjustment cost, the adjustment speed varies industries and among the companies within the industries.

III. RESEARCH METHODOLOGY

This section of the paper presents the research methodology adopted in the study and the details for the same as given below.

OBJECTIVES OF THE STUDY

1. To find the determinants of capital structure in BSE selected Indian manufacturing companies
2. To calculate the time required to cover the gap between actual and optimum capital structure

Empirical model equation

Debt to total capital $i,t = \beta_0 + \phi$ Lagged debt to total capital $i,t-1 + \beta_1$ Tangibility $t + \beta_2$ Operating profit $t + \beta_3$ Size of company $t + \beta_4$ Depreciation $t + \beta_5$ GDP Growth $+ \beta_6$ Interest Rate $+ \gamma + \epsilon_{i,t}$

Period of the study: - 2007 to 2017

Variable definitions

Sr. No.	Financial variable	Measurement of the variable
1	Long term debt to total capital	Long term debt / long term debt + equity capital
2	Size of the business	Natural log of total asset
3	Tangibility	Net fixed asset to total asset
4	Profitability	EBIDTA to total asset
5	Depreciation provision	Depreciation to total asset
6	GDP growth	Growth in GDP %
7	Interest Rate	Lending rate

Table no.01- Operational definitions used in the study

Data source: - Capitaline database

Population of the study

The population of the study is collected as per the given steps below :-

Step1) :- The actively traded manufacturing companies data is collected from the BSE website

Step2):- The BSE companies data compared with the Captialine data

Step3):- Companies with debt to total capital between 0.10 and 2.50 are included in the study

Sr.No.	Name of Industry	Actively traded manufacturing companies (dtd. 31.03.2017)
1	Auto industry	101
2	Cement industry	31
		132

Table no. 02: - Population of the study

IV. DATA ANALYSIS AND INTERPRETATION

Table no.03 presents the summary findings of the empirical model that includes the firm specific and company specific variables, the auto industry findings suggest that the lagged debt to total capital, tangibility, size of the company, operating profit and interest rate are statistically significant determinants of the capital structure. The study found speed of adjustment towards the optimum capital structure is 0.37 (1-0.63) and it takes 2.70 years ($1/0.37=2.70$) to close the gap between actual and optimum capital structure. The cement industry findings suggests that the lagged debt to total capital, tangibility and operating profit of the company are statistically significant determinants of the capital structure. The study found speed of adjustment towards the optimum capital structure is 0.76 (1-0.24) and it takes 1.31 years ($1/0.76=1.31$) to close the gap between actual and optimum capital structure. The study found that the speed of adjustment is high in auto industry than cement industry companies listed on BSE.

Variables	Auto industry		Cement industry	
	Coefficient	P-value	Coefficient	P-value
Lagged debt to total capital	0.63	0.00	0.24	0.00

Tangibility	0.13	0.01	0.16	0.00
Size of company	-0.05	0.00	0.003	0.77
Depreciation	0.01	0.95	-0.19	0.67
Operating profit	0.17	0.00	0.33	0.00
Interest rate	-0.002	0.04	-0.01	0.66
GDP Growth	-0.00	0.75	-0.009	0.08
Constant	0.38	0.00	16.69	0.49
	Wald Test=242.80 Pvalue =0.00		Wald Test=69.90 Pvalue =0.00	
	Sargan test=75.43 Pvalue=0.00		Sargan test=97.49 Pvalue=0.00	

Table no. 03: - Results of multiple regression model

V. CONCLUSION

The debate of trade off theory against the pecking order theory is not yet resolved and issue of speed of adjustment varies with the changes in economic, political and institutional differences. The partial adjustment phenomenon of dynamic trade off theory is less researched aspect of capital structure in Indian context. This study examined the partial adjustment model in the auto and cement industry companies listed on the BSE during 2007 and 2017. The study examines the capital structure adjustment phenomenon post Global Financial Crisis of 2008 and the study found differences in capital structure determinants in the auto and cement industry companies. The study found higher adjustment in the selected cement companies as compare to the auto industry and it is concluded that the auto industry companies experience higher adjustment cost of capital structure compared to the cement companies.

REFERENCES

1. Modigliani F., Miller M.H, "The Cost of Capital, Corporation Finance and Theory of Investment", American Economic Review, 53, pp.no. 261-297, 1958
2. Modigliani F., Miller M.H, "Corporate income taxes and the cost of capital: A correction", American Economic Review, Volume 53 (3), pp. 433-443, 1964
3. Miller, "Debt and Taxes", Journal of Finance, pp.no.261-275, 1977
4. Myers S.C, "The capital structure puzzle", The Journal of Finance, Volume no. 39 (3), pp. 575- 592, 1984
5. Myers S.C. , Majluf N.S., "Corporate financing and investment decisions when firms have information that investors do not have", Journal of Financial Economics, lume 13, pp. 187-221, 198

