

DETERMINANTS OF CAPITAL STRUCTURE IN SELECT INDIAN INDUSTRIES

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ABSTRACT:

Capital Structure describes how a corporation has organized its capital and it obtains the financial resources with which it operates its business. Businesses adopt various capital structures to meet both internal needs for capital and external requirements for returns on shareholders investments. The study examines the determinants of capital structure in select companies in India. The study period ranges 2011 to 2015. The collected data have been analyzed by Arithmetic Mean, Standard Deviation and Coefficient of Variation. In Debt Equity Ratio the highest values are to be found in the select companies.

Keywords: Cost of Equity and Cost of Debt

I. INTRODUCTION:

The financial success of a firm depends mainly on its capital structure. Firms with unplanned Capital Structure can prosper in short run but face difficulties in mobilizing additional funds and in increasing the value of the business in the long run. The choice of debt and equity in the capital structure of corporate firms is an important financial decision because it influences both the return and the risk of shareholders. The excessive use of debt may endanger the survival of the corporate firm, at the same time; non-use of debt prevents the firm from an opportunity to enhance the rate of return to its equity holders. It is generally understood that the optimal capital structure of a firm is the composition of debt and equity, which results in the minimum cost of capital and thus determination of an optimal capital structure is not an exact science. The firms have to analyze a number of factors such as the firm's business risk, its financial flexibility, shareholders' wealth maximization, source of funds, acquisition and maintenance of a good rating in the market, profitability and growth rate before deciding upon an appropriate capital structure. All these factors are a pointer to one important fact that companies will have to search for the right capital structure which enhances its value while minimizing costs.

II. REVIEW OF LITERATURE:

Baxter (1967)¹ in his study entitled "Leverage, Risk of Ruin and the Cost of Capital" reported that negative association existed between net operating earnings and leverage.

(Gupta, (1969)² in his study captioned "The Effect of Size, Growth and Industry of Financial Structure of Manufacturing Companies" confirmed that total debt ratios were positively related to growth and negatively related to size. He also found that significant industry effect also reflects on debt ratio.

Sarma and Rao (1969)³ in their study titled "Financial Management Public Enterprises" ascertain that the Cost of Capital plays a significant role in determining capital structure of a company.

Toy et al (1974)⁴ in their study entitled "A Comparative International Study of Growth, Profitability and Risk as Determinates of corporate Debt Ratio in the Manufacturing Sector" identifies that debt ratios are positively related to growth of sales whereas return on investment was negatively related to debt ratio.

Allan. J. Taub (1975)⁵ in his study captioned “Determinants of Firms Capital Structure” finds that return on investment, long term rate of interest and size of the firm positively influences on debt-equity ratio. The uncertainty of the firm’s earning had negative influence on debt-equity ratio.

Chakaraboty (1977)⁶ in his study titled “Corporate Capital Structure and Cost of Capital” observes that age, retained earnings and profitability are negatively correlated, while total assets and capital intensity are positively related to debt- equality ratio.

Ferri and Jones (1979)⁷ in their study entitled “Determinants of Financial Structure; A New Methodological Approach” ascertains that the industry class linked to the firm’s leverage. Further, they observe that firm’s use of debt is related to its size, and operating leverage.

III. PROFILE OF THE INDUSTRIES:

AUTOMOBILE INDUSTRY

The Indian automobile industry is one of the largest in the world. The industry accounts for 7.1 per cent of the country’s Gross Domestic Product. The two wheeler segment with 8.1 per cent market share is the leader of the Indian Automobile market owing to a growing middle class and a young population. Moreover, the growing interest of the companies in exploring the rural market further aided the growth of the sector. The overall Passenger Vehicle segment has 13 per cent market share. India is also a prominent auto exporter and has strong export expectations for the near future. In January 2016, exports of commercial vehicles registered a growth of 18.36 per cent over April-January 2015. In addition, several initiatives by the Government of India and the major automobile players in the Indian Market are expected to make India a leader in Two Wheeler and Four Wheeler in the world by 2020.

Tata Motors Ltd.,

Tata Motors was established in 1945 as Tata Engineering and Locomotive Co. Ltd. to manufacture locomotives and other engineering products. Tata Motors Company headquarters located at Mumbai. Turnover of the Tata motors is Rs.46, 647 crores.

Maruthi Suzuki India Ltd.,

Maruthi Suzuki India Ltd. was established in February 1981, though the actual production commenced only in 1983. Maruthi Suzuki headquarters located at New Delhi. Turnover of the Maruthi Suzuki is 5, 77,463.00 Million.

Mahindra & Mahindra Ltd.,

Mahindra & Mahindra was set up as a steel trading company in 1945. Mahindra and Mahindra Limited (M&M) is an Indian Multinational automobile manufacturing Corporation headquarters located at Mumbai. Turnover of the Company is 72,474 Crore.

Ashok Leyland Ltd.,

Ashok Leyland Ltd., was established in 1948. The Headquarters of the Ashok Leyland is at Chennai, Tamil Nadu, India. Turnover of the Company is 1.7 billion.

Hero Motocorp Ltd.,

Hero Honda was started in January 19, 1984. The Headquarters of the Hero Motors Ltd is at Gurgaon, India. Turnover of the Hero Motocorp Ltd., is 30,857.48 billion.

ENGINEERING AND CONSTRUCTION INDUSTRY

The Indian Engineering sector has witnessed a remarkable growth over the last few years driven by increased investments in infrastructure and industrial production. The engineering sector, being closely associated with the manufacturing and infrastructure sectors, is of strategic importance to India's economy. India on its quest to become a global superpower has made significant strides towards the development of its engineering sector. The Government of India has appointed the Engineering Export Promotion Council as the apex body in charge of promotion of engineering goods, products and services from India. India exports transport equipment, capital goods, other machinery /equipment and light engineering products such as castings, forgings and fasteners to various countries of the world. The capital goods and engineering turnover in India is expected to reach US\$ 125.4 billion by financial year 2017.

Larsen & Turbo Ltd.,

Larsen and Turbo Ltd., were established in the year 1938. The headquarters of the Larsen and Turbo is at Maharashtra, Mumbai, India. Turnover of the Company is Rs. 5, 97,796.00 Million.

NCC Ltd.,

Nagarjuna Construction Company Limited (NCC) was established in 1999. The headquarters of NCC is at Manchester, United Kingdom. Turnover of the company is Rs. 13,376,726 Million

IVRCL Ltd.

IVRCL Infrastructures & Projects was incorporated in 1987. The headquarters of IVRCL Ltd., is at Hyderabad, Andhra Pradesh, India. Turnover of IVRCL Ltd., is Rs. 31, 174.17 million.

Gammon India Ltd.,

Gammon India Ltd., was established in the year 1922. The headquarters of Gammon India Ltd., is at Mumbai, India. Turnover of Gammon India Ltd. is at Rs 3842.61 Crore.

Hindustan Construction Company Ltd.

Hindustan construction company Ltd., was established in the year 1926. The headquarters of Hindustan Construction Company Ltd., is at Mumbai, India. Turnover of the Company is Rs. 81.50 billion.

IV. OBJECTIVES OF THE STUDY:

- To ascertain debt equity mix and factors associated with capital structure differs among select companies

V .METHODODOLOGY:

Source of Data

Data used for the study are secondary in nature. Secondary data are collected from Prowess data base maintained by Centre for Monitoring Indian Economy. The variables used in the study have been selected after a detailed survey of the available literature on the subject and discussions with several knowledgeable persons in the field of finance.

Period Of Study

The study covers period of ten years from 2010 to 2015. The financial year runs from 1st April to 31st March every year.

FRAMEWORK OF ANALYSIS

The statistical tools used to analyze the data include (i) Arithmetic Mean, (ii) Standard Deviation and (iii) Coefficient of Variation.

VI. ANALYSIS:

Debt Equity Ratio - Automobile

Year	TML	MSIL	MML	AL	HML	Mean	SD	CV
2000	0.88	0.04	0.99	1.13	0.49	0.71	0.44	62.63
2001	0.92	0.04	0.98	0.87	0.29	0.62	0.43	68.87
2002	0.80	0.19	0.47	0.85	0.11	0.48	0.34	69.77
2003	0.92	0.42	0.55	0.79	0.11	0.56	0.32	57.44
2004	0.90	0.24	1.01	1.04	0.27	0.69	0.40	57.81
2005	0.60	0.21	0.84	0.92	0.24	0.56	0.33	58.11
2006	0.49	0.14	0.53	0.65	0.23	0.41	0.21	52.37
2007	0.74	0.10	0.63	0.90	0.20	0.51	0.35	67.92
2008	0.64	0.03	0.35	0.62	0.15	0.36	0.27	76.39
2009	0.70	0.12	0.47	0.44	0.12	0.37	0.25	67.81
2010	0.93	0.13	0.61	0.53	0.09	0.46	0.35	77.15
2011	1.16	0.09	0.77	0.64	0.06	0.54	0.47	86.27
2012	1.21	0.08	0.40	0.72	0.06	0.50	0.48	97.37
2013	0.76	0.04	0.32	0.72	0.59	0.49	0.30	62.59
2014	0.66	0.04	0.36	0.68	0.29	0.41	0.27	66.34
2015	0.62	0.07	0.32	0.75	0.09	0.37	0.31	83.14
Mean	0.81	0.12	0.60	0.77	0.21	0.50		
SD	0.20	0.10	0.25	0.18	0.15			
CV	24.34	84.24	41.15	23.64	71.69			
	Sum of Squares		Df	Mean Square		F	Sig.	
Between Groups	6.401		4	1.600		48.145	.000	
Within Groups	2.493		75	.033				
Total	8.894		79					

Debt Equity Ratio – Engineering and Construction

Year	L&T	NCC	IVRCL	Gammon	Hindustan	Mean	SD	CV
2000	0.82	1.95	1.13	0.93	3.07	1.58	0.94	59.69
2001	0.91	2.56	1.58	0.27	3.86	1.84	1.41	77.04
2002	1.03	0.89	1.60	0.43	3.09	1.41	1.03	72.98
2003	1.07	1.14	0.91	0.55	3.19	1.37	1.04	76.05
2004	1.29	0.95	1.39	0.90	4.14	1.73	1.36	78.34
2005	1.13	0.95	1.42	1.08	3.14	1.55	0.91	58.81
2006	0.52	0.97	0.84	1.13	3.02	1.29	0.99	76.36
2007	0.58	0.83	0.62	1.15	1.41	0.92	0.36	38.71
2008	0.33	0.50	1.43	0.18	1.53	0.79	0.64	80.62
2009	0.37	0.62	0.42	0.36	1.81	0.72	0.62	86.65
2010	0.38	0.58	0.67	0.34	1.95	0.78	0.67	85.02
2011	0.53	0.75	0.78	0.65	2.42	1.03	0.79	76.70
2012	0.38	0.69	0.88	0.70	1.75	0.88	0.52	59.07
2013	0.27	0.25	0.15	0.40	1.38	0.49	0.51	103.14
2014	0.24	0.25	0.36	0.38	1.43	0.53	0.50	95.12
2015	0.28	0.16	0.58	0.79	3.20	1.00	1.25	124.88
Mean	0.63	0.88	0.92	0.64	2.52	1.12		
SD	0.35	0.62	0.46	0.32	0.92			
CV	55.55	70.35	49.53	50.62	36.45			
	Sum of Squares		Df	Mean Square		F	Sig.	
Between Groups	40.600		4	10.150		30.446	.000	
Within Groups	25.003		75	.333				
Total	65.604		79					

VII. FINDINGS:

Automobile

The mean value of Debt Equity Ratio (DER) of the select five companies are found to ranges between 0.12 (Maruti Suzuki India Ltd.,) and 0.81 (Tata Motors Ltd.,). Mean DER amounts to 0.50. Tata Motors Ltd., (0.81), Mahindra & Mahindra Ltd., (0.60) and Ashok Leyland Ltd., (0.77) have DER above the average. The rest of two companies Maruti Suzuki India Ltd., (0.10) and Hero Motocorp. Ltd., (0.21) are with ratio below the average. Comparing to co-efficient of variation across the five companies shows that the level of DER has remained highly stable with Ashok Leyland Ltd., while it is highly instable with Maruti Suzuki India Ltd., Test of comparison of mean values across company's shows that there exists significant difference in the mean values.

Year-wise comparison of DER shows that during the year 2000, the ratio has remained the highest. Compared against the grand mean of 0.50, it is found that the ratio has remained well above during 2000, 2001, 2003, 2004, 2005, 2007 and 2011. Regarding stability of DER across years, it is found that the ratio has remained more stable during 2006. Volatility is found to be high during 2012. Since, DER of Tata Motors is found to be high (1.21) as against any other companies.

Engineering and Construction

The mean value of Debt Equity Ratio (DER) of the select five companies are found to range between 0.63 (Larsen and Turbo Ltd.,) and 2.52 (Hindustan). Mean DER amounts to 1.12. Hindustan Construction Company Ltd., (2.52) has DER above the average. The rest of four companies Larsen and Turbo Ltd., (0.63), NCC Ltd., (0.88), IVRCL Ltd., (0.92) and Gammon India Ltd., (0.64) are with ratio below the average. Comparing to co-efficient of variation across the five companies shows that the level of DER has remained highly stable with Hindustan Construction Company Ltd., while it is highly instable with NCC Ltd., Test of comparison of mean values across company's shows that there is significant difference in the mean values.

Year-wise comparison of DER shows that during the year 2001, the ratio has remained the highest. Compared against the grand mean of 1.12, it is found that the ratio has remained well above during 2000, 2001, 2002, 2003, 2004, 2005 and 2006. Regarding stability of DER across years, it is found that the ratio has remained more stable during 2007. Volatility is found to be high during 2015. Since, DER of Hindustan Construction Company Ltd., is found to be high (4.14) as against any other companies.

VIII. Conclusion

The determination of a company's capital structure constitutes a difficult decision, one that involves several factors, such as risk and profitability. That decision becomes even more difficult, in times when the economic environment in which the company operates presents a high degree of instability. Therefore, the choice among the ideal proportion of debt and equity can affect the value of the company, as much as the return rates can. In Automobile DER of Tata Motors is found to be high (1.21) as against any other companies. In Engineering and Construction DER of Hindustan Construction Company Ltd., is found to be high (4.14) as against any other companies.

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