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Factors Affecting Selected IT Companies' Capital Structure

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Abstract - This paper is analysis the explanatory power of some of the theories that have been proposed in the literature to explain variations in capital structures across firms. In particular, this study investigates capital structure determinants of IT firms based on from 2019 to 2023 comprising 4 companies. The study is to analyze the effect of Debt-Equity ratios on other ratio. An analysis of determinants of leverage based on total debt ratios may mask significant differences in the determinants of long and short-term forms of debt. Therefore, this paper studies determinants of total debt ratios as well as determinants of short-term and long-term debt ratios.

The results indicate that most of the determinants of capital structure suggested by capital structure theories appear to be relevant for Swedish firms. But we also find significant differences in the determinants of long and short-term forms of debt. Due to data limitations, it was not possible decompose short-term debt and long-term debt into its elements, but the results suggest that future analysis of capital choice decisions should be based on a more detailed level.

I. INTRODUCTION

How do firms choose their capital structures? In his answer to this question, Prof. Stewart C. Myers, then President of American Finance Association in 1984 said that "we don't know". Despite decades of intensive research, and hundreds of papers after Modigliani and Millers' seminal work, surprisingly there is lack of consensus even today among the finance experts on this basic issue of corporate finance. In practice, it is observed that finance managers use different combinations of debt and equity. Academicians and practitioners alike have found it difficult to find out how a firm decides its capital structure in the perfect capital markets of the west as well as in the imperfect capital markets, as in India. This has led to an upsurge in research on company finance, particularly aimed at understanding how companies finance their activities and why they finance their activities in these specific ways. A practical question therefore is: What determines the capital structure? There are three major capital structure theories namely Trade-off Theory [Kraus, A., Litzenberger, R. (1973), Kim (1978)], Pecking-Order Theory [Myers (1984) and Myers and Majluf (1984)], Agency Cost Theory [Jensen and Meckling (1976)]. This paper undertakes study of firm level data of 3 major companies listed in BSE, taken from aviation sectors and attempts to identify main determinants of capital structure for the period 2006-07 to-2010-11 in the light of the above mentioned theories. My purpose of this exercise is to verify whether any particular theory can characterize Indian corporate behavior in determining capital structure. The central issue I will address is to examine empirically the existence of inter-firm and inter-industry differences in the capital structure of Indian firms and identify the possible sources of such variation in capital structure. Efforts will be made to find out the factors that determine the financing pattern of capital structure of Indian companies, particularly in the private sector.

II. REVIEW OF LITERATURE

In the light of the vast literature on capital structure issues, we do not try to provide a comprehensive review, and we do not discuss theory in detail. Rather, as a starting ground, we will give a brief outline of the major theoretical ideas and the corresponding empirical implications, and present some empirical studies on capital structure issues. The focus of our discussion is on (subjectively) selected recent empirical studies. Sound financing decisions of a firm basically should lead to an optimal capital structure.

Capital structure represents the proportion in which various long-term capital components are employed. Over the years, these decisions have been recognized as the most important decisions that a firm has to take. This is because of the fact that capital structure affects the cost of capital, net profit, earning per share, and dividend payout ratio and liquidity position of the firm. These variables coupled with a number of other factors determine the value of a firm. So, capital structure is a very important determinant of the value of a firm.

Franco Modigliani and Merton Miller (hereafter called MM) were the first to present a formal model on valuation of capital structure. In their seminal papers (1958,1963), they showed that under the assumptions of perfect capital markets, equivalent risk class, no taxes, 100 per cent dividend-payout ratio and constant cost of debt, the value of a firm is independent of its capital structure. When corporate taxes are taken into account, the value of a firm increases linearly with debt-equity (D/E) ratio because of interest payments being tax exempted. MM'S work has been at the center stage of the financial research till date. Their models have been criticized, supported, and extended over the last 50 years. David Durand (1963) criticized the model on the ground that the assumptions used by M-M are unrealistic. Solomon (1963) argued that the cost of debt does not always remain constant. Once the leverage level exceeds the accepted level, the probability of default in interest payments increases by which the cost of debt rises. Stiglitz (1969, 1974) proved the validity of the MM model under relaxed assumptions whereas Smith (1972), Krause and Litzenberger (1973), Baron (1974, 1975), and Scott (1976, 1977), supported the M-M model, but only under the conditions of risk free debt and costless bankruptcy. When bankruptcy has positive costs, there exists an optimal capital structure which is a trade off between tax advantage of debt and bankruptcy costs.

III. RESEARCH METHODOLOGY

Objective of the Study:

The proposed research is intended to examine the trend and pattern of financing the capital structure of Indian companies. The central issue we will address is to examine empirically the existence of inter firm and inter industry differences in the capital structure of Indian firms and identify the possible sources of such variation in capital structure in order to find out the factors that determine the financing pattern of capital structure of Indian companies, particularly in the private sector.

Source of Data:

For our study purpose, only secondary data is used which is sourced from the annual reports of the selected companies and websites www.moneycontrol.com and www.bseindia.com. The information relating to nature of industry, size, age, state and region, company background, value of total assets and annual financial statements of sample companies for the period of-2018-19 to 2022-2023 have been obtained from the same.

Hypothesis:

1) Null Hypothesis:

There is correlation between the Debt-Equity ratio and other selected variables.

2) Alternative Hypothesis:

There is no correlation between the Debt-Equity ratio and other selected variables

Determinants of capital structure:

Leverage:

The use of fixed cost in production process also affects the capital structure. The high operating leverage-use of higher proportion of fixed cost in the total costs over a period of time-can magnify the variability in future earnings. Both the bankruptcy cost theory and agency cost theory suggest the negative relation between operating leverage and debt level in capital structure. The bankruptcy cost theory contends the higher operating leverage, the greater the chance of business failure and the greater will be the weight of bankruptcy costs on enterprise financing decisions. Similarly, as the probability of bankruptcy increases, the agency problems related to debt become more aggravating.

Profitability:

Financial leverage has a positive effect on the firm's profitability. Taub, Nerlove, Baker, and Petersen and Rajan also found a positive relationship between capital structure and profitability of the firm. In addition, Roden and Lewellen found a positive relationship between profitability and total debt.

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Champion describes that the use of leverage is one way to improve the performance of the firm. Hadlock and James argue that companies prefer debt financing because they anticipate higher returns.

Size:

Many studies suggest that there is a positive relationship between firm size and leverage. Marsh indicates that large firms more often choose long-term debt, while small firms choose short term debt. The cost of issuing debt and equity is negatively related to firm size. In addition, larger firms are often diversified and have more stable cash flows, and so the probability of bankruptcy for larger firms is less, relative to smaller firms. This suggests that size could be positively related with leverage. The positive relationship between size and leverage is also viewed as support of asymmetric information.

Debt-Equity:

In financial terms, debt is a good example of the proverbial two-edged sword. Astute use of leverage (debt) increases the amount of financial resources available to a company for growth and expansion. The assumption is that management can earn more on borrowed funds than it pays in interest expense and fees on these funds. However, as successful as this formula may seem, it does require that a company maintain a solid record of complying with its various borrowing commitments.

Interest Coverage Ratio:

A ratio used to determine how easily a company can pay interest on outstanding debt. The interest coverage ratio is calculated by dividing a company's earnings before interest and taxes (EBIT) of one period by the company's interest expenses of the same period:

Data analysis:

The data has been analyzed using various statistical tools like correlation, regression. The data has been also analyzed using different test and statistical tools like SPSS. The figures for the purpose of the analysis have been collected from various available secondary sources like annual reports of the company, journals of the finance, and other periodicals.

Leverage

Year	Mphasis	Nelco	KPIT
2019	1.28	1.43	0.36
2020	1.26	1.64	0.073
2021	1.01	0.76	0.009
2022	1.87	0.77	0.010
2023	0.54	0.71	0.002

Correlation

	Mphasis	Nelco	KPIT
Mphasis	1		
Nelco	0.18691	1	
KPIT	0.136976	0.6261	1

Anova

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3.621285	2	1.810642	12.11098	0.001322	3.885294
Within Groups	1.794051	12	0.149504			
Total	5.415336	14				

The calculated value is 12.11 and table value is 3.89 which is lower than the calculated value. Hence the Null hypothesis is rejected and alternative hypothesis is accepted. Therefore the difference is significant.

Profitability

Year	Mphasis	Nelco	KPIT
2019	22.40	52.78	32.32
2020	27.72	35.69	18.68
2021	19.96	18.68	11.64
2022	16.71	7.74	20.16
2023	15	10.59	18.47

Correlation

	Mphasis	Nelco	KPIT
Mphasis	1		
Nelco	0.733093	1	
KPIT	0.175219	0.704348	1

Anova

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	76.50737	2	38.25369	0.261198	0.774396	3.885294
Within Groups	1757.458	12	146.4548			
Total	1833.965	14				

The calculated value is 0.26 and table value is 3.89 which is higher than the calculated value. Hence the Null hypothesis is acepted and alternative hypothesis is rejected. Therefore the difference is insignificant.

2021	3.74	1.58	2.90
2022	3.86	2.16	3.07
2023	3.98	2.29	3.18

Size

Year	Mphasis	Nelco	KPIT
2019	3.54	1.53	2.36
2020	3.64	1.58	2.98

Correlation

	Mphasis	Nelco	KPIT
Mphasis	1		
Nelco	0.922621	1	
KPIT	0.846717	0.70168	1

Anova

Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	9.29332	2	4.64666	52.50266	1.16E-06	3.885294
Within Groups	1.06204	12	0.088503			
Total	10.35536	14				

The calculated value is 52.50 and table value is 3.89 which is lower than the calculated value. Hence the Null hypothesis is rejected and alternative hypothesis is accepted. Therefore the difference is significant.

2021	0.04	0.31	-
2022	0.08	0.21	-
2023	0.02	0.16	-

Debt-Equity

Year	Mphasis	Nelco	KPIT
2019	0.07	0.78	0.11
2020	0.06	0.73	0.02

Correlation

	Mphasis	Nelco	KPIT
Mphasis	1		
Nelco	0.441407	1	
KPIT	1	1	1

Anova

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.423242	2	0.211621	5.376394	0.029091	4.256495
Within Groups	0.35425	9	0.039361			
Total	0.777492	11				

The calculated value is 5.38 and table value is 4.26 which is lower than the calculated value. Hence the Null hypothesis is rejected and alternative hypothesis is accepted. Therefore the difference is significant.

2021	28.78	3	12.13
2022	28.60	5.96	26.40
2023	26.53	9.71	25.90

Interest Coverage

Year	Mphasis	Nelco	KPIT
2019	146.74	1.36	15.95
2020	23.01	2.06	14.30

Correlation

	Mphasis	Nelco	KPIT
Mphasis	1		
Nelco	-0.48622	1	
KPIT	-0.23698	0.843919	1

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Anova

Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	5611.241	2	2805.62	2.860022	0.096449	3.885294
Within Groups	11771.74	12	980.9785			
Total	17382.98	14				

The calculated value is 2.86 and table value is 3.89 which is higher than the calculated value. Hence the Null hypothesis is accepted and alternative hypothesis is rejected. Therefore the difference is insignificant.

IV. CONCLUSION

The study indicates that service sector companies relies more on the equity and less on the debt, and vice versa in case of manufacturing companies. To sum up, Indian companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or of least resistance, preferring to raise equity as a financing means "of last resort". Hence internal funds are used first, and when that is depleted debt is issued, and when it is not sensible to issue any more debt, equity is issued. Equity capital as a source of fund is not preferred across the board. This shows that somewhere or other, the financing pattern of IT sector companies' is in line with the packing order theory as propounded by Myers and Majluf (1984). This gives a redeeming signal about the Indian corporate behavior which is found out to show more dependence on their internally generated funds than on external sources of finance.

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