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A Study on the Parameters of Capital Structure

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Abstract – Capital structure represents the proportion of debt capital and equity capital in the capital structure. What kind of capital structure is best for a firm is very difficult to define. The capital structure should be such which increases the value of equity share or maximizes the wealth of equity shareholders.

Debt and equity differ in cost and risk. As debt involves less cost but it is very risky securities whereas equity is expensive securities but these are safe securities from companies' point of view.

Debt is risky because payment of regular interest on debt is a legal obligation of the business. In case they fail to pay debt security holders can claim over the assets of the company and if firm fails to meet return of principal amount it can even go to liquidation and stage of insolvency.

Equity securities are safe securities from company's point of view as company has no legal obligation to pay dividend to equity shareholders if it is running in loss but these are expensive securities. The current paper highlights the parameters of capital structure.

Keywords: Parameters, Capital, Structure

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INTRODUCTION

Capital Structure is referred to as the ratio of different kinds of securities raised by a firm as long-term finance. The capital structure involves two decisions-

a. Type of securities to be issued are equity shares, preference shares and long term borrowings (Debentures).

b. Relative ratio of securities can be determined by process of capital gearing. On this basis, the companies are divided into two-

i. Highly geared companies - Those companies whose proportion of equity capitalization is small.

ii. Low geared companies - Those companies whose equity capital dominates total capitalization.

For instance - There are two companies A and B. Total capitalization amounts to be USD 200,000 in each case. The ratio of equity capital to total capitalization in company A is USD 50,000, while in company B, ratio of equity capital is USD 150,000 to total capitalization, i.e, in Company A, proportion is 25% and in company B, proportion is 75%. In such cases, company A is considered to be a highly geared company and company B is low geared company Capital structure of the business affects the profitability and financial risk. A best capital structure is the one which results in maximizing the value of equity shareholder or which brings rise in the price of equity shares. Generally companies use the concept of financial leverage to set up capital structure.

With debt fund companies funds and earnings increase because debt is a cheaper source of finance but it is very risky to involve more debt in capital structure. More debt will result in increase in earning only when rate of earnings of the company, i.e., return on investment should be more than rate of interest on debt. If rate of interest is more than the earnings or ROI of the company then more debt means loss for company.

To prove that owners of companies gain or earning per share is more when debt is involved in the capital structure we will take following example in which company is using all equity capital in one situation, then include some debt along with equity in second situation and then add more debt along with equity in third situation.

Situation I:

Total Capital = Rs 50 Lakhs

Equity Capital = Rs 50 Lakhs (5, 00,000 shares @ Rs 10 each)

Debt = Nil

Tax rate = 30% p.a.

Earnings before interest and tax (EBIT) = Rs 7, 00,000

Situation II:

Total Capital = Rs 50 Lakhs

Equity Capital = Rs 40 Lakhs (4, 00,000 shares @ Rs 10 each)

Debt = Rs 10 Lakhs

Tax rate = 30% p.a.

Interest on debt = 10%

Earnings before interest and tax (EBIT) = Rs 7, 00,000

Situation III:

Total Capital= Rs 50 Lakhs

Equity Capital = Rs 30 Lakhs (3, 00,000 shares @ Rs 10 each)

Debt= Rs 20 Lakhs

Tax rate = 30% p.a.

Interest on debt = 10%

Earnings before interest and tax (EBIT) = Rs 7, 00,000

Let us now calculate earnings per share in all the situations.

	Situation I	Situation II	Situation III
EBIT (Earnings Before Interest and Tax) Less: Interest	7,00,000 0	7,00,000 -1,00,000 ADVERTISEMENTS: (10% of 10 lakhs)	7,00,000 -2,00,000 (10% of 20 lakhs)
EBT (Earnings Before Tax) Less: Tax (30% of EBT)	7,00,000 -2,10,000 (30% of 7 lakhs)	6,00,000 -1,80,000 (30% of 6 lakhs)	5,00,000 -1,50,000 (30% of 5 lakhs)
EAT (Earning After Tax)	4,90,000	4,20,000	3,5000
EPS (EAT / No. of Equity Shares)	0.98 [4,90,000/ 5,00,000]	1.05 [4,20,000/ 4,00,000]	1.16 [3,50,000/3,00,000]

If we compare the above table we can see that in situation III equity shareholders get maximum return followed by II situation and least earning in I situation. Hence it is proof that more debt brings more income for owners in the capital structure.

But this statement holds true only till rate of earning of capital, i.e., return on investment of the company is more than the rate of interest charged on debt. As we can see return on investment in this example,

=EBIT/ Total Investment x 100 = 7, 00,000 / 50, 00,000 x 100

= 14% which is more than rate of interest.

Return of investment is 14% and rate of interest is 10%

14% > 10% i.e., ROI > Rate of Interest

If return on investment is less than the rate of interest then equity shareholders lose by including more debt. Then more of equity is beneficial for owners of company to prove this. Let us take an example where return on investment is less than rate of interest.

Situation I:

Total Capital= 50, 00,000

Equity Capital= 50, 00,000 (5, 00,000 shares @ Rs 10 each)

Debt= Nil

Tax Rate= 30% p.a.

Interest Rate= 10% p.a.

Earnings before Interest and Tax = Rs 3, 00,000

ROI= 3, 00,000/50, 00,000×100=6%

Situation II:

Total Capital=50, 00,000

Equity Capital= 40, 00,000 (4, 00,000 shares @ Rs 10 each)

Debt=10, 00,000

Tax Rate=30% p.a.

Interest Rate= 10% P.a.

Earnings before Interest and Tax = Rs 3, 00,000

ROI = 3, 00,000 / 50, 00,000 x 100 = 6%

Situation III:

Total Capital = 50, 00,000

Equity Capital = 30, 00,000 (3, 00,000 shares @ Rs 10 each)

Debt = 20, 00,000

Tax Rate=30% p.a.

Interest Rate= 10% P.a.

Earnings before Interest and Tax = Rs 3, 00,000

ROI = 3, 00,000 / 50, 00,000 x 100 = 6%

Let us now calculate earnings per share in all the situations.

	Situation I	Situation II	Situation III
EBIT (Earnings Before Interest and Tax) Less: Interest	3,00,000 0	3,00,000 – 1,00,000 (10% of 10 lakhs)	3,00,000 – 2,00,000 (10% of 20 lakhs)
EBT (Earnings Before Tax) Less: Tax (30% of EBT)	3,00,000 – 90,000 (30% of 3 lakhs)	2,00,000 – 60,000 (30% of 2 lakhs)	1,00,000 – 30,000 (30% of 1 lakh)
EAT (Earning After Tax)	2,10,000	1,40,000	70,000
EPS (EAT/ No. of Equity Shares)	0.42 [2,10,000/ 5,00,000]	0.35 [1,40,000/4,00, 000]	0.23 [70,000/3,00,000]

Hence proved that in case return of investment is less than rate of interest the equity shareholders get less earning when debt is included in the capital structure.

In other words we can say that during boom period we must have more of debt and less of equity shares in capital structure and during depression when income or return is less we should have more of equity and less of debt in the capital structure.

PARAMETERS OF CAPITAL STRUCTURE:

The various factors which influence the decision of capital structure are:

1. Cash Flow Position:

The decision related to composition of capital structure also depends upon the ability of business to generate enough cash flow.

The company is under legal obligation to pay a fixed rate of interest to debenture holders, dividend to preference shares and principal and interest amount for loan. Sometimes company makes sufficient profit but it is not able to generate cash inflow for making payments.

The expected cash flow must match with the obligation of making payments because if company fails to make fixed payment it may face insolvency. Before including the debt in capital structure company must analyse properly the liquidity of its working capital.

A company employs more of debt securities in its capital structure if company is sure of generating enough cash inflow whereas if there is shortage of cash then it must employ more of equity in its capital structure as there is no liability of company to pay its equity shareholders.

2. Interest Coverage Ratio (ICR):

It refers to number of time companies earnings before interest and taxes (EBIT) cover the interest payment obligation.

ICR= EBIT/ Interest

High ICR means companies can have more of borrowed fund securities whereas lower ICR means less borrowed fund securities.

3. Debt Service Coverage Ratio (DSCR):

It is one step ahead ICR, i.e., ICR covers the obligation to pay back interest on debt but DSCR takes care of return of interest as well as principal repayment.

$$DSCR = \frac{\text{Profit after tax + Depreciation + Interest + Non Cash Exp. written off}}{\text{Preference Dividend + Interest + Repayment obligation}}$$

If DSCR is high then company can have more debt in capital structure as high DSCR indicates ability of company to repay its debt but if DSCR is less than company must avoid debt and depend upon equity capital only.

4. Return on Investment:

Return on investment is another crucial factor which helps in deciding the capital structure. If return on investment is more than rate of interest then company must prefer debt in its capital structure whereas if return on investment is less than rate of interest to be paid on debt, then company should avoid debt and rely on equity capital. This point is explained earlier also in financial gearing by giving examples.

5. Cost of Debt:

If firm can arrange borrowed fund at low rate of interest then it will prefer more of debt as compared to equity.

6. Tax Rate:

High tax rate makes debt cheaper as interest paid to debt security holders is subtracted from income before calculating tax whereas companies have to pay tax on dividend paid to shareholders. So high end tax rate means prefer debt whereas at low tax rate we can prefer equity in capital structure.

7. Cost of Equity:

Another factor which helps in deciding capital structure is cost of equity. Owners or equity shareholders expect a return on their investment i.e., earning per share. As far as debt is increasing earnings per share (EPS), then we can include it in capital structure but when EPS starts decreasing with inclusion of debt then we must depend upon equity share capital only.

8. Floatation Costs:

Floatation cost is the cost involved in the issue of shares or debentures. These costs include the cost of advertisement, underwriting statutory fees etc. It is a major consideration for small companies but even large companies cannot ignore this factor because along with cost there are many legal formalities to be completed before entering into capital market. Issue of shares, debentures requires more formalities as well as more floatation cost. Whereas there is less cost involved in raising capital by loans or advances.

9. Risk Consideration:

Financial risk refers to a position when a company is unable to meet its fixed financial charges such as interest, preference dividend, payment to creditors etc. Apart from financial risk business has some operating risk also. It depends upon operating cost; higher operating cost means higher business risk. The total risk depends upon both financial as well as business risk.

If firm's business risk is low then it can raise more capital by issue of debt securities whereas at the time of high business risk it should depend upon equity.

10. Flexibility:

Excess of debt may restrict the firm's capacity to borrow further. To maintain flexibility it must maintain some borrowing power to take care of unforeseen circumstances.

11. Control:

The equity shareholders are considered as the owners of the company and they have complete control over the company. They take all the important decisions for managing the company. The debenture holders have no say in the management and preference shareholders have limited right to vote in the annual general meeting. So the total control of the company lies in the hands of equity shareholders.

If the owners and existing shareholders want to have complete control over the company, they must employ more of debt securities in the capital structure because if more of equity shares are issued then another shareholder or a group of shareholders may purchase many shares and gain control over the company.

Equity shareholders select the directors who constitute the Board of Directors and Board has the responsibility and power of managing the company. So if another group of shareholders gets more shares than chance of losing control is more.

Debt suppliers do not have voting rights but if large amount of debt is given then debt-holders may put certain terms and conditions on the company such as restriction on payment of dividend, undertake more loans, investment in long term funds etc. So company must keep in mind type of debt securities to be issued. If existing shareholders want complete control then they should prefer debt, loans of small amount, etc. If they don't mind sharing the control then they may go for equity shares also.

12. Regulatory Framework:

Issues of shares and debentures have to be done within the SEBI guidelines and for taking loans. Companies have to follow the regulations of monetary policies. If SEBI guidelines are easy then companies may prefer issue of securities for additional capital whereas if monetary policies are more flexible then they may go for more of loans.

13. Stock Market Condition:

There are two main conditions of market, i.e., Boom condition. These conditions affect the capital structure specially when company is planning to raise additional capital. Depending upon the market condition the investors may be more careful in their dealings.

During depression period in the market business is slow and investors also hesitate to take risk so at this time it is advisable to issue borrowed fund securities as these are less risky and ensure fixed repayment and regular payment of interest but if there is Boom period, business is flourishing and investors also take risk and prefer to invest in equity shares to earn more in the form of dividend.

14. Capital Structure of other Companies:

Some companies frame their capital structure according to Industrial norms. But proper care must be taken as blindly following Industrial norms may lead to financial risk. If firm cannot afford high risk it should not raise more debt only because other firms are raising.

CONCLUSION

A capital structure arbitrageur seeks to profit from differential pricing of various instruments issued by one corporation. Consider, for example, traditional bonds, and convertible bonds. The latter are bonds that are, under contracted-for conditions, convertible into shares of equity. The stock-option component of a convertible bond has a calculable value in itself. The value of the whole instrument *should* be the value of the traditional bonds *plus* the extra value of the option feature. If the spread (the difference between the convertible and the non-convertible bonds) grows excessively, then the capital-structure arbitrageur will bet that it will converge.

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