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IMPACT OF NON-DEBT TAX SHIELDS ON CAPITAL STRUCTURE

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Abstract

The objective of this study to investigate the impact of Non-debt tax shield on capital structure in cement companies, India. Over six year from 2007 to 2012 periods the research concentrate on that study. Capital structure refers to total liability of the company such as, share capital (preference and equity share), debts, retain earnings and others long term source. Sample criteria for selecting net profit margin based 5, 10, 15, 20, 25 randomly selected the cement company. Purposive sampling technique was used to decide five Indian cement companies. The empirical evidence proves through canonical correlation result reveal that depreciation by total assets ratio are high relationship with total debt and debt to equity ratio but, investment opportunity by total assets there is no relationship with total debt, short term debt, long term debt, gearing and debt to equity ratios.

Keywords :*leverage, non-debt tax shield, and cement companies.*

Short Profile

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INTRODUCTION:

Capital structure refers to total liability of the company such as, share capital (preference and equity share), debts, retain earnings and others long term source. The capital structure is major division of debt and equity fund. John Jacob (2014) debt capital is a cheaper source of fund compared to equity fund. The debt capital does not result indilutin of control the interest on debt but that is tax deductionable on the other hand, high level of debt financing becomes risk during periods of low earning. The debt holder may impose limitations on the firm additional borrowing income distribution and some time on business activities as well as the larger the use of debt greater will be the financing risk. The proposition of debt funding is measured by leverages and gearing, Pervaiz et, al., (2012). Business is money centric. Any movement in business, it is required finance for meeting both short-term and long-term needs. Short-term fund are required to meet the working capital needs of the business long term fund are require to meet the permanent capital investment. Ajanthan (2013) debt financing offers more benefit to an organisation as compared to equity income financing since it gets tax shield on interest paid on debt while equity income is charged with tax. DeAngelo & Masulis (1980), Non-debt tax shields such as, tax deduction for depreciation and investment tax credits are measured to be the substitutes for tax benefits of debt financing. Therefore non-debt tax shields are expected to have negative impact on leverage. Company are using tax deduction tools is investment and depreciation through debt. For using non-debt tax shield, companies can use the charge that is subject to tax laws such as costs of Propaganda and deprecation,

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decrease tax rate and debt ratio too.

STATEMENT OF PROBLEM

The choice of the combination of Debt-equity funding is made by the managers of the business. They decide whether to borrow, plough back the profits the business has made, the owners to raise more funds to expand the business, to increase the shareholders payout of returns on their investment. Research focus on how the return on borrowed funds compared with the return on assets financed was also carried out to determine, whether the return on assets warranted the borrowing. Debts choice is very critical and unpredictable problem in company financial management. further, debt is the tax shield instrument and also depreciation and investment is substitute for tax shield benefit, but this compound is not repayable amount. Hence, depreciation and investment opportunity is may be determinants factor or not in capital structure of a firm. So, the managers to try to which factors are most crucial and they have identified to give more concentrate.

Capital Structure Measured Ratio and Authors

Total Debt, Short- term debt, long- term debt, Debt- equity ratio, Capital gearing (gearing) are defined as dependent variable and Non-debt tax shield (NDTS) is defined as independent variable.

Total debt ratio:

Total debt refers to both long term and short term debt is called total debt. Source of fund for which the firm has to pay a fixed cost or fixed return may be termed as leverage. Leverage refers to the percentage of assets financed by debt. John Jacob (2015) mentioned that Total debt ratio accepted level ranged between 30 to 40 percent is best level. Titman and Wessel (1998), PATRIK BAUER (2004), Chandrasekara Mishra (2011), Amsavani and Gomathi (2012) and John Jacob (2015) they are used total debts ratio in their study. Followed defined ratio:

$$\text{Total Debt} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

Debt/ equity ratio:

The debt-to-equity ratio is a measure of the relationship between the capital contributed by creditors and contributed by shareholders. A high debt/equity ratio means that a company has been aggressive in financing its growth with debt. This can result in volatile earnings as a result of the additional interest expense. Titman and Wessel (1998), PATRIK BAUER (2004) Wan Mansor and Rozimah Zakaria (2006), Aloy Niresh (2012), Pervaiz et, al., (2012), Debt/ equity ratio is used their study. Followed defined ratio:

$$\text{Debt/ Equity ratio} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

Capital gearing (gearing) ratio:

A company with high gearing is more vulnerable to downturns in the business cycle because, decrease the sale and also affect the capital structure of firm or leveraged firm. A larger proportion of equity provides a cushion and is seen as a measure of financial strength. On other hand, Gearing is a measure of a company's financial leverage and shows the extent to which its operations are funded by lenders versus shareholders. The term gearing refers to the ratio between a company stock price and the price of its warrants. Wan Mansor and Rozimah Zakaria (2006), Capital gearing (gearing) ratio is used their study

$$\text{Capital gearing (gearing)} = \frac{\text{Preference shares} + \text{Total Debt}}{\text{Total capital} + \text{short term borrowing}}$$

Short- term debt:

Debt with a short maturity, usually one year or less year liability is called short term debt. The value of this account is very important when determining a company's financial health. the company may be in poor financial health and does not have enough cash to pay off its short-term debts. Although short-term debts

are due within a year, there may be a portion of the long-term debt included in this account. This portion pertains to payments that must be made on any long-term debt throughout the year. Titman and Wessel (1998), Patrick Hutchinson (2003), Han-Suck Song (2005) they are used Short- term debt ratio in their study

$$\text{Short term ratio} = \frac{\text{Short term debt}}{\text{Total assets}}$$

Long- term debt

A company held the loans and financial obligations lasting one or more year. Long-term debt for a company would include any financing or leasing obligations that are to come due in a greater than 12-month period. Such obligations would include company bond issues or long-term leases that have been capitalized on a firm's balance sheet. Titman and Wessel (1998), Patrick Hutchinson (2003), Han-Suck Song (2005), they are used long- term debt ratio in their study

$$\text{Long term ratio} = \frac{\text{Long term debt}}{\text{Total assets}}$$

Non-debt tax shield (NDTS):

Non-debt tax deduction substitutes for tax shield benefit of debt financing DeAngelo & Masulis (1980). Titman and Wessel (1998), Amsavani and Gomathi (2012), John Jacob (2015) they are used Non-debt tax shield in their study. Non-debt tax shield include depreciation and investment tax credit. So the researcher is measured two type of Non-debt tax shield. Which is most powerful determinates the capital structure. Followed defined ratios:

$$\text{Deprciation ratio} = \frac{\text{Depreciation}}{\text{Total assets}}$$

And

$$\text{Investment oppotunity ratio} = \frac{\text{Depreciation}}{\text{Total assets}}$$

RESEARCH METHODOLOGY

The objective of this study seeks to impact of Non-debt tax shield on capital structure in cement companies, India. The total capacity is spread over 129 plants, which is owned by 54 major companies across the country. But 25 companies survey the regular financial market in India. Sample criteria for selecting net profit margin based 5, 10, 15, 20, 25 randomly selected the cement company. Purposive sampling technique was used to decide five Indian companies namely Ambuja cement, JK Cement, India cement, Shree cement, Prism cement. Secondary data were analyses with help of STATA 10. The canonical correlation analysis has applied to identified that relationship between NDTS and capital structure,

OBJECTIVE OF THE STUDY

The objective of this study seeks to which leverage measurement best and non debt tax shield influence factor in cement companies in India. Over six year from 2007 to 2012 periods the research concentrate on that study.

ANALYSIS AND DISCUSSION

Relationship between NDTS on capital structure

Table 1 explains the relationship between NDTS on capital structure. In this case there are two functions because the number of canonical functions is equal to the number of variables in the smaller of the u indicate that dependent variable and v indicate that independent variable sets. That is, the dependent variables include total debt, short-term debt, long term debt, gearing, debt to equity ratio and the v independent variables include depreciation to total asset ratio and investments opportunity to total assets ratio. The standard error of each test is calculated as the average conditional standard error across all compounds. The unstandardized or raw canonical coefficients are the weights of the

dependent variables and the independent variables, which maximize the correlation between the two sets of variables. That is, the unstandardized canonical coefficients indicate how much each variable in each set is weighted to create the linear combinations that maximize the correlation between the two sets. The unstandardized canonical coefficients are interpreted in a manner analogous to interpreting unstandardized regression coefficients. For the variable total assets, a one unit increase leads to a 14.902 increase in the first canonical variation of the independent variables set, when all of the other variables are held constant. At the bottom of the tables canonical correlation coefficients (Rc) are reported for each function. The strength of the relationship between the pairs of variates is reflected by the CCA coefficient (Rc). For the first function, Rc = 0.8349. For the second function, Rc = 0.3569.

Assessing Overall Model Fit test the Statas results includes the multivariate tests for each function. First, Wilk's lamda and corresponding F-tests, evaluate the canonical correlations coefficients for all functions are zero. Hypothesis is rejected. It is found that depreciation by total assets ratio are high relationship with total debt and debt to equity ratio but, investment opportunity by total assets there is no relationship with total debt, short term debt, long term debt, gearing and debt to equity ratios. Discussiions as follows;

Table 1 relationship between NDTS on capital structure

```
. canon (totaldebt shortdebt longdebt gear debttoequity) (depreciation investment)

Linear combinations for canonical correlations          Number of obs =         30
```

	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
u1						
totaldebt	3.308967	1.006465	3.29	0.003	1.250516	5.367418
shortdebt	-1.346612	1.499334	-0.90	0.377	-4.413095	1.719871
longdebt	.2291079	.3475421	0.66	0.515	-.4816955	.9399114
gear	-.5641923	.5129591	-1.10	0.280	-1.613312	.4849269
debttoequity	7.194463	1.179532	6.10	0.000	4.782049	9.606878
v1						
depreciation	14.90271	1.967128	7.58	0.000	10.87948	18.92594
investment	.2248286	.1597163	1.41	0.170	-.101828	.5514852
u2						
totaldebt	3.862011	3.996917	0.97	0.342	-4.312602	12.03662
shortdebt	-8.152137	5.954223	-1.37	0.181	-20.32989	4.025617
longdebt	-1.080169	1.380175	-0.78	0.440	-3.902943	1.742605
gear	2.47923	2.037086	1.22	0.233	-1.687079	6.645539
debttoequity	1.513659	4.684211	0.32	0.749	-8.066629	11.09395
v2						
depreciation	4.285421	7.811946	0.55	0.587	-11.6918	20.26264
investment	-1.238788	.6342727	-1.95	0.061	-2.536021	.0584456

```
                                        (Standard errors estimated conditionally)

Canonical correlations:
  0.8349  0.3569

Tests of significance of all canonical correlations
```

	Statistic	df1	df2	F	Prob>F	
Wilks' lambda	.264322	10	46	4.3473	0.0003	e
Pillai's trace	.824453	10	48	3.3664	0.0022	a
Lawley-Hotelling trace	2.44741	10	44	5.3843	0.0000	a
Roy's largest root	2.30147	5	24	11.0471	0.0000	u

Source: secondary data computed

Mounther and Ramesh (2003), Found that non-debt tax shield is a positive and significant determinant of capital structure in non-taxed economies. Liaqat Ali (2011), the results show that size, non-debt tax shields, and tangibility have highly positive relationship with the leverage ratio. Non-debt tax shield (NDTS) is defined as a ratio of total annual depreciation to total assets. John Jacob (2015), It is found that the Size, NDTS, Liquidity are having positively influenced the short term debt. Karim Ben Khediri, (2011), Firms have incentives to use more debt in order to benefit from tax shield due to interest deductibility. John Jacob (2015), It is found that the Size, NDTS, Liquidity and Uniqueness are having positively influenced the long-debt ratio. Modigliani and Miller (1963), companies should aim towards entire debt financing due to tax deductions associated with interest payments on debt. John Jacob (2015), it is found that the NDTS and liquidity are having positively influenced the total debt.

CONCLUSION

Capital structure refers to total liability of the company such as, share capital (preference and equity share), debts, retain earnings and others long term source. This study investigates that impact of Non debt tax shield on capital structure: empirical evidence from cement companies in India. Survey analysis periods of six financial years from 2007 to 2012 data are calculated. Sample criteria for selecting net profit margin based 5, 10, 15, 20, 25 randomly selected the cement company. Purposive sampling technique was used to decide five Indian companies. It is found that depreciation by total assets ratio are high relationship with total debt and debt to equity ratio but, investment opportunity by total assets there is no relationship with total debt, short term debt, long term debt, gearing and debt to equity ratios.

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