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Determinants of Capital Structure: An Analysis of Leverage Measures and Their Determinants for Indian Firms

Palakh Jain[1], Chavi Asrani[2], Tinu Jain[3]
[1]*Assistant Professor, Bennett University*
[2]*Phd Scholar, IIT-Delhi*
[3]*Assistant Professor, IIM*
Corresponding Author: Palakh Jain

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I. Introduction

Capital structure pertains to the extent of leverage of the firm. In recent years, a number of theories have been proposed to explain the variation in debt ratios across firms. The theories suggest that firms select capital structures depending on attributes that determine the various costs and benefits associated with debt and equity financing. This paper attempts to look at the capital structure of Indian companies using econometric techniques on data gathered from Prowess Database.

II. Theory Of Capital Structure

Modigliani-Miller Proposition

The Modigliani-Miller proposition (of Franco Modigliani, Merton Miller) forms the basis for modern thinking on capital structure. The basic theorem states that, in the absence of taxes, bankruptcy costs, and asymmetric information, and in an efficient market, the value of a firm is unaffected by how that firm is financed. It does not matter if the firm's capital is raised by issuing stock or selling debt. It does not matter what the firm's dividend policy is. Therefore, the Modigliani-Miller proposition is also often called the capital structure irrelevance principle.

This proposition however fails to capture the reality on account of the underlying assumptions.
In literature, the following are the two theories to model the capital structure of a firm:

1. **Trade off theory**: Firms choose target debt ratios by trading off the tax benefits of debtagainst the costs of bankruptcy and financial distress.

2. **Pecking-order theory**: Financing adapts to mitigate created by differences in informationbetween insiders (managers) and outside decisions. The firm fist turns to the financing sources where differences in information matter least.

Apart from these, Modigliani Miller Theory and Agency Theory are also used to explain the optimal financing decisions of the firms, but these shall not be covered as a part of the paper.

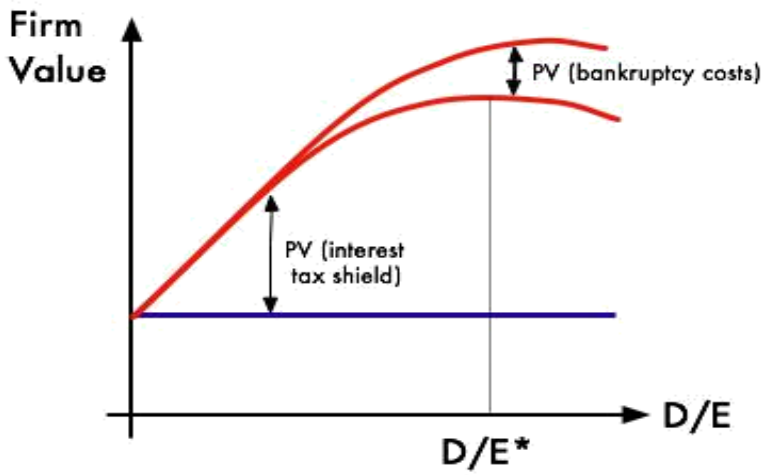
III. Trade- Off Theory

The trade-off theory of capital structure refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. The classical version of the hypothesis goes back to Kraus and Litzenberger who considered a balance between the dead-weight costs of bankruptcy and the tax saving benefits of debt. Often agency costs are also included in the balance. This theory is often set up as a competitor theory to the Pecking Order theory of capital structure which will be discussed later.

An important purpose of the theory is to explain the fact that corporations usually are financed partly with debt and partly with equity. It states that there is an advantage to financing with debt, the tax benefit of debt and there is a cost of financing with debt, the costs of financial distress including bankruptcy costs of debt and non-Bankruptcy costs (e.g. staff leaving, suppliers demanding disadvantageous payment terms, bondholder/stockholder infighting, etc). The marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing.

The empirical relevance of the trade-off theory has often been questioned. Miller (1977) compared this balancing as akin to the balance between horse and rabbit content in a stew of one horse and one rabbit. Taxes are large and they are sure, while bankruptcy is rare and, according to Miller, it has low dead-weight costs. Accordingly he suggested that if the trade-off theory were true, then firms ought to have much higher debt levels than we observe in reality.

Welch has argued that firms do not undo the impact of stock price shocks as they should under the basic trade-off theory and so the mechanical change in asset prices that makes up for most of the variation in capital structure. Despite such criticisms, the trade-off theory remains the dominant theory of corporate capital structure. Dynamic version of the model generally seem to offer enough flexibility in matching the data.



The figure shows how as the debt-equity ratio (ie leverage) increases, there is a trade-off between the interest tax shield and bankruptcy, causing an optimum capital structure, D/E*.

TRADE-OFF THEORY
Conforms with value maximizing construct
Assumes a relatively static capital structure
Considers the influence of taxes, transaction costs, and financial distress
Ignores the impact of capital market "signals"
Ignores concerns regarding proprietary data
Cannot explain many real-world practices

Pecking- order Theory

Pecking order theory of capital structure states that firms have a preferred hierarchy for financing decisions. The highest preference is to use internal financing (retained earnings and the effects of depreciation) before resorting to any form of external funds. Internal funds incur no flotation costs and require no additional disclosure of proprietary financial information that could lead to more severe market discipline and a possible loss of competitive advantage. If a firm must use external funds, the preference is to use the following order of financing sources: debt, convertible securities, preferred stock, and common stock (Myers, 1984) This order reflects the motivations of the financial manager to retain control of the firm (since only common stock has a "voice" in management), reduce the agency costs of equity, and avoid the seemingly inevitable negative market reaction to an announcement of a new equity issue. (Hawawini & Viallet, 1999)

Implicit in pecking order theory are two key assumptions about financial managers. The first of these is asymmetric information, or the likelihood that a firm's managers know more about the company's current earnings and future growth opportunities than do outside investors. There is a strong desire to keep such

information proprietary. The use of internal funds precludes managers from having to make public disclosures about the company's investment opportunities and potential profits to be realized from investing in them. The second assumption is that managers will act in the best interests of the company's existing shareholders. The managers may even forgo a positive-NPV project if it would require the issue of new equity, since this would give much of the project's value to new shareholders at the expense of the old (Myers & Majluf, 1984)

Pecking order theory explains these observed and reported managerial actions while the trade-off model cannot. It also explains stock market reactions to leverage-increasing and leverage-decreasing event, which the trade-off model cannot.

Measures of Leverage

In this paper, the primary analysis will be done by evaluating the accounting ratios that describe capital structure (debt ratios, coverage ratios etc) and their correlations with various other factors that can have a bearing on the capital structure of the firm. First, we go on to describe the various measures of leverage that we propose to use in our analysis. In literature, there are many measures of leverage that are used. The use is dependent on the question they are made to address. For example, the agency problems associated with debt mainly relate to how the firm has been financed in the past and therefore on the relative claims on firm value divided between equity and debt. In this case, the ***stock of debt relative to firm value*** can be a useful measure of leverage and is one of the most widely used measures of leverage.

In other circumstances, as proposed by Aghion and Bolton, leverage is seen as a means of transferring control when the firm is economically distressed, from shareholders (or their fiduciaries) to bondholders (or their fiduciaries). Here, the question to be addressed is whether the firm can meet its fixed payments. Hence, a flow measure like the ***interest coverage ratio*** is a more relevant measure of leverage.

We proceed to discuss the various ratios we plan to use in our analysis and the relative accuracy of each vis-à-vis others.

The broadest definition of stock leverage is the ***ratio of total liabilities to total assets***. This can be used as a proxy for what is left for shareholders in case of liquidation. However, it fails to capture whether the firm is at risk of default in the near future. Also, since total liabilities also includes items like accounts payable (which may be used for transactions purposes rather than for financing), the amount of leverage may be overstated.

A more refined definition of financial leverage is provided by the ***ratio of debt (both short termand long term) to total assets***. Although a good measure of leverage, the ratio fails to incorporatethe fact that there are some assets that are offset by specific non debt liabilities. Given that the

level of accounts payable and accounts receivable may jointly be influenced by industry considerations, it seems appropriate to use a measure of leverage unaffected by the gross level of trade credit.

Another measure is the ***ratio of total debt to net assets***, where net assets are total assets less accounts payable and other liabilities. Though this measure is not influenced by trade credit, it is affected by factors that have nothing to do with financing. For example, assets held against pension liabilities may decrease this measure. Hence, the ratio of total debt to capital (defined as total debt plus equity) can capture the effects of past financing decisions in the best way possible.

The ***coverage ratio i.e. the ratio of earnings before interest and taxes (EBIT) to interestexpense*** is a measure of the risk which assesses that equity holders will not be able to make fixedpayments and will have to give up control. This measure is apt if we believe that investments equal in magnitude to depreciation. In cases when no such investments are needed, a better measure of the firm's ability to service debt is the ratio of earnings before interest, taxes, and depreciation (EBITDA) to interest expense. However, both these measures have a common problem. They assume that short term liabilities like accounts payable and short term debt will be rolled over. This need not be true in times of distress. Furthermore, an inability to make fixed payments at low levels of debt may have very different implications for the control of the firm than an inability to make those payments at high levels of debt. The former is more likely to lead to liquidation while the latter may lead to reorganization (especially if the debt is closely held). Yet another problem is that these measures are highly sensitive to income fluctuations.

For our analysis, we will use the following measures of debt:

1. Ratio of long term debt to equity
2. Ratio of total debt to total assets
3. Interest Cover

Determinants of Leverage

Leverage may be significantly affected by a variety of other factors. For instance, leverage increases with fixed assets, non-debt tax shields, investment opportunities and firm size and decreases with volatility, advertising expenditure, probability of bankruptcy, profitability and uniqueness of the product. For this paper, we focus on four factors: tangibility of assets (the ratio of fixed to total assets), firm size, and profitability.

Theories of capital structure suggest how some of these factors might be correlated with leverage. If a large fraction of a firm's assets are tangible, then assets should serve as collateral, diminishing the risk of the lender suffering the agency costs of debt (like risk shifting). They should also retain more value in liquidation. Hence, the greater the proportion of tangible assets on the balance sheet (fixed assets divided by total assets), the more willing should lenders be to supply loans. Correspondingly, the leverage should be higher.

According to Myers, highly levered companies are more likely to pass up profitable ***investmentopportunities***. Hence, firms expecting high future growth should use a greater amount of equityfinance. As suggested in Myers (1977), the ratio of the market value of assets to the book value of assets can be used as a proxy for growth opportunities. However, due to paucity of data, the same has not been considered.

The effect of ***size on equilibrium leverage*** is more ambiguous. Larger firms tend to be more diversified and fail less often. Hence, size (taken to be represented by net sales/operating income) may be an inverse proxy for the probability of bankruptcy. If so, size should have a positive impact on the supply of debt. At the same time, size may also be a proxy for the information outside investors have, which should increase their preference for equity relative to debt. Since both sides can be reasoned out appropriately, the correlation of the measures of debt with the size of the firm would provide evidence of the positive or negative effect of the size of the firm on its debt structure.

As far as ***profitability*** being a factor affecting leverage, the literature offers conflicting theoretical predictions. According to Myers and Majluf (1984), there should be a negative relationship, because firms will prefer to finance with internal funds rather than debt. On the other hand, Jensen (1986) predicts a positive relation if the market for corporate control is effective and forces the firms to commit to paying out cash by levering up. If it is ineffective, however, managers of profitable firms prefer to avoid the disciplinary role of debt, which would lead to a negative correlation between profitability and debt. On the supply side, suppliers are more willing to lend to firms with current cashflows. Profitability is measured as cashflow from operations normalized by the book value of assets. In the case of profitability as well, both sides can be reasoned out appropriately by both schools of thought, the correlation of the measures of debt with probability would provide evidence of the positive or negative effect of probability on its debt structure.

Finally, there is the possibility that the correlations may stem for other reasons than firms optimally choosing capital structure. For instance, if firms typically issue stock when their price is high relative to book value, a negative correlation between the market-to-book ratio and leverage may be observed.

Now that we have set what we want to derive, we proceed on to analyzing the data collected for Indian firms and observe the relation of the various determinants discussed above with the measures of debt discussed previously.

IV. Data Analysis

With the background on various leverage proxies and the factors that affect leverage, we now proceed to have a look at the sample data. Our sample data (2005-2007) consists of various ratios discussed above for Indian firms with a clear bifurcation into:

1. Asset light companies – Software services, Financial services etc (Appendix A)
2. Asset heavy companies– Manufacturing, Heavy engineering etc (Appendix B)

Since, the leverage in both these classes would be different because of the difference of factors like tangibility of assets, size etc, we opine that these two classes be dealt separately in order to get a clearer picture of the affect of these factors on leverage of firms.

Average analysis (Year 2007) for both the company types brings out the following figures:

For asset heavy companies:
Average ratio of fixed asset to total assets ~ 62
Average ratio of long term debt to total assets ~ 2.76
Average ratio of long term debt to equity ~ 0.42
For asset light companies:
Average ratio of fixed asset to total assets ~ 26.75
Average ratio of long term debt to total assets ~ 0.20

Average ratio of long term debt to equity ~ 0.10

From the data above it is easy to identify tangibility as a determinant of debt. Asset heavy companies have a comparatively higher proportion of fixed assets tend to be more leveraged than their asset light counterparts. As shown above, the ratios of long term debt to total assets and long term debt to equity for asset light companies are miniscule compared to asset heavy companies. ***Hence, tangibility (ratio of fixed assets to total assets) turns appears to be a featurefor the highly leveraged firms in the Indian context as well***.

Averages tend to be affected by the large values, so for the rest of the determinants, we focus our attention to correlations between the various determinants of leverages and the measures of leverages.

The following correlations were observed:

Asset light companies (Average of correlations for 3 years)

	Long term debt/Equity	Total Debt/total Assets	Interest Cover	Profitability	Net Sales
Long term debt/Equity	1				
Total Debt/total Assets	0.949148674	1			
Interest Cover	-0.329840078	-0.261975731	1		
Profitability	-0.397102867	-0.282806345	0.534972099	1	
Net Sales	-0.365444025	-0.283380769	**0.74959017**	0.690465227	1

Asset Heavy Companies (Average of correlations for 3 years)

	Long term debt/Equity	Total Debt/Total Assets	Interest Cover	Profitability	Net Sales
Long term debt/Equity	1				
Total Debt/total Assets	0.270433867	1			
Interest Cover	-0.280336355	-0.096579149	1		
Profitability	-0.287910351	-0.085005188	**0.73667611**	1	
Net Sales	0.042257844	-0.159847506	-0.14431634	-0.143138849	1

Correlations (Latest data combined for all firms (Asset heavy and Asset light))

	Long term debt/Equity	Total Debt/total Assets	Interest Cover	Profitability	Net Sales
Long term debt/Equity	1				
Total Debt/total Assets	0.360947122	1			
Interest Cover	-0.107946261	-0.084041867	1		
Profitability	-0.341246626	-0.196105158	**0.779462789**	1	
Net Sales	0.146949539	-0.10150609	-0.098930872	-0.073443331	1

Conclusions for Indian Firms

From the correlations above, we can conclude the following for Indian firms:

1. <u>Asset light companies</u>

a. A significant positive correlation is observed between Interest coverage (Leverage measure) and Net Sales. As hypothesized earlier, this suggests that:

i. Firms that are larger and consequently have higher sales tend to be leveraged more.

ii. At the same time, size may also be treated as an inverse probability of bankruptcy. Hence, capital providers tend to be more than willing to provide debt to firms with high sales which are a major determinant in the cash flows of the firm and hence the repayment capability.

b. There is high positive correlation between ratio of long term debt to equity and ratio of total debt to total assets. This suggests that asset light companies are not using debt as a means to increase their fixed assets (which increases total assets as well). This validates their classification as an asset light company and is also a pointer to their asset light business model. Debt may be used for acquiring non-tangible resources like manpower, training, and advertising or for managing the other capital requirements of the firms.

2. <u>Asset heavy companies</u>

A significant positive correlation is observed between interest coverage (Leverage measure) and profitability. As hypothesized earlier, this suggests that:

a. Highly profitable asset heavy firms rely on debt as a primary means of finance rather than going to market to raise equity.

b. Since profitability is measured as cash flow from operations normalized by the book value of assets, profitability is also a good measure of the cash flows of the

firm. Hence, on the supply side, it can be reasoned out that suppliers are more willing to lend to firms with current cash flows and hence higher profitability.

c. Debt as a measure of finance ensures lesser control over the profitable firm for the equity holders. In this case, the insiders (Promoters and Management) are not liable to provide information and share their gains with the equity holders and hence tend to go in with the debt option to finance their capital requirements.

3. Combined Data

A significant positive correlation is observed between interest coverage (Leverage measure) and profitability. In this case as well, this suggests that the subset of profitable firms tend to depend on debt as a measure of finance rather than being dependent equity.

Appendix A

Data for Asset Light Companies 2005

Company	Long term debt/Equity	Total Debt/ Total Assets	Interest Cover	Profitability	Operating Income	Fixed Assets/Total Assets
3i	0.62	5.321399885	2.7	8.32	223.76	48.70545037
Hcl	0.03	0.057986387	27.95	11.27	1447.01	17.72502652
HT	0.144	0.212197477	3.08	2.54	2.61	11.63675676
Infosys	0	0	65.91	44.26	6868	39.02769681
Mphasis	0	0	16.76	10.34	247.77	11.67786667
Ndtv	0	0	32.86	122.92	24.89	17.72237569
NIIT	0.18	0.867274328	1.6	4.53	283.82	41.44342298
Sify	0	0	18.01	25.71	3464.22	28.2302588
TCS	0	0.071252424	66.01	120.86	8051.11	38.62746598
Tv Today	0	0.116487054	3.82	7.18	139.07	55.61252624
Wipro	0.01	0.023704222	313.87	35.42	7276.18	29.65697818
Zee	0.25	0.357237105	16.61	7.92	647.25	7.270866542

2006

Company	Long term debt/Equity	Total Debt/Total Assets	Interest Cover	Profitability	Operating Income	Fixed Assets/total Assets
3i	0.79	7.316099844	5.51	13.21	289.82	39.05111
Hcl	0.01	0.017573428	33.56	20.45	3032.92	25.51421
HT	0.131	0.191971436	2.22	2.66	2.38	15.45589
Infosys	0	0	78.65	39.09	9039	37.81678
Mphasis	0	0	9.63	13.42	380.67	24.86333
Ndtv	0	0	18.27	44.64	31.38	13.38533
NIIT	0.41	1.702543636	1.91	5.48	339.74	36.34767
Sify	0	0	17.57	25.9	4634.31	26.29101
TCS	0	0.008110985	89.63	59.92	11236.01	27.90822
Tv Today	0	0.216497696	3.91	10	160.29	54.61714
Wipro	0	0.036374094	81.18	34.6	10264.1	30.11959
Zee	0.31	0.473788074	8.6	3.8	831.4	4.881453

2007

Company	Long term debt/Equity	Total Debt/total Assets	Interest Cover	Profitability	Operating Income	Fixed Assets/Total Assets
3i	1.16	6.961853082	3.24	11.56	357.76	17.15993982
Hcl	0.01	0.031197442	54.38	33.72	3768.62	29.19313461
HT	0.038	0.149971573	5.16	5.34	1.94	15.59317751
Infosys	0	0	87.06	40.21	13166	36.29924701
Mphasis	0	0	5.32	18.91	1102.85	32.61037873
Ndtv	0	0	6.25	29.15	43.19	16.55612557
NIIT	0.35	1.539275362	2.82	7.84	398.15	39.12862319
Sify	0	0	17.45	27.56	6228.47	21.47764186
TCS	0	0.010906667	20.69	53.7	14942.09	25.66900606
Tv Today	0	0.195547074	5.5	9.77	189.91	52.79096692
Wipro	0	0.080300325	26.98	35.19	13758.5	29.60031058

Zee	0.05	0.238446367	13.74	9.26	867.68	4.884096804

Appendix B

Data for Asset Heavy Companies

2005

Company	Long term debt/Equity	Total Debt/Total Assets	Interest Cover	Profitability	Net Sales	Fixed Assets/Total Assets
ABB	0.003	0.006328773	16.13	26.77	2970.97	18.27847628
Aditya Birla	0.211	1.012891567	7.41	7.82	1861.59	62.31821927
Ashok Leyland	0.776	3.167143426	13.69	21.52	4241.75	66.11086365
Ballarpur	0.618	4.15623221	2.71	11.8	1797.69	100.7356043
BHEL	0.089	0.158214045	19.81	15.83	9737.5	26.29480418
BPCL	0.314	0.955644472	10.06	13.76	58371.57	66.47758929
Ceat	0.897	3.795314938	0.8	-4.58	1534.52	39.64645228
Eicher	0.586	2.010690238	3.63	20.87	1987.72	71.38429253
Hero Honda	0.135	0.181345149	64.07	54.2	7419.86	36.14626968
HPCL	0.024	0.466479425	20.79	12.93	60804.66	65.87948236
IOCL	0.496	1.214458448	12.4	20.51	144862.37	63.25617634
Jindal	1.041	0.601663273	8.84	50.72	2577.16	88.72149555
MRF	0.321	0.170816643	2.1	2.83	2991.33	91.30812052
Nestle India	0	0.371984578	2324.1	97.5	2442.65	90.89355585
ONGC	0.003	0.079933134	6.5	29.03	40034.11	131.5636569
Reliance India	0.474	0.941134163	6.47	19.1	65268.77	69.95351205
Sail	0.488	8.05426139	15.19	90.77	28814.52	110.5320082
Tata Motors	0.597	1.845184158	8.23	32.19	17184.33	54.44554885
Tata Steel	0.382	1.467652908	25.53	57.59	14403.47	85.94644294
Tvs	0.304	0.528705762	20.32	16.67	2854.9	93.95877613
Unitech	0.696	23.78	1.24	3.54	39.62	32.68041667
Hyundai India	0.273	7.095638271	48.42	30.01	6591.15	88.15927526
Landt	0.39	0.146809284	3.94	17.19	13399.02	19.339556

2006

Company	Long term debt/Equity	Total Debt/Total Assets	Interest Cover	Profitability	Net Sales	Fixed Assets/Total Assets
ABB	0.434	1.765431546	4.76	9.01	5523.99	70.67311
Aditya Birla	0.501	1.738612673	12.38	22.85	5329.25	59.00194
Ashok Leyland	0.076	0.107946512	44.43	22.76	13570.44	22.06746
Ballarpur	0.475	1.370648227	2.66	3.49	77120.12	72.00709
BHEL	0.645	3.923528427	0.97	-2.03	1745.95	79.4178
BPCL	0.174	1.209266123	2.44	1.48	1645.58	50.37245
Ceat	0.092	0.102484487	84.94	49.5	8708.13	39.648
Eicher	0.243	1.185014924	2.72	2.06	72443.26	62.00947
Hero Honda	0.731	1.353390631	6.71	13.86	184204.83	57.3163
HPCL	1.214	0.508740594	7.91	36.57	2918.91	74.7554
IOCL	0.002	0.003580192	6.71	27.86	43140.59	98.27291
Jindal	0.392	0.812270694	12.89	21.69	78041.27	96.02533
MRF	0.248	3.845397541	12.96	32.64	29662.95	99.6428
Nestle India	0.417	1.382415371	7.32	28.84	20154.66	52.72031
ONGC	0.259	0.829541188	30.5	41.4	15075.6	85.88565
Reliance India	0.501	0.790305038	8.16	15.04	3220.07	83.39632
Sail	0.25	0.072968854	4.93	22.22	15043.68	18.63836
Tata Motors	0.001	0.001540286	27.98	32.35	4284.46	16.85192
Tata Steel	0.723	4.374144653	3.29	12.63	1874	93.17539
Tvs	0.343	0.13980785	2.09	5.94	3732.5	94.89788
Unitech	0	0.350869529	1112.5	87.11	2799.04	90.14163
Hyundai India	0.574	32.16494845	3.16	32.11	71.38	29.92268
Landt	0.254	5.791987359	243.07	27.45	7748.64	87.03367

2007

Company	Long Term debt/Equity	Total Debt/total Assets	Interest Cover	Profitability	Net Sales	Fixed Assets/total Assets
ABB	0.583	1.527114709	2.46	6.31	3415.01	45.89643
Aditya Birla	0.21	1.126788905	19.54	19.45	7334.95	62.45675
Ashok Leyland	0.01	0.011211902	84.78	26.89	17470.24	18.76138
Ballarpur	0.531	1.22607182	6.75	21.72	98527.89	62.71712
BHEL	0.553	3.201493439	1.74	8.32	2134.66	78.30688
BPCL	0.245	1.2928266	7.28	13.01	1965.04	46.51221

Ceat	0.067	0.065959789	83.23	33.18	9892.45	42.63657
Eicher	0.29	1.313234209	5.88	15.06	91161.73	55.89609
Hero Honda	0.646	1.009762304	5.82	13.65	221336.94	59.70763
HPCL	1.074	0.336623275	6.74	33.86	3898.23	77.83607
IOCL	0.001	0.013807011	7.25	26.54	51343.87	91.22737
Jindal	0.335	0.652196775	12.26	22.62	110405.13	94.88699
MRF	0.146	2.420155762	28.93	40.25	35835.15	91.12574
Nestle India	0.313	1.291866381	7.92	20.76	26661.55	48.15504
ONGC	0.688	1.606288541	390.82	34.69	15207.88	62.23609
Reliance India	0.705	0.995385274	3.36	8.05	3841.85	76.17118
Sail	0.25	0.133658284	6.77	24.9	18007.69	18.38945
Tata Motors	0	0	26.06	35.13	5940.37	13.39233
Tata Steel	0.502	3.315119041	4.23	13.88	2165.25	86.46678
Tvs	0.316	0.116393883	5.1	17.87	4401.93	90.96481
Unitech	0	0.051149103	761.81	106.99	3483.58	87.23933
Hyundai India	0.511	29.48196721	1.81	13.95	84	25.35082
Landt	0.749	12.19520487	50.61	17.99	9011.44	69.92652

References

[1]. Brealey, R.A. and S.C. Meyers.*Principles of Corporate Finance, 6th Edition.* Irwin McGrawHill Publishers, Boston, MA, 2000.
[2]. Brigham, E.F., L.C. Gapenski and M.C. Ehrhardt. *Financial Management Theory and Practice,9th Edition.* Dryden Press, Orlando, FL, 1999.
[3]. Brigham, E.F. and J.F. Houston. *Fundamentals of Financial Management, 8th Edition*. Dryden Press, Orlando, FL, 1998.
[4]. Copeland, T.E. and J.F. Weston. *Financial Theory and Corporate Policy, 3rd Edition.* Addison-Wesley Publishing Company, Reading, MA, 1992.
[5]. Dann, L. "Common Stock Repurchases: An Analysis of Returns to Bondholders and Stockholders," Journal of Financial Economics, (June, 1981), pp. 113-138.
[6]. Gitman, L.J. *Managerial Finance Brief, 2nd Edition.* Addison-Wesley-Longman, Inc. Reading, MA, 2000.
[7]. Hawawini, G. and C. Viallet. *Finance for Executives: Managing for Value Creation.* South-Western College Publishing, Cincinnati, OH, 1999.
[8]. Hittle, L.C., K. Haddad, and L.J. Gitman. "Over-the-Counter Firms, Asymmetric Information, and Financing Preferences," Review of Financial Economics, (Fall 1992), pp. 81-92.
[9]. James, C. "Some Evidence on the Uniqueness of Bank Loans," Journal of Financial Economics, (December, 1987), pp. 217-235.
[10]. Lasher, W. R. *Practical Financial Management, 2nd Edition.* South-Western College Publishing, Cincinnati, OH, 2000.
[11]. Megginson, W.L.*Corporate Finance Theory.* Addison-Wesley-Longman, Inc. Reading, MA ,1997.
[12]. Modigliani, F. And M. Miller."The Cost of Capital, Corporation Finance, and the Theory of Investment," American Economic Review 48, (June, 1958), pp. 261-297.
[13]. Moyer, R.C., J.R. McGuigan, and W.J. Kretlow.*Contemporary Financial Management, 8th Edition*. South-Western College Publishing, Cincinnati, OH, 2001.
[14]. Myers, S.C. "The Capital Structure Puzzle," Journal of Finance, 39 (July, 1984), pp. 575-592.
[15]. Myers, S.C., Chapter 4 Financing of Corporations. In: G.M. Constantinides, M.Harris and R.M. Stulz , Editors(s), Handbook of the Economics of Finance, Elsevier,2003, Volume 1, Part 1, Corporate Finance, Pages 215-253.
[16]. Myers, S.C. and N.S. Majluf. "Corporate Financing and Investment Decisions When Firms Have Information Investors Do Not Have," Journal of Financial Economics 13, (June, 1984),
[17]. pp. 187-221.
[18]. Pinegar, J.M. and L.Wilbricht. "What Managers Think of Capital Structure Theory: A Survey", Financial Management, (Winter, 1989), pp. 82-91.
[19]. Raghuram, G. R. and Zingales, L., What Do We Know about Capital Structure? Some Evidence from International Data.
[20]. Ross, S.A., R.W. Westerfield, and B.D. Jordan.*Fundamentals of Corporate Finance, 4th Edition*. Irwin, McGraw-Hill Publishers, Boston, MA, 1998.
[21]. Shyam-Sunder and S.C. Myers (1999). Testing static tradeo¤ against pecking order models of capital structure. *Journal of Financial Economics* 51 (1999) 219-244
[22]. Sheridan,T. and Roberto,W. (1988). The Determinants of Capital Structure Choice.
[23]. *The Journal of Finance*, Vol. 43, No. 1., pp. 1-19.
[24]. Sunder, L.S. and S.C. Myers. "Testing Static Tradeoff Against Pecking Order Models of Capital Structure," Journal of Financial Economics 19 (February, 1999), pp. 219-244.
[25]. Van Horne, J. C. and J.W. Wachowicz. *Fundamentals of Financial Management, 11th Edition.*
[26]. Prentice-Hall Publishers, Inc., Upper Saddle River, NJ, 2001.

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