

CAPITAL STRUCTURE FINANCING APPROACHES: AN EMPIRICAL EVIDENCE FROM INDIA

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This empirical paper attempts to study capital structure financing approaches used by Electronics & electrical products industry of the Indian corporate sector. The study is limited to top 29 firms from Electronics & electrical products industry out of top 500 manufacturing firms selected on the basis of the turnover for the year 2004-2005 which covers the time span of eleven years commencing from 1995-96 to 2005-06. The study reveals that the majority of the companies in Electronics & electrical products industry are following conservative approach of financing through debt in the composition of their capital structure during the study period. However, debt capital is a cheaper source of finance, thus, the use of debt may maximize the value of wealth of shareholders. Alternatively it has been observed that lesser number of companies in Electronics & electrical products industry are following liberal/very liberal approach of financing through debt, particularly, in 100-200 and 200-300 and more than 300 percent capital structure ranges in financing of their capital structure during the study period.

Key Words:- Conservative, Liberal, Aggressive, Capital Structure, Shareholders.

Section I – Introduction

The main purpose of a firm for using financial leverage is to magnify the shareholders' return under favourable economic conditions with the ultimate aim of increasing the value of each share. Value of share will increase if

- (i) earnings per share or return on equity capital increases at rate higher than the increase in cost of equity capital,
- (ii) cost of equity capital remains constant and the earnings per share or return on equity increases,
- (iii) cost of equity capital decreases and earnings per share or return on equity increases or remains constant.

The role of financial leverage in magnifying the return of the shareholders is based on the assumptions that the fixed charges funds such as preference share capital, debentures and term-loans can be obtained at a cost lower than the firm's rate of return on its total assets. Thus, when the difference between the earnings generated by assets financed by the fixed charges funds and costs of these funds is distributed to the shareholders, the earnings per share or return on equity capital increases. It will contribute towards shareholders' wealth if cost of equity capital increases at a lower rate. However, earnings per share or return on equity will fall if the company obtains the fixed charges funds at a cost higher than the rate of return on

the firm's assets. It should be therefore clear that earnings per share, return on equity capital and cost of equity share capital are the important figures for analyzing the impact of financial leverage." (Pandey, I. M., 2010, p. 320). The paper is organized into five sections. Section I provides the introduction about capital structure. Section II deals with data source, sample size & research methodology to be followed in the study. Section III presents reports and analysis of the empirical results of the study. Section IV summarizes and concludes the study. Section V describes the suggestions & scope for further research.

Section II – Data Source, Sample Size & Research Methodology

For examining the capital structure financing approaches used by Electronics & electrical products industry of the Indian corporate sector, the firm level panel data is taken into consideration and it is collected from the corporate data base PROWESS maintained by the Center for Monitoring the Indian Economy (CMIE). This database contains the detailed information on the financial performance of all the public listed companies in all the segments in India, compiled from various sources such as profit and loss accounts and balance sheets, stock price data, the annual reports etc. The database also contains background information including ownership pattern, products, profit, plant location, new investment and so on for the companies. This is a reliable source of information and many researchers in India have used the data for their empirical analysis. The data used in the analysis consists of the manufacturing firms listed on the Bombay Stock Exchange (BSE). We have also restricted our analysis to firms that have no missing data continuously for eleven years. So the sample size is a function of available data. Finally, we ended up with top 29 firms from Electronics & electrical products industry out of the list of top 500 private sector manufacturing firms published in the Business Today, on the basis of sales turnover for the year 2004-05. So, these top 29 firms from Electronics & electrical products industry constitute sample for our empirical study. The study covers time span of eleven years commencing from 1995-96 to 2005-06. In the present study, the ratio of total borrowings to net worth is being used for measuring the capital structure (debt–equity ratio) of a firm. Here, borrowings include all forms of debt-interest bearing or otherwise. All secured and unsecured debt is included under total borrowings. Thus, total borrowings include debt from banks (short term as well as long term) and financial institutions, inter-corporate loans, fixed deposits from public and directors, foreign loans, loan from government, etc. Funds rose from the capital market through the issue of debt instruments such as debentures (both convertible and non-convertible) and commercial paper are also included here while net worth includes equity share capital, preference share capital and reserve & surpluses minus revaluation reserves & miscellaneous expenses not written off. Preference share capital is irredeemable in nature. So, it is considered as a part of net worth. Short-term borrowings are included in the debt or total borrowings because it is observed that short-term borrowings are being used as a long-term source of finance in the Indian contest. The capital structure has been divided into thirty one ranges during the period for empirical study. Further these capital structure ranges are classified into four broader categories – i.e. 0-100 percent, 100-200 percent, 200-300 percent and more than 300 percent for analytical analysis.

Section III – Empirical Results

During the period under study 307 observations from the years 1995-96 to 2005-06 are shown in Table which observes information related to companies (9.80 percent of the total number of sample companies) lying in Electronics & electrical products industry. Capital structure wise analysis reveals that highest number of companies (15.31 percent) is in 0-10 percent capital structure range, followed by 7.49 percent of companies in 50-60 percent capital structure range, while no company is lying in 250-260 percent capital structure range during the period under study. Yearly analysis reveals that highest number of companies (31.03 percent) is in 0-10 percent capital structure range in the year

Table -%age Distribution of 29 Companies under Electronics & Electrical Products Industry

Capital Structure (%)	Year											Avg.
	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	
00-10	0	0	7.69	7.14	10.34	10.34	17.24	24.14	27.59	31.03	28.57	15.31
10-20	15.38	4	0	10.71	3.45	10.34	10.34	6.90	6.90	3.45	7.14	7.17
20-30	3.85	8	0	7.14	6.90	10.34	13.79	6.90	0	10.34	7.14	6.84
30-40	7.69	8	11.54	0	10.34	3.45	6.90	6.90	10.34	0	7.14	6.51
40-50	7.69	4	7.69	0	3.45	6.90	3.45	3.45	6.90	3.45	7.14	4.89
50-60	7.69	8	3.85	3.57	10.34	13.79	3.45	6.90	10.34	6.90	7.14	7.49
60-70	11.54	4	11.54	10.71	3.45	0	6.90	6.90	10.34	10.34	3.57	7.17
70-80	3.85	4	3.85	7.14	3.45	3.45	0	3.45	3.45	3.45	10.71	4.23
80-90	0	8	3.85	3.57	6.90	3.45	3.45	3.45	0	3.45	7.14	3.91
90-100	7.69	4	0	0	0	0	3.45	3.45	3.45	3.45	0	2.28
100-110	3.85	12	3.85	3.57	6.90	6.90	3.45	3.45	0	3.45	0	4.23
110-120	11.54	8	7.69	3.57	0	0	6.90	6.90	3.45	0	0	4.23
120-130	0	0	0	7.14	3.45	3.45	3.45	0	0	0	3.57	1.95
130-140	0	4	3.85	10.71	10.34	3.45	0	0	0	0	0	2.93
140-150	0	12	3.85	3.57	0	3.45	3.45	0	0	0	0	2.28
150-160	3.85	0	11.54	0	0	0	0	0	0	3.45	0	1.63
160-170	0	0	0	10.71	3.45	0	0	0	0	0	0	1.30
170-180	0	0	0	0	3.45	0	0	0	3.45	3.45	3.57	1.30
180-190	3.85	0	0	0	3.45	3.45	0	0	0	0	0	0.98
190-200	0	4	7.69	3.57	0	0	0	0	0	0	0	1.30
200-210	0	0	0	0	3.45	6.90	3.45	3.45	0	6.90	0	2.28
210-220	0	4	3.85	0	0	0	0	0	0	0	0	0.65
220-230	0	0	0	0	0	3.45	0	0	0	0	0	0.33
230-240	0	0	3.85	0	0	0	0	3.45	3.45	0	3.57	1.30
240-250	0	0	0	0	0	0	0	0	0	3.45	0	0.33
250-260	0	0	0	0	0	0	0	0	0	0	0	0
260-270	0	0	0	3.57	0	0	0	0	0	0	0	0.33
270-280	3.85	0	0	0	0	0	3.45	0	0	0	0	0.65
280-290	0	0	0	0	0	3.45	3.45	0	0	0	0	0.65
290-300	0	0	0	0	0	0	0	0	3.45	0	3.57	0.65
>300	7.69	4	3.85	3.57	6.90	3.45	3.45	10.34	6.90	3.45	0	4.89
Total %	100	100	100	100	100	100	100	100	100	100	100	100

0-100	65.38	52	50	50	58.62	62.07	68.97	72.41	79.31	75.86	85.71	65.80
100-200	23.08	40	38.46	42.86	31.03	20.69	17.24	10.34	6.90	10.34	7.14	22.15
200-300	3.85	4	7.69	3.57	3.45	13.79	10.34	6.90	6.90	10.34	7.14	7.17
>300	7.69	4	3.85	3.57	6.90	3.45	3.45	10.34	6.90	3.45	0	4.88

2004-05. It may be noted that 65.80 percent companies are in 0-100 percent, 22.15 percent companies in 100-200 percent, 7.17 percent companies in 200-300 percent and 4.88 percent companies in more than 300 percent broadly classified capital structure ranges during the period under study. So, it has been observed that around two third of the companies (65.80 percent) in Electronics & electrical products industry are in 0-100 percent capital structure range. It means that in this industry, such companies are following conservative approach of financing through debt. These companies are using lesser amount of debt in their capital structure as compared to even their own capital also, although it is a cheaper source of finance. Similarly, it has also been observed that more than one-fourth but less than one-fifth of the companies (22.15 percent) are in 100-200 percent capital structure range. Such companies are following liberal and safe approach of financing through debt. These companies are using more amount of debt in their capital structure than their own capital but less than the well established standard range of 200 percent (2:1). It has been observed that more than one eighth of the companies (12.05 percent which means that 7.17 percent in 200-300 percent and 4.88 percent in more than 300 percent capital structure ranges) are in more than 200 percent capital structure ranges. It means that such companies are using debt freely as a source of finance. Such companies are using debt beyond the well established standard range of 200 percent (2:1). But, in this industry, only 3.58 percent companies are in 190 to 210 percent (1.90:1 to 2.10:1) capital structure range which is near to the well established standard range of 200 percent (2:1) during the study period. It has been observed that under 100-200 percent capital structure range, six sub capital structure ranges are having less than 2 percent companies, each, respectively. Under 200-300 percent capital structure range, eight sub capital structure ranges are having less than 1 percent companies, each, respectively. However, during 1995-96, 1996-97, 1998-99 and 1999-00 only a small number of companies is laying in one particular sub range of 200-300 percent broader capital structure range. It has also been observed that there are a certain percentage of companies in highest capital structure range, i.e. more than 300 percent, in ten out of eleven year study period. Overall, it is found that most of the companies in Electronics & electrical products industry are using lesser amount of debt in their capital structure during the study period.

Section IV – Summary and Conclusions

The paper studies the capital structure financing approaches used by Electronics & electrical products industry of the Indian corporate sector. The study is limited to top 29 firms from Electronics & electrical products industry out of the top 500 private sector manufacturing firms selected on the basis of sales turnover for the year 2004-2005, published in Business Today, which covers time span of eleven years commencing from 1995-96 to 2005-06. The following are the conclusion and findings of the present study.

1. It is found that around two-third (65.80 percent) companies in Electronics & electrical products industry are in 0-100 percent capital structure range during the period under study. So, in Electronics & electrical products industry, companies are following high degree conservative approach of financing through debt in their capital structure composition during the study period. Thus, these companies are using lesser amount of debt capital as compared to their own capital in the composition of their capital structure during the period under study which is below the well-established standard of 2:1. Thus, it is observed that the companies in Electronics & electrical products industry are using high degree conservative approach of financing through debt in the composition of their capital structure during the study period. However, debt capital is a cheaper source of finance, thus, the use of debt may maximize the value of wealth of shareholders.
2. It is found that lesser number of companies is lying in 100-200 percent capital structure range in Electronics & electrical products industry (slightly more than one-fourth but less than one-fifth companies i.e. 22.15 percent) during the study period which shows that in this industry, such companies are following high degree conservative approach of financing through debt in their capital structure composition.
3. It is found that (3.58 percent) companies in Electronics & electrical products industry are in 190 to 210 percent (1.90:1 to 2.10:1) capital structure range in their capital structure composition which is approaching to the well-established standard range of 200 percent (2:1) during the study period.
4. It is observed that one-seventh (15.31 percent) companies in Electronics & electrical products industry are in 0-10 percent capital structure range during the period under study. It means that such companies in this industry are using negligible amount of debt in their capital structure during the period under study.
5. It has been observed that more than one eighth of the companies (12.05 percent which means that 7.17 percent in 200-300 percent and 4.88 percent in more than 300 percent capital structure ranges) are in more than 200 percent capital structure ranges. Companies in these ranges are using debt freely as a source of finance. Such companies are using debt beyond the well-established standard range of 200 percent (2:1) during the study period. It is observed that lesser number of companies in Electronics & electrical products industry are following very liberal approach of financing through debt, particularly in this range, in financing of their capital structure during the study period.

In nut shell, the study concludes that majority of the companies in Electronics & electrical products industry are following conservative approach of financing through debt in the composition of their capital structure during the study period.

Section V- Suggestions & Scope for Further Research

Debt and equity are the backbone of the business world. Equilibrium is needed between them in order to maximize the value of a firm consequently the wealth of share holders. In the present study, use of conservative approach by Electronics & electrical products industry of financing through debt in the

composition of their capital structure in the Indian Corporate Sector is observed. Further research can be carried out for finding out the factors which are responsible for such conservative behaviour of firms in planning the capital structure of this industry. So, a financial manager should consider a number of factors to set the composition of an optimal capital structure for a firm giving considerable weight to earnings rate, collateral value of assets, age, cash flow coverage ratio, non-debt tax shield, size (net sales), dividend payout ratio, debt service ratio, cost of borrowing, corporate tax rate, current ratio, growth rate, operating leverage and uniqueness (selling cost/sales) etc. India is blended with full of laws. There is no need to create new laws. The need is to change mind set of the Indians. Thus, there is a need to develop such an ethical culture in the corporate sector which is to be based upon the teachings of ancient Indian Wisdoms which will develop the capital market to the fullest extent with the fullest faith and will lead to contribute to the wealth of shareholders.

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ANNEXURE

LIST OF SAMPLE COMPANIES

Electronics & Electrical Products Industry

Blue Star Ltd.
Whirlpool Of India Ltd.
Astra Microwave Products Ltd.
Avaya Globalconnect Ltd.
Himachal Futuristic Communications Ltd.
Shyam Telecom Ltd.
Atlas Copco (India) Ltd.
Ingersoll-Rand (India) Ltd.
Elgi Equipments Ltd.
Bajaj Electricals Ltd.
Eveready Industries (India) Ltd.
Exide Industries Ltd.
H B L Power Systems Ltd.
Siemens Ltd.
A B B Ltd.
Areva T & D India Ltd.
Havell'S India Ltd.
Finolex Cables Ltd.
Bharat Bijlee Ltd.
Emco Ltd.
Titan Industries Ltd.
Moser Baer India Ltd.
Opto Circuits (India) Ltd.
Solectron Centum Electronics Ltd.
Honeywell Automation India Ltd.
Yokogawa India Ltd.
H C L Infosystems Ltd.
D-Link (India) Ltd.
Mirc Electronics Ltd.

