# IMPACT OF CAPITAL STRUCTURE POLICY ON VALUE OF THE FIRM – A STUDY ON SOME SELECTED CORPORATE MANUFACTURING FIRMS UNDER DHAKA STOCK EXCHANGE

**Jahirul HOQUE**
*Eastern University, Dhaka, Bangladesh*
*hjahirul@yahoo.com*
**Ashraf HOSSAIN**
*Eastern University, Dhaka, Bangladesh*
*ahossain29@yahoo.co.in*
**Kabir HOSSAIN**
*Eastern University, Dhaka, Bangladesh*
*pp.bd2006@yahoo.com*

**Abstract**
*The study is about capital structure policy and its impacts on value of the firm. The outcome of this study was both the primary and secondary data. The study was based on opinions survey of 80 respondents of the 20 manufacturing corporate firms, enlisted under Dhaka Stock Exchange. The empirical analysis of the study was limited to a period of five years ranging 2008-2012. The major findings of the study are: (i) the most important determinant of capital structure policy as rated by the respondents have been financial risk , profitability, availability of fund, productivity, liquidity, operating risk, growth rate, proper timing, corporate tax, stability of sales/ investment etc, (ii) the study reveals that in terms of the average positions of capital structure and financial structure during 2008-2012, Beximco pharma has ranked first followed by Square pharma, Apex Adelchi, DESCO, ACI ltd, Titas gas, Bata shoe,Aftab automobile, Reneata pharma, Square textile ltd etc,(iii) as regards the value of the firm during the study period, Titas gas has obtained first rank followed by Square pharma, DESCO, Beximco pharma, BATBC, ACI, Reneta pharma, Apex Tennary, Apex Adelchi, Bata shoe and so on.(iv) this study has portrayed that the independent variables namely capital structure **(CS),** debt to equity **(DER)** & debt to asset **(DR),** fixed assets to total assets(Tangibility), earnings before interest and taxes to interest charges**(ICR**), financial leverage multiplier**(FLM**) have influenced value of the firm**(VF)** to the extent of 79.1 percent significantly. Therefore, it is recommended that the relevant firm's authority should take proper measures in order to improve the independent variables having positive influence on value of the firms.*

**Key words:** *Value of the Firm, Cost of Funds, Financial risk, Return on Investment, Return on Equity, Debt ratio, Debt-Equity Ratio, Profitability, DSE*

**JEL Classification:** *E420*

## I. INTRODUCTION

Capital structure and its influence on the firm financial performance and overall value has been remained an issue of great attention amongst financial scholars since the decisive research of (Modigliani & Miller, 1958) arguing that under perfect market setting capital structure doesn't influence in value of the firm. This proposition explains that value of firm is measured by real assets not, the mode they are financed. (Jensen & Meckling, 1976) drew concentration to the impact of capital structure on the performance of enterprises, number of tests as an extension port to inspect the relationship between performance of firm and financial leverage.

However the results documented were contradictory and mixed. Some studies have reported positive relationships.

(Ghosh & et al, 2000). (Hadlock & James, 2002) also support the argument. Several others have reported a negative relationship between debt and financial achievement like (Fama & French, 1998) and (Simerly & Li & 2000). Capital structure is said to be closely link to the financial performance (Zeitun & Tian, 2007). Influential paper of (Jensen & Meckling, 1976), high leverage may initiate clashes between managers and shareholders due to selection of investment either equity, debt or hybrid (Myers, 1977). The company's choice of capital structure determines the allocation of its operating cash flow each period between debt holders and shareholders. The debate over the significance of a company's choice of capital structure is esoteric. But, in essence, it concerns the impact

on the total market value of the company (i.e.; the combined value of its debt and its equity) of splitting the cash flow stream into a debt component and earn equity component. Financial experts traditionally believed that increasing a company's leverage, i.e. increasing the proportion of debt in the company's capital structure, would increase value up to a point. But beyond that point, further increases in leverage would increase the company's overall cost of capital and decrease its total market value.

However, the extent to which a company's choice of capital structure affects its market value is debated. This study analyzes capital structure of Bangladeshi 20 firms, selected from six most leading sectors i.e. engineering, food and allied, fuel and power, chemical and pharmaceutical, cement and leather industry with a specific objective to examine the impact of capital structure on the firm's value.

## II. OBJECTIVES OF THE STUDY

Sustainable The main objective of the study is to critically examine the impact of capital structure policy on value of the firm for some selected firms under Dhaka Stock Exchange in Bangladesh.

To achieve the main objective, the study highlights the following specific objectives:

- To identify the responsible personnel for fixation of capital structure policy for the selected firms.
- To identify the determinants of capital structure policy indicating each of their importance in the sample firms.
- To analyze the existing capital structure and financial structure positions for the sample firms during 2008-2012.
- To examine the impact of capital structure on value of the firm for sample firms during the study period

## III. RATIONALE OF THE STUDY

In fact, Bangladesh is going to attain its MDG (Millennium Development Goal) by 2021 through the influential economic chief aspects like RMG industries, frozen fishes industries, Jute & Tea industries, Leather industries, Expatriate industries, Natural gases and so on. Due to the fast changes in the socio- economic and political situations of Bangladesh, practicing most advantageous capital structure models can facilitate a great contribution to all over the business enterprises as well as our developing economy. So, the rationales of studying capital structure policy are as follows:

- To ascertain and present a sound and effective capital structure policy for industry sectors in general and the selected firms in particular.
- To demonstrate how to increase the value of the firm by determining an ideal debt-equity mix.
- To reveal how to take an advantage of favorable financial leverage.
- To know how to avoid using of high risky debt capital in capital structure.
- To show how to take an advantage of corporate tax.
- To know how to control the cost of capital.

This paper will help to understand the general practices of capital structure in Bangladesh including the sensitivity of leverage on each industry. This will also act as a guide for the financial managers to design their optimum capital structure to maximize the market value of the firm and minimize the agency cost. The significance of this study is that it will help the investors to create such a portfolio that yield them maximum profit. It will also enable them that how a choice of capital structure affects the value of the company. This study is a first effort to study the impact of capital structure on value of the firm in Bangladesh that examines the top 20 companies of DSE.

## IV. HYPOTHESIS OF THE STUDY

In connection with the objectives of the study, the following **4 hypotheses** have been developed for the study purpose.

***1.*** $H_0$: There is no relationship between capital structure and value of the firm

***2.*** $H_a$: There exists relationship between capital structure and value of the firm

***3.*** $H_0$**:** The capital structure policy has no influence on value of the firm

***4.*** $H_a$**:** The capital structure policy has influence on value of the firm

## V. REVIEWS OF THE PAST STUDIES

The significance of capital structure models to firm performance and its value was highlighted by various researchers in their research work over the decades across the developed world. Capital structure model was remarkable to Modigliani and Miller (1958) were the first to present a formal model on valuation of capital structure. They showed that under the assumptions of perfect capital markets, equivalent risk class, no taxes, 100 percent dividend-payout ratio and constant cost of debt, the value of a firm is independent of its capital structure.

Garima Dalal (2013) founded the relationship between capital structure and value of firm and to found the significance of differences in capital structures of different companies – inter and intra industry. Two hypotheses were framed and tested bivariate correlation technique was used to find the nature of relationship between (i) capital structure and cost of capital, (ii) cost of capital and value of the firm and (iii) capital structure and value of the firm. Then, t-test was applied to test the significance of coefficient of correlation. F test was applied to test the significance of difference in capital structure. 30 companies listed on BSE Index were selected in the sample. The difference in capital structure of different companies whether they belong to the same industry group or different groups was found to be statistically significant. This is because of the fact that qualitative values of the determinants of capital structure and their effect on value of the firm vary from company to company. Co-efficient of correlation between cost of capital and capital structure was found to be negative.

Raheel Mumtaz et al(2013) studied on a total number of 83 companies are selected from KSE 100 index for their analysis and they suggested that financial performance of firms is significantly affected by their capital structure and their relationship is negative in nature. Moreover capital structure of a firm is negatively related to its market value and also increases its risk level as the share of debt increases in the capital mix.

Khalaf Al-Taani (2013) worked about 45 manufacturing companies listed on the Amman Stock Exchange were used for this study which covers a period of five (5) years from 2005-2009. Multiple regression analysis was applied on performance indicators such as Return on Asset (ROA) and Profit Margin (PM) as well as Short-term debt to Total assets (STDTA), Long term debt to Total assets (LTDTA) and Total debt to Equity (TDE) as capital structure variables. The results show that there is a negative and insignificant relationship between STDTA and LTDTA, and ROA and PM; while TDE is positively related with ROA and negatively related with PM. STDTA is significant using ROA while LTDTA is significant using PM. The study concludes that statistically, capital structure is not a major determinant of firm performance. It recommends that managers of manufacturing companies should exercise caution while choosing the amount of debt to use in their capital structure as it affects their performance negatively.

Muhammad Umar et al (2012) examined the impact of capital structure on firms' financial performance in Pakistani top 100 consecutive companies in Karachi Stock Exchange from 2006 to 2009 has found that the relationship between capital structure and firms' financial performance. The results show that all the three variables of capital structure, Current Liabilities to Total Asset, Long Term Liabilities to Total Asset, Total Liabilities to Total Assets, negatively impacts the Earning before Interest and Taxes, Return on Assets, Earning per Share and Net Profit Margin whereas Price Earnings ratio shows negative relationship with Current Liabilities to Total Asset and positive relationship is found with Long Term Liabilities to Total Asset where the relationship is insignificant with , Total Liabilities to Total Assets.

Ogbulu et al (2012) was implemented on a sample of 124 companies quoted on the Nigerian Stock Exchange (NSE) for the year ended 31st December 2007. The ordinary least squares method of regression was employed in carrying out this analysis. The result of the study reveals that in an emerging economy like Nigeria, equity capital as a component of capital structure is irrelevant to the value of a firm, while Long-term-debt was found to be the major determinant of a firm's value. Following from the findings of this study, corporate financial decision makers are advised to employ more of long-term-debt than equity capital in financing their operations since it results in a positive firm value. Antwi & Mills (2012) conducted a study on all the 34 companies quoted on the Ghana Stock Exchange (GSE) for the year ended 31st December 2010. The ordinary least squares method of regression was employed in carrying out this analysis. The result of the study reveals that in an emerging economy like Ghana, equity capital as a component of capital structure is relevant to the value of a firm, and Long-term-debt was also found to be the major determinant of a firm's value. Following from the findings of this study, corporate financial decision makers are advised to employ more of long-term-debt than equity capital in financing their operations since it impacts more on a firm's value. Ali (2011) investigated capital structure of nonfinancial firms registered on Karachi Stock Exchange (Pakistan) from 2003 to 2008 to find which independent variables determine the capital structure of Pakistani firms. He found statistically significant coefficients for profitability, size, tangibility, growth, dividend and inflation. The negative relationships between profitability and leverage; positive relationships between growth and long term debt and dividend and total debt of firms confirm the presence of pecking order theory in determining the financing behavior of Pakistani firms. Md. Ayub Ali & Md. Faruk Hossain(2011) have attempted to explore the impact of firm specific factors on capital structure decision for a sample of 39-firm listed on Dhaka Stock Exchange (DSE) during 2003-2007 using Ordinary Least Square (OLS) regression method and found that profitability, tangibility, liquidity, and managerial ownership have significant

and negative impact on leverage and positive and significant impact of growth opportunity and non-debt tax shield on leverage have been found in this study. On the other hand, size, earnings volatility, and dividend payment were not found to be significant explanatory variables of leverage. W. Masulis (2011) developed a model based on current corporate finance theories which explains stock returns associated with the announcement of issuer exchange offers. The major independent variables are changes in leverage multiplied by senior security claims outstanding and changes in debt tax shields. Parameter estimates are statistically significant and consistent in sign and relative magnitude with model predictions. Overall, 55 percent of the variance in stock announcement period returns is explained.

The evidence is consistent with tax based theories of optimal capital structure, a positive debt level information effect, and leverage-induced wealth transfers across security classes.

Anup chowdhury & Suman paul chowdhury (2010) have found the influence of debt-equity structure on the value of shares given different sizes, industries and growth opportunities with the companies incorporated in Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE) of Bangladesh. A strong positively correlated association is evident from the empirical findings when stratified by industry. Shah & Hijazi (2004) studied non-financial firms listed on KSE and took tangibility, size, profitability and growth as determinants. They found positive impact of tangibility and size and negative impact of profitability and growth.

In the light of the preceding literature review, the contradictory and mixed outcomes have been found about the association between capital structure and value of the firms. From the above studies, it has been shown mostly by the researcher the negative relationship between capital structure and value of firms. But this study has tried to demonstrate that the capital structure policy not only influence negatively but also affect positively and this research paper will fill in the gaps by removing ambiguities and vagueness about the capital structure policy.

## VI. METHODOLOGY OF THE STUDY

In this section, the following aspects of the methodology have been discussed elaborately along with primary data, secondary data and models application. Primary data have been collected through open-end and close-end questionnaire and secondary data have been gathered by following various types of Annual Reports and other related financial publications.

***6.1 Sampling design***: At first, the selection of sample units arises. At present, a total number of 117 manufacturing firms have been operating under Dhaka Stock Exchange (DSE). Out of these total manufacturing firms, only 20 firms representing 17.10 percent were selected for the study purpose. Now the question is; why the manufacturing sector was selected? There are 3 reasons for selecting manufacturing sector viz. (i). it is observed that a substantial portion of GDP comes from manufacturing sector (ii).the manufacturing sector invests a huge amount of investable fund and (iii).the manufacturing sector employs a huge number of workers. Lastly, a total number of 80 respondents in the rank and status of production manager, finance manager, operating manager and chief accountant have been selected for collecting primary data.

**Primary data collection:** We have collected primary data through (i).direct personal interview face to face (ii).direct personal investigation (iii).direct exploration thought questionnaire

**Secondary data collection:** The secondary data were collected from (i). Annual reports of the sample firms (ii). Websites of the relevant firms (iii). Websites of the regulatory bodies.

***6.2 Data & Variables Analysis:*** There have been applied the following statistical tools and techniques to quantify, analyze and evaluate the data through: **Models, Mean** (Weighted Average), Percentage, Table, Chart, **Pearson Correlation** and **Regression** with **ANOVA** with the help of **SPSS** (Statistical Program for Social Science). The following are the necessary financial variables are applied for assessing our selected data.

**Dependent Variables:** In this study, the dependent variable is value of firm (VF) which has been calculated as follows: **VF** = **Total debts + Equity Capitalization** , where, equity capitalization is found out by dividing net profit after tax by rate of return(ROI) per taka.

**Independent Variables:**

**(i). Capital structure:** Capital structure in absolute figure in million in taka that has been regarded as capital structure in this study.

**(ii). Debt to asset:** Total debt to total assets is a leverage ratio that defines the total amount of debt relative to assets. This enables comparisons of leverage to be made across different companies. The higher the ratio, the higher the degree of leverage, and consequently, financial risk.

**(iii). Debt- equity:** A measure of a company's financial leverage calculated by dividing its total liabilities by stockholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets. A high debt/equity ratio generally means that a company has been aggressive in financing its growth with debt.

**(iv). Tangibility**: Tangibility is calculated by dividing total fixed assets by total assets of the firm. This ratio is usually indicated to the shareholders as the permanent source of assets.

**(v). Interest coverage ratio:** This is calculated by dividing earnings before interest and taxes by interest charges which stresses a firm's meeting all fixed financial charges.

**(vi). Financial leverage multiplier:** This is equal to total assets divided by share capital.

***6.3 Model Specifications:***

In order to test the hypotheses, the followings models have been developed by using Ordinary Least Squares **(OLS)** method.

***Model:*** $VF = \beta_0 + \beta_1 CS + \beta_2 DER + \beta_3 DR + \beta_4 TNG + \beta_5 ICR + \beta_6 FLM + \ldots\ldots\ldots\ldots + e$

Where, $\beta_0$ denotes to the intercept of the regression line that is constant, $\beta_1$ **to** $\beta_6$ is the slope or coefficient of independent variables and **e** refers to the error term that is other independent variables.

## VII. IDENTIFICATION OF RESPONSIBLE PERSONNEL FOR CAPITAL STRUCTURE DECISION MAKING POLICY

Capital structure decision is one of the vital financial decisions of the organizations. This is because of the fact that capital structure determines the requirements of permanent sources of capital. Capital structure policy normally has been determined by the top level management of the organizations. However, the **Chart-1(Appendix-1)** indicates that the **Chairman** of board of directors is at the apex of the chart who is responsible for formulating capital structure policy of the sample firms. Next comes the **Managing director** followed by **Finance director** who is the chief for finance functions. Under Finance Director, there are three personnel namely **Chief Financial Officer (CFO), Chief Accountant and Cost Accountant.** Lastly, under chief financial officer, there is finance manager and under chief accountant there is accountant. All these personnel together, are responsible for the formulation of capital structure policy.

## VIII. DETERMINANTS OF CAPITAL STRUCTURE POLICY

There are some qualitative and quantitative factors that are influencing to take decisions about capital structure policy which are very much pivotal and play a central role in the organization. The authors of financial management ***(as for example Hoque & Huq, 2013*)** have identified a number of determinants of capital structure. These determinants were placed before our respondents to identify them indicating the importance of the same. The table-1 shows their responses:

**Table-1: Determinants of Capital Structure Policy:**

| **Importance Rating Scales N= 80** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Factors** | **Most Unimportant** (1) | **Un-Important (2)** | **Neutral (3)** | **Important (4)** | **Most Important (5)** | **WAM** | **Rank** |
| **Quantitative:** | | | | | | | |
| Productivity | 0 | 0 | 0 | 35 | 45 | 4.56 | 4 |
| Profitability | 0 | 0 | 0 | 30 | 50 | 4.63 | 2 |
| Growth Rate | 0 | 0 | 10 | 31 | 39 | 4.36 | 7 |
| Liquidity | 0 | 0 | 5 | 35 | 40 | 4.44 | 5.5 |
| Cost of funds | 0 | 0 | 13 | 37 | 30 | 4.21 | 13 |
| Tangibility | 0 | 0 | 15 | 40 | 25 | 4.13 | 16 |
| Operating efficiency | 0 | 0 | 17 | 33 | 30 | 4.16 | 14 |
| Financial risk | 0 | 0 | 0 | 25 | 55 | 4.69 | 1 |
| Operating risk | 0 | 0 | 5 | 35 | 40 | 4.44 | 5.5 |
| Corporate Tax | 0 | 0 | 16 | 24 | 40 | 4.30 | 8.5 |
| Leverage | 0 | 0 | 20 | 30 | 30 | 4.13 | 16 |
| Stability of Sales/Investment | 0 | 0 | 15 | 30 | 35 | 4.25 | 10.5 |
| Trading on Equity | 1 | 3 | 19 | 27 | 30 | 3.94 | 19 |
| **Qualitative:** | | | | | | | |
| Capital market Conditions | 2 | 5 | 13 | 30 | 30 | 4.01 | 18 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Proper Timing | 0 | 6 | 4 | 30 | 40 | 4.30 | 8.5 |
| Control of Business | 2 | 3 | 5 | 35 | 35 | 4.23 | 12 |
| Availability of Fund | 0 | 0 | 0 | 32 | 48 | 4.60 | 3 |
| Attitude of Regulatory Bodies | 2 | 6 | 2 | 30 | 40 | 4.25 | 10.5 |
| Attitude of Lenders and Rating Agencies | 5 | 5 | 10 | 35 | 25 | 3.88 | 20 |
| Attitude of Top Management | 8 | 5 | 7 | 35 | 25 | 3.80 | 21 |
| Financial Flexibility | 0 | 0 | 15 | 40 | 25 | 4.13 | 13 |

*Source: Based on Field Investigation through Questionnaire,*

*Note: Weighted Average Mean (WAM) has been calculated considering most unimportant as weight 1 to most important as weight 5.*

**The table-1** portrays that according to the opinion of the respondents, the determinant **financial risk** has been rank first position as to rate of importance with mean score of **4.69** followed by profitability with 4.63 mean score, availability of fund with mean score 4.60, productivity with 4.56 mean score, liquidity with 4.44 mean score, operating risk with 4.44 mean score, growth rate with 4.36 mean score, corporate tax with mean score 4.30, proper timing of business with mean score 4.30 and so on. Therefore, considering the weighted average mean, it can be said these ten determinants of capital structure have been highly important to the respondents.

## IX. ANALYSES OF CAPITAL STRUCTURE AND FINANCIAL STRUCTURE POSITIONS

Capital structure is comprised of permanent sources of finances, mainly equity & debt other than the financial structure is consisted with capital structure & short term debts.

**Table-2: Average Positions of Capital Structure and Financial Structure for the Sample Firms during 2008-2012**

| Name of Firm | CS | | FS | |
|---|---|---|---|---|
| | Average(mn) | Rank | Average(mn) | Rank |
| Square Pharma ltd. | 12,643.8 | **2** | 12,673.6 | **2** |
| Beximco Pharma ltd. | 16,295.2 | **1** | 16,318.4 | **1** |
| ACI Ltd. | 4,113.8 | **5** | 4,163.8 | **5** |
| Reneta pharma ltd. | 2,164.5 | **9** | 2,183.8 | **9** |
| Aftab Automobiles ltd. | 2,685.6 | **8** | 2,690 | **8** |
| AMCL (Pran) ltd. | 501.4 | **17** | 507.2 | **17** |
| Heidelberg Cement ltd. | 4.35 | **20** | 4.35 | **20** |
| Apex Adelchi ltd. | 5,511.6 | **3** | 5,514.2 | **3** |
| Apex Tennary ltd. | 1,530.6 | **11** | 1,532 | **11** |
| Apex Spinnings ltd. | 1,225.8 | **13** | 1,227.2 | **13** |
| BOC ltd. | 965 | **14** | 967.2 | **14** |
| BATBC ltd. | 471.4 | **18** | 473.6 | **18** |
| Square Textile ltd. | 1,784.6 | **10** | 1,785.4 | **10** |
| Rahim Textile ltd. | 857.4 | **15** | 857.8 | **15** |
| Confidence cement ltd. | 429.2 | **19** | 431.2 | **19** |
| Keya cosmetics ltd. | 1,388.4 | **12** | 1,391.8 | **12** |
| Bata shoe ltd. | 2,822.4 | **7** | 2,824.8 | **7** |
| Metro spinning ltd. | 645.8 | **16** | 650 | **16** |
| DESCO ltd. | 4,466.2 | **4** | 4,467.2 | **4** |
| Titas Gas ltd. | 3,620.4 | **6** | 3,623 | **6** |

*Source: Based on data shown in Annual Reports of sample firms during 2008-2012*

**The table-2** shows that in case of capital structure position, Beximco pharma has occupied the first rank with average CS of 16,295.2 MT followed by Square pharma with average of CS of 12,643.8MT, Apex Adelchi with average CS of 5,511.6MT, DESCO with average CS of 4,466.2MT, ACI ltd. with average of CS 4,113.8MT, Titas gas with average of CS 3,620.4MT, Bata show with average of CS 2,822.4MT, Aftab automobiles with average of CS 2,685.6MT, Reneta pharma with average of CS 2,164.5MT, Square textile with average of CS

1,784.6MT and so on. The table reveals the same positions of financial structure like the capital structure in case of all the sample firms. This is quite natural that a firm with heavy capital structure must have heavy financial structure. On the other hand, a firm with light capital structure must have light financial structure. This is because of the fact that capital structure and financial structure are closely positively related with each other.

## X. ANALYSES OF VALUE OF THE FIRMS

The value of the firm is the most indicator of shareholders' wealth which is the ultimate goal of an organization. The value of firm can be determined in two ways namely multiplying number of shares outstanding by the market price of the share and total debts plus capitalized value of equity capital. In the present study, we have applied the second way that is VF is equal to total debts (long term & short term) plus equity capitalization value. Against the backdrop, the table-3 presents the value of the sample firms during the study period.

**Table-3: Showing value of the sample firms during 2008-2012**

| Firm | 2008 | 2009 | 2010 | 2011 | 2012 | Average | Rank |
|---|---|---|---|---|---|---|---|
| Square pharma | 4679 | 4702.40 | 4725.91 | 4749.54 | 4773.28 | **4,726.03** | **2** |
| Beximco pharma | 4412 | 4434.06 | 4456.23 | 4478.51 | 4500.90 | **4,456.34** | **4** |
| ACI | 4778 | 4801.89 | 4825.90 | 4850.03 | 4874.28 | **3,851.13** | **6** |
| Reneta pharma | 4529 | 4551.65 | 4574.40 | 4597.28 | 4620.26 | **3,650.47** | **7** |
| Keya cosmetics | 2546 | 2558.73 | 2571.52 | 2584.38 | 2597.30 | **2,571.56** | **13** |
| Apex Adelchi | 3215 | 3231.08 | 3247.23 | 3263.47 | 3279.78 | **3,247.12** | **9** |
| Apex Tennary | 3526 | 3543.63 | 3561.35 | 3579.15 | 3597.05 | **3,561.44** | **8** |
| Apex spinning | 2014 | 2024.07 | 2034.19 | 2044.36 | 2054.58 | **2,034.38** | **14** |
| Bata shoe | 3058 | 3073.29 | 3088.66 | 3104.10 | 3119.62 | **3,088.73** | **10** |
| BATBC | 4125 | 4145.63 | 4166.35 | 4187.18 | 4208.12 | **4146.46** | **5** |
| BOC | 1247 | 1253.24 | 1259.50 | 1265.80 | 1272.13 | **1,259.53** | **18** |
| Square Textile | 1931 | 1940.66 | 1950.36 | 1960.11 | 1969.91 | **1,950.41** | **16** |
| Rahim Textile | 912 | 916.56 | 921.14 | 925.75 | 930.38 | **921.17** | **20** |
| DESCO | 4516 | 4538.58 | 4561.27 | 4584.08 | 4607.00 | **4,561.39** | **3** |
| Titas gas | 5478 | 5505.39 | 5532.92 | 5560.58 | 5588.38 | **5,533.05** | **1** |
| Metrospinning | 2014 | 2024.07 | 2034.19 | 2044.36 | 2054.58 | **2,034.24** | **15** |
| Aftab Auto | 2654 | 2667.27 | 2680.61 | 2694.01 | 2707.48 | **2,680.67** | **12** |
| AMCL pran | 3517 | 3534.59 | 3552.26 | 3570.02 | 3587.87 | **2,920.35** | **11** |
| Cofidence cement | 1162 | 1167.81 | 1173.65 | 1179.52 | 1185.41 | **1,173.66** | **19** |
| Heidelberg cement | 1025 | 1030.13 | 4725.91 | 1040.45 | 1045.65 | **1,773.43** | **16** |

*Source: Based on data shown in Annual Reports of sample firms during 2008-2012*

**The table-3** portrays that in case of value of the firm, Titas gas has occupied the first rank with average VF of **5,533.05MT followed by** Square pharma with average of VF **4,726.03MT,** DESCO with average of VF **4,561.39MT,** Beximco pharma with average of VF **4,456.34MT,** BATBC with average of VF **4146.46MT,** ACI ltd. with average of VF **3,851.13MT,** Reneta with average of VF **3,650.47MT,** Apex tennary with average of VF **3,561.44MT,** Apex adelchi with average of VF **3,247.12MT,** Bata show with average of VF **3,088.73MT and so on.**

## XI. EXAMINING IMPACT OF CAPITAL STRUCTURE POLICY ON VALUE OF THE FIRM

The impact of capital structure policy on value of the firm has been depicted below both after examining the correlation and coefficient among the different independent and dependent variables by putting the total number of observations on **SPSS program**.

The **table-4** depicts that the correlation (r ) between VF & CS, VF & DR, VF & DER, VF & ICR ,VF & TNG and VF & FLM has been calculated as 0.570, -0.142, -0.041, -0.167, 0.780 and 0.777 respectively. Considering the significance level (two tailed ), it is observed that r between VF & CS , r between VF & TNG and r between VF & FLM have been significant at 0.01 level.

At this phase, it is essential to measure the impact of the selected independent variables on the dependent variable. Considering the un-standardized coefficients values, the regression model may be estimated as follows:

***Model: VF = $\beta_0$ + $\beta_1$CS + $\beta_2$DER + $\beta_3$DR + $\beta_4$TNG +$\beta_5$ICR +$\beta_6$FLM +……. +e=***
***674.989 – 0.044CS – 19.915DER + 16.006DR + 0.042TNG + 45.966ICR + 1230+ 673FLM + …+e***

From the regression summary output, it is observed that the coefficients of **DR, ICR, TNG** and **FLM** tend to have positive impacts on the value of the firm. On the other hand, the coefficients of CS and DER tend to have negative impacts on value of the firm. Now it is important to determine whether independent variables' responsiveness is statistically significant or not. This has been done by **"t"** statistics **at 05 percent** level of significant. From **table-5,** it is observed that **DER, DR, TNG** and **FLM** are statistically very significant as compared to other predicted variables.

The coefficient of multiple determination here ($\mathbf{R^2}$) indicates that the regression model explains **79.1** percent of the variation on value of the firm. From the **ANOVA** table it is evident that the model is significant at 0.000 level. This signifies that value of the firm has been influenced to the extent of **79.1** percent by the independent variables name capital structure, debt-equity ratio, debt ratio, interest coverage ratio, tangible ratio and financial leverage multiplier.

## XII. CONCLUSIONS

Formulation of a proper capital structure policy and its implementation are of the fundamental phase for any type of business organization in Bangladesh. The value of the firm shall be affected by its capital structure policy. This premise is shown by proving that the value of the firms has been significantly influenced by their capital structure and their relationship shows positive movement in entirely or partly and sometimes in negative way in individually or wholly by their nature. When it is seen that there is positive relationship between value of the firm and capital structure; that means- debt and equity mix is most favorable position in nature but when it is seen that there is negative relationship between value of the firm and capital structure, that means- debt and equity mix is scattered .As a result, firms are covered with highly risk position.

This study has portrayed that the independent variables namely capital structure **(CS),** debt to equity **(DER)** & debt to asset **(DR),** fixed assets to total assets(Tangibility), earnings before interest and taxes to interest charges**(ICR**), financial leverage multiplier**(FLM**) have influenced value of the firm**(VF)** to the extent of 79.1 percent significantly . Consequently, the concerned authority of the corporate firms should take necessary steps in order to increase positions of debt ratio, interest coverage ratio, tangibility and financial leverage multiplier having positive impacts on value of the firm. Therefore, the relevant authority should take proper steps and decisions whether it would be optimal, target or proportional capital structure pattern in order to maximize the value of the firm and that should be the ultimate goal for any type of business organization.

## XIII. REFERENCES

1. European Commission (2010), Europe 2020 - A European strategy for smart, sustainable and inclusive growth, Brussels.
2. Raheel Mumtaz et al (2013), Impact of Capital Structure on Firms' Financial Performance: Evidence from Pakistan, Journal of Basic and Applied Scientific Research
3. Garima Dalal (2013), Capital Structure Decisions, Journal of Business Management Social Sciences Research (JBM&SSR) ISSN No: 2319-5614
4. Khalaf Al-Taani (2013), The Relationship between Capital Structure and Firm Performance: Evidence from Jordan, Journal of Finance and Accounting.
5. Muhammad Umar et al (2012), Impact of Capital Structure on Firms' Financial Performance: Evidence from Pakistan, Research Journal of Finance and Accounting
6. Ogbulu et al (2012) Capital Structure and Firm Value: Empirical Evidence from Nigeria, International Journal of Business and Social Science Vol. 3 No. 252
7. Samuel Antwi, Ebenezer Fifi Emire Atta Mills (2012), Capital Structure and Firm Value: Empirical Evidence from Ghana, International Journal of Business and Social Science Vol. 3 No. 22
8. Md. Ayub Ali & Md. Faruk Hossain (2011), Impact of Firm Specific Factors on Capital Structure Decision: An Empirical Study of Bangladeshi Companies, International Journal of Business Research and Management (IJBRM), Volume (3) : Issue (4) : 2012 163
9. Irfan Ali (2011), Determinants of capital structure: Empirical evidence from Pakistan , MSc Business Administration, Maser Thesis
10. Ronald W (2011). Masulis, The Impact of Capital Structure Change on Firm Value: Some
11. Anup Chowdhury & Suman Paul Chowdhury (2011), Impact of capital structure on firm's value Evidence from Bangladesh, Business and Economic Horizons
12. Abdullah Shah and Tahir Hijazi (2004), The Determinants of Capital Structure of Stock Exchange-listed Non-financial Firms in Pakistan, The Pakistan Development Review