Degree of Indebtness of Firms: A Comparative Study Between MNCs and Domestic Companies of Bangladesh

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Abstract- Financial leverage can be defined as the degree to which a company uses borrowed money or debt financing rather than equity financing to magnify earnings of shareholders. Although it can boost a company’s returns, but it increases risk as well. The main objective of the study was to determine the degree of indebtedness of MNCs and domestic companies and make a comparison between them. Seven domestic firms and seven MNCs were selected from six industrial sectors. Three measures of degree of financial leverage were used; capital structure [DFL(CS)], financing cost structure [DFL(FS)] and general [DFL(Gen)]. It was observed that DFLs of domestic companies were higher than that of MNCs in all three measures of DFL in all the years. Grand mean DFL (CS), DFL (FS) and DFL (Gen.) of domestic companies were 0.13, 0.61 and 2.09 respectively and that of MNCs were 0.03, 0.12 and 1.06 respectively. Like DFL (CS), averages of DFL (FS) of domestic companies were at least approximately three to four times higher than MNCs in most of the years. Domestic companies showed more consistency than MNCs in terms of DFL based on financing cost structural measure as year-wise deviations of domestic companies were less than MNCs.

Keywords: financial leverage, capital structure, financing cost

I. INTRODUCTION:
Financial leverage is concerned with the relationship between operating profits and earnings per share. If a company is financed exclusively with common stock, a specific percentage change in operating profit will be insensitive to shareholders” earnings. If a company is financed with debt or is „leveraged,” however, its shareholder earnings will become more sensitive to changes in operating profit. Nevertheless, financial leveraging makes companies equally susceptible to greater decreases in stockholder earnings if operating profits drop. Leverage is very scientific tool in the hand of finance manager.

II. STATEMENT of the PROBLEM:
Often the decision regarding financial leverage or capital structure is a formidable task due to its short and long term impact on profitability, financial risk and value. The difficulty is compounded as there are both benefits and drawbacks of having more debt or equity capital. Every company is supposed to maintain their optimum capital structure although its
measurement is very difficult. Ross, Westerfield and Jaffe (2005), state that “As financial distress costs cannot be expressed in a precise way, no formula has yet been developed to determine a firm’s optimal debt level exactly.” Value of company maximizes at optimum capital structure. To gain advantages of tax shield and higher earnings per share many companies raise too much debt capital which is detrimental to their good performance and survival. Excessive use of debt capital leads to financial distress and excessive use of equity capital leads to poor financial performance and low company value. According to Stewart (1997), it is the contractual obligation to repay debt, the fact that they have borrowed money and pre-committed to paying it back that forces companies to pay out cash, to sell unrelated businesses or to take other value increasing steps they might otherwise be reluctant to take. Another benefit is that having more debt and less equity makes it easier to concentrate the equity in the hands of insiders so that they have stronger incentives to create value that come with significant equity ownership. The main benefit of increased debt is the increased benefit from the interest expense as it reduces taxable income. But it does not make sense to maximize debt load. With an increased debt load the following occurs: interest expense rises and cash flow needs to cover the interest expense also rise due to increased investment. Debt issuers become nervous that the company will not be able to cover its financial responsibilities with respect to the debt they are issuing. Stockholders become also nervous.

III. LITERATURE REVIEW:
According to Brealey and Myers [1], financial leverage is usually measured by the ratio of long term debt to total long term capital. Another way to measure the same thing is in terms of the company’s debt-equity ratio. According to Allen [2], two important questions related to financial decision regarding maximization of owners’ wealth is – how should the company finance its investment and how should the company distribute its revenue. Gitman [3] states that the amount of debt capital in a firm’s capital structure affect return and risk which ultimately changes firm value. According to Pandey [4], leverage or capital structure ratios are calculated to judge long term financial position of the firm as well as to measure the financial risk and the firm’s ability of using debt to shareholder’’s advantage. Sarkar and Goswami [5] have conducted a study to through some light on the business risk, financial risk, financial break-even point and total risk of Hindustan Construction Company Limited. The result showed that the value of correlation coefficient between degree of financial leverage (DFL) and return on net worth (RONW) and this relationship is not statistically significant both at 5% and 1% levels of significance is (-) 0.54. Pasha, Mohammad and Ali [6] has conducted a study to estimate the relationship between profitability and leverage ratio. The higher the leverage ratio, the higher the bank’s profitability provided that the economy is in a boom state, but failure might be coming up to the banking network if lower profitability is recorded during bust from higher levels of leverage. The banking situation worsens when higher leverage degree during the bust which would cause difficulty in responding the deposits they have raised from the depositors and paid capital from the shareholders. Akbari and Moammadi [7] had undertaken a research on capital
structure of 118 DSE listed companies. The aim of their study was to analyze the effect of debt ratio on risk and return of shareholders’ stock. Regression results showed that financial leverage insignificantly increased the risk. This comply ith study of Hussan [8].

IV. THEORETICAL FRAMEWORK:
A. Degree of Financial Leverage (DFL): Pandey (2014) defines DFL as the percentage change in EPS due to a given percentage change in EBIT. Gitman (2007) states that the numerical measure of the firm’s financial leverage is called degree of financial leverage (hereafter DFL). Sinha [9] describes two different measures of DFL:
(i) (Financing Business Load / Financing Business Effort) i.e. [\% \Delta DFV / \% \Delta IFV], is a measure of the degree of the “financing leverage effect” and may be connoted as the “elasticity coefficient measure” of DFL or
(ii) Relative proportion of Average Fixed Financing Cost Bearing Capital (AFFCBC) within the “average capital structure” or relative proportion of Fixed Financing Cost Before Tax (FFCBT) or Fixed Financing Cost After Tax (FFCAT) within the “financing cost structure” is a measure of the degree of the cause of the financing leverage effect and may be connoted as the “structural measure” of DFL.

B. Measures of Degree of Financial Leverage (DFL):
There are three measurements of Degree of Financial Leverage (DFL)-a) Capital Structure measure b) Financing Cost Structure measure and c) General measure. Detailed calculation of DFL is shown below:

(a) Capital Structure Measure: This is a measure of the cause of the “financing leverage effect” and representing the “relative proportion of AFFCBC within the “average capital structure” and given by:
DFL CS = \frac{\text{Amount of Average Fixed Financing Cost Bearing Capital}}{\text{Amount of fixed and Variable Financing Cost Bearing Capital}}
\text{DFL(CS) = } \frac{\text{AFFCBC}}{\text{AFFCBC+AE}}
\text{Since, AFFCBC} \geq 0 \text{ and } \text{AE} > 0, 0 \leq \text{DFLCS} < 1

(b) Financing Cost Structural Measure: It represent the “relative proportion of FFCBT (or FFCAT) within the financing cost structure”, given by:
DFL FS = \frac{\text{Amount of Fixed Financing Cost After tax}}{\text{Total Amount of Financing Cost After tax}}
\text{DFL (FS) = } \frac{(1 \text{ - } t) \text{ FFCBT}}{(1 \text{ - } t) \text{ FFCBT + EDAT}}

(c) General measure: DFL can also be measured as follows:
DFL = \frac{\text{EBIT}}{\text{EBIT- I- PD/ (1-t)}}
\text{Here, PD = Preferred Dividend, I = Interest expense, } t= \text{ tax rate}

V. OBJECTIVE of the STUDY:
The main objective of the study was to determine the degree of indebtedness of MNCs and domestic companies and make a comparison between them. Specific objectives are: a. To find out degree of financial leverage based on capital structure measure of MNCs and domestic companies and make a comparison between them.
b. To determine degree of financial leverage based on financing cost structure measure of MNCs and domestic companies and make a comparison between them.
c. To find out degree of financial leverage based on general measure of MNCs and domestic companies and make a comparison between them.

VI. METHODOLOGY of the STUDY:

Type of Research: Type of research is exploratory. An attempt was made to identify degree of financial leverage. Nature of research is Empirical and research approach is Quantitative.

Population: Population one consists of all MNCs listed on DSE which continue operation during the study period. Eight MNCs are found in 6 industrial sectors. Population two consists of all DSE listed domestic companies of the same 6 industrial sectors and which continue operations during the study period. Population size is 45.

Types of Data: Secondary data was used. The research method employed basically involved quantitative analysis of secondary data. Nature of data is both time series and cross sectional.

Sources of Data: Books, Journals, Company documents, Annual reports of sample firms, Reports of Securities and Exchange Commission and Dhaka Stock Exchange (DSE) and Websites of sample firms and DSE. Study period is from year 1996 to 2015.

Sampling Technique: Stratified Sampling technique was applied for the selection of sample items of population one. Each of the two populations has been divided into several sub-populations or strata according to industry sector or type of industry. For the sake of comparison with the MNCs, it is necessary to select only those domestic companies that are performing well and on a consistent basis. So, Quota Sampling method was applied in selecting sample firms of population two.

Sample Size & Sample Items: The sample in this study consists of 14 companies (7 from each population) listed in Dhaka Stock Exchange (DSE). Two companies were selected from Pharmaceuticals & Chemicals industry and one company is selected from Engineering, Food & Allied, Tannery, Cement and Fuel & Power industry in each category. Name of the domestic companies are: Aftab Automobiles Ltd.(AAL), Agricultural Marketing Company Ltd.(AMCL), Beximco Pharmaceuticals Ltd.(BPL), Square Pharmaceuticals Ltd. (SPL), Apex Footwear Ltd.(AFL), Confidence Cement Ltd.(CCL), and Padma Oil Company Ltd.(POCL). Name of the MNCs are: Singer Bangladesh Ltd.(SBD), British American Tobacco Bangladesh Company Ltd.(BATB), GlaxoSmithKline Bangladesh Ltd.(GSK), Reckitt Benckiser (Bangladesh) Ltd.(RBB), Bata Shoe Company Ltd.(BSC), Heidelberg Cement Bangladesh Ltd.(HCL), and Linde Bangladesh Ltd.(LBD)

Techniques of Data Analysis: Mean is used to determine yearly average and grand average. Collected data has been processed by MS Excel, SPSS (version 20) and Gretl software. Presentation of data is done in two forms; text and tabular.

VII. RESULTS and DISCUSSION:

A. Degree of Financial Leverage (DFL) of Domestic Companies:

1) Capital Structure Measure: From the table A11 it is seen that DFL of AMCL was higher than other companies in most of the years. AAL” DFL showed decreasing trend from 1996 to 2003 and afterwards it increased for some years. DFL of AFL was higher in initial years than later years. CCL and SPL have low DFL compared to other companies. Due to absence
of any long term debt, DFL of POC was 0. Average DFL of AMCL was found highest (0.30) and DFL of AAL and BPL was same (0.14).

2) Financing Cost Structure Measure: From table A12 it is seen that DFL of AFL was more consistent and higher than other companies in many years. Besides AFL, high DFL is also seen in AMCL, BPL and AAL. These companies average fixed financing cost was 74%, 72% and 71% respectively of total financing cost. In some years of these companies, DFL became 1.00 which indicated that total financing cost comprises only with fixed financing cost and there is no variable financing cost. Comparatively low DFL was seen in CCL and SPL. On an average, highest DFL of 0.86 belonged to AFL and lowest DFL of 0.26 belonged to SPL.

3) General Measure: From table A13 it is seen that DFL of BPL, SPL and POC lies between 1.00 and 2.00 in every year of the study period which means that a change in operating income would results in more than proportionate change in EPS or ROE but not to a large extent. DFL of AAL in recent years was below than previous years. Wide fluctuation of DFL was seen in AFL and from 2008, DFL was above 2.00. DFL of AMCL was hovering around 3.00 from 2006. On an average, highest DFL of 4.85 belonged to AFL and lowest DFL of 1.09 belonged to SPL.

B. Degree of Financial Leverage (DFL) of MNCs:
1) Capital Structure measure: From the table A14 it is seen that DFL of HCL is higher than other companies in most of the years. RBB”s DFL was 0 over the entire period which indicated the absence or very negligible amount of fixed financial cost bearing capital in its capital structure. Except few years it holds true for BSC, BATB and GSK as these companies’ average DFL was 0 or near 0. In most of the years, LBD also experienced 0 DFL. Average DFL of HCL was found highest (0.12) and that of SBD was 0.05.

2) Financing Cost Structure Measure: From the table A15 it is seen that DFL of GSK was 0 up to year 2004 and that of RBB was 0 from 2003 to 2014 which indicated that in those years there was no fixed financial cost. DFL of BSC showed very low but consistent pattern. DFL of BATB and LBD has declined in recent years than initial years of study period. Although there were wide fluctuations, comparatively higher DFL was found in HCL. Wide fluctuations were also seen in case of SBD. On an average, highest DFL of 0.29 belonged to HCL and lowest DFL of 0.02 belonged to BSC and GSK.

3) General Measure: From the table A16 it is seen that DFL of MNCs was hovering around 1.00 in most of the years indicating insignificant financial leverage advantage. In 2005, DFL of HCL was 2.03 which became maximum among all observations. One important feature of the table is that consistent pattern of DFL was shown by all the MNCs except SBD. Variation of DFL among companies was also low. On an average, highest DFL of 1.22 belonged to SBD and lowest DFL of 0.99 belonged to GSK.

C. Comparison of Yearly Average DFL Between Domestic Companies and MNCs: In this section comparison of yearly average of DFL between domestic companies and MNCs is shown in a comprehensive way by incorporating all three measures of DFL. Average of yearly DFL of seven companies of each category is determined to reach at average DFL in each year. From the table it is
observed that DFLs of domestic companies were higher than that of MNCs in all three measures of DFL in all the years. Average DFLs (CS) of domestic companies were higher in initial years of study period than later years. The same holds true for MNCs. In 1996, DFL (CS) of domestic companies was 0.23 whereas that of MNCs was 0.05 and in 2015 it has declined to 0.10 and 0.01 in case of domestic companies and MNCs respectively. Average DFLs (CS) of domestic companies were at least approximately three to four times higher than that of MNCs in most of the years. Grand mean DFL (CS) of domestic companies was 0.13 which was much higher than that of MNCs (0.03). Domestic companies showed more consistency than MNCs in terms of DFL based on financing cost structural measure as year-wise deviations of domestic companies were less than MNCs.

Like DFL (CS), averages of DFL (FS) of domestic companies were at least approximately three to four times higher than MNCs in most of the years. The differences in DFL (FS) between two types of companies were much larger in recent years than previous years. Grand mean DFL (FS) of domestic companies (0.61) was much higher than that of MNCs (0.12). MNCs showed more consistency than domestic companies in terms of DFL (general). Average DFLs (general) of both types of companies has slightly declined in recent years than previous years. In 1996, DFL (general) of domestic companies was 3.12 whereas that of MNCs was 1.08 and in 2015 it has declined to 1.94 and 1.02 in case of domestic companies and MNCs respectively. Average DFLs (general) of domestic companies were at least two times higher than that of MNCs in most of the years. Grand mean DFL (general) of domestic companies (2.09) was much higher than MNCs (1.06).

### TABLE I: COMPARISON of AVERAGE DFL

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic Co.</th>
<th>MNCs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DFL(CS)</td>
<td>DFL(FS)</td>
</tr>
<tr>
<td>1996</td>
<td>0.23</td>
<td>0.69</td>
</tr>
<tr>
<td>1997</td>
<td>0.17</td>
<td>0.64</td>
</tr>
<tr>
<td>1998</td>
<td>0.17</td>
<td>0.46</td>
</tr>
<tr>
<td>1999</td>
<td>0.16</td>
<td>0.53</td>
</tr>
<tr>
<td>2000</td>
<td>0.13</td>
<td>0.55</td>
</tr>
<tr>
<td>2001</td>
<td>0.15</td>
<td>0.56</td>
</tr>
<tr>
<td>2002</td>
<td>0.16</td>
<td>0.60</td>
</tr>
<tr>
<td>2003</td>
<td>0.16</td>
<td>0.65</td>
</tr>
<tr>
<td>2004</td>
<td>0.19</td>
<td>0.70</td>
</tr>
<tr>
<td>2005</td>
<td>0.19</td>
<td>0.72</td>
</tr>
<tr>
<td>2006</td>
<td>0.14</td>
<td>0.65</td>
</tr>
<tr>
<td>2007</td>
<td>0.11</td>
<td>0.62</td>
</tr>
<tr>
<td>2008</td>
<td>0.09</td>
<td>0.70</td>
</tr>
<tr>
<td>2009</td>
<td>0.09</td>
<td>0.78</td>
</tr>
<tr>
<td>2010</td>
<td>0.09</td>
<td>0.67</td>
</tr>
<tr>
<td>2011</td>
<td>0.08</td>
<td>0.57</td>
</tr>
<tr>
<td>2012</td>
<td>0.08</td>
<td>0.57</td>
</tr>
<tr>
<td>2013</td>
<td>0.08</td>
<td>0.65</td>
</tr>
<tr>
<td>2014</td>
<td>0.07</td>
<td>0.46</td>
</tr>
<tr>
<td>2015</td>
<td>0.10</td>
<td>0.45</td>
</tr>
<tr>
<td>G.Mean</td>
<td>0.13</td>
<td>0.61</td>
</tr>
</tbody>
</table>

Source: Derived from Annual Report of sample firms

VIII. CONCLUSION:
In this paper, the degree of indebtedness of firms is measured by three types of degree of financial leverage. It is seen that in all three measures, on an average domestic companies are more levered than MNCs. Neither type of company uses excessive debt or financial leverage because DFL (general) of domestic companies were below 2 and that of MNCs were hovering around 1 for the last few years. There is a scope for both MNCs and domestic companies to enhance proportion of debt capital in their capital structure to a certain extent to avail the advantages of degree of financial leverage without falling into financial distress.
REFERENCES: