

Impact of financial leverage on financial performance: Evidence from textile sector of Bangladesh

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Abstract

The principal intention of this paper is to find out the relationship between financial leverage and financial performance as well as to assess the impact of financial leverage on the financial performance of sample textile industries in Bangladesh. Debt-assets ratio & debt-equity ratio are proxy of financial leverage and return on assets and return on capital employed is proxy of the financial performance of sample textile industries. In this paper correlation and regression analysis have been conducted by SPSS-20 over the 5-years (2008 to 2012) sample data. In this study, result indicates statistically significant negative tie-up between debts-equity ratio to return on assets (-.293) and insignificant negative relationship between debts-equity ratio to return on capital employed (-.249) as well as statistically significant detrimental tie-up between debt-assets ratio to return on assets (-.285) and return on capital employed (-.335). Financial leverage insignificantly impacts the financial performance of the sample textile companies.

Key words Financial leverage, Financial performance, Textile industry

Paper type Research paper

Introduction

For maximizing the wealth of a firm financial manager has to take three crucial decisions such as investment decision, financing decision, and dividend decision. Among these three options financing is the most important for the firm. A firm may raise funds mainly into two sources such as debt and equity. Debt may be short-term or long-term. Financial leverage means introducing long-term debt in the capital structure of a firm. Financial leverage refers to instigate long-term debt in firm's financial structure for the amplifying year ended earnings (Pandey, 2005). In case of financing decision financial manager has to consider two facts such as cost and return. Marginal & institutional investors deem that debt financing enhances firm's financial performance (Myers & Majluf, 1984). Profitability refers to the gain or



benefit which is generated by a company for a particular period through using their available resources. Profitability is essential for any firm to survive in this competitive world. Firm's existing shareholders wealth maximization is the crucial assumption of most of the corporate sector theory in the business world. Firm's wealth maximizing goal also includes profitability. Leverage is the best means of increasing firm's profit at the end of periods. Different studies in the home and abroad revealed that corporate performance of various manufacturing firms affected by financial leverage. Firm's primary intention is to utilize financial leverage is to boost their stockholder's earning under congenial business and economic conditions. Financial performance of a corporation may be favorably or adversely affected by the financial leverage which is dependent on the productive use of debt financing. Thump of financial leverage on corporation's performance may be favorable or unfavorable which relay on efficient implication of debt financing. An affirmative correlation refers firms rely on debt as much as firms require which will boost firm's performance at the end of years (Aburub, 2012).

The textile industry is one of the most important and second largest manufacturing sectors in Bangladesh. This industry contributes mostly many times in the economic development of Bangladesh in terms of increasing GDP, creating employment opportunities and generating foreign remittance through international trade. Under textile industry, readymade garments sector sell overseas totaled the US \$24.5 billion (2013-14) accounting for over 80% of the country's overseas sell revenue and involving more than 4.2 million skilled and unskilled workers, 80% of them are female (Textile review Volume 08, Issue 08, August 2015). Measuring profitability of textile industry in Bangladesh is essential because it significantly contributes to increasing GDP and creating employment opportunities. As like any other manufacturing sector textile industry try to enhance their operational performance by introducing financial leverage in their capital structure. As far researcher knowledge there is no specific study on financial leverage and financial performance of the textile industry in Bangladesh. So this study is to detect the relationship between financial leverage and profitability as well as assess the impact of financial leverage on profitability in sample textile companies in Bangladesh.

Objectives of the study

- To examine the tie-up between financial leverage and profitability of selected textile companies in Bangladesh.
- To assess the impact of financial leverage on the profitability of selected textile companies in Bangladesh.

Literature review

Profound research works have done on the financial leverage and profitability in various sectors in foreign countries as well as some manufacturing sectors in Bangladesh. So far researcher's knowledge there is no empirical works on the financial leverage and profitability in textile sectors in Bangladesh. This work is the researchers endeavor to fulfill this gap. Findings of earlier research work on this and related topics conducted in Bangladesh and other countries outlined below:

Rajkumar (2014), in a study, employed debt to equity ratio & debt to the total assets ratio as a surrogate of financial leverage and net profit, return on equity & return on capital employed as a proxy of the financial performance of the study in Sri Lanka. This study has shown that there is a detrimental tie-up between financial leverage and financial performance of John Keells Holdings Plc. The investigation also revealed that financial leverage has a statistically significant impact on financial performance of studied corporation in Sri Lanka. Enekwe and Agu (2014), investigate the effect of financial leverage on corporate performance: Evidence of Quoted Pharmaceutical firms in Nigeria. In this work, debt ratio, debt-equity ratio & time interest coverage ratio are employed as independent variables for representing financial leverage and return on the asset as the dependent variable for representing financial performance. The result of the co-relation analysis indicates that debt ratio (DR) and the debt-equity ratio (DER) have an adverse correlation with return on assets (ROA) whereas interest coverage ratio (ICR) has a supportive tie-up with return on assets (ROA) in Nigeria pharmaceutical industry. Regression analysis also showed that explanatory variables have an insignificant impact on financial performance of the selected companies. From the model, it is also seen that only 16.4% change in the dependent variable is explained by explanatory variables. Rehman (2013), found positive linkage of debt-equity ratio with sales growth & return on asset, whereas adverse tie-up of debt-equity ratio with net profit margin, earning per share and return on equity. Akinlo and Asaolu (2012), study on profitability and leverage: Evidence from Nigerian firms. The results of the study reveal that leverage was negatively related to the profitability of Nigerian firms. Khan (2012) performed a study on Pakistanian companies where short-term

debt & total debt are proxy of debt structure as well as return on asset is proxy of firm's financial performance. This study revealed that debt structure statistically significant adverse impact on firm's financial performance. Rafique (2011) study on the Pakistan Automobile Industry where he found firm's profitability and financial leverage have statistically insignificantly influenced on the capital structure of study periods. Ebaid (2009), shown in his study on Egyptian companies that debt structure has an insignificant correlation with ROE whereas statistically significant negative impact on firm's ROA. Amjed (2007), found in a study on Textile sector of Pakistan that total debt as a whole has no impact on Textile Sector's profitability due to the inherited distinct features of current debt and long-term debt. Debt financing increases return on equity of a profitable business organization (Ward & Price, 2006). War & Price also emphasis on financial leverage or debt financing because solvent firms earn more than it pays for borrowing through debt financing. Enuju and Soochong (2005) had shown their study that long-term debt financing does not influence restaurant firm's financial performance. Abor (2005) examines capital structure impact on the profitability of registered companies in Ghana. In this study Abor shown that debt ratio has significant positive tie-up with the profitability of the firms listed in Ghana. Here total debt to the total asset is the proxy of debt ratio and return on equity is the proxy of profitability. Fama and French (2002), examining the trade-off and pecking order estimation about common stock's return and leverage. They forecasted that adverse tie-up between leverage and profitability which is picking-up temporary variation in leverage rather than mark change in leverage. Negash (2001) found in his study that leverage has a dissentient impact on the corporate performance of incorporated firms on the Johannesburg Stock Exchange.

Majumdar and Chhibber (1999) found in their study; there is an appreciably adverse correlation between debt and financial performance of Indian firms. Wald (1999) conducted a study on "How firm characteristics affect capital structure: an international comparison". In this study, Wald showed that debt-asset ratios have statistically significant positive correlation with profitability. Rajan and Zingales (1995) examined capital structure determinants of registered corporations in seven largest countries around the world. This study revealed that profitability adversely related with financial leverage. Titman and Wessels (1988) researched on dynamics of capital structure decision. They expressed that more profit-generating firms have a minimum level of leverage than a low profit generating firm because company initially uses their internal earnings as capital before finding outside capital.

Methodology

For demonstrating the cause-effect correlation between explanatory variables and dependent variable causal research is designed (Copper & Schindler, 2006).

Sample size

The researcher considers all the listed textile companies (45 textile companies enlisted) in Dhaka Stock Exchange as a population from where purposively 12 textile companies are selected as a sample in this research. Sample textile companies are chosen on the basis of their available financial data. In this study, the researcher uses five years' (2008 to 2012) data of sample textile companies.

Data collection

This study is empirical in nature which based on secondary data. The relevant secondary data of sample textile companies collect from their respective financial statements. Financial statements of sample textile companies are found out through visiting their website as well as the website of Dhaka Stock Exchange.

Data analysis

For analyzing the collected secondary data of sample textile companies various statistical tools have been applied. Among these tools include ratio analysis which measures the financial leverage and financial performance of sample textile companies and multiple regression analysis & Correlation analysis are used to show the effect and interconnection among relevant variables in this research work. Multiple regression analysis & Correlation analysis performed by using of SPSS-20.

Model specification

In this research financial leverage demonstrates as an explanatory variable, and financial performance indicates as an explained variable. Debt-assets ratio (DTA) & debt-equity ratio (DTE) are proxy of financial leverage and return on assets (ROA), & return on capital employed (ROCE) is proxy of the financial performance of selected sample textile companies. To examine the effect of financial leverage on the financial performance of sample textile companies following regression models are used:

$$\begin{aligned} \text{ROA}_{it} &= \alpha_{it} + \text{DTA}_{it}\beta_0 + \text{DTE}_{it}\beta_1 + \epsilon_{it} \\ \text{ROCE}_{it} &= \alpha_{it} + \text{DTA}_{it}\beta_0 + \text{DTE}_{it}\beta_1 + \epsilon_{it} \end{aligned}$$

Hypotheses

Hypothesis-1

H1: There is a statistically crucial tie-up between financial leverage and financial performance of sample textile companies.

Hypothesis-2

H2: Financial leverage influence on financial performance of sample textile companies.

Analysis and discussion

Table 1: Correlations

		ROA	ROCE	DE	DA
ROA	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	60			
ROCE	Pearson Correlation	.958**	1		
	Sig. (2-tailed)	.000			
	N	60	60		
DE	Pearson Correlation	-.293*	-.249	1	
	Sig. (2-tailed)	.023	.055		
	N	60	60	60	
DA	Pearson Correlation	-.285*	-.335**	.578**	1
	Sig. (2-tailed)	.027	.009	.000	
	N	60	60	60	60

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Above correlation matrix shows that there is both positive and negative tie-up existing between dependent variables and explanatory variables. In some cases, the inter-correlation is significant whereas the relationship is insignificant in other cases. There is statistically substantial adverse tie-up between debt to equity and return on assets (-.293*) at 1% level whereas insignificant negative correlation with return on capital employed (-.249). If the debt to equity ratio increases, return on the asset as well as return on capital employed are decreased and vice-versa. Again, there is a significant uncooperative relationship between Debt to total assets and Return on assets (-.285*), and Return on capital employed (-.335**). If the debt to total assets ratio increases return on assets and return on capital employed are decreased and vice-versa. Here, the antagonistic alliance between debt to total assets and return on assets is significant at 1% level, and return on capital employed is significant at 5% level but the tie-up between debt to total assets and return on equity is not

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statistically significant. Above result indicates that Hypothesis-1 is partially accepted which refers a substantial negative linkage between financial leverage and financial performance of the sample textile corporation.

Table 2: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.326 ^a	.106	.075	.03085

a. Predictors: (Constant), DA, DE

Table 3: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.042	.006		6.512	.000
	DE	-.004	.003	-.192	-1.254	.215
	DA	-.028	.025	-.174	-1.137	.260

a. Dependent Variable: ROA

From Table 2 it is observed that coefficient of determination (r^2) demonstrates that debt to total asset ratio & debt to equity ratio explain only 10.6% variation of return on asset (ROA). That is, the result obtain from the model revealed that independent variables only explain 10.6% variation of return on asset which is statistically insignificant. So it is said that propose model is not statistically fit to explain the dependent variable by independent variables.

Table 4: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.342 ^a	.117	.086	.05577

a. Predictors: (Constant), DA, DE

Table 5: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.073	.012		6.313	.000
	DE	-.003	.006	-.084	-.549	.585
	DA	-.084	.044	-.287	-1.882	.065

From the above result of the model, it is seen that coefficient of determination (r^2) denotes that debt to total asset ratio & debt to equity

ratio explains only 11.7% variation of return on capital employed (ROCE). That is, the result obtain from the model revealed that independent variables only explain 11.7% variation of return on asset where the impact of debt to asset on return on capital employed (ROC) is statistically significant at 10% level, and the effect of debt to equity on return on capital employed (ROCE) is statistically insignificant. So it is said that proposed model is not statistically fit to explain the dependent variable by explanatory variables. The result of the suggested two models revealed that Hypothesis-2 rejected. That is, financial leverage is not significantly knocking on the financial performance of the sample textile industries.

Conclusion

In this study, the fundamental impetus of the researcher is to show the connection between financial leverage and financial performance as well as to assess the impact of the financial leverage on the financial performance of the sample textile companies for the time horizon of 2008 to 2012. From the calculated result, it is observed that there is statistically significant adverse alliance between debts-equity ratio to return on assets and the insignificant negative association between debts- equity ratio to return on capital employed. Whereas there is a statistically significant negative relationship between debt-assets ratio to return on assets and return on capital employed. This contrary linkage between financial leverage and financial performance is also consistent with various authors like Rajkumar (2014), Enekwe and Agu (2014), Rehman (2013), Fama and French (2002), Majumdar and Chhibber, (1999), Rajan and Zingales (1995). On the other hand, it is also found out from the calculated result that financial leverage insignificantly influences the financial performance of the sample textile companies. Here the impact of financial leverage over financial performance is insignificant because financial performance of the sample textile companies not only dependent on financial leverage but also some other factors like size of the industries, liquidity, the tangibility of the assets, efficiency of the industries, tax rate, economic condition, etc. This result is consistent with the various renowned authors like Rafique (2011). This study is essential for fund providers or creditors of the manufacturing sectors and financial executive who take financing decision of the organization. At last, it is said that the study may be enhanced by considering more independent variables, increasing the sample size and volume of data in the linear regression model to obtain better results.

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