
Impact of Capital Structure on the Profitability of Firms; A Case Study of Textile Industry of Pakistan

Ayesha Ateeq*

Lecture, Department of Banking and Finance

Government College University Faisalabad

Email: aisha.ateeq78@gmail

*Corresponding author

Saima khurshaid

Lecturer, Shiblee College of Commerce

Saimakhurshid202@gmail.com

Muhammad Faran Ali Butt

Faranali3817@gmail.com

Market Development Executive

Punjab Beverage Company, Pakistan

Abstract

This study aims to investigate the influence of capital structure on the profitability of firms. For this purpose, profitability has taken in term of return on assets, return on equity, net profit margin and earning per share as dependent variables while capital structure in term of debt to equity ratio, long term debt to equity and short term debt to equity used as independent variables. For our sample selection we have considered 152 firms of textile industry which are listed in KSE and we have applied correlation analysis, descriptive statistics and multiple regression analysis to analyze the results. This study concluded that there is a negative impact of short term debt to equity ratio on the profitability of the firms and long term debts to equity and debt to equity ratio has a positive impact on the profitability of the firms but the results are significant only in case of regression analysis for return on equity and insignificant for all others.

Key words: Capital Structure; Profitability; Debt to Equity; Short term Debts; Long term Debts; ROAS; ROEQ; NPMG; ERPS; Textile Industry

Reference to this paper should be made as follows: Ateeq, A., Khurshaid, S., Butt, M, F, A. (2017) ‘Impact of Capital Structure on the Profitability of Firms; A Case Study of Textile Industry of Pakistan’, *Asia Pacific Journal of Emerging Markets*, Vol. 1, No. 2, pp.135–146.

Biographical notes: Ayesha Ateeq is a Lecturer at GC University, division of finance, Lyallpur business school. She received her Master’s in Commerce from university of Agriculture Faisalabad, Pakistan. She has completed MPhil in Finance from Riphah International University Islamabad. Her research and teaching interest are in the field of Finance.

Saima khurshaid is a Lecturer at Shiblee College of Commerce, Faisalabad, Pakistan.

Muhammad Faran Ali Butt is working as a Market Development Executive at Punjab Beverage Company, Pakistan.

1. Introduction

Capital is needed to finance assets in the business. Capital in the business came from two sources: equity finance and debt finance. The critical decision for management is to decide about the mix of different capital components. Managers have to answer this question that what should be the proportion of debt and equity in the capital structure (CS). Before deciding about the lack of capital components, cost and benefits of availing each capital component should be compared. Also the claims of the capital providers should be checked and analyzed. When cost of capital increased, value/benefit/profit of firm is also decreased. So cost of capital is inversely related with profitability. The objective of the management is to maximize profitability and minimize cost. This is referred to as optimum CS that is the most debatable topic of the financial management and is attracted by the researcher. Increased equity finance will increase the threat of takeover by the external parties (competitors), secondly it is observed that management issue equity finance only when they think that

shares are overvalued in the market and normally refuse to issue under-value shares. On the other hand, management view about debt financing is that highly leveraged firm is viewed by stakeholders as a most successful and most profitable firms that is generating higher profit sufficient to pay off the claim of the creditors. That's why they mostly prefer debt financing. The other reason for preferring the debt financing is that "interest on debt" is tax deductible. Tax benefits induced the managers to prefer debt finance rather than equity finance. But highly leveraged firms are actually very risky firms, higher interest rates overwhelm the tax advantages of the debt. If business faces the hard time, and due to uncertain future, there is a great chance of insolvency and ultimately bankruptcy. So capital structure decisions became most crucial and sensitive. This study aims to examine the association between CS and profitability of Pakistani textile manufacturing companies.

2. Literature Review

Ferati, (2009) studied the association between CS and profitability of Macedonia firms by using 150 firms as a sample for the period of 10 years. ROE is taken as endogenous variable and short and long term and owner's equity are independent variable. Ordinary least square method was used. They have concluded that short-term debt and equity are positively influenced by ROE while long-term debt and equity are negatively influenced by ROE. Claudiu (2011) empirically investigated the affiliation between CS and profitability of 62 public companies in Romania for 10 years from 2001-2011. ROA, ROE & ROI are used as endogenous variable (proxy for profitability) while debt ratio, tax rates, size and noncurrent asset ratio as exogenous variables. For empirical model test two methods such as fixed effect and random effect models were employed. They have concluded that profitability is adversely affected by capital structure decisions and it is proof of pecking order theory. In addition, firms with large non-current assets are under-performance and diseconomies are the results.

Niressh and Velampy, (2012), explored the association between CS and profitability relationship of 10 Srilankan banks over 8 years' period from 2002-2009. Debt to equity is considered as explanatory variable while ROA as explained variable. Results were based on descriptive and correlation analysis. The study found the negative association between CS and firms profitability.

Chisti, Ali and Sangmi (2013) empirically explored the influence of CS on profitability of 10 firms from automobile industry that were listed at Indian stock

exchange for the period of 5 years from 2007-2008 to 2011-2012. They have used ratio analysis for analyzing the results. this study uses mean of profitability as an exogenous variable while different CS ratios such as “debt to equity, debt to asset and interest coverage” were used as endogenous variables. they performed correlation analysis and revealed that profitability is negatively influenced by the debt to equity ratio while positively influenced by interest coverage and debt to asset ratio.

Ali, (2013) empirically explored the influence of CS on the profitability of 84 companies listed on KSE and 75 companies listed on BSE for the period of 10 years from 2000 to 2010. This study used ROA as a proxy of profitability as an explained while long term, short term debt ratios, contribution of equity and insider possession as a proxy of CS that were used as explanatory variables. this study used multiple regression analysis for analyzing the results and found the negative correlation of profitability and long term leverage in the corporations of BSE and KSE.

Heirany et al, (2014) explored the effects of CS on firm’s performance of 202 firms of 13 different industries for the period of 6 years from 2006-2011. ROA was considered as explained variable. While Leverage were considered as independent variable. Relative leverage as control the leverage level of the competitors. Competitive advantage is used as mediator variable. This study showed the significant and positive association between leverage and financial performance, it is also found that there is inverse significant association between square leverage and firm’s performance. Moreover, the performance of firm is negatively affected by the leverage of participants

Kumaar and Himani, (2014), have explored the influence of CS on financial performance of selected Indian’s manufacture companies by using the data for the 5 years’ period from 2009-2013. This study considered “Debt Equity ratio long term debt and debt asset ratio” as independent variables while “GPM, NPM, ROCE, ROA, & ROE” as dependent variables. This study used correlation and Multiple Regression analysis for obtaining the results and found the positive affiliation between CS and the financial performance of firms.

Aziz and Amara, (2014), have examined the impact of CS on firm performance of 33 firms listed on KSE for 7 years’ period from 2006-2012. ROA and EPS are considered as explained variable and debt equity, long term debt to total asset ratio, short term debt to total asset are considered as explanatory variables. Firm

size is used as control variable. Assumption of multi collinearity, heteroscedasticity, contemporaneous correlation, autocorrelation along with PCSE and PRAIS-winsten regression were used. They have revealed the negative association between CS ratio and the performance of firm and the significant impact of debt to equity ratio on the performance of firm.

Chechet et al. (2014), have examined the relationship between CS and profitability of 70 stock exchange listed firms in Nigeria for 9 years from 2000 to 2009. Profitability is taken as explained variable while debt ratio and equity over the period is taken as explanatory variables. They analyzed panel data using fixed effect, random effect and hausman chi-square. They concluded that debt ratio is adversely related with profitability while equity over the time is directly related with profitability. Bandt et al, (2014), have investigated the impact of capital structure on bank's profitability of large French banks for the period of 19 years from 1993 to 2012. For Profitability ROE is taken as dependent variable and capitalization as exogenous variable. It was concluded that there is an inverse association between capital structure and profitability.

3. Methodology

The whole textile sector of Pakistan is considered as the population of our study. Textile companies which are listed at KSE and are providing fully required data needed for our study is considered as the sample of study. For the purpose of our analysis we have collected the data for the period from 2008 to 2013. And the source of data collection is the published reports for ratio analysis by the state bank of Pakistan. Independent variables include the capital structure in the form of following ratios; "Total debt to equity ratio, Long term debt to equity ratio and Short term debt to equity ratio", while dependent variables are "Return on equity, return on assets, Net operating margins and Earnings per share". We have measure different variables in following ways. We have measured performance and capital structure of the textile firms which are listed at KSE and we have measured these in different ways. Total debt to equity ratio is determined in term of "current liabilities + non-current liabilities divided by shareholder's equity". We have short term debt to equity in term of "current liabilities divided by total shareholder's equity". Long term debt to equity is calculated through "non-current liabilities divided by total shareholder's equity". Performance is calculated ROEQ as "EBT divided by average of shareholder's equity", ROAS in term of "EBT divided by average of current assets + non-current assets".

NPMG determined as “EBT divided by total sales” and ERPS calculated as “EBT – tax provisions divided by total number of ordinary shares”. Correlation and multiple regression analysis are conducted to investigate the relationship.

4. Empirical Results

The results are showing the negative and significant association among TDB and ERPS and ROEQ, but as with the literature Kumar and Himani (2014) proved positive relation between performance and liquidity, we concluded that TDB has positive, insignificant relation with ROAS and NPMG. We have found that there is a direct but insignificant relationship between STDB and firm’s profitability, it is similar to the findings of Goyal (2013). They examined positive relation with profitability. LTDB has positive but insignificant relation with profitability in term of ROAS, ERPS, and NPMG. But at the same time there is a direct significant relation with LTDB and ROEQ.

Table 1: Correlation among Variables

		ERPS	NPMG	ROEQ	ROAS	TDB	STDB	LTDB
EPS	“Pearson Correlation	1	.165**	.245**	.170**	-0.001	0.003	0.004
	Sig. (2-tailed)		0	0	0	0.974	0.919	0.895
	N”	910	910	910	910	910	909	910
NPM	“Pearson Correlation	.165**	1	.118**	.118**	0.039	0.02	0.008
	Sig. (2-tailed)	0		0	0	0.246	0.541	0.809
	N”	910	910	910	910	910	909	910
ROE	“Pearson Correlation	.245**	.118**	1	.066*	-0.063	0.01	.083*
	Sig. (2-tailed)	0	0		0.046	0.058	0.76	0.012
	N”	910	910	910	910	910	909	910
ROA	“Pearson Correlation	.170**	.118**	.066*	1	0.024	0.013	0.004
	Sig. (2-tailed)	0	0	0.046		0.462	0.705	0.901
	N”	910	910	910	910	910	909	910
TDB	“Pearson Correlation	-0.001	0.039	-0.063	0.024	1	.496**	.070*
	Sig. (2-tailed)	0.974	0.246	0.058	0.462		0	0.034
	N”	910	910	910	910	910	909	910
STDB	“Pearson Correlation	0.003	0.02	0.01	0.013	.496**	1	.875**
	Sig. (2-tailed)	0.919	0.541	0.76	0.705	0		0
	N”	909	909	909	909	909	909	909
LTDB	“Pearson Correlation	0.004	0.008	.083*	0.004	.070*	.875**	1
	Sig. (2-tailed)	0.895	0.809	0.012	0.901	0.034	0	
	N”	910	910	910	910	910	909	910

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ERPS	910	-496.85	828.78	5.8663	54.10119
NPMG	910	-686.43	233.08	-5.8206	51.6094
ROEQ	910	-869.25	791.9	2.8861	86.79362
ROAS	910	-633.33	425.04	-1.5415	41.12891
TDB	910	-76.82	296.98	2.0166	14.08251
STDB	909	-595.61	280.77	0.8312	23.03112
LTDB	910	-1406.27	47.93	-1.0126	46.85068

The table 2 shows descriptive statistics, mean values of profitability ERPS, NPMG, ROEQ and ROAS are 5.8663, -5.8206, 2.8861 and -1.5415 respectively and for capital structure in term of TDB, STDB and LTDB are 2.0166, .8312 and -1.0126 respectively. It represents that firms are relying on mostly STDB.

4.1. Multiple Regression Analysis

We have applied multiple regression analysis to see the impact of liquidity on the performance of textile industry for that purpose we have developed 4 different models and their results shows as follow;

4.1.1. Multiple Regression analysis for ERPS

DTB is negatively related with profitability in term of ERPS which means that when TDB increased the profitability goes down and vice versa, as the same result was explained by Heirany et al, (2014). But at the same time STDB and LTDB has positive impact on the ERPS but these results are not significant similar to the results of study of Kumaar and Himani, (2014). See table 3.

Table 3: Multiple Regression analysis Dependent Variable is ERPS

Model		“Unstandardized Coefficients”		“Standardized Coefficients”	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.951	1.818		3.274	.001
	DTB	-.011	.291	-.003	-.039	.969
	STDB	.008	.366	.003	.022	.983
	LTDB	.002	.157	.002	.012	.990

4.1.2. Multiple regression analysis for NPMG

The below table of results shows the positive and significant influence of CS in term of DTB and LTDB on the profitability (NPMG) but at the same time these are insignificant. The STDB has negative impact on the NPMG and insignificant relationship, the results are similar to the study of Arowoshegbe and Idialu, (2013). See table 4.

Table 4: Multiple Regression analysis Dependent Variable is NPM

Model		"Unstandardized Coefficients"		"Standardized Coefficients"	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.130	1.734		-3.536	.000
	DTB	.255	.278	.070	.919	.358
	STDB	-.162	.349	-.072	-.463	.644
	LTDB	.073	.149	.066	.488	.626

4.1.3.. Multiple regression analysis for ROEQ

Table 5: Multiple Regression analysis Dependent Variable is ROEQ

Model		"Unstandardized Coefficients"		"Standardized Coefficients"	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.407	2.866		1.189	.235
	DTB	1.521	.459	.247	3.314	.001
	STDB	-2.727	.578	-.723	-4.722	.000
	LTDB	1.294	.247	.699	5.240	.000

Above results shows the direct and significant influence of DTB and LTDB on the profitability of firm in term of ROEQ. The STDB has a significant negative influence on the ROEQ and these results are also parallel to the results of (Claudiu, 2011, Velnampy & Niresh, 2012; Shubita & Alsawalhah, 2012; Pauraghajan & Malekian, 2012). See table 5.

4.1.4. Multiple Regression analysis for ROAS

Table 6: Multiple Regression analysis Dependent Variable is ROAS

Model		“Unstandardized Coefficients”		“Standardized Coefficients”	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.692	1.382		-1.224	.221
	DTB	.114	.221	.039	.517	.605
	STDB	-.061	.279	-.034	-.219	.826
	LTDB	.027	.119	.031	.231	.818

The results showed that there is a positive and insignificant impact of DTB and LTDB on the profitability in term of ROAS. But at the same time STDB has a negative impact on the ROAS but it is an insignificant relationship. See table 6.

5. Conclusion

From our research study we have concluded that there is a negative impact of short term debt to equity ratio on the profitability of the firms and long term debts to equity and debt to equity ratio has a positive impact on the profitability of the firms but the results are significant only in case of regression analysis for return on equity and insignificant for all others.

We increase the short term debts the profitability of firms goes down and when we increase the debts and long term debts profitability of firms go up. It means to enhance the firm's profitability we have to mainly depend on the usage of long term debts as compare to the short term debts. The logic behind that, we increase our long term debts it gives us an opportunity to have finance for covering our investment needs and we utilize this amount by investing in profitable places and also utilizing for some productive reasons which leads to be a cause of increasing our profitability. So we are recommended to increase the profitability, firms must rely on long term debts more as compare to short term debts.

References:

Ali, A. (2013). Effect of Capital Structure on the Performance of Firm. *IOSR Journal of Business and Management*, 12(6), 83-93

Arowoshegbe, A.O. and Ldialu, J.O (2013). Capital Structure and Profitability of Quoted Co in Nigeria. *International Journal of Business and Social Research*, (#), 99-106

Aziz, B. and Amara (2014). Impact of Capital Structure on Firm Performance Analysis of Food Sector Listed on Karachi Stock Exchange. *International Journal of Multidisciplinary Sorsortium*, 1(!), 1-11

Bandt, O.D, Camara, B.Pessarossi, P. and Rose, M. (2014). Does the Capital Structure Affect Bank's Profitability. ACPR Banque De France, Secretariat General DEL Autorite De Controle Prudential ET DE Resolution Direction DES ETUDES-Directiobndes Edtudes-SGACPR.1-49

Chechet, I.L, and Olayiwola, A.B. (2014). Capital Structure and Profitability of Nigerian Quoted Firms. *American International Journal of Social Science*, 3(1)

Chisti, K.A., Ali, K. and Sangmi, D.M. (2013). Impact of Capital Structure on Profitability of Listed Companies. *The USV Annual of Economics and Public Administration*, 13(17), 183-191

Claudiu, B. (2011). Profitability and Capital Structure Trade Off. 969-975

Ferati, R. (2009). Capital Structure and Profitability. *European Scientific Journal*, 8(7), 51-58

Goyal, A.M. (2013). Impact of Capital Structure on Performance of Listed Public Sector Banks in India. *International Journal of Business and Management Invention*, 2(10), 35-43

Heiranymf, Nayebzadeh, S. and Esmailkhani, H. (2014). The Effect of Capital Structure on Performance of the Firms Listed on Tehran Stock Exchange Base on the Competitive Advantage. *Interdisciplinary Journal of Contemporary Research in Business*, 5(9), 502-513

Kumar, G.N. and Himani, G. (2014). Impact of Capital Structure on Financial Performance in Indian Construction Co. *International Journal of Economic, Commerce and Mgt*, 2(5), 3-14

Niresh, A.J and Velnampy, T. (2012). The Relationship Between Capital Structure and Profitability. *Global Journal of Management and Business Research*, 12(13), 67-73

Pouraghajanna, Malekianme. (2012). The Relationship Between Capital Structure and Firm Performance. *Internal Journal of Business and Commerce*, 1(9), 167-181

Shubita, M.F. and Alsawallah, M.J. (2012). The Relationship Between Capital Structure and Profitability. *International Journal of Business and Social Science*, 3(16)

Velnampy, T. and Niresh, A. The Relationship Between Capital Structure and Profitability. *Global Journal of Management and Business*.