

Relationship between Financial Leverage and Profitability of Textile Companies of India

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ABSTRACT

This paper attempt to find out relation between financial leverage and textile companies' profitability. For this purpose, sample of 150 company year has been used in this research which include 30 textile companies' five years data covering from year 2013 to year 2017. Ratio analysis used in this research to measure financial leverage of textile companies and profitability of textile companies. Debt Ratio has been used in this research as an indicator of financial leverage while as an indicator of profitability, Net Profit Margin, Return on Assets, Return on Equity and Earning per Share has been used. Correlation analysis and Regression analysis has been used in this research to evaluate relation between financial leverage and profitability of textile companies. This research found that Debt ratio is negatively and significantly related with all indicators of profitability which indicates that financial leverage has a significant negative impact on textile companies' profitability.

1. Introduction

Capital structure in concerned with the proportion of equity capital and debt finance. Decisions related with the capital structure are vital decisions for any business concern because capital structure has a significant impact on overall performance of the business. The most important decisions regarding capital structure is decision of using financial leverage in capital structure. When debt finance is used along with the equity capital in capital structure is called as a "Financial Leverage". Financial leverage has two main advantages: 1. Tax Shield and 2. Trading on Equity. Interest paid on debt is tax deductible expense which reduce taxable income of business and business can take advantage of tax shield. Trading on equity occurs when a company uses debt finance in capital structure to increase its earning on equity capital. Company can take advantage of trading on equity by cheaper debt finance. But, financial leverage also has some risks. It put burden of interest expense on company and pay higher interest rates made it riskier. So, it's mandatory for every business to take decision about appropriate capital structure.

Previous studies generally found that financial leverage and profitability of companies are negatively related. Previous studies founded that using more debt in capital structure has a negative impact on performance on companies. (1,2,3,4)

This research attempt to find out relationship between financial leverage and performance of the textile companies in India. This research will help textile companies to make decision about capital structure.

2. Literature Review

Mahtuzah Salim and Dr.Raj Yadav investigate the relationship between capital structure and firm performance by taking sample of 237 Malaysian listed companies. They measured firm performance by return on assets, return on equity and earnings per share. Their research found that short

term debt, long term debt and total debt had a significant negative impact on firm performance.

Dr. Khalid Ashraf Chisti, Dr. Khurshed Ali and Prof. Mouh-i-Din Sangmi attempt research to investigate impact of capital structure on the profitability of a firm. They used ten automobile companies' five-year data as sample. They used debt-equity ratio, debt to assets ratio, interest coverage ratio, gross profit ratio, net profit ratio, operating profit ratio, return on capital employed and return on investment in their research. They used correlation analysis for evaluate relation of capital structure and profitability. They had concluded that capital structure and profitability significantly and negatively related.

D.K.Y Abeywardhana examine the relation between capital structure and the profitability of non-financial SMEs in the UK for the period of 1998-2008. They used various ratios in their research. the research used two-stage least squares method. The result conclude that capital structure has a significant impact on the profitability. Especially, long-term debt to total assets ratio had s significant negative impact on profitability of SMEs in the UK.

3. Objectives

The main purpose of present research is to evaluate the relationship between financial leverage and textile companies' profitability. The specific objectives of this research are as following.

1. To evaluate relationship between financial leverage and net profit margin.
2. To evaluate relationship between financial leverage and return on assets.
3. To evaluate relationship between financial leverage and return on equity.
4. To evaluate relationship between financial leverage and earning per share.

4. Research and Methodology

The sample for this research consist 150 company years which include 30 textile companies' five years data covering data form year 2013 to year 2017. Data used in this research is secondary in nature and collected from annual report of the companies. Ratio analysis has been used in this research to evaluate financial leverage and profitability of companies. Debt Ratio(DR) is used as an indicator of financial leverage and as an indicators of profitability Net Profit Margin(NPM), Return on Assets(ROA), Return on Equity(ROE) and Earning per Share(EPS) has been used. Formulas for calculate these ratios are as following.

Variables	Abbreviation	Measurement
Independent Variable		
Debt Ratio	DR	Total Liabilities / Total Assets
Dependent Variable		
Net Profit Margin	NPM	Net Profit after Tax / Net Sales x 100
Return on Assets	ROA	Profit before Tax / Total Assets x 100
Return on Equity	ROE	Net Profit after Tax / Shareholders' Fund x 100
Earning per Share	EPS	Earning per Share in Rupees / Face Value of Share x 100

Descriptive statistics have been used in this research to describe and analyse the behaviour of variables. Correlation analysis and Regression analysis has been used in this research to evaluate the relation between financial leverage and textile companies' profitability. all data analysis is done using by SPSS.

5. Hypothesis

- H₀₁: There is no significant relationship between financial leverage (DR) and NPM.
- H₁₁: There is significant relationship between financial leverage (DR) and NPM.
- H₀₂: There is no significant relationship between financial leverage (DR) and ROA.
- H₁₂: There is significant relationship between financial leverage (DR) and ROA.
- H₀₃: There is no significant relationship between financial leverage (DR) and ROE.
- H₁₃: There is significant relationship between financial leverage (DR) and ROE.
- H₀₄: There is no significant relationship between financial leverage (DR) and EPS.
- H₁₄: There is significant relationship between financial leverage (DR) and EPS.

6. Data Analysis and Findings

6.1 Descriptive Statistics

Table:1 Descriptive Statistics

	Min	Max
DR	0.12	0.99
NPM	-140.79	42.20
ROE	-1539.91	42.18
ROA	-55.44	36.16
EPS	-2196.30	3203.00
N=150		

	Mean	Std. Dev.
DR	0.60	0.1970
NPM	2.75	15.1852
ROE	-15.31	148.7358
ROA	4.54	10.8114
EPS	209.47	579.9853
N=150		

Debt Ratio

The Debt ratio is a type of solvency ratio which measures the company's leverage. Debt ratio shows that how much portion of total assets is financed by debt finance. The average value of DR is 0.60 which indicates that textile companies' total assets' 60% portion is financed by debt. The standard deviation value for the same variable is 0.1970 which means the value of DR is can be deviate from mean value of DR by 19.71%. The maximum and minimum values of DR is 0.99 and 0.12 respectively.

Net Profit Margin

The Net Profit Margin is the type of profitability ratio which indicates the percentage of revenue left after all expenses and tax have been deducted from sales. The average NPM is 2.75% which means textile companies averagely earn 2.75 rupee on 100-rupee sales. The minimum value of NPM is -140.79% which indicates the worst negative profitability face by the textile company. The maximum net profit earn by textile company is 42.20% which is indicated by the maximum value of NPM. The standard deviation value of NPM is 15.19%.

Return on Equity

The Return on Equity is the type of profitability ratio which measures how much profit a company generates with the money invested by shareholders. The mean value of ROE (-15.31%) indicates that textile companies averagely generate negative profit (loss) on shareholders' fund. The minimum and maximum value for the same variable is -1539.91% and 42.18% respectively. The standard deviation value of ROE 148.73% which high and indicates that values of ROE are away from the mean by 148.73%.

Return on Assets

The Return on Assets is the type of profitability ratio which measure how much earning is generated from total assets. The textile companies averagely generate 4.54% return on their total assets. The standard deviation value for this variable is 10.81% which is quite low and it indicates that value of ROA can be deviate from average value of ROA by only 10.81%.

Earning per Share (in %)

The Earning per Share ratio is an indicator of profitability which indicates the companies' ability to produce net profit for equity shareholders. Generally, EPS is measure in term of money but in this research, EPS is converted in percentage because the face values of companies are various from each other. The average value EPS is 209.46% which indicates that textile companies averagely generate 209.46% on the face value of equity share. The minimum value of EPS is -2196.30% and maximum value of EPS is 3203%.

6.2 Correlation Analysis

Table:2 Correlation Matrix

	DR	NPM	ROA	ROE	EPS
D R	1	-.414	-.515	-.306	-.268
N P M	-.414	1	.804	.795	.573
R O A	-.515	.804	1	.526	.662
R O E	-.306	.795	.526	1	.388
E P S	-.268	.573	.662	.388	1

Table:2 shows that DR is negatively related with the indicators of profitability like NPM, ROE, ROA and EPS. The negative relation of DR with the indicators of profitability of companies indicates that using more debt finance in capital structure have bad impact on performance of the textile companies. Textile companies can maximize their profit by minimizing the debt in capital structure.

6.3 Regression Analysis

6.3.1 Regression analysis of DR with NPM

Table:3.1 Model Summary

Regression Statistics	
Multiple R	0.414
R Square	0.171
Adjusted R Square	0.166
Standard Error	13.87
Observations	150

Table:3.2 ANOVA

	d.f.	Sum of Squares	Mean Square	F
Regression	1	5883.309	5883.309	30.58
Residual	148	28474.926	192.398	
Total	149	34358.235		

Dependent Variable: NPM

Table:3.3 Coefficients

	β	Std. Error	t	P-value
Constant	21.98	3.658	6.010	0.000
DR	-31.88	5.767	-5.530	0.000

Coefficient table (table:3.3) shows that β value is negative between DR and NPM which indicate that there is negative relationship between DR and NPM. P-value is 0.000 which is less than a significance level of 0.01. thus, we accept the alternative hypothesis that there is significant relation between DR and NPM. So, our final conclusion is "There is significant negative relation between financial leverage(DR) and NPM."

6.3.2 Regression Analysis of DR with ROA

Table:4.1 Model Summary

Regression Statistics	
Multiple R	0.515
R Square	0.265
Adjusted R Square	0.260
Standard Error	9.301
Observations	150

Table:4.2 ANOVA

	d.f.	Sum of Squares	Mean Square	F
Regression	1	4613.96	4613.96	53.339
Residual	148	12802.268	86.50	
Total	149	17416.228		

Dependent Variable: ROA

Table:4.3 Coefficients

	β	Std. Error	t	P-value
Constant	21.574	2.453	8.795	0.000
DR	-28.24	3.867	-7.303	0.000

Regression analysis between DR and ROA indicates that there is significant negative relation between DR and ROA. Coefficient table (table:4.3) shows that β value is -28.24 which is negative and which indicates the negative relation of these both variables. P-value is 0.000 which is less than significance level of 0.01 which gave strong testimony to accept alternative hypothesis and reject the null hypothesis. Thus, "There is significant negative relation between financial leverage(DR) and ROA."

6.3.3 Regression Analysis of DR with ROE

Table:5.1 Model Summary

Regression Statistics	
Multiple R	0.306
R Square	0.094
Adjusted R Square	0.087
Standard Error	142.08
Observations	150

Table:5.2 ANOVA

	d.f.	Sum of Squares	Mean Square	F
Regression	1	308578.44	308578.45	15.29
Residual	148	2987650.29	20186.83	
Total	149	3296228.73		

Dependent Variable: ROE

Table:5.3 Coefficients

	β	Std. Error	t	P-value
Constant	123.99	37.47	3.309	0.001
DR	-230.95	59.07	-3.910	0.000

Regression analysis between DR and ROE concluded that there is significant negative relation between DR and ROE. P-value (0.000) is less than significance level of 0.01 which gave evidence to reject null hypothesis and accept the alternative hypothesis. β value between these two variables is -230.95 which suggest negative relation of these two variables. So, "There is significant negative relation between financial leverage(DR) and ROE.

6.3.4 Regression Analysis of DR with EPS

Table:6.1 Model Summary

Regression Statistics	
Multiple R	0.268
R Square	0.072
Adjusted R Square	0.065
Standard Error	560.68
Observations	150

Table:6.2 ANOVA

	d.f.	Sum of Squares	Mean Square	F
Regression	1	3596220.18	3596220.18	11.44
Residual	148	46524853.85	314357.121	
Total	149	50121074.02		

Dependent Variable: EPS

Table:6.3 Coefficients

	β	Std. Error	T	P-value
Constant	685.03	147.87	4.63	0.000
DR	-788.41	233.09	-3.38	0.001

β value is -788.41 which is negative and it indicates negative relation of DR and EPS. P-value is 0.001 which is less than significance level of 0.01 which provide strong evidence to accept alternative hypothesis. So, it's conclude that "There is a significant negative relation between financial leverage(DR) and EPS."

7. Conclusion

This research aim is to find out relation of financial leverage and textile companies' profitability. The present research found that Debt Ratio which is indicator of financial leverage is negatively related with all profitability indicators like Net Profit Margin, Return on Assets, Return on Equity and Earning per Share. The correlation and regression analysis provide evidence that this negative relation is significant at 0.01 level of significance. Thus, final conclusion of this research is "There is significant negative relationship between financial leverage and companies' profitability" which is in line with the results of some past studies.

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