

An Empirical Study of Factors Affecting on Capital Structure with Reference to Automobile Companies

Dr. Yuvraj Nalwade¹, Dr. Mahavir Shetiya² Dr. Dr. Rustum Darade ³, Dr. Sudam Shinde ⁴

¹Associate Professor, Masters in Business Administration Department, VIIT, Baramati,

Dist. Pune, Maharashtra, India.

ynfinance@gmail.com

² Professor, Masters in Business Administration Department,

S.N.G. Institute of Management & Research, Pune, Maharashtra, India.

mahavirshetiya@gmail.com

³Assistant Professor, Samarth Institute of Engineering and Management, Pune

rustumd@gmail.com

⁴Associate Professor, Masters in Business Administration Department,

S.N.G. Institute of Management & Research, Pune, Maharashtra, India.

shindesudam1@gmail.com

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ABSTRACT

This research is descriptive and analytical research because in descriptive research it contains components of both qualitative and quantitative research. Descriptive research defines the situation as it is. There is no control of researcher on the selected variables. In this research data is not manipulated as such. Researcher has defined, explained, analyzed and validated different variables. Henceforth, this research is combination of descriptive and analytical type of research. For this study primary data is not required and used. Secondary data is obtained from various reports, research articles, books, previous research works conducted, Journals, websites, Prowess database package of Centre for Monitoring Indian Economy (CMIE), 'Handbook of statistics on Indian economy', 'Science direct through Jaykar Library of Savitribai Phule Pune University' and other published reports etc.

Keywords: Capital Structure, Share value, Market Capitalization, BETA, Total Capital, Net Worth, PAT.

Introduction

The "Capital structure" problem is the prime areas of attraction for many researchers in the finance domain. It deals with the firm's choice for the types of securities to be issued. "Myers (1984)" has rightly mention\ed "Capital structure" as the "Capital structure puzzle". The determinants of optimal CS and its influence on the CS decision are still an unsolved problem, giving ample scope for further research. Pioneered by the work of "Modigliani and Miller (1958)", who studied the impact of corporate tax in use of debt capital, many researchers viz., "Jensen and Meckling (1976)", "Myers (1984)", "Kester (1986)", "Titman and Wessel (1988)", "Rajan and Zingales (1995)", "Jonson (1998)", "Booth Collins et al. (2001)", "Dogra and Gupta (2009)" have analyzed the factors that define the "Capital structure" (CS) of a company and while there exist varied views about the relation between profitability (P) and "Capital structure" (CS). The necessity for such researches, in this area, has gained importance as globalization and stiff competition have forced today's corporate firms to determine that level of debt, which offers increased profit to the firm's owner without unduly increasing the risk of insolvency and at the same time make the firm a less attractive target for "Corporate Restructuring" viz., Merger or Takeover. valuation.

Literature Review

1. ("Velnampy.T & Pratheepkanth.P", 2013) this paper discussed the importance of "Capital structure" in "Firm value" creation, for this study they have selected ten listed firms in Sri Lanka. They tried to determine the relationship among "Leverage Ratio, Debt ratio, Equity ratio and Firm value" and these variables were categorized in two categories dependent and independent. "Leverage Ratio, Debt ratio, Equity ratio" have taken dependent variables. "Firm value" is taken as an independent variable. They analyzed financial data for the period 2006-2010. The study defined that there was significant impact of "Equity Ratio" and "Debt ratio" on "Firm Value". This study supported to existing researcher findings "Kinsman and Newman (1998), Dhanka, S.D. (1996), Mahdi (2009), Rajan et al (1995), Frank et al (2003)". Additionally, this paper proved that ratio of "Capital Structure" significantly influence on "market value".
2. ("Koralun-Bereznicka, Julia", 2013) have examined the impact of asset frame work on "Capital Structure". This study covered the "Capital Structure" data and financial data which were disclosed in BACH-ESD data base for the period of 2000 to 2010 of selected European Companies. Basically, they collected data of private firms for analyzing significance level of asset management on "Capital Choice". They found that the size does not have significant impact on asset structure of company in order to selection of capital choice.
3. ("Mujahid Mubeen et al.", 2014) fundamental objective of this research paper was to study the effect of financial performance bike comparison on the "Capital structure" and wealth of shareholders for textile industries in Pakistan. The publisher of this studying has taken a sample of 155 textile companies and made a regression analysis 2006 to 2011 data of company performance. Researcher had considered return on equity, return on assets and Earning per share ratios as accounting fundamentals to calculate the effect of "Capital structure" on company's financial output as well as wealth of shareholder. According to the results obtained in this experiment it has been found that "Capital structure" has very high significant positive impact on company's 'financial performance' and 'wealth of shareholders'.
4. ("Nusrat Jahan", 2014) have conducted experimental in order to establish the factor affecting "Capital structure" determination in Bangladesh. In addition of this research and forehead emphasize the appropriate choice of "Capital structure" theory and its importance in textile sector. Determination of fixed cost model having the fluctuations in leverage according to time series has made on the basis of panel data from this industry. According to this result profitability and tangibility of the business factors have statistically significant on organizational debt ratio. Fixed cost model was found highly significant based on the output of this theory.
5. ("Handoo, Anshu & Sharma, Kapil", 2014) this research was based on the analysis made for 870 bit from government as well as private sector in year 2001 to 2010 in order to find out important prerequisites for appropriate "Capital structure" theory. With the help of regression analysis "Three dependent and Ten independent" variables were studied in this case and it has found that factors like size of the firm, text structure of the country, growth ratio, capacity to serve debt and effect eligibility have higher significance in order to leverage organizational financial performance.

6. ("Manjule, Dr. Rohit R.", 2014) this paper has tried to describe the brief relation between economic determinants on macro level and companies leveraged financial performance. This was the additional experiment to the studies undertaken in India considered 151 companies from different 13 industrial sectors. Like growth and liquidity were assessed through the regression test to check the performance of firm for its influence on debt equity ratio. This is nothing but degree of financial leverage. In addition, the result of this economic analysis found out the industry categorical impact factors which have suggested the different variables in sector to sector for the explanation of this theory.
7. ("Md. Imran Hossain & Md. Akram Hossain", 2015) have conducted the research study with the objective to define the parameters affecting "Capital structure" for production industries in Bangladesh and also has made the efforts to find out the impact of different "Capital structure" theories for this category of business. Data available on the final record of 75 manufacturing companies were used in this study with the help of regression model of corrected standard error. According to the basic root theory, all the series of this research were stationary. Some of the factors having significant impact on "Capital structure" theories like hassle free cash flow, less financial cost, minimum debt liability and the amount of dividend payments negatively affect the company's "Capital structure" Liquidity and sensitivity ratios have shown positively significant correlation with long term debt which quotes for negative short span debt. Before taking the "Capital structure" decision manager should think about the above mentioned factors for the better financial leverage.
8. ("Jani, Dr. Rakeshkumar Rasiklal", 2015) this research paper summarized the outputs of different capital theories in order to find out the "Capital structure" differences across the firms and the industry categories. This paper also has given the attempts to investigate determinants in "Capital structure" of automobile companies for the span of 2009 to 2013. The study has its major focus on the analysis of debt equity ratio and its effect on all other ratios of the company. According to this research the analysis of leverage determinants mainly reveal the covering differences between short term and long term debts. Result of this paper has indicated the relevance of different theories to be considered while preparing for "Capital structure" of any business.
9. ("Pandey, Dr. N. S. & Malarvizhi M.", 2015) this paper has made an attempt to establish influence of "Capital structure" on profitability of the firm. This was a research conducted specifically for cement industry where as 5 cement companies were taken as sample give the help of convenience sampling method. Correlation method implemented in 5 different companies and the data collected from the cement industry reach to the conclusion ratios and standard deviation giving the highest importance to debt equity capital. Profitability of firm is dependent on the set of variables affecting "Capital structure" like coverage for interest, expenses on assets and duration of investment in capital. According to this research profitability of the firm is negatively affected by "Capital structure".

Objectives

1. To study "Capital structure" as a factor influencing value of share.
2. To study relationship between important factors influencing "Capital structure" with value of share.

Research Methodology

This chapter is described about the different methods and techniques used by researcher in regard to reach the conclusion. The purpose of this chapter is aimed describe various data collection methods, research instruments used in order to statistical calculations, descriptions given for the research design used to describe the selected topic in detail and integrating developed finding for the crystallization of selected objectives.

This research in title towards the study of integrated phenomenon picture related to the vogue of “Capital structure” adopted by companies. Researcher has selected the group of automobile companies specifically located in Pune district. This research is entitled towards the analysis of “Capital structure” theories adopted by Indian industries and not in a global scenario.

Hypothesis 2

There is no significant difference in the change in Market Capitalization and Total Capital of the companies in automobile sector.

Hypothesis 3

There is no significant difference in the change in Market Capitalization and Net Worth of the companies in automobile sector.

Data Analysis

This chapter throws light on the data analysis done for the available data (as specified in earlier chapter Research Methodology) and the findings thereof; including the testing of the hypotheses set for this research work.

Table No. 1: Descriptive stats of pooled data

	Mean	Median	Standard Deviation	Kurtosis	Skewness	Count	Confidence Level (95.0%)
<i>Sales</i>	320.51	144.91	542.09	15.47	3.59	93	111.64
<i>Profit after tax</i>	11.76	2.6	36.32	36.38	5.11	93	7.48
<i>Total capital</i>	20.02	8.5	37.07	14.27	3.59	93	7.63
<i>Reserves and funds</i>	87.51	18.23	208.7	31.2	4.99	93	42.98
<i>Net worth</i>	105.72	31.9	216.58	28.45	4.72	93	44.6
<i>Tangible net worth</i>	101.81	27.9	212.85	30.7	4.93	93	43.84
<i>Total term liabilities</i>	64.08	18.55	154.61	41.41	5.81	93	31.84
<i>Net working capital</i>	15.22	1.16	83.6	38.44	5.46	93	17.22

<i>Market Capitalization</i>	334.65	0	1416.77	28.28	5.26	93	291.78
<i>Beta</i>	0.18	0	0.36	0.78	1.62	93	0.07

In all, 93 companies’ data has been pooled together for 10 variables considered for data analysis. Each variable has been explained below:

1. Sales – The mean sales value is Rs.320.51 crores, with median at Rs.144.91 crores. The data is positively skewed and platykurtic.
2. Profit After Tax - The Mean Profit After Tax value is Rs.11.76 crores, with median at Rs.2.60 crores. The data is positively skewed and platykurtic.
3. Total Capital - The Mean Total Capital value is Rs.20.02 crores, with median at Rs.8.50 crores. The data is positively skewed and platykurtic.
4. Reserves - The Mean Reserves value is Rs.87.51 crores, with median at Rs.18.23 crores. The data is positively skewed and platykurtic.
5. Net Worth - The Mean Net Worth value is Rs.105.72 crores, with median at Rs.31.90 crores. The data is positively skewed and platykurtic.
6. Tangible Net Worth - The Mean Tangible Net Worth value is Rs.101.81 crores, with median at Rs.27.90 crores. The data is positively skewed and platykurtic.
7. Total Term Liabilities - The Mean Total Term Liabilities value is Rs.64.08 crores, with median at Rs.18.55 crores. The data is positively skewed and platykurtic.
8. Net Working Capital - The Mean Net Working Capital value is Rs.15.52 crores, with median at Rs.1.16 crores. The data is positively skewed and platykurtic.
9. Market Capitalization - The Mean Market Capitalization value is Rs.334.65 crores, with median at Rs.0.00 crores. The data is positively skewed and platykurtic.
10. Beta - The Mean Beta value is Rs.0.18, with median at Rs.0.00. The data is positively skewed and platykurtic.

Table No.2: One sample t test Results

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
SALES	5.702	92	.000	320.51183	208.8701	432.1535
PAT	3.123	92	.002	11.76172	4.2824	19.2410
TCAP	5.208	92	.000	20.01591	12.3824	27.6494
RESERVES	4.043	92	.000	87.50559	44.5241	130.4871
NW	4.708	92	.000	105.72527	61.1213	150.3292

TNW	4.613	92	.000	101.80688	57.9712	145.6425
TTL	3.997	92	.000	64.08172	32.2405	95.9229
NWC	1.756	92	.082	15.22258	-1.9943	32.4395
MCAP	2.278	92	.025	334.64538	42.8659	626.4249
BETA	4.747	92	.000	.17763	.1033	.2520

The one-sample t-test is a member of the t-test family. All the tests in the t-test family compare differences in mean scores of continuous-level (interval or ratio), normally distributed data. The 1-sample t-test does compare the mean of a single sample. Unlike the other tests, the independent and dependent sample t-test it works with only one mean score.

The independent sample T-test compares the same group with the same model as the other group. They will examine the question, "Is the elderly population smaller than the other population?" Depending on the dependent sample before / after T-test measurements, e.g. For example, "Do students improve after receiving tuition"?

So, if only one meaning is drawn from the sample, then what is the average comparison of 1-sample T-test? 1-sample T-test compare the average scores found in a relative sample to a hypothetical assumption. Generally the value assumed is the population or some theoretically derived value.

Examples of 1-sample T-test are: 1) Examination of sample against pre-defined value, 2) Sample test against expected value, 3) Examination of sample against common knowledge or expectations, and 4) Test of the results of a replicated experiment against original study. Is taking the P value of the test for all variables is more than 0.05 (excluding Net Working Capital). T score is a positive in case of all variables.

2.2 Hypotheses Testing

➤ **Hypothesis 1**

There is no significant difference in the change in Market Capitalization and Total Capital of the companies in automobile sector.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Paired 1	TCAP	20.0159	93	37.06533	3.84350
	MCAP	334.6454	93	1416.76601	146.91179
Paired Samples Correlations					
		N	Correlation	Sig.	
Paired 1	TCAP &	93	.080	.445	

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Paired 1	TCAP - MCA P	-314.62946	1414.27490	146.65348	-605.89592	-23.36300	-2.145	92	.035

From the results, we can say that:

- The Total Capital and Market Capitalization values were weakly and positively correlated ($r = 0.080, p > 0.05$)
- There was a significant negative average difference between Total Capital and Market Capitalization. ($t_{93} = -2.145, p < 0.05$)
- On average, Total Capital were 314 points lesser than Market Capitalization (95% CI [-605.90, -23.36])

Thus, the hypothesis is proved.

➤ **Hypothesis 2**

There is no significant difference in the change in Market Capitalization and Net Worth of the companies in automobile sector.

Paired Samples Statistics										
		Mean	N	Std. Deviation	Std. Error Mean					
Paired 1	NW	105.7253	93	216.57902	22.45820					
	MCA P	334.6454	93	1416.76601	146.91179					
Paired Samples Correlations										
		N	Correlation	Sig.						
Paired 1	NW & MCA P	93	.780	.000						
Paired Samples Test										
		Paired Differences					t	df		

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			Sig. (2-tailed)	
					Lower	Upper			
Pair 1	NW - MCA P	-228.92011	1255.17054	130.15512	-487.41941	29.57920	-1.759	92	.082

From the results, we can say that:

- The Net Worth and Market Capitalization values were weakly and positively correlated ($r = 0.780, p < 0.05$)
- There was a significant negative average difference between Net Worth and Market Capitalization. ($t_{93} = -1.759, p > 0.05$)
- On average, Net Worth were 229 points lesser than Market Capitalization (95% CI [-487.41, 29.57])

Thus, the hypothesis is proved.

5. Conclusion:

Hypotheses-Specific Conclusions

Hypothesis 1

There is no significant difference in the change in Market Capitalization and Total Capital of the companies in automobile sector.

Conclusion:

- The Total Capital and Market Capitalization values were weakly and positively correlated ($r = 0.080, p > 0.05$)
- There was a significant negative average difference between Total Capital and Market Capitalization. ($t_{93} = -2.145, p < 0.05$)
- On average, Total Capital were 314 points lesser than Market Capitalization (95% CI [-605.90, -23.36]). Thus, the hypothesis is proved.
- From the findings which researcher has withdrawn from data analysis and statistical tests of hypothesis researcher conclude that the total capital of the automobiles sector companies in the sample and their respective Market Capitalization are different, the difference is not statistically significant.

5.1.3 Hypothesis 2

There is no significant difference in the change in Market Capitalization and Net Worth of the companies in automobile sector.

Conclusion:

- The Net Worth and Market Capitalization values were weakly and positively correlated ($r = 0.780, p < 0.05$)
- There was a significant negative average difference between Net Worth and Market Capitalization. ($t_{93} = -1.759, p > 0.05$)
- On average, Net Worth were 229 points lesser than Market Capitalization (95% CI [-487.41, 29.57]).
- Thus, the hypothesis is proved which means out of findings extracted from test of hypothesis in statistics and data analysis it is opinion of researcher and concludes the total Net Worth of the automobiles sector companies in the sample and their respective Market Capitalization are different, the difference is not statistically significant.

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