

"DETERMINANTS OF THE CAPITAL STRUCTURE AND FINANCIAL LEVERAGE: AN ANALYSIS OF SELECTED INDIAN AUTOMOBILE AND FMCG COMPANIES LISTED ON NSE"

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Abstract

A company's capital structure is the "structure" of debt, which is a combination of debt and equity. Profitability, Solvency, Liquidity, and Control are the four pillars of a good capital structure. This paper examines the relationship between financial leverage and the determinants of capital structure of Automobile and FMCG companies listed on the NSE. Data of 15 companies, from each sector, for a period of 10 years from 2009-2019, was studied. Capital structure is the dependent variable. Profitability, asset acquisition cost, growth, size, debt repayment potential, tax rate, debt-free exemption, tangible asset structure, liquidity, uniqueness, and business risk are independent variables. The results of multiple correlation and regression showed that growth factors, business risk, company size and liquidity have a positive effect on capital structure. The findings of this study shall be useful for business administrators of various firms and will guide business managers in makingthe right financial decisions.

Keywords: Capital Structure, Liquidity, Financial Leverage, Non-debt Tax Shield, Regression Analysis.

JEL Classification: C25; G 30; G 32

Introduction

A company's capital structure is a combination of debt and equity that a company can use to maximize its market value. A company's growth depends on investments that lead to increased profits. "A company can use debt or equity to make such investments. These investments with

¹FMCG – These are the low cost products that are sold quickly. These goods are also known as consumer packaged goods (CPG). The FMCG industry is the fourth largest sector in the Indian economy.





long-term benefits determine the value of the company today. But this value depends on the

cost of these funds, as well as the future cash flows". The funds of the existing theory are damaged by both loans and owners. Every prudent financial manager has to make financial strategy, comprising of various corporate financial decisions. The diverse types of financial tactics policies are capital structure policies, dividend policies and capital budgetary policies. All of them are interrelated and interlinked and are of utmost importance. It is very difficult for any organization to ignore any one of them for the purpose of decision making. The capital structure decision is a continuous one and keeps on changing from time of a company's inception to its expansion. The changes reflected in the pattern of capital structure affects debtequity mix; thereby causing corresponding change in the cost of capital. In short, it can be said that the capital structure not only impacts the cost of capital but also liquidity, net profit, dividend payout ratio and earnings per share.

Review of literature

The decision -making factor of the company's capital structure is a problem for decades. Several proven studies have been done after study by Modigliani and Miller (1958).

Ronoowah (1995) examined "38 firms" listed in "Stock Exchange of Mauritius (SEM)", for the time period 1994-2004. Using panel estimations techniques the results proven that liquidity, "profitability", size and tangibility are key company-specific factors influencing the choice of capital structure in Mauritius.

Titman and Wessel (1988) undertook a study of 105 manufacturing firms for a period of 8 years. The variables under study were uniqueness, "growth rate", liquidity, "volatility", "nondebt tax shields", size of the firm, the "collateral value of assets", "industry classification" and the "size of the firm". Factor analysis was used to conclude that company uniqueness is negatively related.

"Pathak (1997) stated various determinants of capital structure and their effect on corporate leverage have been studied. The working report examines 135 companies listed on the Bombay Stock Exchange (India) over a 10-year period (1990-2009), considering six determinants: profitability, liquidity, liquidity, growth, size and business risk. This study shows that there is a significant connection between the lever and the structure of the capital".

"Arvin Gosh et.al (2000)" went through various "determinants of capital structure". The determinants were considered are profit margin, non-debt tax shield, fixed asset ratio, asset size, growth of the assets, "research and development expense", "advertisement expenditure", "selling expense" and "business risk". From 19 industries, "319 firms" were studied for a period of 10 years between 1982-1992. The data was analyzed using least square method and it was outlined that asset growth, fixed capital ratio, R&D expenditure, and advertising expenditure are statistically notable.

"KesharJ.Baral (2004)" studied 40 listed companies in "Nepal Stock Exchange". Five-year data (1996-2001) were collected for seven variables: size, business risk, growth, earnings level, dividends, debt service ratio, and operating leverage. A regression method was used to conclude that size, growth and income level were statistically significant.





"Chen and Stranger (2006)"investigated the relationship between the determinants of capital structure of listed on the "Shanghai Stock Exchange" and the "Shenzhen Stock Exchange" in China. Various variables such as firm size, profitability, "firm age", "firm risk" and tax factor were considered. "The study showed a positive relationship between firm age, risk and size, "positively related to debt ratio" and a negative relationship with profitability. In addition, the tax factor does not affect the capital structure".

"Mallikarjunappa and Goveas (2007)"They investigated the "determinants of capital structure of pharmaceutical companies in India". The study examined certain factors such as "profitability, collateral value of assets, growth, size, debt service, tax rate, debt-free tax shelter, liquidity, uniqueness and business risk". Data for the year (1993-2002) were obtained from a sample size of 71 farms and the data were analyzed using multiple regression methods. Debt repayment capacity, liquidity, and business risk were found to be statistically significant, but the rest were insignificant.

"Amidu (2007)" has applied a multi regression model to examine the importance of various factors which influence the "capital structure decisions" on the banking sector in Ghana. The study concluded that the factors like corporate tax, profitability bank size, profitability in order to determine capital structure of banking institutions in Ghana.

"Maji and Gosh (2007)" they analyze how capital structure theory i.e. static trade theory and Beijing order theory favors the functioning of Indian business. This study used four determinants of capital structure - liquidity, size, dividends and profitability - and their impact on corporate leverage. This study examined a sample of 160 companies from 6 manufacturing sectors using a generalized least squares regression model. As a result, it was found that there was a positive correlation between solvency and leverage, and company size and leverage, and a negative correlation between dividend and leverage". They do not support the discount order theory, so the static trading theory cannot provide a solid argument for this point.

Karadeniz et al(2009) "have studied Turkish companies listed in the "Istanbul Stock Exchange". "The finding concluded that "effective ROA", "tax rate" and "tangibility of assets" are negatively related to leverage, while the non-debt tax shield, firm size and growth opportunity" do not appear to be related to the capital structure".

"Yuanxin Liu & Jing Ren (2009)" carried out a study between various determinants of capital structure between of "IT companies" listed on "China Stock Exchange" for 4 years. As a result of using multiple regression analysis on six variables such as sample size and scale of 92 companies in 2004-2007, "profitability, liquidity, growth rate and growth opportunity, it was found that the growth rate" of companies IT in China was more important..

"Wanrapee Banchuenvijit (2009) stated the relationship between leverage and the determinants of capital structure over a five-year period (2004-2008) of 81 companies listed on the Stock Exchange of Thailand was investigated". "This study examined profitability, size, type, growth and volatility and Cross-sectional time series regression models were found to be statistically significant in terms of success, accuracy, and size".

G.Genimakis & Noulas (2011) analyzed the "determinants of capital structure and leverage of the Athens Stock Exchange. Multiple regression analysis and parametric tests were applied to





various determinants of 259 generations for 9 years from 1998 to 2006. Size, profitability, earnings volatility, real assets, depreciation, growth rate, credit rating, economic activity classification, sector classification, ownership and stock market" classification. A significant positive correlation was found between a company's "leverage and sales volume, growth rate, asset liquidity, depreciation, earnings volatility and creditworthiness. Profitability and firm age are strongly inversely related to leverage, but number of employees, a measure of firm size, does not affect leverage".

Liaqat Ali (2011), studied the determinants of leverage of 170 Indian textile companies listed on the BSE. This study covered the period 2006-2010 and used panel data analysis. A regression model with fixed effects was used to analyze the criminal data of the selected companies. The results show that certainty, size and non-debt tax shields have a positive and significant relationship with the leverage ratio.

"Chandra Shekar Mishra (2011) given the relationship between capital structure determinants and leverage of post-liberalization public sector manufacturing units in India over a five-year period (2006-2010) was investigated. He identified nine variables (specificity of assets, growth, size, Revenue variability, profitability, debt-free tax haven, tax, age and uniqueness from a sample of 48 companies). As a result of the analysis using regression analysis, variables such as profitability, growth potential, income potential, non-debt and uniqueness showed a negative correlation, while task, certainty, size and age showed a positive correlation".

Mat Kila and Wan Mansor (2008), tested the determinants of capital structure using pooled OLS estimations for companies listed on Bursa Malaysia Securities Berhad (BMSB) for the period 1999-2005. After examining the financial statements of 17 companies, it was found that interest coverage ratio, liquidity and size had a significant relationship with total debt. However, there is a significant negative relationship between firm growth and capital structure.

Egle Krasauskaite(2011)stated there are determinants of capital structure and leverage. The sample size of SMEs is 4,679

companies for 3 years (2008~2010) considering "7 variables such as tax rate, size, growth potential, growth potential, age, liquidity and profitability". As a result of data analysis through multiple regression analysis, growth potential and liquidity were found to be statistically significant.

"Pahuja and Sahi (2012) given the relationship between the determinants of capital structure of Indian companies and debt capital was investigated for 30 companies listed on the Bombay Stock Exchange from 2008 to 2010. This study considered five factors that influence capital structure: growth, profitability, liquidity, liquidity and size. This study used a generalized least squares regression model to conclude that there is a positive relationship between growth and leveraged liquidity".

"Riyazahmed.K (2012) the determinants of capital structure were studied considering the case of an Indian automobile manufacturer listed on the "Auto Index of the National Stock Exchange of India and the sample size of the study was 15 companies with seven determinants: size, rate of return, business risk, growth, dividend payout, ability to repay debt and degree of operating leverage". This study showed the relationship between determinants and financial leverage:





debt repayment capacity, operating leverage, dividend payout ratio and business feasibility were statistically significant, while size, revenue level and growth rate were insignificant". Thus the existing literature suggests that "factors individually or together exert their influence on firm which ultimately determines the capital structure or financing choice of the firm".

Table 1 Study of Manufacturing sector PSUs in India

| Variable | Measure | Theory | Expected Sign |
|---------------------|-----------------------------|---------------------------|---------------|
| Asset | NFATA | Information Asymmetry | +1/4 |
| Tangibility | NFATA | miormation Asymmetry | +xe |
| Growth | % Change in Sales or | Agency | - <u>ve</u> |
| | CAGR in Sales | | |
| Size | Log of Sales or Total | Information Asymmetry | 4220 |
| | Assets | | +xe |
| | Variation in operating | Not Specific | 710 |
| Earnings Volatility | income | | -xe |
| Profitability | Return on Assets | Pecking Order Hypothesis; | -xe |
| | | Information Asymmetry | + <u>ve</u> |
| Non Debt Tax Shield | Deprecation to Total Assets | Not Specific | -xe |
| Tax | 1 – [Earnings after Tax/ | Not Specific | +xe |
| | Earnings before Tax] | | |
| Age | Age since Incorporation | Information Asymmetry | + <u>ve</u> |
| Uniqueness | Research & Development | Product/ Input Market | -xe |
| | Expense to Sales | | |

Source: Determinants of Capital Structure – A Study of Manufacturing sector PSUs in India

Hypothesis of the study

H0: "Profitability", "collateral value of assets", "growth, size", "debt service capacity", "tax rate, non-debt tax shields, structure of tangible assets, liquidity, uniqueness, and the business risk" has no "impact on the capital structure of Indian companies from Automobile and FMCG sectors".

H1: "Profitability, collateral value of assets, growth, size, debt service capacity, tax rate, non debt shields, structure of tangible assets, liquidity, uniqueness, and the business risk" do have an impact on the capital structure of Indian companies from Automobile and FMCG sectors.

Research Methodology

Research methodology is a technique that is used to identify, select, process, and analyze information. For the purpose of this study, quantitative research has been undertaken between the independent and dependent variables.





Objectives of the Study

- 1. "A Study on the Determinants of Capital Structure of Selected FMCG and Auto Listed Companies in "National Stock Exchange of India".
- 2. "Investigate the relationship between financial leverage and asset acquisition costs, profitability, growth opportunities, company size, liquidity, debt repayment potential, business risk, and tax havens and non-debt tax havens".

Data Description

The data is collected from Nifty¹FMCG and Nifty Automobile companies."The financial data" for the studyis for 10 years from2009-2010 to 2018-2019. The data taken from NSE²website and "Capital Line web site". It was further analyzed by taking averages.

Tools of Analysis

Both "descriptive statistics" and "inferential statistics" were used.

Data Analysis Model

This study was conducted to investigate the relationship between financial leverage and the determinants of capital structure. The correlation between all factors was analyzed by regression analysis of the equity capital ratio of the automobile and FMCG industries as a determinant of the capital structure.

"Leverage = f(profitability, collateral value of assets, growth, size, debt service capacity, tax rate, non-debt tax shield, liquidity, uniqueness, business risk)".

The following regression model is used for testing the hypothesis: "Leverage= $\alpha+\beta1PROF+\beta2COVA+\beta3GROW+\beta4SIZ+\beta5DSC+\beta6TAXR+\beta7NDTS+\beta8LI$

Scopus

¹Nifty- Nifty 50 is a benchmark Indian stock market index that represents the weighted average of 50 of the largest Indian companies listed on the National Stock Exchange.

² NSE- The National Stock Exchange of India Limited (NSE) is India's largest financial market and the fourth largest market by trading volume. It is the largest private network in India and provides modern, fully automated electronic trading.



Q+β9UNIQ+β10BRISK+Error"

Research results

The following are the results of the study conducted on a total of 30 companies from two sectors.

1. AUTOMOBILE SECTOR:

1.1 Descriptive statistics

Table 1.2 1.1 Descriptive data analysis in Automobile Sector

| | Lever age | Profita bility | "CO VA" | "Gro wth" | "Siz e" | "Debt Servic e Capac ity" | "Ta x Rat e" | "Non - Debt Tax Shiel ds" | "Liqui dity" | "Unique ness" | "Busi ness Risk" |
|------------|--------------|-------------------|------------|--------------|-------------|---------------------------------------|-----------------------|---------------------------|-----------------|------------------|------------------------|
| Mea n | 0.545 | 0.2153 | 0.804 9 | 0.1484 | 9.83 46 | 151.46 09 | 0.27 76 | 0.055 | 1.4351 | 0.1322 | 0.508 |
| Med ian | 0.346 | 0.1611 | 0.827 | 0.1427 | 9.51 25 | 10.844 | 0.27 74 | 0.056 | 1.3789 | 0.1165 | 0.501 |
| Std dev | 0.613 | 0.1118 | 0.195 6 | 0.0511 | 1.04 68 | 275.36 42 | 0.03 65 | 0.022 6 | 0.5321 | 0.0579 | 0.270 8 |
| Min | 0.020 9 | 0.0933 | 0.439 | 0.0832 | 8.34 79 | 3.8858 | 0.21 | 0.016 7 | 0.6451 | 0.0403 | 0.208 |
| Max | 1.640 | 0.4694 | 1.120 | 0.3012 | 12.3 177 | 1031.1 668 | 0.32 68 | 0.093 6 | 2.2637 | 0.2302 | 1.239 |
| Cou nt | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |

1.2 Inferential Statistics

Table 1.3 Regression Statistics





| Regression Statistics | | | | | | | |
|-----------------------|--------|--|--|--|--|--|--|
| Multiple R | 0.9047 | | | | | | |
| R Square | 0.8186 | | | | | | |
| Adjusted R Square | 0.3649 | | | | | | |
| Standard Error | 0.4892 | | | | | | |
| Observations | 15 | | | | | | |

Table 1.4 Regression Statistics and Anovas test

| ANOVA | | | | | |
|------------|----|--------|--------|--------|-------------------|
| | D£ | SS | MS | F | Significance F |
| Regression | 10 | 4.3187 | 0.4319 | 1.8046 | 0.2991 |
| Residual | 4 | 0.9573 | 0.2393 | | |
| Total | 14 | 5.2759 | | | |

Table 1.5 Regression statistics CS and co linearity statistics

| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95% | Upper 95% |
|-----------------------------|--------------|-------------------|----------|---------|--------------|--------------|--------------|--------------|
| Intercept | 12.6293 | 11.3370 | 1.1140 | 0.3277 | (18.8474) | 44.1059 | (18.8474) | 44.1059 |
| Profitability | (3.1748) | 2.8386 | (1.1184) | 0.3260 | (11.0561) | 4.7066 | (11.0561) | 4.7066 |
| COVA | (6.2812) | 4.0919 | (1.5350) | 0.1996 | (17.6421) | 5.0798 | (17.6421) | 5.0798 |
| Growth | (0.0301) | 4.4256 | (0.0068) | 0.9949 | (12.3176) | 12.2575 | (12.3176) | 12.2575 |
| Size | (0.2155) | 0.4012 | (0.5371) | 0.6197 | (1.3293) | 0.8983 | (1.3293) | 0.8983 |
| Debt Service Capacity | 0.0003 | 0.0011 | 0.2872 | 0.7882 | (0.0027) | 0.0034 | (0.0027) | 0.0034 |
| Tax Rate | (5.2421) | 6.6764 | (0.7852) | 0.4762 | (23.7787) | 13.2945 | (23.7787) | 13.2945 |
| Non-Debt Tax Shields | 14.8698 | 16.8022 | 0.8850 | 0.4262 | (31.7805) | 61.5200 | (31.7805) | 61.5200 |
| Liquidity | (2.1300) | 1.8631 | (1.1432) | 0.3167 | (7.3029) | 3.0429 | (7.3029) | 3.0429 |
| Uniqueness | (4.2733) | 6.5727 | (0.6502) | 0.5510 | (22.5221) | 13.9755 | (22.5221) | 13.9755 |
| Business Risk | (0.0209) | 0.7528 | (0.0277) | 0.9792 | (2.1111) | 2.0694 | (2.1111) | 2.0694 |

1.3 Correlation between Variables

Table 1.6 Variables and Their Relationships





ISSN: 1533 - 9211

| | Leverage | Profitability | COVA | Growth | Size | Debt Service Capacity | Tax Rate | Non- Debt Tax Shields | Liquidity | Uniq | Busi ness Risk |
|-----------------------------|----------|---------------|----------|----------|----------|-----------------------------|----------|--------------------------------|-----------|--------|----------------------|
| Leverage | 1 | | | | | | | | | | |
| Profitability | (0.6037) | 1 | | | | | | | | | |
| COVA | (0.5348) | 0.4386 | 1 | | | | | | | | |
| Growth | 0.5179 | (0.3472) | (0.3571) | 1 | | | | | | | |
| Size | 0.4178 | (0.2200) | 0.1752 | 0.0131 | 1 | | | | | | |
| Debt Service Capacity | (0.4748) | 0.7709 | 0.3736 | (0.3431) | (0.0642) | 1 | | | | | |
| Tax Rate | 0.2694 | (0.2061) | (0.5331) | 0.4500 | 0.0054 | (0.0690) | 1 | | | | |
| Non-Debt Tax Shields | 0.2044 | 0.0134 | 0.1028 | 0.1144 | 0.3793 | (0.3231) | 0.1138 | 1 | | | |
| Liquidity | 0.1994 | (0.3445) | (0.8851) | 0.1536 | (0.4734) | (0.3387) | 0.4619 | (0.1643) | 1 | | |
| Uniqueness | 0.0840 | 0.1222 | 0.3127 | (0.0572) | 0.1435 | (0.1957) | (0.4964) | 0.5130 | (0.4500) | 1 | |
| Business Risk | 0.4955 | (0.2954) | (0.0293) | 0.3452 | 0.4601 | (0.3433) | 0.1859 | 0.5195 | (0.1983) | 0.2440 | 1 |

2. FMCG SECTOR:

2.1 Descriptive Statistics:

Table 2.1.1 Descriptive Statistics

| | Levera ge | Profitabilit y | COV A | Growth | Size | Debt Service Capacity | Tax Rate | Non- Debt Tax Shields | Liquidit y | Unique ness | Business Risk |
|------------|--------------|-------------------|----------|--------|---------|-----------------------------|----------|--------------------------------|---------------|----------------|------------------|
| Mean | 0.3950 | 0.3515 | 0.7585 | 0.1284 | 8.8615 | 152.5586 | 0.1877 | 0.0524 | 1.5834 | 0.4285 | 0.4390 |
| Median | 0.1971 | 0.3042 | 0.8111 | 0.1180 | 8.8882 | 29.2439 | 0.2781 | 0.0456 | 1.5779 | 0.3877 | 0.4291 |
| Std Dev | 0.5883 | 0.2551 | 0.2099 | 0.0564 | 0.9433 | 302.7518 | 0.3451 | 0.0390 | 0.5890 | 0.2985 | 0.1739 |
| Min | 0.0000 | 0.0485 | 0.3089 | 0.0286 | 7.5506 | 0.9550 | (1.0445) | 0.0114 | 0.5412 | 0.0349 | 0.2310 |
| Max | 1.8970 | 0.9024 | 1.0969 | 0.2581 | 10.7258 | 1183.2654 | 0.3484 | 0.1527 | 2.8027 | 0.9985 | 0.8287 |
| Count | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |

2.2 Inferential Statistics:

Table 2.2.1 Regression Statistics

| Multiple R | 0.9021 |
|----------------|--------|
| R Square | 0.8138 |
| Adjusted R | |
| Square | 0.3484 |
| Standard Error | 0.4749 |
| Observations | 15 |





Table 2.2.2 ANOVA

| | df | SS | MS | F | Significance F |
|------------|----|--------|--------|--------|----------------|
| | | | | | |
| Regression | 10 | 3.9432 | 0.3943 | 1.7485 | 0.3107 |
| | | | | | |
| Residual | 4 | 0.9021 | 0.2255 | | |
| | | | | | |
| Total | 14 | 4.8453 | | | |
| | | | | | |

Table 2.2.3 Descriptive Analysis

| | | Tipuve A | | | 1 | | 1 | | | | |
|----------|--------|----------|-------|-------|-------|--------|-------|-------|--------|------|-------|
| | | | | | | Debt | | Non- | | | |
| | | | | | | Servic | | Debt | | | |
| | | | | | | e | | Tax | | | Busin |
| | Lever | Profitab | COV | Grow | | Capac | Tax | Shiel | Liquid | | ess |
| | age | ility | A | th | Size | ity | Rate | ds | ity | Uniq | Risk |
| | | | | | | | | | | | |
| Leverag | | | | | | | | | | | |
| e | 1 | | | | | | | | | | |
| | | | | | | | | | | | |
| Profitab | (0.594 | | | | | | | | | | |
| ility | 4) | 1 | | | | | | | | | |
| | (0.452 | | | | | | | | | | |
| | (0.453 | | | | | | | | | | |
| COVA | 2) | 0.4188 | 1 | | | | | | | | |
| | 0.114 | | 0.089 | | | | | | | | |
| G -41 | 9 | (0.2104) | | 1 | | | | | | | |
| Growth | 9 | (0.2104) | 6 | 1 | | | | | | | |
| | 0.255 | | 0.060 | (0.42 | | | | | | | |
| Size | 9 | 0.0397 | 2 | 17) | 1 | | | | | | |
| Size | | 0.0377 | _ | 17) | 1 | | | | | | |
| Debt | | | | | | | | | | | |
| Service | | | | | | | | | | | |
| Capacit | (0.332 | | 0.408 | (0.07 | (0.16 | | | | | | |
| y | 3) | 0.7199 | 5 | 81) | 54) | 1 | | | | | |
| | | ., | | | | | | | | | |
| Tax | (0.726 | | 0.303 | 0.022 | (0.28 | 0.146 | | | | | |
| Rate | 3) | 0.3323 | 7 | 2 | 65) | 8 | 1 | | | | |
| | | | | | | | | | | | |
| | | 0.3692 | | | | | | 1 | | | |
| Non- | (0.485 | | 0.557 | 0.417 | (0.50 | 0.486 | 0.246 | | | | |





ISSN: 1533 - 9211

| Debt | 0) | | 4 | 1 | 88) | 5 | 6 | | | | |
|----------|--------|----------|-------|-------|-------|-------|-------|-------|--------|-------|---|
| Tax | | | | | | | | | | | |
| Shields | | | | | | | | | | | |
| | | | | | | | | | | | |
| Liquidit | 0.493 | | (0.76 | (0.38 | 0.079 | (0.50 | (0.25 | (0.69 | | | |
| у | 2 | (0.6496) | 26) | 39) | 8 | 34) | 94) | 62) | 1 | | |
| | | | | | | | | | | | |
| | (0.523 | | 0.426 | 0.124 | (0.25 | 0.711 | 0.204 | 0.675 | (0.697 | | |
| Uniq | 8) | 0.8417 | 6 | 7 | 17) | 3 | 8 | 1 | 2) | 1 | |
| | | | | | | | | | | | |
| Busines | 0.565 | | (0.19 | 0.543 | 0.054 | (0.22 | (0.59 | 0.050 | (0.084 | (0.06 | |
| s Risk | 2 | (0.3368) | 77) | 2 | 6 | 20) | 25) | 5 | 0) | 34) | 1 |
| | | | | | | | | | | | |

1.3 Correlation between variables Table 2.3.1 Coefficients

| | | Standard | | P- | Lower | Upper | Lower | Upper |
|---------------|--------------|----------|----------|--------|-----------|---------|-----------|---------|
| | Coefficients | Error | t Stat | value | 95% | 95% | 95.0% | 95.0% |
| Intercept | (2.6995) | 4.5286 | (0.5961) | 0.5832 | (15.2729) | 9.8740 | (15.2729) | 9.8740 |
| Profitability | 1.0548 | 3.0697 | 0.3436 | 0.7484 | (7.4679) | 9.5776 | (7.4679) | 9.5776 |
| COVA | 0.8830 | 1.6549 | 0.5336 | 0.6219 | (3.7117) | 5.4777 | (3.7117) | 5.4777 |
| Growth | 4.7677 | 5.5637 | 0.8569 | 0.4398 | (10.6796) | 20.2150 | (10.6796) | 20.2150 |
| Size | 0.0302 | 0.2236 | 0.1350 | 0.8991 | (0.5905) | 0.6509 | (0.5905) | 0.6509 |
| Debt | | | | | | | | |
| Service | | | | | | | | |
| Capacity | 0.0004 | 0.0007 | 0.4979 | 0.6447 | (0.0017) | 0.0025 | (0.0017) | 0.0025 |
| Tax Rate | (0.7916) | 0.6072 | (1.3036) | 0.2623 | (2.4776) | 0.8944 | (2.4776) | 0.8944 |
| Non-Debt | | | | | | | | |
| Tax Shields | (1.7919) | 8.6985 | (0.2060) | 0.8469 | (25.9429) | 22.3591 | (25.9429) | 22.3591 |
| Liquidity | 0.7924 | 1.0740 | 0.7378 | 0.5016 | (2.1894) | 3.7742 | (2.1894) | 3.7742 |
| Uniqueness | (0.9352) | 1.7893 | (0.5227) | 0.6288 | (5.9030) | 4.0326 | (5.9030) | 4.0326 |





| Ī | Business | | | | | | | | |
|---|----------|--------|--------|--------|--------|----------|--------|----------|--------|
| | Risk | 1.1523 | 1.5544 | 0.7413 | 0.4997 | (3.1634) | 5.4679 | (3.1634) | 5.4679 |
| | | | | | | | | | |

Analysis and discussion

The present study shows R is approximately 81% and thus goodness of fitness is confirming that it does not suffer from any limitations. Analysis of other factors is done below.

1. Profitability:

As per the "static trade-off theory", "firms earning higher profit higher debt" and facilitates better enjoying tax benefits. The pecking order hypothesis, on the other hand, postulates a negative association between profitability and leverage. This kind of firm better manages to finance from inside than going bankrupt by outsourcing the funds. Profitability, in this study too does not affect capital structure of any of the sectors as its p-value is 0.32 and 0.74 respectively in auto and FMCG sector. Hence, null hypothesis is accepted.

2. "Collateral Value of Assets" (COVA):

The order theory of capital structure assumes that a company's tangible assets accumulate more liabilities over the years. In contrast, static trade theory states that tangible assets act as collateral and therefore do not affect an organization's capital structure. The more tangible assets a company has, the greater its borrowing capacity. Though null hypothesis, in this study too is accepted as the analysis is giving p-values much more than 0.05.

3. "Growth":

Increased total assets are the extent of company growth. But the growth is accepted by the lever, as well as by the cost of the agency. "Growth opportunities add value to the business and increase long-term borrowing capacity and rowing businesses need more short-term and long-term debt to meet their needs". The p-values for growth are 0.99 and 0.43 for the auto and FMCG sectors, respectively. "Therefore, the null hypothesis is accepted and the capital structure of the company is not affected".

4. "Size"

Company size reflects the level at which the company operates. Small companies have less ability to raise external funds and are less dependent on equity capital, while large companies have more ability to raise funds. This study is about a large company with high capacity. Company size is positively related to leverage, which is true for both sectors. "The null hypothesis is accepted, but the p-value is above the acceptable limit".

5. "Debt service capacity"

The higher the debt range, the more debt components there are in the financial structure. A company's borrowing capacity is directly proportional to its fixed payment obligations and its ability to pay principal and interest. Therefore, the higher the debt-to-GDP ratio, the better the company's ability to pay off debt. In this study, the null hypothesis is rejected because the p-values of both sectors are below the confidence level.

6. Tax Rate

Tax rate is another factor which will have an impact on capital structure. Firm's "effective tax





rates" generally have positive relationship with leverage. The Automobile sector showed a p-value of 0.4762 leverage beta coefficient is -5.2421 in the automobile sector whereas FMCG sector showed a p-value of 0.2623; beta coefficient of -0.7691. Therefore, the null hypothesis is accepted and the capital structure of the firm is not affected.

7. Non-Debt Tax Shields

A tax shield is a cover or shield or reduction in taxable income for any business organization which is achieved by claiming permissible deductions as mortgage interest, amortization, and depreciation. Depreciation and amortization are NDTS from the inside of the company. Firms having "non-debt tax shield" generally will have a negative relation with leverage. The p-value of NDTS is more than 0.05 for both the sectors and is showing an inverse relation in the study too.

8. "Liquidity"

Generally, firms' liquidity will have a negative correlation with leverage. The more the liquidity the company wants to maintain, less shall be the debt component and vice versa. Liquidity is showing inverse relationship in the Auto sector, but the same is no true for the FMCG sector. Null hypothesis is accepted on the basis of p-value in both the sectors.

9. Uniqueness

This factor is showing a negative correlation in both sectors. The leverage beta coefficient is 4.2733, correlation is 0.0840 in the Auto sector, whereas the corresponding figures in FMCG sector are -0.5238 and -0.9352 respectively. The null hypothesis is accepted, but the capital structure of the firm is not affected.

10. "Business risk"

The higher the business risk, the less shall be the financial risk, hence less debt. Therefore, firms having high "business risk" will be having negative correlation with leverage. The pvalue for Auto sector is 0.9792 and that of FMCG is 0.4997, thereby accepting the null hypothesis. Capital structure theory is based on the determinants of capital structure. This study was done by selecting 10 independent variables and one dependent variable. The value of all independent variables and dependent variables comes from 30 companies, including 15 companies in the road sector and 15 FMCG sectors. This study uses 10 years (2009-201229) through a "capital" database. The relationship between the variables was confirmed by multiple regression and correlation analysis. In the regression analysis, the standard error was 0.402003836449127, and in the ANOVA (F=4.46781390803685, P=0.00248844007060483), it was found that the regression analysis is significant. We accept the null hypothesis because "it indicates that all independent variables together have a significant effect on financial leverage, but not individually". A study of factors influencing the capital structure of automotive and FMCG companies listed on the US Stock Exchange for the period 2009-2019 predicts these companies. The study of these factors that influence a company's capital structure is important for financial managers involved in planning a company's capital structure. These managers are encouraged to pay particular attention to factors other than various firm-specific factors when making decisions about the firm's capital structure in these sectors.





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ISSN: 1533 - 9211

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