

# EXPLORING THE INTERPLAY OF CAPITAL STRUCTURE, SHAREHOLDING PATTERN, AND FINANCIAL PERFORMANCE IN THE INDIAN AUTOMOBILE SECTOR

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## ABSTRACT

*An investigation that delves deeply into the complex linkages between shareholding patterns, financial performance, and capital structure within the Indian automotive industry. Using a thorough methodology, the analysis investigates how shareholding distribution, organizational capitalization decisions, and the resulting effects interact to affect financial outcomes. With the exception of motorcycles, the Indian automotive industry extended by 9.5 percent yearly to arrive at 4.02 million units in 2017, positioning it as the fourth biggest all around the world. It was the seventh-biggest producer of business vehicles in 2017. Bicycles, which are predicted to be pushed by a younger and developing working class, lead the market in terms of volume. The increasing wealth of the companies that study the country's ads also contributed to the area's development. India has great expectations for the near future in terms of new product development and is also a significant exporter of autos. From FY13 to FY18, India's car exports grew overall at a compound annual growth rate (CAGR) of 6.86 percent. The current study evaluates the long-term financial performance of notable, chosen automakers using proportional analysis, spanning the years 2013 to 2017. In order to provide a financial performance rating, the evaluation's goal is to assess and look into the financial performances of the three selected organizations. The review's objective is to compare and contrast the risks taken by different businesses in relation to their strengths and weaknesses.*

**Keywords:** *Interplay, Capital Structure, Shareholding Pattern, Financial Performance, Indian Automobile Sector*

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## 1. INTRODUCTION

The automobile sector in India is still a powerful force in the nation's economy, contributing significantly to current results, job development, and new trade revenues. Examining the intricate elements that shape the region's financial landscape is crucial, as it expands in response to global trends, economic paradigms, and technology developments. The interplay of ownership patterns, financial performance, and capital structure is

a key element affecting the financial stability of businesses in the area. To make educated decisions and promote sustainable growth in this significant industry, partners, investors, and lawmakers must fully understand the interdependencies between these components.

Capital structure, a vital component of financial administration, is the blend of obligation and equity that a business uses to support its operations and expansion. Since it straightforwardly affects a company's capital costs, risk resistance, and in general financial strength, finding some kind of harmony among obligation and equity is essential. Since capital-concentrated operations, creative work, and international competition are the standard in the Indian automobile area, it is basic to analyze how organizations structure their capital. The reason for this study is to decide the region's novel capital structure inclinations and how financial performance is influenced by them.

Simultaneously, the organizational shareholding structure plays a crucial role in shaping its management, decision-making procedures, and primary orientation. Examining the ownership distribution among institutional investors, advertising, and individual investors provides insights on the alignment of interests and the anticipated impact on the process of making business decisions. A distinct picture of shareholding patterns is shown by the Indian automobile industry, which is represented by a combination of domestic and foreign businesses. An important goal of this investigation is to comprehend the ways in which these patterns influence important choices and financial outcomes.

Furthermore, the financial performance of companies in the Indian automotive sector is measured in a variety of ways, including productivity, benefit, liquidity, and dissolvability. It serves as a comprehensive assessment of an organization's ability to incentivize its partners and investigate the challenges inherent in the sector. This study intends to uncover patterns, correlations, and causal links by analyzing financial performance in conjunction with capital structure and shareholding patterns. These findings can provide financial backers, financial specialists, and policymakers with valuable insights.

This study means to offer a thorough comprehension of the components that contain the financial scene of organizations in the Indian automobile industry by looking at the relationship between capital structure, shareholding patterns, and financial performance. It looks to add to the corpus of information that explains significant decision-production, advances straightforwardness, and helps in economic development in this center region of the Indian economy by an exhaustive examination.

### **1.1. Objectives of The Study**

- To research the characteristics and expansion of particular automakers.

- To Examining a few chosen automakers' liquidity and solvency performance
- To assess the profitability and turnover of a subset of automakers

## 2. LITERATURE REVIEW

Using the Dupont Arrangement of Financial Examination, Ahmed Arif Almazari's (2012) study focuses on the financial performance of the Jordanian Bedouin Business Bank. A commonly used tool for financial analysis, the Dupont Framework breaks down return on equity (ROE) into its constituent parts, providing a comprehensive understanding of factors influencing financial performance. By employing this technique to a specific scenario, Almazari's investigation enhances the writing by providing significant insights into the key factors influencing financial advancement in the Jordanian financial sector.

The experimental analysis by Banerjee and De (2014) looks at capital structure choices in particular as a key factor influencing company financial performance in the Indian iron and steel sector. The study examines the complex relationship between capital structure and financial performance, providing precise evidence from a wide range of contemporary research. Through the differentiation of factors influencing capital structure choices, the review advances a broader understanding of financial management practices within the Indian setting.

Research by Chadha and Sharma (2015) delves into the factors that influence capital structure in India and adds to the body of knowledge currently available on corporate finance. The research offers valuable insights for companies operating in the Indian market by using observational approaches to evaluate the factors influencing capital structure decisions. The research improves our understanding of the complexities involved in shaping capital structure decisions and their effects on financial performance by identifying and decomposing the factors.

Christina Sheela The DuPont Examination is used in Dr. K. Karthikeyan's (2012) study to examine the financial performance of the Indian drug sector. The DuPont Examination provides a comprehensive view of financial efficacy by considering a precise dissection of return on equity (ROE) into its constituent parts. This study contributes to the writing by straightforwardly applying the DuPont Examination to the Indian medication industry, giving goodies of information about the key variables impacting financial performance in this area.

In the Indian setting, Dawar's (2014) study looks at the connection between capital structure decisions, office theory, and business performance. The link between administrators (investors) and specialists (executives) is examined in the organization hypothesis along with the implications for business decisions. Through an analysis of the impact of organization hypotheses on capital structure choices and subsequent company

performance, Dawar's study advances our understanding of corporate administration components within the Indian business landscape.

The study conducted by Dharmaraj and Kathirvel (2013) examines the financial performance of specific Indian vehicle companies. The analysis employs a comprehensive approach to assess financial performance, providing insights into the financial stability of these entities. The findings aid in the understanding of the unique challenges and prospective opportunities faced by the Indian automotive industry, assisting partners in making well-informed decisions.

### **3. RESEARCH METHODOLOGY**

The review that is all proposed depends entirely on secondary information. The information was accumulated from the yearly reports of the singular organizations as well as from their sites, course readings, reference books, diaries, articles, and periodicals. The Society of Indian Automobile Manufactures (SIAM), equity master, and money control.com have given the fundamental information.

#### **3.1. Sample Design**

The leading producers of motorcycles and three-wheelers are used to select the organizations. Three automotive companies have been selected by the analyst based on information accessibility over the next five years. This particular example has been selected for the suggested study. The corresponding groups have been chosen for analysis. The first three are TVS Motor Company Limited, Hero Moto Corp Limited, and Bajaj Auto Limited. The examination was administered throughout a five-year study period, encompassing, for example, the fiscal years 2012–2013 through 2016–2017.

#### **3.2. Ratio Employed in Data Analysis**

Ratio analysis is a regularly involved device in financial analysis. It is portrayed as the efficient utilization of ratio analysis to assess financial explanations and decide the qualities and shortcomings, confirmed performance, and current financial status of a company. The term ratio suggests a quantitative or numerical relationship between two items.

#### **3.3. Hypothesis of the Study**

The following is the formulation of the research hypothesis:

H1: The present ratio values of the chosen automakers do not significantly differ from one another.

H2: The Quick ratio values of the chosen automakers do not significantly differ from one another.

H3: The Interest Coverage Ratio values of the chosen automakers do not significantly differ from one another.

H4: There is no appreciable relationship between net profit, operating profit, fixed assets, and net sales for the selected automakers.

## 4. DATA ANALYSIS AND RESULTS

### 4.1. Performance of Selected The automotive industry' Liquidity

The chosen automotive industry's continuous ratio and rapid ratio are displayed in the accompanying table 1.

**Table 1:** Performance of Selected Automakers' Liquidity

Year/ Company	Current Ratio of selected automobile industry			Quick Ratio of selected automobile industry		
	Hero Motocorp	Bajaj Auto	TVS Motor	Hero Motocorp	Bajaj Auto	TVS Motor
<b>2013</b>	2.3	2.6	1.10	2.07	2.33	1.49
<b>2014</b>	2.4	2.3	1.10	2.11	2.06	1.53
<b>2015</b>	2.7	4.8	1.10	2.14	2.96	1.48
<b>2016</b>	2.9	2.8	1.9	2.28	2.33	1.46
<b>2017</b>	2.9	3.8	1.9	2.65	3.73	1.40
<b>Mean</b>	2.56	3.3	1.87	2.25	2.68	1.47
<b>Median</b>	2.7	2.8	1.10	2.14	2.33	1.48
<b>S.D</b>	1.29	2.06	1.06	1.24	1.68	1.05
<b>CV</b>	19.14	49.11	7.37	20.02	41.04	8.99
<b>Skewness</b>	-0.35	0.792	-0.610	2.69	2.15	-0.068

In the aforementioned table, Hero Moto corp's current ratio was 2.3 in 2013, 2.4 in 2014, and 2.9 in 2017. Bajaj Auto's current ratio was 2.6 in 2013, 2.3 in 2014, and 3.8 in 2017, while TVS Motor's current ratio was 1.10 in 2013, 1.10 in 2014, and 1.9 in 2017. It is conceivable to conclude that over time, the proportion of Bajaj Auto, TVS Motor, and Hero Motocorp Motors is gradually declining.

In the aforementioned table, Hero Moto corp's fast ratio was 2.07 in 2013, 2.11 in 2014, and 2.65 in 2017. Bajaj Auto's fast ratio was 2.33 in 2013, 2.06 in 2014, and 3.73 in 2017. Moreover, TVS Motor was 1.49 in

2013, 1.53 in 2014, and 1.40 in 2017. It is quite possible to infer that the fast ratio of TVS Motor, Bajaj Auto, and Hero Motocorp Motors is steadily falling.

#### 4.2. ANOVA Current Ratio Test

**Table 2:** Analysis of Change: Chose Automakers' Ongoing Ratio

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	1.966669	5	0.491669	0.673067	0.627020	3.48007
Within Groups	8.326669	11	0.732669			
Total	10.293338	16				

Table 2 provides the 0.673 F-esteem Its 0.627 and the F-basic worth (3.480) is not precisely met. It is more noticeable than the 0.05 alpha threshold. As a result, the false hypothesis is accepted. Therefore, there isn't much of a difference between the selected auto companies' current ratio upsides.

#### 4.3. ANOVA Test of Quick Ratio

**Table 3:** Quick Ratio for a Selection of Automakers: Variance Analysis

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	0.929375	5	0.232345	0.477909	0.751960	3.48007
Within Groups	4.863720	11	0.486374			
Total	2.793095	16				

Table 3 reveals that the P-value is 0.751 and the F-esteem (0.477) is not quite the F-basic worth (3.480). Compared to the alpha level of 0.05, it is more notable. As a result, the false hypothesis is admitted. Therefore, there isn't much of a difference between the selected auto companies' Speedy Ratio benefits.

#### 4.4. Performance of Solvency in a Selection of Automobile manufacturers

The accompanying table 4 shows the interest inclusion ratio, selective ratio, and arrangements to amount to assets ratio of the picked automobile industry.

**Table 4:** Performance of Solvency in a Selection of Automakers

Year/ Company	Interest Coverage Ratio of Selected Automobile Companies			Proprietary Ratio of Selected Automobile Companies			Sales to Total Assets Ratio of Selected Automobile Companies		
	Hero Motocorp	Bajaj Auto	TVS Motor	Hero Motocorp	Bajaj Auto	TVS Motor	Hero Motocorp	Bajaj Auto	TVS Motor
2013	3.15	4.60	3.9	1.53	1.65	1.27	3.7	2.8	3.4
2014	3.45	6.69	5.8	1.57	1.68	1.05	3.7	2.5	3.5
2015	3.84	7.84	8.4	1.63	1.70	1.29	3.7	2.5	3.3
2016	3.99	6.43	9.4	1.64	1.80	1.33	3.4	2.5	3.4
2017	2.70	4.98	14	1.69	1.84	1.37	2.8	2	3
Mean	3.43	6.12	8.18	1.60	1.74	1.26	3.34	2.5	3.18
Median	3.45	6.43	8.4	1.63	1.70	1.29	3.7	2.5	3.4
S. D	1.54	2.33	4.66	1.08	1.09	1.14	1.270	1.214	1.116
CV	22.84	26.77	52.93	11.20	12.44	52.18	12.568	17.320	6.280
Skewness	-1.44	1.12	1.20	-1.19	1.43	-1.75	-1.260	0.000	-0.407

The interest inclusion ratio of Hero Motocorp was 3.15 in 2013, 3.45 in 2014, and 2.70 in 2017. The interest inclusion ratio of Bajaj Auto was 4.60 in 2013, 6.69 in 2014, and 4.98 in 2017. The interest inclusion ratio of TVS Motor was 1.53 in 2013, 1.57 in 2014, and 12 in 2017. It is quite possible to deduce that the Interest Inclusion Ratio of Motocorp Motors, Bajaj Auto, is consistently dropping, while that of TVS Motor Hero is continuously rising.

In the aforementioned chart, the Exclusive Ratio for Hero Motocorp was 1.53 in 2013, 1.57 in 2014, and 1.69 in 2017. The corresponding figures for Bajaj Auto were 1.65 in 2013, 1.68 in 2014, and 1.84 in 2017. Moreover, TVS Motor was 1.27 in 2013, 1.05 in 2014, and 1.37 in 2017. It is quite possible to deduce that TVS Motor is steadily decreasing, Hero Motocorp Motors' exclusive ratio is constantly rising, and Bajaj Auto's is continuously falling.

Deals to Add up to Resources Ratio of Hero Motocorp was 3.7 in 2013, 3.7 in 2014, and 2.8 in 2017. The following figures are for Bajaj Auto, which was 2.8 in 2013, 2.5 in 2014, and 1 in 2017, and TVS Motor, which was 3.4 in 2013, 3.5 in 2014, and 2 in 2017. It is possible to deduce that Hero Motocorp Motors, Bajaj Auto, and TVS Motors' deals to add up to their resource's ratio are steadily decreasing.

#### 4.5. Test of Interest Coverage Ratio using ANOVA



**Table 5:** Analysis of Variance in Selected Auto Companies' Interest Coverage Ratio

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	20.29338	5	5.32336	0.552943	0.704990	3.48007
Within Groups	97.62275	11	9.662275			
Total	117.91613	16				

Table 5 indicates that the P-esteem is 0.704 and the F-esteem (0.552) is not quite the F-basic worth (3.480). Compared to the alpha level of 0.05, it is more notable. The flawed hypothesis is acknowledged in this way. Therefore, there isn't much of a difference between the selected car businesses' Interest Inclusion Ratio benefits.

#### 4.6. Profitability and Asset Relationship on Net Sales

Regression analysis is a dependable strategy for recognizing the straight relationship between no less than two variables. Regression is essentially utilized for two purposes: prediction and causal induction. In its most fundamental structure, regression shows the relationship between one independent variable (Y) and one dependent variable (X). Regression analysis is utilized to show the relationship between variation in one variable and variation in another. We shouldn't surmise that greater shoes liken to greater feet, despite the fact that a regression with shoe size as the independent variable and foot size as the dependent variable would have an exceptionally high regression coefficient and gigantic limit checks. It's vital to understand that regression analysis and finding correlations between different variables are two very various cycles. Regression looks to represent the relationship between the variables, while correlation lays out the strength of that relationship.

X and Y are the dependent and independent variables, respectively.

Y stands for net sales, X1 for net profit, X2 for operating profit, and X3 for fixed assets.

**Table 6:** Examination of Hero Motocorp's Variance

	Df	SS	MS	F	S	Multiple R	R Square	Adjusted R Square
<b>Regression</b>	4	15281988	5093997	1.16289	0.577847	0.881599	0.777216	0.108857
<b>Residual</b>	2	4380540	4380540					
<b>Total</b>	6	19662528						

**Table 6.1:** Hero Motocorp's coefficients



	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
<b>Net sales</b>	19472.68815	11560.75649	1.684499	0.341063	-127399	166340.616
<b>Net Profit</b>	8.985317793	31.14477264	-0.2650	0.835148	-393.013	377.040337
<b>Operating Profit</b>	1.197389243	11.02548899	0.119436	0.794326	-128.190	130.583307
<b>Fixed Assets</b>	6.854509047	14.54480120	0.432235	0.740273	-168.250	179.957528

The multiple regression study shown in Table No. 6 illustrates how Net Deals fundamentally affect Profit and Resources given the input technique. The entire technique was explained by the significant variables that explained the variation in Net Deals: Net Profit, Working Profit, and Fixed Resources. With a value of 6.85, Fixed Resources had the most impact on Net Deals. Moreover, Net Deals do not yet depend on Net Profit. Considering the remarkable figure of 0.835148 (Coefficient= - 8.98). More critical than 0.05 to anticipate the Net Arrangements, the whole method depicted 88% of the variation, which was genuinely huge  $F(3, 1) = 1.1630$ , Enormous  $F = 0.5780$ . The discoveries of the regression analysis demonstrate a huge  $F=0.5780$  ( $P>0.005$ ) and a changed R square of 0.1088. Consequently, the 5% level concedes the distorted hypothesis. Accordingly, there is no essential relationship between working profit, net profit, fixed assets, and net arrangements.

#### 4.6.1. Relationship between Assets and Profitability on Net Sales at Bajaj Auto Ltd.

Ho: The relationship between Bajaj Auto Ltd.'s net profit, operating profit, fixed assets, and net sales is not noteworthy.

H1: There is a noteworthy correlation between Bajaj Auto Ltd.'s net profit, operating profit, fixed assets, and net sales.

**Table 7:** Examination of the Variance of Bajaj Auto Ltd.

	Df	SS	MS	F	S	Multiple R	R Square	Adjusted R Square
<b>Regression</b>	4	4693427.88	1564477	3.690340	0.361347	0.95768313	0.91715696	0.66862780
<b>Residual</b>	2	8423940.050	8423940					
<b>Total</b>	6	13117367.93						

**Table 7.1:** Values of Bajaj Auto Ltd.

	<b>Coefficients</b>	<b>Standard Error</b>	<b>T Stat</b>	<b>P-value</b>	<b>Lower 95%</b>	<b>Upper 95%</b>
<b>NET SALES</b>	57018.76897	35394.19870	1.610999	0.353660	-392686	506719.293
<b>NET PROFIT</b>	3.346929748	2.360965963	-1.41763	0.391109	-35.3460	27.6519873
<b>OPERATING PROFIT</b>	4.64352138	1.253767859	2.906059	0.210989	-14.2873	20.5741526
<b>FIXED ASSETS</b>	20.03142199	15.6803500	-1.29640	0.418287	-207.565	169.500110

The various regression analysis introduced in Table No. 6.1.8 demonstrates that Net Arrangements for the most part influence Profit and Assets considering the entry methodology. The strategy came to make sense when Net Profit, Working Profit, and Fixed Resources were identified as critical components in explaining the change in Net Deals. With a coefficient of 4.64, Working Profit had the most effect on Net Deals. Considering the remarkable figure of 0.418287 (Coefficient= - 20.031).

## 5. CONCLUSION

Analyzing the connection between shareholding patterns, capital structure, and financial performance in the Indian automobile industry has given significant new bits of knowledge into the complex variables influencing the industry's financial environment. This study has meticulously examined numerous financial indicators, possession arrangements, and subsidizing programs in order to uncover the intricate relationships between these key factors. Ratio analysis is useful in comparing the financial arguments put forth by different companies and the financial outcomes of studies conducted across ill-defined time periods. Businesses have utilized a greater amount of acquired reserves. The liquidity ratio and the research revealed a significant positive association. In addition to giving businesses more liquidity capacity throughout the conversion phase, it establishes an efficient stock management system. Consequently, the assessment indicates that notable alterations have been implemented to tackle these shortcomings. The chosen automakers' Dissolvability Ratios differ in some ways. This implies that they must accept a tiny amount of risk in order to keep their long-term promises. When compared to other automakers, Hero Motocorp has one of the highest productivity or turnover ratios. This illustrates how well Hero Motocorp looks after its assets and resources. Hero Motocorp has higher profitability ratios than other automakers. It displays Hero Motocorp's substantial profit, which is fantastic for the company. We may conclude, after considering all of the arguments and issues brought up by this inquiry, that Hero Motocorp continues to hold a respectable position in the market, even though Bajaj Auto and TVS Motors are acceptable. After that, investors can contribute with confidence. Their shares will be obtained and delivered, and they can anticipate a substantial payout.

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