Capital Structure Analysis of Automobile Companies in India

ISSN 2321 – 371X
Commerce Spectrum 8(2) 35-37

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Abstract

The thesis was submitted to the Mahatma Gandhi University, Kottayam, India in 15.11.2019 for the award of Ph.D degree and awarded in December, 2020. The work was done under the supervision of Dr. S. Santhosh Kumar, Professor, School of Management Studies, Cochin University of Science and Technology, Kerala, India.

1. Introduction

The automobile industry in India is one of the largest in the world and one of the fastest growing industries globally. The automobile industry in India is categorized into passenger cars, two wheelers, commercial vehicles and three wheelers. The dominant products of the industry are two wheelers with a market share of 81 per cent and passenger cars with a market share of 13 per cent. Commercial vehicles and three wheelers share about 6 per cent between them. Looking into the nature of the automobile industry in India, its high vulnerability to economic fluctuation is quite interesting to observe. Situations of boom and recession in the economy may highly influence the volume of production and sales in the industry. Moreover, higher level of competition and the increasing entry of foreign players during the last decade have made the industry so dynamic and challenging to sustain. The nature of the industry being more responsive to seasonal variations in agriculture is also noteworthy. On the financing side, automobile industry is highly capital intensive in nature. The higher investment requirements of these companies especially in fixed assets normally bring higher operating risk to the firm. Similarly, the use of debt capital accentuated by the higher fixed capital requirement also brings higher financial risk to these companies. When production and sales operations of these companies are severely prone to economic fluctuations, policy changes and seasonal variations; size of operating earnings to financial obligation become a challenge. The present study is an attempt to intrude deeply into the capital structure of automobile companies in India to examine and to explore into its details.

2. Statement of the Problem

The automobile industry is an essential part of manufacturing sector and considered to be an indicator of economic development of any country. This sector has witnessed tremendous growth during the last two decades. However, the industry is severely prone to economic fluctuations as the demand for automobile varies heavily according to the changes in the domestic and global economy. Since the industry is exposed to higher degree of fluctuations towards periodical and non periodical economic events, managing the financial affairs of the companies in the industry becomes crucial. Moreover, the capital intensive nature of the industry demands more investment in fixed assets. Higher investments in fixed assets may lead to higher dependence on debt bringing more contractual interest obligation. In this context the factors determining capital structure of these companies, its influence on firm performance and finally its impact on value of the firm are important for financial decision making. Several studies have been conducted in this area but a full-fledged study covering all these aspects has not been undertaken so far.

3. Significance of the Study

Capital structure decision is one of the key decisions to be undertaken by every company at the time of raising their capital. The research may be helpful to the new players to decide their capital structure. The scientific research may help the companies to re-plan their capital structure and may expand their wings by using strong liquid position to have an edge over the competitors and may serve the expectations of the stakeholders. The findings may be used to compared it with the data of the same or related segment/industry/size/national & international level.

4. Scope of the Study

The study covers the capital structure analysis of all the listed automobile manufacturing companies in India. All the segments of the industry comprising two-wheelers and three wheelers, cars and utility vehicles and commercial vehicles as a single lot and as separate lots becomes the essence of the study. The analysis covered the identification of the determinants of capital structure and the influence of capital structure decision on financial performance and firm value of the automobile companies in India.

5. Objectives of the Study

The study examines the capital structure of the automobile manufacturing companies in India. Specifically, it looks into:

1) The factors determining the capital structure of the companies
2) The influence of capital structure on financial performance of the companies
3) The influence of capital structure on 'firm value' represented by market value of equity shares of the companies.

6. Hypotheses of the Study

The following hypotheses are formulated for the study:

H_1: The capital structure defined as Long Term Debt to Total Assets (DTA) or Long Term Debt to Equity (DE) of automobile manufacturing companies in India is determined by their (a) firm size (b) profitability (c) tangibility (d) growth in assets, and (e) interest coverage.

H_2: The financial performance of automobile manufacturing companies in India represented by (a) ROA or (b) ROE is independent of their capital structure.

H_3: The firm value of automobile manufacturing companies in India represented by market value of equity shares is independent of their capital structure.

7. Research Methodology

All the automobile manufacturing companies in India which are listed in BSE constitute the population for the study. The study was based on secondary data. Annual Reports of the automobile companies in India formed the primary source of such data. Research Data Bases such as PROWESS and Money Control were the sources of the required data. The study covered a period of ten years for analysis i.e. from 2007-08 to 2016-17.

Two panel econometric techniques, fixed effects (FEM), and random effects (REM), were used to estimate the relationship between key explanatory variables and performance measures.

8. Findings of the Study

The findings of first objective, factors influencing capital structure: In the case of all automobile companies, tangibility and interest coverage were the significant determinants of capital structure. Both the variables were positively influencing capital structure. In the case of two and three wheelers, tangibility was the significant variable and it has a positive relationship with capital structure. When DE was taken as the capital structure proxy, profitability was found significantly influencing capital structure. Profitability has a positive relationship with capital structure. In the case of cars and utility vehicles, When DTA was taken as the capital structure proxy, size of the firm, tangibility and growth in assets were found to be significantly influencing capital structure. Size of the firm and growth in assets were negatively influencing capital structure and tangibility has a positive relationship. But in the case of DE, tangibility was the determining factor and it has a positive relationship. In the case of commercial vehicles, when DTA was taken as the capital structure proxy, interest coverage is the only determining factor. And it has a negative relationship with capital structure. But when DE was taken, none of the variables were the determining factor of capital structure.

The findings of the second objective of the study, to examine the influence of capital structure on financial performance are: In the case of all automobile companies, when ROA was taken as the financial performance proxy, DTA was found to be negatively influencing financial performance. But when ROE was the financial performance proxy, DE was the influencing variable and it also had a negative relationship with financial performance. In the case of two and three wheelers, when ROA was taken as the financial performance measure, DE was the significant variable and it has a positive influence on financial performance. In the case of ROE also, DE was found to be having significant influence but it had a negative influence on financial performance. In the case of cars and utility vehicles, when ROA was taken as the measure for financial performance, DE was the significant variable positively influencing financial performance. When ROE was taken, again DE was significant but it had a negative influence on financial performance. In the case of commercial vehicles, when ROA was taken, DTA was the significant variable negatively influencing financial performance. And in the case of ROE, both DTA and DE were significant with negative influence on financial performance.

The findings of the third objective of the study, to examine the influence of capital structure on firm value represented by market capitalization are: in the case of all automobile companies, capital structure did not influence firm value of any automobile companies. In the case of two and three wheelers, the capital structure variant DE had a significant influence on firm value. The relationship was found to be negative. In the case cars and utility vehicles, the findings of the study was capital structure had no influence on firm value. And in the case of commercial vehicles, capital structure has no influence on the firm value of commercial vehicles.

9. Conclusion

Capital structure decision still remains a core issue in corporate finance, even after sixty years of the seminal work of Modigliani and Miller (1958). Through the use of panel data regressions, this research work identified the determinants of capital structure of automobile manufacturing companies in India and its influence on financial performance and firm value. The study was carried out for automobile manufacturing companies as a whole and for each segment separately.

The results revealed that determinants of capital structure vary for each segment of automobile companies. On the whole, asset tangibility and interest coverage are the major determinants of capital structure. It is a realistic indication that these companies anchor their capital structure decision based on the magnitude of the above variables. It is a clear indication also to the new comers to the industry.

From the examination of influence of capital structure on financial performance, empirical results indicate that capital structure has negative influence on return on equity in the case of all segments of automobile manufacturing companies. Negative influence was found between capital structure and return on assets in case of automobile manufacturing companies as a whole and for commercial vehicles. This indicates that increase in debt-equity ratio brings lower earnings to owners.

Regarding the influence of capital structure on value of firms represented by market capitalization, no influence was found except in the case of two and three wheeler segment. It means that capital structure decision is irrelevant to the value of firms.

So, capital structure decisions have to be taken by considering the peculiarities of each segment so that they can maximize the worth of shareholders. The present study helps the financial managers to work on a continuous basis to achieve a target capital structure which can be revised from time to time to reach an optimum capital structure.