

Optimization of Capital Structure for Increased Profitability



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Abstract: Every company needs money or capital not only for its establishment but also for day to day operations. In order to acquire the money or capital a company will have its own variety sources that can be elucidated by capital structure. There are two ways or sources for financing a firm i.e. debt finance and equity finance also known as debt and equity capital. Debt Capital comes from bonds, debentures, long term notes payable etc. whereas equity capital comes from stock/shares may be equity or preference, retained earnings etc. Working capital is also a part of capital structure. Each category has its own pros and cons. Decisions related to finance is the integral element of any company. In this connection, the finance manager plays a vital role in arriving at a decision. He is always in dilemma that which proportion of capital leads to optimum utilization of funds. The widely accepted solution is a combination of equity capital and debt capital. Generally capital structure is formulated as per the interest of equity share holders. Hence rather than collecting funds totally from share holders, it is better to have a long term loan also, even though it is an expense to the company, this method is followed by many companies. This research paper primarily focuses on effectiveness of capital structure on profitability of Information Technology (IT) firms in India.

Key Words: Capital structure, Profitability, Debt, Equity, Working capital

I. INTRODUCTION

In simple words capital structure refers to the money deployed by the company for its operations and for financing its assets. Usually it is in two forms i.e. debt and equity capital. In other words it is also known as debt equity or debt capital ratio. Now the basic question is what is the appropriate or optimum capital structure to be followed by the company so that it can achieve highest profitability? The answer is proportion of debt and equity that results in lowest cost to obtain it. In order to optimize the capital structure a company must decide its priorities and decide that the expenses are debt in nature and equity in nature and can go for which one is required. The following diagram explains the dynamics between debt and equity capital from investors perspective.

| Capital Structure | | Investment Dynamics | | | |
|----------------------------|----------------------------|---------------------|-------------------------------------|---------------|-------------|
| | | Risk | Return | Ownership | Performance |
| A S S E T S | D E B T | Low Risk | Low return Interest Capital | No Ownership | Temporary |
| | E Q U I T Y | High Risk | High Return Dividend Capital growth | Voting rights | Permanent |

In this research paper an effort is made to establish a hypothetical connection between capital structure and business revenue and also to determine the causal relationship between capital structure and profitability. To prove this, selected firms are categorized into 3 types based on 2 attributes namely business revenue and size of the asset.

| Categorization of companies | |
|-----------------------------|-------------------------|
| Business Revenue | Size of an Asset |
| Low Revenue Companies | Small Assets Companies |
| Medium Revenue Companies | Medium Assets Companies |
| High Revenue Companies | Large Assets Companies |

In order to prove that capital structure significantly impact on profitability a random sample of 100 Information Technology (IT) firms are selected across India. From these companies the data related to finance is collected for a time period of 6 years. The appropriate statistical tools are also used for analysis namely measures of central tendency, ratio analysis and simple regression analysis.

II. NEED FOR THE STUDY

The two fundamental factors to determine the effectiveness of capital structure on profitability are size of an asset and revenue generated by business. Despite ample of research in this area, a very few studies have analyzed the cause and effect relationship between capital structure and profitability.

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This research paper primarily focuses on analyzing the effectiveness of capital structure on profitability of various IT firms in India. Hence, the research in done in this paper is first of its kind to establish a casual connection between profitability and capital structure.

III. OBJECTIVES OF THE STUDY

The couple of objectives of this research paper are

1. To know the factors which are influencing capital structure
2. To analyze the causal connection between capital structure and profitability

IV. LITERATURE REVIEW

Bhaduri (2002): This study reveals the fact that the best capital structure of any firm or company is influenced by size of an asset, cash flows, growth of firm, restructure of cost etc.

Mirigianakis, Asteriou and Voulgaris (2002): This study explains capital structure of the company is significantly influenced by utilization of assets, gross and net profitability and total assets. In their further research in the year 2004, they also found that profitability is the main factor which influences the capital structure of the company.

Lara and Mesquita (2003): This study reveals a fact that the best and exemplary ratio of equity capital and debt capital will boost the net worth of a company (profitability) equally with return rates.

Azhagaah and Premgeetha (2004): States that, if a company has an ability to acquire the debt funds rapidly and dispose them with same speed, the then company enjoys the financial flexibility in order to achieve its goals.

Pandey (2004): In his study, he anticipated that, there is a cause and effect relationship between profitability and capital structure and companies with low level of profitability would enjoy more internal funds.

Deesomsak (2004): This study reveals that capital structure of any company mainly influenced by the environment in which it operates.

V. RESEARCH METHODOLOGY

The data is collected for 6 years i.e. 2012–2013 to 2017–2018 and considered for analysis. The required data for the study is collected from secondary source of 100 IT firms across India. The following statistical tools namely coefficient of correlation, mean, standard deviation; ratios are used to analyze the data. The profitability variables are dependent namely Return on Assets (ROA) and Return on Capital Employed (ROCE), where as the Debt Equity Ratio and Total Debt to Total Assets Ratio are independent variables. Finally Expense ratio or current ratios are treated as controlled variables.

VI. DATA ANALYSIS

Regression Equation Model

$$Y_e = a + b_1 (\text{Expense-Income}) + b_2 (\text{Total Debt-Total Asset}) + b_3 (\text{CR}) + e$$

Where Y_e = Profitability variables (ROA & ROCE), CR = Current Ratio, a = Intercept, $b_1 - b_3$ = Estimated Coefficient and e = Residual Error

Table-1: Results of Regression Analysis for Return on Asset

| Particulars | Low Revenue Companies | Medium Revenue Companies | High Revenue Companies |
|--------------------------|-----------------------|--------------------------|------------------------|
| Current Ratio | -0.332 | -0.341 | -0.257 |
| Total Debt - Total Asset | -0.0241 | -0.243 | 0.0250 |
| Expense - Income | -0.2019 | -0.9012 | -1.1987 |
| Intercept | 18.654 | 103.675 | 108.843 |
| r value | 0.2152 | 0.7543 | 0.5429 |
| f ratio | 29.12 | 135.21 | 99.65 |

*Source: Primary data

Interpretation: From the above table, the application of debt funds in low income companies are insignificant as $r=0.2152$ which means 21.52% variation in Return on Assets.

In case of medium income companies it is significant because $r=0.7543$ which means 75.43% variation in Return on Assets. Similarly use of debt funds in high income companies is also significant as the variation in ROA is 54.29%.

Table-2: Results of Regression analysis for Return on Capital Employed

| Particulars | Low Revenue Companies | Medium Revenue Companies | High Revenue Companies |
|--------------------------|-----------------------|--------------------------|------------------------|
| Current Ratio | -0.410 | -0.413 | -0.123 |
| Total Debt - Total Asset | -0.0125 | -0.386 | 0.0438 |
| Expense - Income | -0.2176 | -0.8021 | -1.2012 |
| Intercept | 20.543 | 114.576 | 107.542 |
| r value | 0.2137 | 0.5634 | 0.1875 |
| f ratio | 30.34 | 141.32 | 97.34 |

*Source: Primary data

Interpretation: From the above table, the returns on capital employed in low income companies are insignificant as $r=0.2137$ which means 21.37% as the variation in capital employed is very less. In case of medium income companies it is significant because $r=0.5634$ which means 56.34% variation in capital employed which is more than 0.50. Similarly the returns on capital employed in high income companies are very less which is 18.75%.



Table-3: Summarization of results

| Particulars | C R | TD-TA | Exp - Inc | R O A | R O C E |
|-------------|-------|-------|-----------|-------|---------|
| C R | | 0.16 | -0.17 | -0.14 | -0.32 |
| TD-TA | -0.12 | | -0.65 | -0.60 | -0.56 |
| Exp - Inc | -0.01 | 0.26 | | -0.65 | -0.42 |
| R O A | 0.96 | 0.76 | -0.12 | | 0.87 |
| R O C E | 0.65 | 0.43 | 0.54 | 0.54 | |

Source: Primary data

Interpretation: From the above table it is very clear that, the profitability against capital employed is declines with an increase in total debt. Return on capital employed with expense-income ($r = -0.42$) which indicates negative returns.

VII. CONCLUSION

From business revenue perspective, the present study proves that IT companies with low capital and low operating expenses are highly profitable despite of their debt capital ratio capital structure. The other side of the research is return on capital employed perspective; here the profitability is influenced significantly by expenditure. Medium income IT companies can perform better by generating moderate income with low cost of debt so that the impact on profitability will be more significant. However the proportion of debt in capital structure is very much crucial role and if it is increased more, automatically the profitability goes down. High income IT companies obviously showed better performance when compared to low and medium income group IT companies. From asset size perspective, small IT companies performed well by generating more revenue. In a nut shell, it is clear that if total debt is increasing more when compared to total asset results in poor performance of the company and vice versa.

LIMITATIONS STUDY

1. The analysis is done only for 6 years for selected IT firms in India and it purely based on financial data. Therefore results are not generalized.
2. The correctness of the outcome is totally depends on the consistency and superiority of secondary data collected from CMIE.
3. Due to time and ck of resources a long term analysis has not done.
4. This study is only limited for IT companies. Therefore the findings of this study are more helpful for further research in IT area only.
5. The same study can be carried out other than IT Sector.

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