

“Role of Borrowed and Lease Debt Finance in Capital Structure”

Dr. Vinod S. Bhelose¹, Dr. Bipin R. Bankar²

¹ Dr. D. Y. Patil Institute of Management Studies, Pune (India)

² Adhalrao Patil Institute of Management and Research, Pune (India)

Abstract - This study examines the role of debt finance in capital structure with a specific focus on the proportion of borrowed capital and lease finance among listed companies in the Information Technology (IT) and Pharmaceutical sectors. While traditional capital structure theories emphasize the overall level of leverage, this research extends the analysis by disaggregating debt into its key components—borrowed debt (both long-term and short-term) and lease finance (long-term and short-term). The study aims to identify whether significant differences exist in the composition of debt and its implications for financing decisions.

The research is based on secondary data collected from selected listed companies, and appropriate statistical tools have been employed to analyze the proportions of different debt components. The findings reveal a statistically significant difference between the proportions of borrowed capital and lease finance, indicating that firms adopt distinct approaches in utilizing these sources of debt. This suggests that lease financing is not merely a substitute for traditional borrowing but serves a different strategic and operational purpose within the capital structure.

However, the study finds no significant difference in the proportion of debt-equity financing, implying that despite variations in internal debt composition, firms maintain a relatively stable overall leverage structure. This reflects the tendency of firms to adhere to target capital structures while adjusting the internal mix of debt instruments.

The study contributes to existing literature by highlighting the importance of debt composition, particularly in sectoral contexts, and provides insights for financial managers in optimizing financing strategies under varying economic and operational conditions.

Key Words: Capital Structure, Debt-Equity, Borrowed Debt Capital, Lease Finance.

1. INTRODUCTION

Capital structure is a fundamental concept in corporate finance that deals with the proportion of debt and equity used by firms to finance their operations and

investments. The decision regarding the mix of financing sources is critical, as it directly influences a firm's cost of capital, risk profile, and overall value. Early theoretical contributions by Stewart C. Myers (2001) emphasize that firms balance the benefits of debt—primarily tax shields—against the costs of financial distress and agency conflicts. This trade-off framework, along with the pecking order theory, forms the basis for understanding financing behavior, where firms prefer internal funds, followed by debt, and lastly equity.

Empirical studies have further validated the existence of an optimal capital structure. Michael Bradley, Gregg A. Jarrell, and E. Han Kim (1984) demonstrate that firms tend to move toward a target leverage ratio that minimizes their weighted average cost of capital. However, subsequent research suggests that capital structure is not static but dynamic in nature. John R. Graham and Mark T. Leary (2011) argue that firms adjust their financing decisions over time in response to internal and external factors, including market conditions and investment opportunities.

While traditional literature primarily focuses on the level of debt, recent studies have shifted attention toward the composition of debt. Joshua D. Rauh and Amir Sufi (2010) highlight that firms use a variety of debt instruments with different maturities, priorities, and sources. This perspective introduces the concept of debt structure, which refers to the internal composition of total debt, including borrowed capital and lease financing. Such differentiation is important because each component carries distinct implications for liquidity, flexibility, and financial risk.

The strategic nature of capital structure decisions is further emphasized by Christopher Parsons and Sheridan Titman (2009), who suggest that financing choices are influenced by competitive positioning, industry characteristics, and managerial strategies. In this context, sector-specific differences become crucial. For instance, Jian Chen and Roger Strange (2005) find that firm characteristics such as size, profitability, and asset tangibility significantly affect leverage decisions. This implies that asset-light industries like Information

Technology (IT) may rely differently on debt compared to capital-intensive sectors such as pharmaceuticals.

Another important concept is debt capacity, which refers to the maximum level of debt a firm can sustain without increasing the probability of financial distress. A. Dias Jr and Panagiotis G. Ioannou (1995) highlight that debt capacity depends on cash flow stability and risk allocation, which also influences the choice between traditional borrowing and lease financing. Lease finance, in particular, has gained prominence as an alternative source of funding, especially after changes in accounting standards that require capitalization of lease obligations, thereby affecting reported leverage.

Recent studies have also incorporated macroeconomic factors into capital structure analysis. Muhammad Sadiq et al. (2023) show that variables such as inflation and interest rates influence firms' financing decisions and the relationship between capital structure and firm value. Similarly, Kaloudis and Tsolis (2018) demonstrate that firms adjust their debt composition in response to economic cycles, while Zhou and Lok (2024) highlight the increased risk of financial distress associated with higher leverage levels.

Despite extensive research, much of the literature continues to treat debt as a homogeneous component, with limited focus on its internal composition. Studies such as those by Kang and Ausloos (2017), Nirmala and Sathvik (2023), and Kruk (2021) emphasize determinants and outcomes of leverage but do not explicitly differentiate between borrowed capital and lease finance. This gap becomes particularly relevant in the current financial environment, where firms increasingly use diverse financing instruments.

In this context, the present study focuses on the role of debt finance in capital structure by examining the proportion of borrowed capital (long-term and short-term) and lease finance (long-term and short-term) among listed IT and pharmaceutical companies. By analyzing the internal composition of debt alongside the overall debt-equity mix, the study aims to provide a more nuanced understanding of financing behavior across sectors with distinct operational and asset characteristics.

2. REVIEW OF LITERATURE:

The study of capital structure has evolved significantly, with debt finance being recognized as a critical component influencing firm value and financial stability. Theoretical foundations laid by Stewart C. Myers (2001) emphasize the trade-off between the tax benefits of debt and the associated costs of financial distress. While

traditional theories primarily focus on the overall level of leverage, they provide limited insight into the internal composition of debt, particularly the distinction between borrowed funds and lease financing.

Empirical evidence by Michael Bradley, Gregg A. Jarrell, and E. Han Kim (1984) supports the existence of an optimal capital structure, where firms balance the costs and benefits of debt. However, their analysis largely treats debt as a homogeneous component, without differentiating between various sources such as traditional borrowings and lease obligations.

A more nuanced perspective is provided by Joshua D. Rauh and Amir Sufi (2010), who argue that firms actively manage the structure of their debt, including maturity, priority, and type. Their findings suggest that different forms of debt serve distinct strategic purposes, indicating that the composition of debt is as important as its magnitude. This insight is particularly relevant when comparing borrowed capital with lease financing, as each has different implications for liquidity, risk, and financial flexibility.

Further contributions by Christopher Parsons and Sheridan Titman (2009) highlight that capital structure decisions are influenced by strategic and competitive factors. Firms may choose specific types of debt instruments based on operational needs and industry characteristics, suggesting that sectoral differences—such as those between IT and pharmaceutical industries—can significantly affect debt composition.

The determinants of capital structure have also been explored across different institutional contexts. Jian Chen and Roger Strange (2005) find that firm size, profitability, and asset tangibility influence leverage decisions. In asset-light industries like IT, firms may rely less on traditional borrowings due to limited collateral, whereas capital-intensive sectors such as pharmaceuticals may exhibit different financing patterns, potentially increasing reliance on both long-term debt and lease financing.

Sector-specific financing considerations are further highlighted by A. Dias Jr and Panagiotis G. Ioannou (1995), who emphasize the concept of debt capacity based on cash flow stability and project risk. This concept is particularly relevant when evaluating lease finance, as lease obligations are often structured based on predictable cash flows and asset utilization.

Recent studies by Muhammad Sadiq et al. (2023) extend the discussion by incorporating macroeconomic variables such as interest rates and inflation. Their findings indicate that firms adjust their reliance on different forms of debt in response to economic

conditions, which may influence the relative preference for borrowed funds versus lease financing.

Additionally, Graham and Leary (2011) and subsequent empirical reviews emphasize that capital structure decisions are dynamic and context-dependent. Firms do not strictly adhere to fixed leverage targets but adjust their financing mix over time, potentially altering the proportion of lease and borrowed capital within total debt.

Despite these advancements, existing literature predominantly focuses on aggregate leverage ratios, with limited attention given to the internal composition of debt. The distinction between borrowed capital and lease finance has become increasingly important in the modern financial environment, especially after changes in accounting standards (such as lease capitalization), which have brought lease obligations onto the balance sheet.

Overall, the literature suggests that while debt finance plays a crucial role in capital structure, its internal composition—particularly the balance between borrowed funds and lease financing—remains an underexplored area. This gap becomes more pronounced when considering sectoral differences between IT and pharmaceutical companies, which operate under distinct asset structures, risk profiles, and financing needs.

Existing literature on capital structure primarily emphasizes overall leverage while largely overlooking the internal composition of debt, particularly the relative proportion of borrowed capital and lease finance. Moreover, there is limited empirical evidence comparing these components across industries with differing asset structures, such as IT and pharmaceutical sectors. Therefore, a comprehensive sectoral analysis of debt composition is necessary to better understand the evolving role of debt finance in capital structure.

3. OBJECTIVES AND HYPOTHESIS:

The study aims to determine the role of debt finance i.e. proportion of long-term and short-term borrowed capital and lease finance in the capital structure. To achieve this objective the following hypotheses have been framed.

H10: There is no significant difference in the distribution of the Long-term Borrowed Debt Proportion between IT and Pharmaceutical Sector Companies.

H11: There is significant difference in the distribution of the Long-term Borrowed Debt Proportion between IT and Pharmaceutical Sector Companies.

H20: There is no significant difference in the distribution of the Long-Term Lease Liability Debt

Proportion between IT and Pharmaceutical Sector Companies.

H21: There is significant difference in the distribution of the Long-Term Lease Liability Debt Proportion between IT and Pharmaceutical Sector Companies.

H30: There is no significant difference in the distribution of the Short-Term Borrowed Debt Proportion between IT and Pharmaceutical Sector Companies.

H31: There is significant difference in the distribution of the Short-Term Borrowed Debt Proportion between IT and Pharmaceutical Sector Companies.

H40: There is no significant difference in the distribution of the Short-Term Lease/Liability Debt Proportion between IT and Pharmaceutical Sector Companies.

H41: There is significant difference in the distribution of the Short-Term Lease/Liability Debt Proportion between IT and Pharmaceutical Sector Companies.

4. METHODOLOGY:

The present study adopts a quantitative and comparative research design to examine the role of borrowed and lease debt finance in the capital structure of companies classified into two independent categories. The analysis is based on four important debt finance variables, namely Long-Term Borrowed Debt Proportion (LTBDP), Long-Term Lease/Liability Debt Proportion (LTLLDP), Short-Term Borrowed Debt Proportion (STBDP), and Short-Term Lease/Liability Debt Proportion (STLLDP). Secondary data has been considered for the purpose of statistical analysis. The study employs descriptive and inferential statistical techniques to evaluate the distributional characteristics and group-wise differences among the selected variables. Initially, tests of normality were conducted using the Kolmogorov–Smirnov and Shapiro–Wilk tests to determine whether the data followed a normal distribution. Based on the results of the normality assessment, an appropriate non-parametric statistical test was selected for hypothesis testing. Since the sample size is relatively small and the variables did not satisfy the assumption of normality, the Mann–Whitney U test was identified as the suitable technique for comparing the two independent groups.

5. ANALYSIS OF DATA AND HYPOTHESIS TESTING:

The normality of the selected debt finance variables was examined using the Shapiro–Wilk tests.

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
LTBDP	.295	20	.000	.729	20	.000
LTLDP	.154	20	.200 [*]	.892	20	.029
STBDP	.186	20	.069	.902	20	.044
STLLDP	.203	20	.030	.871	20	.012

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The results indicate that the significance values for most of the variables are less than the standard threshold value of 0.05. These values clearly suggest deviation from normal distribution. The Shapiro–Wilk test is considered more appropriate for smaller sample sizes. Therefore, based on the Shapiro–Wilk results, it can be concluded that the data does not follow a normal distribution. Consequently, the assumptions required for parametric tests are violated, and non-parametric statistical techniques are considered more suitable for hypothesis testing.

Hypothesis Testing:

Since the normality assumption was not satisfied for the selected variables, a non-parametric test was considered appropriate for examining the differences between the two independent categories of companies. Accordingly, the Mann–Whitney U test was identified as the suitable statistical tool for hypothesis testing.

Hypothesis Testing Summary:

Hypothesis	P Value (U Test)	Results
H1 ₀ : There is no significant difference in the distribution of the Long-term Borrowed Debt Proportion between IT and Pharmaceutical Sector Companies.	0.019	Rejected
H2 ₀ : There is no significant difference in the distribution of the Long-Term Lease Liability Debt Proportion between IT and Pharmaceutical Sector Companies.	0.002	Rejected
H3 ₀ : There is no significant difference in the distribution of the Short-Term Borrowed Debt Proportion between IT and Pharmaceutical Sector Companies.	0.009	Rejected
H4 ₀ : There is no significant difference in the distribution of the Short-Term Lease/Liability Debt Proportion between IT and Pharmaceutical Sector Companies.	0.001	Rejected

6. FINDINGS AND DISCUSSION:

The findings of the study reveal that the selected debt finance variables do not exhibit normal distribution characteristics, thereby indicating variability in the capital structure patterns among the companies under consideration. The normality test results suggest that the financing behaviour relating to both borrowed debt and lease/liability debt differs across firms. The deviation from normality also indicates that the debt composition patterns may be influenced by firm-specific financial strategies, operational requirements, and risk management practices. The adoption of non-parametric methods further confirms that the data contains asymmetric distributional characteristics. The analysis highlights that both long-term and short-term debt components play an important role in shaping the capital structure decisions of companies. Borrowed debt finance contributes significantly to long-term financing requirements, whereas lease and liability-based financing mechanisms provide flexibility in managing operational and short-term obligations. The study therefore emphasizes that companies rely on a combination of debt instruments to optimize their financial structure and maintain financial sustainability.

7. CONCLUSION:

The study examined the role of borrowed and lease debt finance in determining the capital structure of companies across two independent categories. Four major debt finance variables, namely LTBDP, LTLDP, STBDP, and STLLDP, were analysed using statistical techniques. The normality assessment revealed that the data did not follow a normal distribution, thereby necessitating the use of non-parametric methods for hypothesis testing. Consequently, the Mann–Whitney U test was identified as the most appropriate statistical technique for group comparison. The findings indicate that both borrowed debt and lease/liability debt constitute important components of corporate financing decisions. Long-term borrowed debt supports strategic and capital-intensive investments, while lease and liability financing contributes to operational flexibility and short-term financial management. The study highlights the importance of balanced debt financing practices in achieving an efficient capital structure. Overall, the analysis demonstrates that debt finance decisions are influenced by the financial policies and structural characteristics of companies, thereby playing a crucial role in long-term financial stability and organizational growth.

REFERENCES

1. Myers, S. C. (2001). Capital structure. *Journal of Economic perspectives*, 15(2), 81-102.
2. Rauh, J. D., & Sufi, A. (2010). Capital structure and debt structure. *The review of financial studies*, 23(12), 4242-4280.
3. Bradley, M., Jarrell, G. A., & Kim, E. H. (1984). On the existence of an optimal capital structure: Theory and evidence. *The journal of Finance*, 39(3), 857-878.
4. Dias Jr, A., & Ioannou, P. G. (1995). Debt capacity and optimal capital structure for privately financed infrastructure projects. *Journal of Construction Engineering and Management*, 121(4), 404-414.
5. Chen, J., & Strange, R. (2005). The determinants of capital structure: Evidence from Chinese listed companies. *Economic change and Restructuring*, 38(1), 11-35.
6. Sadiq, M., Yousaf, S. U., Anser, M. K., Sriyanto, S., Zaman, K., Van Tu, D., & Anis, S. N. M. (2023). The role of debt financing in the relationship between capital structure, firm's value, and macroeconomic factors: To throw caution to the wind. *The Quarterly Review of Economics and Finance*, 87, 212-223.
7. Graham, J. R., & Leary, M. T. (2011). A review of empirical capital structure research and directions for the future. *Annual Review of Financial Economics*, 3, 309-345.
8. Parsons, C., & Titman, S. (2009). Empirical capital structure: A review. *Foundations and Trends in Finance*, 3(1), 1-93.
9. *Journal of Economics and Business*. (2020). Determinants of capital structure complexity, 110, 105905.
10. Kruk, S. (2021). Impact of capital structure on corporate value—Review of literature. *Journal of Risk and Financial Management*, 14(4), 155.
11. Zhou, Y., & Lok, C.-L. (2024). Capital structure and financial distress risk: Evidence from China. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 14(4), 603-619.
12. Nirmala, J., & Sathvik, S. (2023). Capital structure determinants: A conceptual and empirical review. *Journal of Advanced Zoology*, 44(S-6), 667-673.
13. Kaloudis, A., & Tsolis, D. (2018). Capital structure in U.S.: A quantile regression approach with macroeconomic impacts.
14. Kaloudis, A., & Tsolis, D. (2018). Capital structure and speed of adjustment in U.S. firms: A comparative study in microeconomic and macroeconomic conditions.
15. Kang, M., & Ausloos, M. (2017). Credit risk ratings as a determinant of corporate governance and capital structure in emerging markets.
16. Satyanarayana, K. T. S. S., Rao, A. N., & Surya, K. J. (2023). Capital structure dynamics and financial performance in Indian banks.