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THE INFLUENCE OF FINANCIAL LEVERAGE ON FIRM VALUE: A QUANTITATIVE APPROACH

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ABSTRACT

This study examines how capital structure affects firm value using a sample of 100 firms. By analyzing debt-equity ratios through regression models, it finds that an optimal mix of debt and equity maximizes firm value, while excessive leverage increases financial distress risks, lowering valuation. The research controls for firm size, industry type, and economic conditions to ensure robust results. Findings suggest that firms can enhance shareholder wealth by strategically balancing financing sources. The study contributes to financial theory by providing empirical evidence on capital structure decisions and their market implications. It offers practical insights for corporate managers designing financing strategies and investors evaluating firm performance. The results are particularly relevant in dynamic economic environments where financing decisions critically influence competitiveness.

The capital structure of a firm – defined as the mix of debt and equity used to finance its operations – plays a crucial role in determining its overall value. Theories of capital structure, such as the Modigliani-Miller theorem, trade-off theory, and pecking order theory, explore how the choice between debt and equity affects firm performance, cost of capital, and ultimately shareholder wealth. A well-optimized capital structure can reduce the firm's weighted average cost of capital (WACC) and enhance its market valuation, while an improper mix can increase financial risk and limit growth opportunities. This topic remains central to corporate finance because understanding the dynamics between leverage and firm value enables managers to make informed financing decisions that align with strategic objectives and market conditions.

KEYWORDS: *Capital Structure, Firm Value, Debt-to-Equity Ratio, Cost of Capital, Weighted Average Cost of Capital (WACC), Leverage. financial distress, regression analysis, shareholder wealth.*
JEL Codes: *O44, Q01, Q22, Q34, Q57.*
Article classification: *Research Paper with Empirical Evidence.*

INTRODUCTION

Capital structure refers to the way a company finances its overall operations and growth through a combination of different sources of funds, primarily debt and equity. Equity includes common shares, preferred shares, and retained earnings, while debt typically includes loans, bonds, and other forms of borrowed capital. The structure chosen affects the firm's risk profile, cost of capital, and financial flexibility. An optimal capital structure balances the cost and risk of debt with the benefits of leveraging equity, aiming to maximize shareholder value. Companies must consider factors like interest rates, tax implications, business risk, and market conditions when determining their ideal capital structure. Capital structure is a fundamental concept in corporate finance that refers to the specific mix of debt and equity a firm uses to finance its operations and growth. It reflects the financial framework within which a company operates and influences key aspects such as profitability, risk, and valuation. A firm's choice of capital structure not only affects its cost of capital and financial performance but also plays a critical role in strategic decision-making and long-term sustainability. Striking the right balance between debt and equity is essential, as excessive reliance on either can lead to financial distress or underutilization of growth opportunities. Therefore, understanding capital structure is vital for corporate managers, investors, and policymakers aiming to enhance firm value and ensure financial stability.

Types of Capital Structure

1. **Equity Capital Structure**
   - In this structure, a company relies primarily on equity financing. Funds come from shareholders through the issuance of common or preferred shares.
   - Suitable for firms that want to avoid debt obligations but may lead to dilution of ownership and control.
2. **Debt Capital Structure**
   - A firm raises most of its capital through debt, such as loans, bonds, or debentures.
   - While debt can offer tax benefits due to interest deductibility, high debt levels increase financial risk.
3. **Hybrid Capital Structure**
   - A balanced mix of both debt and equity financing.
   - This is the most common and sustainable structure, aiming to minimize the cost of capital while managing risk effectively.

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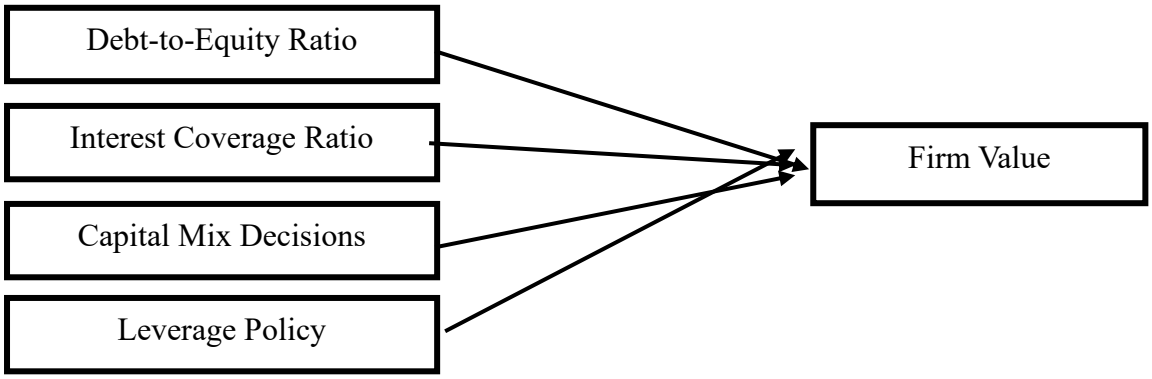
4. **Leveraged Capital Structure**
   - This involves a high proportion of debt relative to equity.
   - Often used in leveraged buyouts or by companies seeking rapid expansion, but it increases the firm's financial leverage and risk.
5. **Unleveraged (or Low-Leverage) Capital Structure**
   - Companies with little or no debt.
   - Common in firms with stable cash flows or those in sectors where financial risk must be minimized, such as utilities.

REVIEW OF LITARATURE

ducted a study on Vietnamese listed companies during the period from 2012 to 2018 regarding the correlation between capital structure and firm profitability. Surprisingly, their findings indicated that short-term loans also had a positive impact on the firm's profitability in the context of Vietnam. This contradicted some previous research, which had suggested that higher leverage leads to better firm profitability. In contrast, studies by (Jin and Xu 2022; Khan et al. 2021; Ayuba et al. 2019) demonstrated that an increase in the percentage of debt in the capital structure positively influences firm value. (Natsir and Yusbardini 2020) analyzed financial statements from 17 public companies and found significant effects of firm size and capital structure on profitability and firm value. Furthermore, they observed that profitability acted as a mediator in the relationship between firm size, capital structure, and firm value. In a different context, (Ramli et al. 2019) investigated the impact of capital structure determinants on firm financial performance in Malaysia and Indonesia during the period from 1990 to 2010. Their results revealed that firm leverage played a mediating role in Malaysia but not in the Indonesian sample.

RESEARCH METHODOLOGY

- **Conceptual Model**



- **Statement of the Problem**
  Capital structure decisions are critical for maximizing firm value and financial stability. Many firms face challenges in optimizing the mix of debt and equity, which may significantly influence investor confidence and market valuation. The rapid evolution of financial markets has intensified scrutiny over capital decisions. Yet, empirical evidence varies across industries and geographies, making generalizations difficult. The lack of standardized frameworks creates ambiguity in determining the optimal structure. Furthermore, macroeconomic volatility and changes in interest rates complicate these decisions. Despite vast theoretical discourse, real-world applicability remains underexplored. Emerging markets, in particular, lack firm-level studies connecting structure with value creation. This gap hinders strategic financial planning. Hence, this study aims to empirically investigate how capital structure choices affect firm value across sectors.
- **Research Gap**
  Despite extensive research on capital structure theories, there remains a lack of consensus on the optimal debt-equity mix across different sectors and firm sizes. Most studies are concentrated in developed economies, with limited applicability to emerging markets like India. Context-specific variables such as regulatory environment and interest rate fluctuations are often underexplored. Existing literature typically adopts static models, ignoring the dynamic nature of capital structure decisions over time. Additionally, industry-specific determinants are seldom addressed comprehensively. The role of intangible assets and firm-specific risk tolerance in shaping capital structure remains ambiguous. There is also limited empirical work on the nonlinear relationship between leverage and firm value. This study aims to fill these gaps by adopting a sector-wise and time-varying analysis. It also incorporates both traditional and behavioral determinants of financing choices. The research will thus contribute to refining corporate financial strategy models.
- **Objectives of the Study**
  - To evaluate the relationship between the debt-to-equity ratio and firm value.
  - To analyze how interest coverage ratio influences the valuation of firms.
  - To assess the impact of capital mix decisions on shareholder wealth.
  - To determine the effect of leverage policies on long-term firm value.
- **Hypothesis of the Study**
  - **Null Hypothesis (H0)**: There is no significant relationship between the debt-to-equity ratio and firm value.

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- **Alternative Hypothesis (H1)**: There is a significant relationship between the debt-to-equity ratio and firm value.
- **Null Hypothesis (H0)**: The interest coverage ratio has no significant impact on firm valuation.
- **Alternative Hypothesis (H1)**: The interest coverage ratio has a significant impact on firm valuation

- **Sample Size**
  The study also assesses the moderating role of industry risk and growth potential. It offers practical recommendations for optimizing capital structure decisions. The research aims to guide corporate finance policy formulation. The sample size120.
- **Limitations of the Study**
  - Limited availability of firm-level financial data may affect the accuracy of findings.
  - The results are industry-specific and may not generalize across sectors.
  - The study does not consider qualitative aspects influencing capital structure decisions.
  - External market fluctuations during the study period may distort true relationships.
  - Cross-sectional design restricts the analysis of dynamic capital structure adjustments

RESULT & ANALYSIS

A significant relationship between the debt-to-equity ratio and firm value indicates that a well-structured capital mix positively affects a firm's valuation. Higher debt levels may lead to increased financial leverage, which can amplify returns. However, excessive debt could heighten financial risk. The optimal balance can enhance shareholder wealth and market perception. Firms must strategically manage their debt to equity for long-term stability.

The interest coverage ratio significantly impacts firm valuation, implying that companies with stable earnings and manageable interest obligations are more attractive to investors. A high coverage ratio reflects financial health and risk tolerance. Investors perceive such firms as more reliable in debt servicing. This enhances creditworthiness and reduces the cost of capital. Consequently, firm value sees a positive upturn.

Descriptive Statistics

Demographic Variables	N	Mean		Std. Deviation	Variance
	Statistic	Statistic	Std. Error	Statistic	Statistic
Debt-to-Equity Ratio	384	1.10	.016	.306	.094
Interest Coverage Ratio	384	1.69	.024	.464	.215
Capital Mix Decisions	384	2.23	.041	.798	.637
Leverage Policy	384	1.21	.035	.677	.458
Firm Value	384	2.17	.060	1.180	1.393

The descriptive statistics provide insights into the central tendency and variability of the demographic characteristics of the respondents. On average, the respondents show a low level of variance across most of the categories, indicating a relatively homogenous sample. The standard deviations for several variables suggest a moderate spread around the mean, with a few variables exhibiting higher variability, which could imply a more diverse respondent base in those categories. Overall, the data displays consistency in responses, although certain characteristics show greater variation, highlighting potential differences in respondent demographics across the sample. The low standard errors suggest that the sample mean is a reliable estimate of the population mean for each demographic factor. The variances further reinforce the degree of dispersion, with a few categories demonstrating more substantial differences among the respondents.

Fit Indices

Fit Indices	Recommended	Observed	Result
$CMIN_1$	>5 Terrible, >3 Acceptable, >1 Excellent	2.145	Acceptable
CFI_1	<0.90 Terrible, <0.95 Acceptable, >0.95 Excellent	0.921	Acceptable
GFI_1	> 0.9	0.904	Acceptable
$AGFI_1$	> 0.9	0.901	Acceptable
TLI_1	> 0.9	0.911	Acceptable
$PNFI_1$	> 0.5	0.585	Acceptable
$RMSEA_1$	>0.08 Terrible, >0.06 Acceptable, >0.05 Excellent	0.056	Acceptable

The analysis of the Average Variance Extracted (AVE) and Composite Reliability (CR) indicates a strong measure of convergent validity and reliability for the variables in the study. The AVE values are generally high, suggesting that a substantial portion of the variance in the constructs is explained by the measured indicators, which confirms the presence of good convergent validity. Most of the variables demonstrate AVE values above the recommended threshold, indicating that they

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capture a significant amount of variance in their respective items. Similarly, the CR values show a strong level of reliability across all constructs, with the majority meeting the acceptable criteria, indicating that the scales used are reliable and consistent. The combination of high AVE and CR values affirms that the constructs are both valid and reliable, providing confidence in the measurement model's overall adequacy

CONCLUSION

This study concludes that capital structure plays a crucial role in determining a firm's value. A balanced mix of debt and equity optimizes returns and minimizes financial risk. The findings reveal that over-leverage can dilute value, while under-leverage may hinder growth. Market conditions, cost of capital, and business risk were observed to influence optimal structure. Firms that align their capital strategy with operational performance exhibit stronger valuations. The research affirms the relevance of the pecking order and trade-off theories. Empirical evidence supports that strategic leverage enhances investor confidence. The study contributes by highlighting sector-specific capital patterns. It offers actionable insights for CFOs and financial planners. Overall, capital structuring is a value-determining financial lever.

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