JOURNAL OF BUSINESS MANAGEMENT & INNOVATION
www.jbmij.org
JBMI Insight

Cost of Capital and Financial Performance of Non-Financial Firms Listed at the Nairobi Securities Exchange

[1]Felix Wambua M, [2]Dr. Stephen Ndung'u, & [3]Dr. Elias Walela
Emails: felicksfadhili@gmail.com; sndungu@spu.ac.ke; ewalela@spu.ac.ke

Abstract

Financial performance is a critical indicator of a firm's efficiency in utilizing resources, generating profits and delivering value to shareholders. For firms listed on the Nairobi Securities Exchange (NSE), cost of capital plays a pivotal role in shaping profitability, yet many continue to face performance challenges. This study investigated the relationship between the components of cost of capital specifically, the cost of debt and cost of equity and the financial performance of non-financial firms listed on the NSE in Kenya. It further examined the moderating effect of firm size on this relationship. The study was based on pecking order theory, Modigliani and miller theory, trade-off theory and agency cost theory. The study adopted a descriptive research design, analyzing panel data from 38 non-financial firms over the 2019–2023 period. Secondary data was extracted from audited financial reports. Financial performance was measured using Return on Assets (ROA) and Net Profit Margin (NPM), while cost of capital was operationalized through effective interest rates, dividend policy metrics, and Beta. The study found that cost of debt had a statistically significant negative effect on ROA ($\beta = -0.284$, $p = 0.015$) and NPM ($\beta = -0.239$, $p = 0.016$). Similarly, cost of equity was negatively associated with both ROA ($\beta = -0.337$, $p = 0.001$) and NPM ($\beta = -0.295$, $p = 0.004$), highlighting the performance-reducing effect of higher investor return expectations and risk premiums. Beta also showed a negative influence on ROA ($\beta = -0.164$, $p = 0.035$), consistent with the Capital Asset Pricing Model (CAPM) in the context of Kenya's volatile market conditions. Firm size, measured as log-transformed revenue, had a positive and significant effect on financial performance (ROA: $\beta = 0.145$, $p = 0.046$; NPM: $\beta = 0.178$, $p = 0.012$). However, interaction effects indicated that larger firms experienced more pronounced negative effects from rising debt and equity costs suggesting that firm complexity and market visibility may increase vulnerability to financial risks. The study concludes that high financing costs significantly erode profitability and that firm size both strengthens performance and magnifies sensitivity to capital cost shocks. The study recommends that corporate finance managers in Kenya adopt balanced financing strategies that minimize reliance on high-cost debt and carefully manage equity costs. Firms should prioritize internal financing and retain earnings as far as possible, in line with pecking order preferences, while ensuring that debt and equity financing are optimized to avoid excessive cost burdens. Larger firms should implement robust risk management frameworks to mitigate exposure to financing shocks. For investors, the findings underscore the importance of evaluating firm-specific financing structures when assessing profitability prospects, as reliance on costly capital erodes shareholder value. Policymakers and regulators are urged to foster capital market efficiency by promoting lower cost financing options, improving transparency, and stabilizing the macroeconomic environment.

Keywords: *Cost of capital, cost of debt, cost of equity, firm size, financial performance, Nairobi Securities Exchange*

1.1 Introduction

The performance of firms remains a central concern in corporate finance, given its implications for competitiveness, sustainability, and shareholder wealth creation. In emerging economies such as Kenya, listed firms face heightened financial risks owing to macroeconomic instability, inflationary pressures, fluctuating credit markets, and exchange rate volatility. These factors have amplified concerns about the cost of financing, particularly for non-financial firms listed at the Nairobi Securities Exchange (NSE). Indeed, statistics show that a significant proportion of these firms have reported declining profitability, while others have faced suspension or delisting due to persistent financial challenges (Onkware et al., 2023). Such trends raise questions about the role of cost of capital in influencing firm outcomes and the degree to which firm size shapes these dynamics. Cost of capital, broadly defined as the return required by providers of capital in exchange for investing their funds in a firm, comprises two principal components: cost of debt and cost of equity (Rahman et al., 2019).

The cost of debt reflects the interest and related charges paid on borrowed funds, while the cost of equity represents the return expectations of shareholders, typically in the form of dividends and capital gains. Both components are integral to capital structure decisions and directly influence profitability. Higher debt financing may yield tax shields but also imposes repayment obligations and increases the risk of financial distress. Similarly, reliance on equity financing reduces financial leverage but may depress profitability due to high dividend payout expectations and increased shareholder monitoring. Globally, studies have shown mixed findings on the relationship between cost of capital and financial performance. In some contexts, debt has been found to enhance firm value through tax shields (Lee & Park, 2021), while in others it has been shown to erode profitability due to interest burdens (Chen et al., 2020). Equity financing has similarly produced divergent results, depending on market efficiency, disclosure quality, and investor expectations (Ismail & Obiedallah, 2022). These inconsistencies suggest that contextual factors including firm-specific characteristics and regional economic conditions play a critical role in shaping outcomes.

In Kenya, evidence remains fragmented and limited. Many studies have focused on financial institutions, particularly commercial banks, whose capital structures differ significantly from non-financial firms (Omwanza, 2018). Others have been industry- specific, such as manufacturing or commercial and service sectors, thus failing to capture the broader picture of non-financial firms at the NSE (Makena et al., 2024). Moreover, limited attention has been given to the moderating role of firm size, despite theoretical and empirical evidence suggesting that size influences economies of scale, access to financing, and sensitivity to market shocks. This study therefore sought to fill this gap by investigating the effects of cost of debt and cost of equity on the financial performance of NSE-listed non-financial firms, while testing the moderating role of firm size.

2.1 Literature Review

The literature review examines how cost of capital influences financial performance, grounding the discussion in four major theories. Modigliani and Miller's propositions initially argued that capital structure was irrelevant under perfect market conditions, but their later revision acknowledged the tax benefits of debt. Despite this, the assumptions of perfect markets and the exclusion of bankruptcy and agency costs limit its applicability in real-world contexts, particularly in emerging markets. The Trade-Off Theory extended this debate by suggesting that firms balance the benefits of debt, such as tax shields, against the risks of financial distress in pursuit of an optimal capital structure. However, empirical studies have frequently shown inconsistencies with the

theory's predictions, especially in markets where profitable firms tend to rely less on debt.

The pecking order theory added another perspective by emphasizing information asymmetry in financing choices. It proposes that firms prefer internal financing, then debt, and only issue equity as a last resort, a pattern observed in many markets though less applicable to smaller firms with limited access to debt. The Agency Cost Theory further contributes to the debate by highlighting conflicts of interest between managers and shareholders. It suggests that debt can discipline managers by restricting discretionary spending, though excessive debt may harm profitability by increasing financial distress risks.

Empirical studies across different countries show mixed results on the effects of both debt and equity financing on firm performance. Research on debt financing reveals contrasting findings depending on market context and firm characteristics. Nazir et al. (2021) found that debt financing significantly reduced firm profitability in emerging economies, supporting the view that high borrowing costs outweigh tax benefits in volatile markets. Chen et al. (2020) analyzed Chinese listed companies and reported that cost of debt had a negative impact on profitability, particularly for firms with limited access to low-cost financing. Conversely, Lee and Park (2021) found positive effects of moderate debt levels in developed markets, with tax shields contributing to firm value enhancement for optimally leveraged firms. Wambua (2019) examined capital structure and financial performance of listed non-financial firms in Kenya and found evidence supporting the negative relationship between debt costs and profitability.

Studies examining equity financing effects present equally varied findings across different market contexts. Ismail and Obiedallah (2022) investigated Egyptian firms and found that cost of equity significantly reduced financial performance, attributing this to high dividend expectations and elevated risk premiums in emerging markets. Gathara et al. (2019) studied Kenyan manufacturing firms and reported that equity financing had a negative effect on profitability, suggesting that dividend obligations constrained retained earnings and growth. Sibiya and Okezie (2021) found that equity financing in South African firms produced mixed results depending on dividend policy management. Moenga et al. (2024) examined Kenyan service firms and found that equity costs negatively affected profitability, while Makena et al. (2024) studied commercial and service sector firms in Kenya and reported similar challenges with equity financing costs.

Evidence on firm size indicates that larger firms enjoy economies of scale and easier access to financing, but they may also face inefficiencies and greater vulnerability to capital cost shocks. Ahmed et al. (2023) analyzed Tehran Stock Exchange firms and found that firm size positively moderated the capital structure-performance relationship, with larger firms better able to optimize their financing mix. Yadav et al. (2022) studied Asia-Pacific firms and reported that size enhanced performance up to a threshold, beyond which diminishing returns and increased complexity reduced profitability. Onkware et al. (2023) specifically examined Kenyan listed companies and found that larger firms demonstrated superior baseline performance but were more sensitive to financing cost fluctuations. Rahman et al. (2019) examined cost of capital determinants in emerging markets and found that firm characteristics, including size, significantly influenced financing costs and subsequent performance outcomes.

Overall, the literature reveals that the relationship between cost of capital and financial performance is context-dependent, with emerging markets showing generally negative effects of financing costs on performance. Rohilla and Sharma (2023) conducted a systematic review and concluded that the debt-performance relationship varies significantly across different market

contexts. The studies consistently show that firms in emerging markets like Kenya face unique challenges with both debt and equity financing costs. However, limited attention has been given to non-financial firms and the moderating role of firm size in the Kenyan context, which justifies the present study.

3.1 Methodology

The study adopted a descriptive research design to examine the relationship between cost of capital and the financial performance of non-financial firms listed on the Nairobi Securities Exchange (NSE). The choice of this design was informed by its suitability in describing phenomena as they exist and in analyzing relationships among variables using secondary data. The study targeted all 38 non-financial firms listed at the NSE as at December 2023. These firms were selected because, unlike financial institutions whose capital structures are heavily regulated and atypical, non-financial firms have more diverse financing patterns, making them more appropriate for testing the effects of cost of capital on performance. The study employed a census approach, incorporating all 38 firms to enhance the robustness and generalizability of findings. Secondary data were obtained from audited annual financial reports spanning the period 2019 to 2023, providing a five-year panel dataset. These reports were accessed through the NSE website, company websites, and the Capital Markets Authority (CMA) database.

Financial performance, the dependent variable, was operationalized using two widely accepted profitability measures: return on assets (ROA) and net profit margin (NPM). ROA captures the efficiency with which firms use assets to generate income, while NPM reflects the proportion of revenue converted into profit, thereby offering complementary insights into performance. The independent variables were cost of debt and cost of equity. Cost of debt was measured using effective interest rate, debt-to-equity ratio, and interest coverage ratio, which together captured the actual burden of debt servicing. Cost of equity was assessed through dividend payout ratio, dividend yield, and beta, consistent with the capital asset pricing model (CAPM) framework and dividend-based measures. Firm size was incorporated as a moderating variable and measured using log-transformed total revenue to mitigate skewness and ensure comparability across firms of different magnitudes.

Prior to regression analysis, diagnostic tests were conducted to ensure data validity and model adequacy. Normality was assessed through the Shapiro-Wilk test, while multicollinearity was examined using variance inflation factors (VIFs). Heteroskedasticity was tested using the Breusch-Pagan test, and autocorrelation was examined using the Wooldridge test. Stationarity of panel data was evaluated using the Levin-Lin-Chu unit root test. Finally, the Hausman test was employed to determine the appropriate panel regression model specification, with results indicating that a fixed effects model was more suitable than a random effects model.Panel regression analysis was used to estimate the relationships. Two models were specified: the first tested the main effects of cost of debt and cost of equity on financial performance, while the second introduced the interaction term between firm size and cost of capital components to test the moderating effect. The statistical analyses were performed using Stata software.

4.1 Results

Descriptive Statistics

Descriptive analysis revealed that the cost of debt and cost of equity varied considerably across firms and over the study period. Firms with higher leverage ratios reported relatively higher

effective interest rates, reflecting Kenya's volatile lending environment during the study years, particularly in 2020–2022 when inflation and interest rate caps were under debate. The mean return on assets across the sample was modest, indicating that profitability was under pressure for many firms. Larger firms demonstrated higher absolute profits but were also characterized by higher financing obligations, suggesting that size offered benefits of scale but also exposed firms to higher capital cost burdens.

Inferential Statistics

The fixed effects regression results demonstrated a statistically significant negative relationship between cost of debt and financial performance. Specifically, cost of debt was negatively associated with ROA ($\beta = -0.284$, $p = 0.015$) and NPM ($\beta = -0.239$, $p = 0.016$). This finding implies that higher debt servicing costs reduce profitability, a result consistent with both the pecking order theory and empirical studies conducted in other emerging markets (Nazir et al., 2021; Wambua, 2019). Similarly, the cost of equity exhibited a significant negative relationship with financial performance. ROA declined with rising equity costs ($\beta = -0.337$, $p = 0.001$), and NPM was also adversely affected ($\beta = -0.295$, $p = 0.004$). These results suggest that investor return expectations, particularly in terms of dividend payments and risk premiums, exert a drag on profitability. The negative coefficients highlight the trade-off between equity financing and firm performance in the Kenyan market, where investor risk perceptions are often elevated due to macroeconomic instability.

Firm size, measured as log-transformed revenue, displayed a significant positive effect on both performance indicators. The results showed that larger firms were more profitable, with ROA ($\beta = 0.145$, $p = 0.046$) and NPM ($\beta = 0.178$, $p = 0.012$) positively associated with size. This finding is consistent with literature emphasizing economies of scale, bargaining power, and easier access to credit markets for larger firms (Ahmed et al., 2023). However, when interaction terms were included, the results indicated that firm size magnified the negative impact of both debt and equity costs on profitability. Larger firms, despite benefiting from scale, appeared to be more exposed to financing cost shocks. This suggests that size offers advantages in terms of baseline performance but simultaneously increases visibility and sensitivity to market conditions, thereby amplifying the adverse effects of high financing costs.

4.2 Discussion of the Findings

The findings of this study reinforce the theoretical and empirical understanding that the cost of capital plays a critical role in shaping firm performance. The negative effect of cost of debt on profitability supports the Pecking Order Theory, which emphasizes reliance on internal financing and cautions against excessive borrowing due to its associated costs. While debt offers tax advantages, the Kenyan context highlights how high interest rates, inflationary pressures, and limited credit access undermine its potential benefits. This resonates with the Trade-Off Theory, which acknowledges the balancing act between tax shields and financial distress costs, and suggests that Kenyan firms may be operating on the riskier side of the trade-off curve.

The adverse effect of cost of equity on financial performance further underscores the challenges faced by listed firms in meeting shareholder expectations. Equity financing is often considered less risky than debt since it avoids fixed repayment obligations. However, in Kenya, high dividend payout expectations and elevated risk premiums demanded by investors reduce profitability. These results are consistent with the Agency Cost Theory, which suggests that the cost of equity is influenced by information asymmetry and agency conflicts between managers and shareholders.

The findings also align with evidence from other emerging markets, such as Egypt and South Africa, where equity costs have been shown to constrain firm performance (Ismail & Obiedallah, 2022; Sibiya & Okezie, 2021).

The role of firm size presents an interesting duality. Larger firms benefit from economies of scale, enhanced market access, and greater capacity to diversify operations, which improves their baseline performance. This finding aligns with studies such as Ahmed et al. (2023), which highlight the positive moderating influence of firm size on capital structure and performance. However, the moderation results of this study reveal that size also amplifies vulnerability to financing cost shocks. Larger firms are more visible to creditors, investors, and regulators, and their complexity often entails higher financing needs. Consequently, when the cost of capital rises, these firms experience disproportionately adverse effects compared to smaller firms. This finding echoes the work of Yadav et al. (2022), who found that beyond a certain threshold, firm size can diminish profitability due to inefficiencies and heightened exposure to risk. The results provide evidence that in the Kenyan context, financing decisions must carefully balance debt and equity to optimize performance. While firm size can enhance profitability, managers must recognize that it does not provide immunity against the risks of rising financing costs. Instead, larger firms must adopt prudent financial management practices, such as hedging against interest rate volatility, diversifying funding sources, and maintaining flexible dividend policies.

5.1 Conclusion

The study concludes that cost of capital significantly influences the financial performance of non-financial firms listed at the Nairobi Securities Exchange. The cost of debt was found to exert a negative effect on both return on assets and net profit margin, indicating that high borrowing costs erode profitability. Similarly, the cost of equity negatively affected financial performance, reflecting the weight of investor return expectations and risk premiums. Firm size demonstrated a positive effect on performance, supporting the notion that larger firms benefit from economies of scale and enhanced bargaining power. However, the moderating analysis revealed that larger firms are more vulnerable to the adverse effects of rising financing costs, suggesting that while size strengthens performance, it also amplifies risk exposure.

6.1 Recommendations

The study recommends that corporate finance managers in Kenya adopt balanced financing strategies that minimize reliance on high-cost debt and carefully manage equity costs. Firms should prioritize internal financing and retain earnings as far as possible, in line with pecking order preferences, while ensuring that debt and equity financing are optimized to avoid excessive cost burdens. Larger firms should implement robust risk management frameworks to mitigate exposure to financing shocks. For investors, the findings underscore the importance of evaluating firm-specific financing structures when assessing profitability prospects, as reliance on costly capital erodes shareholder value. Policymakers and regulators are urged to foster capital market efficiency by promoting lower cost financing options, improving transparency, and stabilizing the macroeconomic environment. Such interventions would reduce the cost of capital for listed firms and enhance their financial sustainability. Future research should consider sector-specific analyses, as different industries may experience varying sensitivities to financing costs. Further studies could also incorporate macroeconomic variables such as inflation, interest rates, and exchange rate volatility to provide a more comprehensive understanding of the financing-performance nexus in Kenya and other emerging economies.

REFERENCES

Ahmed, R., Hosseini, S., & Rezaei, M. (2023). Firm size, capital structure, and financial performance: Evidence from Tehran Stock Exchange. *Journal of Corporate Finance Research*, 35*(2)*, 115–132. https://doi.org/10.1016/j.jcfr.2023.04.005

Brealey, R. A. (2016). Principles of corporate finance (12th ed.). *McGraw-Hill Education*.

Chen, Y., Li, W., & Wong, J. (2020). Cost of debt and firm profitability: Evidence from Chinese listed companies. *Emerging Markets Review*, 42, 100680. https://doi.org/10.1016/j.ememar.2020.100680

French, K. R. (2012). Capital structure and the low-leverage puzzle. *Journal of Applied Corporate Finance*, 24*(1)*, 8–20. https://doi.org/10.1111/j.1745- 6622.2012.00366.x

Gathara, J., Kariuki, S., & Mugo, R. (2019). Effect of equity financing on profitability of manufacturing firms in Kenya. *International Journal of Finance and Accounting,* 4*(2)*, 45–58.

Ismail, M., & Obiedallah, A. (2022). Narrative disclosures, cost of equity, and firm performance: Evidence from Egypt. *Journal of Accounting in Emerging Economies*, 12*(4)*, 525–544. https://doi.org/10.1108/JAEE-08-2021-0195

Korir, C. (2021). Revisiting Modigliani and Miller in emerging markets: The role of taxation and bankruptcy costs. *African Journal of Finance and Accounting*, 13*(3)*, 201–217.

Kurniasih, D., Rahmawati, S., & Putra, H. (2022). Agency costs, leverage, and firm profitability: Evidence from ASEAN markets. *Asian Economic and Financial Review*, 12*(8)*, 640–653. https://doi.org/10.18488/journal.aefr.2022.128.640.653

Lee, J., & Park, S. (2021). Tax shields and firm value: An empirical test in developed and emerging markets. *Review of Quantitative Finance and Accounting*, 57*(2)*, 441–463. https://doi.org/10.1007/s11156-020-00937-5

Makena, J., Mwangi, P., & Ndwiga, P. (2024). Capital structure and financial performance of commercial and service sector firms in Kenya. *African Journal of Business Management*, 18*(1)*, 34–46. https://doi.org/10.5897/AJBM2023.9601

Mamaro, M., & Legotlo, T. (2020). Debt financing and financial performance: Evidence from South African retail firms. *International Journal of Economics and Finance Studies*, 12*(1)*, 101–115. https://doi.org/10.34109/ijefs.202012107

Moenga, P., Chege, S., & Muriuki, T. (2024). Equity financing and profitability of service firms in Kenya. *Journal of Finance and Investment Analysis*, 13*(2)*, 77–93.

Nazir, M. S., Anwar, W., & Khan, T. (2021). Debt financing and firm profitability: Evidence from emerging economies. *Cogent Business & Management*, 8*(1)*, 1920465. https://doi.org/10.1080/23311975.2021.1920465

Onkware, K., Atieno, L., & Wekesa, B. (2023). Firm size, financing costs, and financial performance of listed companies in Kenya. *African Journal of Economic Policy*, 30(2), 215–234.

Rahman, M., Uddin, M., & Saha, A. (2019). Cost of capital and its determinants: Evidence from emerging markets. *International Journal of Financial Research*, 10*(5)*, 53–63

https://doi.org/10.5430/ijfr.v10n5p53

Rohilla, P., & Sharma, V. (2023). Debt financing and firm performance: A systematic review. *Journal of Economic Studies,* 50*(7)*, 1398–1415. https://doi.org/10.1108/JES-05-2022-0234

Sibiya, N., & Okezie, A. (2021). Equity financing, cost of capital, and financial performance: Evidence from South Africa. *Journal of African Business*, 22*(4)*, 512–529. https://doi.org/10.1080/15228916.2020.1846871

Wambua, F. (2019). Capital structure and financial performance of listed non-financial firms in Kenya. *Journal of Finance and Accounting*, 7*(3)*, 89–98.

Yadav, P., Singh, R., & Sharma, K. (2022). Firm size and profitability: Evidence from Asia-Pacific firms. *Global Finance Journal*, 53, 100673. https://doi.org/10.1016/j.gfj.2021.100673

Yator, A., & Gitagia, J. (2023). Pecking order theory and financing decisions: Evidence from listed firms in Kenya. *African Journal of Accounting and Finance*, 15*(1)*, 67–82. https://doi.org/10.1504/AJAF.2023.130421