
The Effect of Financial Leverage on Financial Performance of Non- Financial Firms Listed in the Nairobi Securities Exchange, Kenya

Collins Sitienei¹, Dr. James Nyamu² and Dr. Joseph Masinde³

^{1,2}Tharaka University, Department of Business Administration,

³Chuka University, Department of Management Science

doi.org/10.51505/IJEBMR.2025.9714

URL: <https://doi.org/10.51505/IJEBMR.2025.9714>

Received: July 07, 2025

Accepted: July 12, 2025

Online Published: July 14, 2025

Abstract

This study determined the effect of financial leverage on financial performance of non-financial firms listed at NSE (Nairobi Securities Exchange). This study was anchored on the Trade-off theory, adopted a mixed approach research design comprising of descriptive, causal and longitudinal designs to a study population of 40 non-financial firms listed at NSE where 29 firms were purposively sampled and pooled for 14 years (2010-2023) to obtain 406 firm-year observations. Data was obtained from the NSE website, World Bank reports as well as Capital Market Authority website. Diagnostic tests were conducted in order to prepare the data for regression analysis. In cases where the assumption of ordinary least squares was violated, panel corrected standard errors were recalculated. A transformed regression model-feasible generalized least squares was fitted in case of existence of autocorrelation and heteroscedasticity. The study findings revealed that debt -to-equity ratio (DER) had a statistically significant positive effect on financial performance while interest coverage ratio (ICR) had a statistically significant negative impact on financial performance. Debt -to – asset ratio (DAR) showed no statistically significant effect on financial performance. The study expands the existing base of knowledge on financial leverage and financial performance on listed non-financial firms in the Kenyan context. The study emphasizes on the importance of adopting a strategic approach to capital structure decisions. Firms should carefully consider their specific circumstances when determining appropriate leverage levels. The findings particularly highlight the value of maintaining a balanced debt-to-equity ratio while avoiding excessive interest burdens.

Keywords: Financial Leverage, Financial Performance, debt -to-equity ratio, interest coverage ratio, Non-Financial Firms, Nairobi Securities Exchange.

Introduction

Financial performance is a key measure of a company's overall health and sustainability in the long term since it reflects how well a firm utilizes its assets to generate revenues and profits (Barauskaite & Streimikiene, 2021). High financial performance indicates efficient management and a strong competitive position, attracting investors and facilitating growth (Hassan, 2023). However, most firms face suboptimal financial performance due to a range of internal and external challenges such as inefficient asset utilization, high operating costs and high levels of

leverage. These factors contribute to a challenging environment for achieving optimal financial performance, necessitating a strategic approach to managing leverage by finding an optimal balance between debt and equity to improve financial outcomes (Kalash, 2023).

Financial leverage is the use of debt or other types of borrowed funds to finance a firm's operations. It is a measure of the extent to which a firm uses debt financing to fund its operations or investments (Hongli *et al.*, 2019). DeMarzo and He (2021) avers that the use of debt can be advantageous as it allows firms to benefit from the tax shield provided by interest payments on debt. However, it also increases the risk faced by the firm as the interest payments must be made regardless of the firm's profitability. The level of employment of financial leverage by a particular firm is dependent on several factors, including the firm's risk profile, the availability of debt financing, and the cost of debt financing (Magnanelli & Izzo, 2017). By borrowing money, a company can be able to increase its assets and invest in new projects that may generate greater returns. This, in turn, leads to improved profitability. However, use of debt to finance operations increases a firm's risk. If a company is unable to make its debt payments, it can lead to bankruptcy and a loss of shareholder value (Hussain *et al.*, 2022).

Financial leverage metrics include: debt-to-equity ratio, debt to total assets ratio as well as interest coverage ratio (Hertina, 2021; Efendi *et al.*, 2019). Debt to equity ratio compares a firm's debt to its equity, which represents the amount of money invested by shareholders. A high debt-to-equity ratio suggests that a company is relying heavily on borrowed funds to finance its operations, while a low ratio indicates that a company is relying more on equity financing (Nukala & Prasada Rao, 2021). Debt to equity ratio is a solvency measure that shows the proportion of debt a company uses to finance its assets, relative to the amount of equity used for the same purpose. A higher ratio result means that a company is more highly financial leveraged, which carries a higher risk of insolvency whereas debt-to-total-assets ratio shows how much of a business is owned by creditors (people it has borrowed money from) compared with how much of the company's assets are owned by shareholders. Investors often look at this ratio to determine a company's financial health and its ability to pay back its debts (Ogbonna *et al.*, 2022).

Interest coverage ratio is a metric that used to assess a firm's ability to pay its interest on outstanding debt (Lotti *et al.*, 2024). It compares a firm's earnings before interest and tax (EBIT) relative to its interest expenses. An interest coverage ratio greater than one means that the firm is able to generate enough revenue sufficient to cover its interest obligations while a ratio below one means that the firm is not in a position to generate enough ratio sufficient to cover its interest obligations (Hanipahn & Firmansyah, 2024). This as well may indicate that the firm is likely to be financially distressed. Creditors often use the interest coverage ratio to assess a firm's credit risk. A higher ratio can lead to better terms of borrowing. Interest coverage ratio reflects a firm's operational efficiency as well as its ability to manage debts (Setiawan & Amelia, 2024). In order to improve on this ratio, firms can improve on their earnings or reduce its debt levels through refinancing or paying down their debts (Lotti *et al.*, 2024).

One of the advantages of financial leverage is that it can increase a company's returns on investment. When a firm borrows money at a lower rate than the rate of return on its investment, it can generate greater profits. This is known as the "financial leverage effect" (Alan & Gaur, 2018). This statement agrees with AL-Shatnawi *et al.* (2021) who opines that financial leverage leads to increased shareholder value and higher dividends as well as enabling a company to grow and expand more quickly. By employing debt financing, a company can invest in new viable projects or acquire other firms which could not have been possible to acquire using its existing capital. This can help to increase the firm's market share and improve its competitive position. However, financial leverage also carries significant risks. When a company takes on debt, it is obligated to make regular payments to its creditors. If a company is unable to make these payments, it can lead to default and bankruptcy. In addition, a high debt-to-equity ratio can also negatively impact a firm's credit rating, making it more difficult to secure future financing. Moreover, financial leverage can lead to a significant increase in a company's financial risk, particularly during periods of economic downturns. During such times, a company's revenue may decrease, while its debt obligations remain the same. This can lead to liquidity problems and bankruptcy if the firm is unable to pay its debts.

Objective of the Study

To evaluate the effect of financial leverage on financial performance of non- financial firms listed in the Nairobi Securities Exchange, Kenya.

Research Hypothesis

There is no statistically significant effect of financial leverage on financial performance of non-financial firms listed in the Nairobi Securities Exchange, Kenya

Empirical Literature Review

In a study conducted by Arhinful and Radmehr (2023) to assess the impact of financial leverage on the company performance of non-financial firms listed on the Tokyo Stock Market, data from 263 companies in the automobile and industrial producer sectors listed at Tokyo Stock Exchange were collected for a twenty -year period spanning from 2001 to 2021. Generalized method of moments (GMM) was used to estimate the effect of financial leverage on financial performance. The method was chosen due to its ability to overcome the problem of endogeneity and autocorrelation. The study found out that financial leverage as measured by interest coverage ratio exhibited a positive and statistically significant effect on financial performance as measured by return on assets (ROA). This implied that the use of debt financing which presents financial leverage, can create adequate earnings to pay off interest and principal which is shown by interest coverage ratio. While the study spans from 2001 to 2021, there could be temporal variations in the impact of financial leverage on firm performance. The evolving economic landscape and market conditions over time may influence the relationships observed. This study focused on the automobile and industrial producer sectors, leaving room for investigation into whether the observed relationships hold true across a broader spectrum of industries, as different

sectors may exhibit distinct financial dynamics. The current study therefore takes into account all classes of non-financial firms listed at Nairobi securities exchange.

A study conducted on Indian listed firms by Senan *et al.* (2021) explored the relationship between financial leverage and financial performance. The study focused on a balanced panel data for 1,333 Indian companies collected for a 12- year period from 2007- 2018. Debt -to -asset ratio was used as a measure of financial leverage whereas the constructs of financial performance were Return on capital employed (ROCE), Return on assets (ROA), Return on Equity (ROE), Profit after tax and Tobin's Q. The study applied pooled, fixed and random effect models as well as Generalized Moment Methods to establish the relationship between financial leverage and financial performance. The research found significant positive evidence suggesting a noteworthy impact of financial leverage on the firms' financial performance. The study however, focused on Indian listed firms, and there might be variations in financial leverage's impact on performance in different regions or countries due to diverse economic conditions, regulatory frameworks, and market structures. The study also applied debt to asset ratio alone as a proxy for financial leverage leaving behind other measures such as the interest coverage ratio and debt to equity ratio.

Rehman (2013) examined the relationship between financial leverage and financial performance of listed sugar companies in Pakistan. The study focused on a sample of 35 listed sugar companies from food producer sector of Karachi Stock Exchange for a 6-year period spanning from 2006 - 2011. Financial leverage was measured using the debt-to-equity ratio while financial performance was measured using return on assets (ROA), return on equity (ROE) and earnings per share (EPS). Correlation analysis was used to find out the relationship between financial leverage and financial performance. The findings of the study show a significant positive relationship between the financial leverage and the financial performance of the companies. The researchers concluded that employment of debt in the capital structure of the companies may make a positive impact on the financial performance. However, the study concentrates solely on the fuel and energy sector, limiting the generalizability of the findings to other industries. A cross-sector analysis could reveal variations in the impact of financial leverage on financial performance. The study solely relies on correlation analysis alone to study the effect of financial leverage on financial performance. This may not be adequate for panel data set. The current study therefore applies panel data regression analysis in order to comprehensively study the relationship among variables over time.

Olusola *et al.* (2022) carried out a study on the impact of financial leverage on firm performance with a focus on large companies in Hong Kong Stock Exchange. A panel data model was adopted and the empirical model used Return on Assets (ROA) as a proxy for performance, while total debt (TDR) was proxied for financial leverage. A sample of 202 large companies was chosen for the period of 2014 to 2018. The study findings revealed that there exists a small insignificant negative relationship between financial leverage and financial performance of large firms listed in Hong Kong Stock Exchange. Taking into consideration that Hong Kong has a different economic system, and the economy has many characteristics that vary from other countries in

aspects such as, consumer consumption, spending behaviour, and saving habits which serve as influence to firms and individuals, these findings may therefore not be generalizable to all firms across industries in other countries across the world. The study covers the period from 2014 to 2018, providing a snapshot that may not capture more extended economic cycles or industry trends. An extended analysis period could reveal dynamic shifts in the relationship between financial leverage and firm performance.

A study by Alharbi (2020) on impact of financial leverage on financial performance: evidence from Saudi Arabia, examined how financial leverage affect financial performance. Debt -to-equity ratio was used as a measure of financial leverage while financial performance was measured using return on assets (ROA), return on equity (ROE) and Tobin's Q ratio. The study sample was a total of 78 non-financial firms listed at the Saudi Stock Exchange (Tadawul) for the 9-year period 2010-2018. A random effect panel data regression model was employed to bring out the effect of predictor variables on the predictor variable. The study findings revealed that high financial leverage significantly reduces firm performance, aligning with pecking order theory which asserts that excessive use of debt has a significant harm on firm profitability. This study was however limited to data up to 2018. Post 2018 data could reveal newer trends.

The existing literature is filled with conflicting and inconclusive findings on the effect of financial leverage on financial performance of firms. This is due to the fact different studies were carried out in diverse contexts using varied estimation methods. Some studies concentrated only on one aspect of estimating financial leverage while others took into account various measures. Moreover, gaps also arise in the operationalization of variables as well as the period considered for the purpose of the study. There is therefore a need to extend a study across various sectors in the economy over a reasonable period of time so as to corroborate the extant findings on the nature of connection between financial leverage and financial performance.

Theoretical Review

The study is anchored on the Trade-Off Theory, postulated by Kraus and Litzenberger in 1973, provides a critical framework for understanding the dynamics of capital structure. The theory posits that firms strive to balance the tax advantages of debt against the costs of potential financial distress to determine their optimal level of financial leverage. The theory is premised on the assumptions that firms aim to maximize their value by balancing the benefits and costs of debt financing; interest payments on debt are tax-deductible, creating a tax shield that encourages firms to take on debt; firms are aware of the costs associated with financial distress and considers this factor in their decision-making; firms can find an optimal capital structure where the marginal benefit of debt is equal to the marginal cost of debt; firms operate in a world with imperfect capital markets where taxes and bankruptcy costs exist differentiating it from the Modigliani-Miller theorem's assumption of perfect markets. Specifically, the tax shield provided by debt interest payments enhances firm value by reducing taxable income (D'Amato, 2021).

This theory is limited in the sense that as financial leverage increases, the firm also faces higher risks of financial distress and bankruptcy, which can impose significant direct and indirect costs

(Kalash, 2023). The theory does not account for managerial biases or behavioural factors, such as overconfidence or risk aversion, which may lead firms to deviate from the "optimal" capital structure (Adler, 2023). In practice, it is difficult to accurately determine the cost of financial distress and the benefit of tax shield. This makes it hard for firms to identify the exact trade-off point (Frank & Goyal, 2024). However, this theory is merited on the basis that unlike other theories, such as the Modigliani and Miller theorem, the trade-off theory puts into consideration real world factors such as taxes, agency costs as well as bankruptcy costs hence making it more applicable to actual firm behavior (Gofe & Asfaw, 2023). The theory is based on the principle of firm value maximization hence explaining the reason why firms choose a debt-equity mix that maximizes their value. It accounts for the fact that as firms grow and change, they continuously strive to balance the cost and benefits associated with leverage. It provides a clear explanation as to why firms employ debt in their capital structure, particularly, due to tax benefits associated with the debt (Ichwanudin *et al.*, 2023).

In the context of this study, financial leverage is the independent variable, and the Trade-off Theory directly links financial leverage to financial performance. According to the theory, by carefully balancing debt and equity, a firm can enhance its financial performance through the tax benefits of debt. However, excessive financial leverage can lead to financial distress, negatively impacting performance. This interplay is crucial in understanding how financial leverage decisions are made within firms. As firms increase their financial leverage, they must consider not only the immediate financial benefits but also the long-term risks, aligning with the theory's assertion that firms seek an optimal balance to maximize their value. Agency cost, as an intervening variable, further complicates this relationship. High levels of debt can increase agency costs due to conflicts between shareholders and management, as well as between shareholders and debt holders (Guluma, 2021). These costs can erode the potential financial performance gains from leveraging. Firm size, acting as a moderating variable, influences this dynamic by potentially mitigating some of the risks associated with higher financial leverage. Larger firms typically have more resources, better access to capital markets, and more diversified operations, which can reduce the relative impact of financial distress and agency costs (Alter & Elekdag, 2020).

Conceptual Framework

A conceptual framework is a diagrammatic representation of the relationship between independent and dependent variables. The conceptual framework of the study is shown in Figure 1.

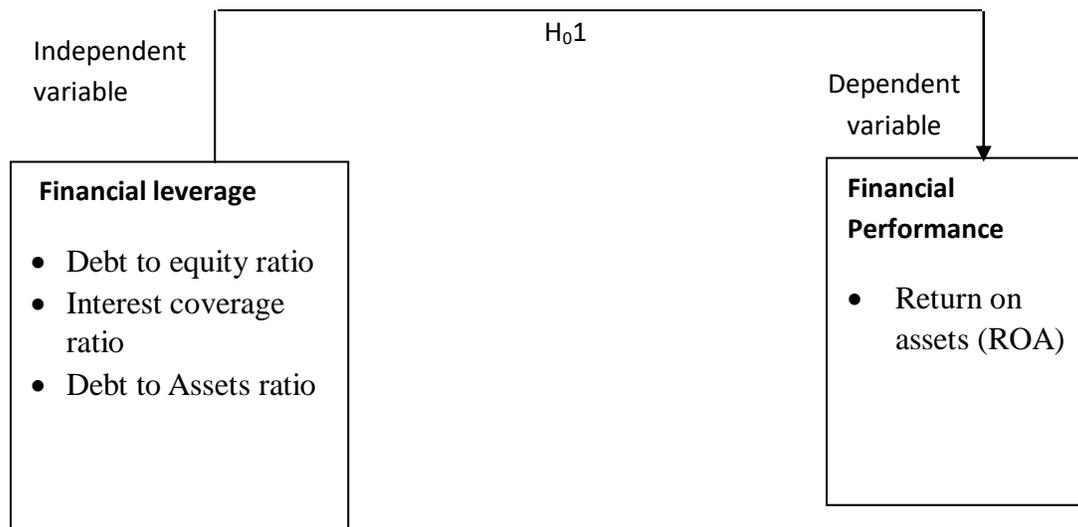


Figure 1: Relationship between Financial Leverage and Financial Performance
Source (Researchers, 2024)

Methodology

Location of the Study: This study was conducted at the Nairobi Securities Exchange (NSE).

Research Philosophy: This study adopted a positivist research philosophy.

Research Design: A mixed research approach that involves descriptive, causal and longitudinal research designs was adopted for this study.

Population of the Study: The population of the study comprised of all the 40 non-financial firms listed at NSE Kenya as at 1st January, 2010 (NSE Handbook, 2010). The financial firms were excluded from the study because they are highly regulated by Central Bank of Kenya and other regulatory bodies. Therefore, their financial leverages are highly regulated.

Sampling Procedure and Sample Size: The study adopted purposive sampling technique in selection of research sample. The study therefore selected a sample of 29 non-financial firms that had been in existence throughout the period under consideration.

Data Analysis:

Statistical Package for Social Scientists (SPSS) version 28.0, Stata and R studio were used for data analysis. Descriptive statistics like mean, percentage frequency and standard deviation was used in preliminary analysis while inferential statistics like t-test and F-test were used in

hypothesis testing at 5% level of significance. Panel data regression model was used to show the relationship between independent variables and dependent variable.

Model Specification

The dependent variable was firm financial performance and was proxied by return on assets (ROA). The independent variable was financial leverage and was denoted by debt-to-equity ratio (DER), interest coverage ratio (ICR) and debt-to-asset ratio (DAR). To test the above hypothesis, the following regression model was fitted:

$$ROA_{it} = \beta_0 + \beta_1 DER_{it} + \beta_2 ICR_{it} + \beta_3 DAR_{it} + e_{it}$$

Where:

ROA is financial performance, β_0 is the regression constant, i is 1,2, ..., 29 non-financial firms, t is 1,2, ...,14 years, β_1 , β_2 and β_3 are coefficient estimates, DER Debt -to- equity ratio, ICR interest coverage ratio, DAR debt -to- asset ratio and e the error term.

Findings

The first objective was to evaluate the effect of financial leverage (debt-to-equity ratio, Interest Coverage ratio and Debt to Asset ratio) on financial performance (ROA) of non-financial firms listed in the Nairobi Securities Exchange, Kenya. The first null hypothesis that the researcher tested is defined as follows:

H₀₁: There is no statistically significant effect of financial leverage on financial performance of non-financial firms listed in the Nairobi Securities Exchange, Kenya

The hypothesis testing began by regression diagnostic tests relevant to this model. First, multicollinearity test was carried out for Debt-to-Equity ratio, Interest Coverage ratio and Debt-to-Assets ratio which are indicators of financial leverage. Table 22 presents the multicollinearity test summary results which reveals that the VIF ranged from 1.04 to 1.16 and tolerance values ranged from 0.862 to 0.965.

Table 1: Multicollinearity Test for Model 1

Variable	VIF	Tolerance (1/VIF)
DAR	1.16	0.862
DER	1.15	0.872
ICR	1.04	0.965
Mean VIF	1.11	—

Source (Researcher, 2024)

The Variance Inflation Factor (VIF) results in Table 1 indicate that multicollinearity is not a concern in this model. All VIF values are well below the commonly accepted threshold of 10. Additionally, the Tolerance values (1/VIF) are all above 0.2, confirming that no independent variable is highly correlated with another. The mean VIF of 1.11 further suggests that the variables are relatively independent and do not exhibit problematic multicollinearity. Since all

values are close to 1, the model can proceed without the need for corrective measures such as variable elimination or transformation.

Secondly, the Brauch Pagan test for heteroscedasticity was carried out. The null hypothesis for the estimation is that is that the variance of the residuals is constant. The summary of Brauch Pagan test results is presented in Table 2

Table 2: Breusch-Pagan / Cook-Weisberg Test Results for Model 1

Test	$\chi^2 (3)$	p-value	Interpretation
Breusch-Pagan / Cook-Weisberg Test	0.41	0.523	No heteroskedasticity

Source (Researcher, 2024)

The test results in Table 2 produced a Chi-square value of 0.41 with a p-value of 0.5226. Since the p-value is greater than 0.05, we fail to reject the null hypothesis, which states that the variance of the errors is constant (homoskedasticity is present). This means that heteroskedasticity is not a concern in this model, and standard OLS regression results remain valid. There is no need for corrective measures like robust standard errors or transformations.

Thirdly, the Fisher-ADF Panel Unit Root Test for stationarity was conducted on four financial variables: ROA, Debt-to-Equity Ratio, Equity Interest Coverage Ratio, and Debt-to-Assets Ratio. The test was chosen over other unit root tests, such as the Levin-Lin-Chu (LLC) test, because the Fisher-ADF test can handle unbalanced panel data, which was a limitation when attempting the LLC test. The Fisher-ADF approach combines individual Augmented Dickey-Fuller (ADF) tests from each panel and aggregates them into four test statistics: *Inverse Chi-Squared (P), Inverse Normal (Z), Inverse Logit t (L), and Modified Inverse Chi-Squared (Pm)**. The results are summarized in Table 3.

Table 3: Stationarity Test for Model 1

Variable	Inverse Squared (P)	Chi-Inverse Normal (Z)	Inverse Logit t (L*)	Modified Chi-Squared (Pm)	Inv. p-value	Integration order
ROA	204.433	-8.013	-9.811	13.185	0.000	1
DER	139.432	-5.681	-6.301	7.251	0.000	1
ICR	172.032	-7.660	-8.139	10.227	0.000	1
DAR	191.231	-7.924	-9.074	11.980	0.000	1

Source (Researcher, 2024)

The results in Table 3 indicate that for all four variables, the p-values are 0.0000, which is well below the conventional significance threshold of 0.05. This suggests that we reject the null hypothesis (H₀) that all panels contain unit roots, meaning that at least one panel is stationary. The negative Z-statistics and large chi-squared values further confirm the rejection of non-stationarity. Given these findings, the variables are deemed suitable for further regression

analysis without differencing, as they do not exhibit unit root behavior. The preference for the Fisher-ADF test is justified by its ability to handle heterogeneous panels, making it more flexible for real-world financial datasets where missing observations and varying panel lengths are common. This ensures a more reliable stationarity check before proceeding with econometric modeling.

The fourth step was to check existence of serial autocorrelation in the panel data set. The Wooldridge test for autocorrelation was conducted to examine the presence of first-order serial correlation in the panel dataset. The null hypothesis (H_0) assumes no autocorrelation, while the alternative hypothesis (H_1) suggests the presence of serial correlation. The autocorrelation results are presented in table 4

Table 4: Wooldridge Test for Autocorrelation in Panel Data for Model 1

Test	F-Statistic	df1	df2	p-value	Decision ($\alpha = 0.05$)
Wooldridge Test	2.026	1	29	0.1653	Fail to Reject H_0 (No Autocorrelation)

Source (Researcher, 2024)

The Wooldridge test results in Table 4 yielded an F-statistic of 2.026 with a p-value of 0.1653, which is above the standard significance level of 0.05. Since we fail to reject the null hypothesis, there is no statistical evidence of first-order autocorrelation in the residuals. This implies that the panel data model does not suffer from significant serial correlation, meaning that the error terms are not systematically related over time. As a result, the regression estimates are likely to be unbiased and efficient, reducing concerns over model misspecification. The random effect model was then fitted to predict the relationship that exist between financial leverage (DER, ICR and DAR) and financial performance (ROA). The model results are summarized in Table 5

Table 5: Random Effects (RE) Results for Objective 1

Predictor	B	SE	z	p	95% CI (Lower)	95% CI (Upper)
DER	0.146	0.069	2.13	0.033	0.012	0.281
ICR	-14.068	8.541	-1.65	0.010	-30.809	2.673
DAR	0.119	0.376	0.32	0.752	-0.617	0.855
Intercept	5.651	1.963	2.88	0.004	1.803	9.498
Statistics	Value	P value				
Wald χ^2	9.13	0.0277				
R ² (Within) = 0.488, R ² (Between) = 0.60, R ² (Overall) = 0.524, Total Observations = 406, Number of Panels (Groups) = 29, Average Time Periods per Panel = 13.5						

Source (Researcher, 2024)

The results presented in Table 5 summarize the findings from the Random Effects (RE) regression model for Model 1, examining the relationships between the dependent variable (ROA) and the independent variables: debt-to-equity ratio (DER), interest coverage ratio (ICR), and debt-to-assets ratio (DAR). The Random Effects (RE) model results indicate that the debt-to-equity ratio has a statistically significant positive effect on ROA ($B = 0.146$, $p = 0.033$), suggesting that as firms increase their debt relative to equity, their ROA improves slightly. However, the interest coverage ratio has a statistically significant negative effect on ROA ($B = -14.068$, $p = 0.010$), implying that higher interest coverage reduces financial performance (ROA). Similarly, the debt-to-assets ratio has an insignificant effect on ROA ($B = 0.119$, $p = 0.752$). The Wald $\chi^2(3) = 9.13$, $p = 0.0277$, meaning the independent variables collectively have a significant effect on ROA. However, the R^2 values were moderate (Within = 0.48, Between = 0.60, Overall = 0.524). The overall R^2 value of 0.524 indicates that the model explains 52.4% of the variation in the dependent variable (ROA). The rho value (0.00) indicates that most variation in ROA comes from idiosyncratic errors rather than firm-level effects, further justifying the use of random effects modeling. Additionally, the dataset is unbalanced, with 406 total observations, 29 panels (firms), and an average of 13.5 time periods per firm. The equation for the relationship between financial leverage and financial performance is provided by the following model:
 $ROA_{it} = 5.651 + 0.146DER_{it} - 14.068ICR_{it} + 0.119DAR_{it}$

Correlation between Financial Leverage and Financial Performance

The strength of association between financial performance (ROA) and indicators of financial leverage (debt-to-equity ratio, interest coverage ratio and debt-to-assets ratio), was investigated using the Pearson product moment correlation. The results are indicated in Table 8

Table 6: Correlation between Financial Leverage and Financial Performance

		ROA	DER	ICR	DAR
ROA	Pearson	1			
	Correlation				
	Sig. (2-tailed)				
	N	406			
DER	Pearson	.325*	1		
	Correlation				
	Sig. (2-tailed)	0.012			
	N	406	406		
ICR	Pearson	-0.425*	-0.082	1	
	Correlation				
	Sig. (2-tailed)	0.041	0.099		
	N	406	406	406	

DAR	Pearson Correlation	0.343*	.334**	.133**	1
	Sig. (2-tailed)	0.0382	0.000	0.008	
	N	406	406	406	406

Source (Researcher, 2024)

Table 8 results indicate that there exist a positive and statistically significant correlation between financial performance (ROA) and debt to equity ratio (DER) at 5% level of significance ($r = 0.325$, $p = 0.012$), suggesting that firms with higher financial leverage tend to have higher profitability. This relationship indicates that firms effectively utilizing debt financing can generate better returns. However, ROA has a negative and statistically significant correlation with ICR ($r = -0.425$, $p = 0.041$) at 5% level of significance, implying that firms with higher interest coverage ratios tend to have lower profitability. This negative association suggests that firms with better debt-servicing capacity may be more conservative in their financial leverage, potentially limiting their financial performance.

DAR exhibits a positive statistically significant correlation with ROA ($r = 0.343$, $p = 0.0382$) at 5% level of significance, indicating that firms with a higher proportion of debt in their capital structure tend to have better financial performance. Additionally, DER and DAR have a positive and statistically significant correlation ($r = 0.334$, $p < 0.001$) at 5% level of significance, which is expected since both measures assess financial leverage. Finally, DAR has a statistically significant positive correlation with ICR ($r = 0.133$, $p = 0.008$) at 5% level of significance, indicating that firms with higher debt levels also tend to have slightly better interest coverage ratios. In general, the results highlight the impact of financial leverage on firm performance. While the positive correlations between ROA, DER, and DAR suggest that leverage can enhance profitability, the negative relationship between ROA and ICR implies that excessive debt servicing may limit profitability. These findings underscore the need for firms to balance their debt levels in order optimize financial performance.

Discussion of Findings

Objective of the study was to evaluate the effect of financial leverage on financial performance of non-financial firms listed at the Nairobi Securities Exchange, Kenya. It was hypothesized that there is no statistically significant effect of financial leverage on financial performance of non-financial firms listed at the Nairobi Securities Exchange. Debt-to-equity ratio revealed a statistically significant positive effect on financial performance as measured by ROA suggesting that as firms increase their debt relative to equity, their ROA improves slightly. Interest coverage ratio revealed a statistically significant negative effect on ROA, implying that higher interest coverage reduces ROA while debt-to-assets ratio had a statistically insignificant positive effect on ROA. The Wald $\chi^2(3)$ was significant, meaning the independent variables collectively had a significant effect on ROA. The findings of this study reveal a nuanced relationship between financial leverage and financial performance, offering both corroboration and contradiction to prior empirical evidence. The positive and statistically significant effect of the debt-to-equity

ratio (DER) on return on assets (ROA) ($B = 0.146$, $p = 0.033$) aligns with several studies that suggest a beneficial impact of leverage on firm performance. For instance, Arhinful and Radmehr (2023) found that financial leverage, measured by debt-to-equity ratio, positively influenced firm performance among non-financial firms in Japan, attributing this to efficient debt utilization in generating earnings. Similarly, Senan et al. (2021) observed a significant positive relationship between debt-to-equity ratio and performance in Indian firms, supporting the notion that debt financing can enhance profitability when managed prudently.

Rehman (2013) and Aripin and Abdulmumuni (2020) further reinforced this view, demonstrating that moderate debt levels contribute to improved financial performance, as excessive reliance on either equity or debt can be detrimental. However, the significant negative effect of the interest coverage ratio (ICR) on ROA ($B = -14.068$, $p = 0.010$) contradicts some prior findings, particularly those of Arhinful and Radmehr (2023), who reported a positive association. This discrepancy may be attributed to differences in economic conditions, industry characteristics, or debt-servicing capabilities across firms. For example, in high-interest-rate environments or sectors with volatile cash flows, higher interest obligations could strain financial performance, leading to a negative relationship between ICR and ROA. This finding resonates with studies such as Olusola et al. (2022), which found a negative effect of interest coverage ratio on performance among large firms in Hong Kong, suggesting that financial leverage's impact is context-dependent. Additionally, the insignificant effect of the debt-to-assets ratio (DAR) ($B = 0.119$, $p = 0.752$) further underscores the variability in how different leverage measures influence performance, reinforcing the argument that not all debt metrics uniformly affect financial outcomes. The mixed results highlight the importance of sectoral and macroeconomic factors in shaping the leverage-performance relationship. For instance, Odhiambo et al. (2022) and Kiema (2021) found negative effects of leverage (DAR) on financial performance in Kenyan firms, particularly in the energy and petroleum sectors, where high leverage levels may lead to financial distress. Conversely, Eysimkele and Koori (2019) observed a positive relationship in agricultural firms, suggesting that industry-specific dynamics play a crucial role. The current study's moderate explanatory power ($R^2 = 0.524$) indicates that while financial leverage is a significant determinant of performance, other factors such as operational efficiency, market conditions, and governance structures also contribute to financial outcomes.

Conclusion

The study's findings collectively paint a comprehensive picture of capital structure dynamics in Kenya's non-financial sector. Important conclusions emerge from the analysis that have both theoretical and practical significance. The research demonstrates that the relationship between financial leverage and performance is complex and multidimensional. While certain forms of leverage enhance profitability, others may constrain it, emphasizing the need for nuanced capital structure decisions. The positive effect of debt-to-equity ratios supports the value of strategic debt usage, but the negative impact of high interest coverage ratios serves as a caution against excessive debt burdens.

Recommendations and Policy Implications

The study's findings suggest several practical recommendations for corporate managers, investors, and policymakers. For corporate executives, the results emphasize the importance of adopting a strategic approach to capital structure decisions. Firms should carefully consider their specific circumstances, including their size and operational efficiency, when determining appropriate leverage levels. The findings particularly highlight the value of maintaining a balanced debt-to-equity ratio while avoiding excessive interest burdens.

For financial managers, the research underscores the strategic importance of monitoring asset utilization as a core performance metric. Given the mediating role that asset utilization plays in the relationship between financial leverage and firm performance, enhancing operational efficiency emerges as a critical lever for maximizing the positive effects of debt financing. Efficient use of assets not only contributes directly to profitability but also strengthens a firm's ability to service debt, thereby reducing financial risk and improving overall financial health.

To this end, regular assessments of asset productivity such as turnover ratios and revenue per asset unit should be systematically incorporated into the financial planning and decision-making processes. These assessments enable managers to identify underperforming assets, allocate capital more effectively, and support data-driven strategies that align operational capabilities with financial objectives. By integrating asset utilization metrics into key performance dashboards and leveraging them for continuous improvement, firms can achieve a more resilient and optimized capital structure that balances growth, risk, and return.

Policymakers can draw several important implications from the study's findings. First, the evidence suggests that regulatory frameworks should be adaptive and responsive to firm heterogeneity, particularly with regard to size. In Kenya's mixed corporate environment comprising both large multinationals and small to medium-sized enterprises (SMEs) a one-size-fits-all approach to financial regulation may hinder optimal firm performance. Tailored policies that enhance access to capital for smaller firms, such as tiered lending criteria, government-backed loan guarantees, or targeted tax incentives, can help level the playing field without compromising financial prudence. Second, the findings highlight the potential for policy interventions aimed at improving transparency and corporate governance to reduce agency costs. Strengthening disclosure standards, enforcing timely financial reporting, and encouraging the adoption of sound governance practices particularly in sectors prone to inefficiency can enhance accountability and promote more efficient asset utilization.

Taken together, these insights support a dual-track policy approach: one that fosters inclusive financial systems for all firm sizes while simultaneously reinforcing the institutional frameworks that uphold market discipline and integrity. Such a strategy can contribute to a more stable, competitive, and performance-oriented corporate sector in Kenya and similar emerging economies.

References

- Adler, D. E. (2023). Theories from behavioral finance are at the forefront of explaining differences in corporate financial policies and capital structures. Most important, however, behavioral corporate finance has reintroduced humanity—in all its complexity and subtlety—into corporate finance, where indeed it belongs. *Advanced Introduction to Behavioral Finance*, 113.
- Alan, Y., & Gaur, V. (2018). Operational investment and capital structure under asset-based lending. *Manufacturing & Service Operations Management*, 20(4) , 637-654.
- Alharbi, M. (2020). The impact of financial leverage on firm performance: Evidence from Saudi Arabia. *Journal of Economics and Business*, 3(1), 1–12. <https://doi.org/10.31014/aior.1992.03.01.203>
- AL-Shatnawi, H. M., Hamawandy, N. M., Sharif, R. J. M., & Al-Kake, F. (2021). The role of the size and growth rate of the bank in determining the effect of financial leverage on the profitability of Jordanian commercial banks. *The journal of contemporary issues in business and government*, 27(1), 1962-1978.
- Alter, A., & Elekdag, S. (2020). Emerging market corporate leverage and global financial conditions. *Journal of Corporate Finance*, 62, 101590.
- Arhinful, R., & Radmehr, M. (2023). The impact of financial leverage on the financial performance of the firms listed on the Tokyo stock exchange. *SAGE Open*, 13(4), 1-22.
- Aripin, N., & Abdulmumuni, O. (2020). Financial leverage and financial performance of Nigerian manufacturing firms. *International Journal of Supply Chain Management (IJSCM)*, 9(4), 607-614.
- Barauskaite, G., & Streimikiene, D. (2021). Corporate social responsibility and financial performance of companies: The puzzle of concepts, definitions and assessment methods. *Corporate Social Responsibility and Environmental Management*, 28(1), 278-287.
- D'Amato, A. (2021). Does intellectual capital impact firms' capital structure? Exploring the role of firm risk and profitability. *Managerial finance*, 47(9), 1337-1356.
- DeMarzo, P. M., & He, Z. (2021). Leverage dynamics without commitment. *The Journal of Finance*, 76(3), 1195-1250.
- Effendi, E., Masnur, M., & Rahmadanti, R. (2021). The Effect of Disclosure of Other Comprehensive Income, Profitability, Leverage, and Company Size on Earnings Management (Study on Financing Institutions Sub-Sector Service Companies Listed on the Indonesia Stock Exchange for the 2018-2019 Period). *Enrichment: Journal of Management*, 12(1), 243-252.
- Eysimkele, A. R., & Koori, J. M. (2019). Financial Leverage and Performance of the Agricultural Companies Listed at Nairobi Securities Exchange, Kenya. *Journal of Finance and Accounting*, 3(5), 76-88.
- Frank, M. Z., & Goyal, V. K. (2024). Empirical corporate capital structure. In *Handbook of Corporate Finance* (pp. 27-125). Edward Elgar Publishing.
- Gofe, T. E., & Asfaw, A. S. (2023). Factors Affecting Capital Structure Decisions of Banks: A Systematic Literature Review Evidence from Commercial Banks of Ethiopia. *Journal of Investment, Banking and Finance (JIBF)*, 1, 1-13.

- Guluma, T. F. (2021). The impact of corporate governance measures on firm performance: the influences of managerial overconfidence. *Future Business Journal*, 7(1), 50.
- Hanipah, S. S., & Firmansyah, D. (2024). Determinants of return on equity: Predictors of total asset turnover and debt to equity ratio–Panel data regression statistics. *Jurnal Ekonomi, Manajemen Dan Akuntansi*, 2(04), 593-608.
- Hassan, S. (2023). Assessment of Financial Performance and Competitive Dynamics of Insurance Companies on the Indonesian Stock Exchange. *Indonesia Accounting Research Journal*, 11(2), 11-127.
- Hertina, D. (2021). The influence of current ratio, debt to equity ratio and company size on return on assets. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(8), 1702-1709.
- Hongli, J., Ajorsu, E. S., & Bakpa, E. K. (2019). The effect of liquidity and financial leverage on firm performance: Evidence from listed manufacturing firms on the Ghana stock exchange. *Research Journal of Finance and Accounting*, 10(8), 91-100.
- Hussain, A., Akbar, M., Khan, M. K., Sokolová, M., & Akbar, A. (2022). The interplay of leverage, financing constraints and real earnings management: A panel data approach. *Risks*, 10(6), 110.
- Ichwanudin, W., Nurhayati, E., & Anwar, C. J. (2023). Modeling the Relationship between Capital Structure and Company Value in the Perspective of Agency and Trade-Off Theory. *structure*, 14, 15.
- Kalash, I. (2023). The financial leverage–financial performance relationship in the emerging market of Turkey: the role of financial distress risk and currency crisis. *EuroMed Journal of Business*, 18(1), 1-20.
- Kalash, İ. (2019). Firm financial leverage, agency costs and firm performance: An empirical research on service firms in Turkey. *İnsan ve Toplum Bilimleri Araştırmaları Dergisi*, 8(1), 624-636.
- Kiema, B. M. (2021). *Effect of Financial Leverage on Financial Performance of Energy and Petroleum Firms Listed at the Nairobi Securities Exchange* (Doctoral dissertation, University of Nairobi).
- Kivaya, B. M., Kemboi, A., & Odunga, R. (2020). Moderating role of firm size on corporate governance and financial performance of microfinance institutions in Kenya. *African Journal of Emerging Issues*, 2(1), 1-23.
- Kraus, A., & Litzenger, R. H. (1973). A state-preference model of optimal financial leverage. *The journal of finance*, 28(4), 911-922.
- Iotti, M., Manghi, E., & Bonazzi, G. (2024). Debt Sustainability Assessment in the Biogas Sector: Application of Interest Coverage Ratios in a Sample of Agricultural Firms in Italy. *Energies*, 17(6), 1404.
- Magnanelli, B. S., & Izzo, M. F. (n.d.). Corporate social performance and cost of debt: The relationship. *Social Responsibility Journal*, 13(2), 250-265.
- Nukala, V. B., & Prasada Rao, S. S. (2021). Role of debt-to-equity ratio in project investment valuation, assessing risk and return in capital markets. *Future Business Journal*, 7(1), 13.
- Odhiambo, A. (2022). Debt-Equity Ratio and Financial Performance of Listed Companies at the Nairobi Securities Exchange, Kenya. *Journal of Economics, Finance and Management*

Studies, 05(04). HYPERLINK "<https://doi.org/10.47191/jefms/v5-i4-07>"
<https://doi.org/10.47191/jefms/v5-i4-07>.

- Ogbonna, U. G., Onwuchekwa, J. C., & David, E. A. (2022). *African Journal of Management, Business Administration & Entrepreneurship*.
- Olusola, B. E., Mengze, H., Chimezie, M. E., & Chinedum, A. P. (2022). The Impact of capital structure on firm performance-evidence from large companies in Hong Kong stock exchange. *Open Journal of Business and Management*, 10(3), 1332-1361.
- Olusola, B. E., Mengze, H., Chimezie, M. E., & Chinedum, A. P. (2022). The Impact of capital structure on firm performance-evidence from Large Companies in Hong Kong stock exchange. *Open Journal of Business and Management*, 10(3) , 1332-1361.
- Rehman, S. S. F. U. (2013). Relationship between financial leverage and financial performance: Empirical evidence of listed sugar companies of Pakistan. *Global Journal of Management and Business Research*, 13(8), 45-53.
- Senan, N. A., Ahmad, A., Anagreh, S., Tabash, M. I., & Al-Homaidi, E. A. (2021). An empirical analysis of financial leverage and financial performance: Empirical evidence from Indian listed firms. *Business Perspectives*, 10, 322-325.
- Senan, N. A., Ahmad, A., Anagreh, S., Tabash, M. I., & Al-Homaidi, E. A. (2021). An empirical analysis of financial leverage and financial performance: Empirical evidence from Indian listed firms. *Business Perspectives*, 10, 322-325.
- Setiawan, C., & Amelia, P. (2024). Financial and Efficiency Performance before and after Mergers and Acquisitions in the Indonesian Infrastructure Industry. *Journal of Infrastructure Policy and Management (JIPM)*, 7(1), 43-62.