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Capital Structure, Board Gender Diversity and Financial Performance of Listed Companies at Nairobi Securities Exchange in Kenya

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Abstract

This research examined how board gender diversity influences the relationship between capital structure and financial performance of companies listed on the Nairobi Securities Exchange (NSE) in Kenya. The study aimed to address the following research inquiries: The link between capital structure and financial performance of listed firms on the NSE in Kenya is being inquired. Does the presence of a diverse gender composition on a company's board of directors influence the link between debt and equity funding and the company's financial performance? In order to do this, the study was based on the conventional theory of capital structure and used an explanatory research method. The research focused on a population of 65 publicly traded companies on the Nairobi Securities Exchange (NSE) in Kenya from 2018 to 2023. However, the sample size consisted of only 32 companies, resulting in a total of 192 observations. Document analyses were used to gather secondary panel data, which were then submitted to statistical analysis techniques such as Pearson's correlation and descriptive analytic measures such as mean and standard deviation. Finally, the study's hypotheses were examined by hierarchical regression analysis. The results suggest that debt financing, equity financing, and capital structure have a substantial and beneficial impact on financial performance. The presence of women on the board, known as board gender diversity, serves as a beneficial mediator between debt financing, equity financing, capital structure, and financial performance. It is therefore imperative that firms regularly try to keep check on the amount of money borrowed and the efforts should be made to ensure that companies do not go overboard in their borrowing and this is by ensuring they balance their sources of financing between debt and equity. Further, firms should afford more importance to equity financing since the study demonstrates that equity financing has always a positive association with the financial performance of firms. Also, it is important to strive to have high capital structures and ensure that there is a proper. mods separation of the two major sources of financing which is debt and equity. Finally, research has demonstrated that a number of aspects related to gender diversity on boards have a positive effect on firms' financial performance, and therefore this area of corporate governance should be a priority.

Keywords: *Board gender diversity, Capital structure, financial performance, and Nairobi Securities Exchange (NSE*).

1.1 Background to the Study

Effective capital structure management, involving the optimal mix of equity, debt, and retained earnings, is crucial for maximizing a firm's value and profitability. A well-balanced capital structure minimizes the weighted average cost of capital, thereby enhancing a company's market value. This study builds on the foundational theories of Modigliani and Miller (1958), who argued that under certain conditions, a firm's value is independent of its capital structure. However, subsequent research challenges this view, demonstrating that the debt-to-equity ratio can significantly impact a company's value.

Capital structure and financial performance vary across regions. In North America, where capital markets are mature, companies tend to favor equity financing and maintain lower levels of debt, with a strong focus on shareholder value, return on equity (ROE), and earnings growth. In contrast, European firms, particularly in Western Europe, are generally more leveraged, benefiting from the favorable tax treatment of debt and a focus on sustainability alongside profitability. In Asia, where capital markets are rapidly expanding, government influence plays a significant role, particularly in countries like China and Japan, where leverage levels and capital structures differ widely. Emerging markets often rely more on debt due to limited access to equity financing, prioritizing market penetration and growth.

In Africa, including Kenya, less developed capital markets lead to a heavier reliance on debt, especially short-term debt, due to difficulties in accessing equity financing. High interest rates and economic volatility further increase the cost of debt and financial risk for businesses. Despite these challenges, efforts are underway to improve financial systems and increase capital availability, such as enhancing stock exchanges and regulatory frameworks. In Kenya, the Nairobi Securities Exchange (NSE) provides equity financing options, but many businesses still depend heavily on debt due to easier access to bank credit. High interest rates and economic instability compel Kenyan firms to carefully manage their capital structures, balancing short- and long-term debt to minimize financial risks.

The financial performance of listed companies in Kenya is critical to the country's economic stability. For example, the banking sector demonstrated resilience during the COVID-19 pandemic, maintaining a capital adequacy ratio of 18.9% in December 2022, exceeding the minimum requirement of 14.5%. Additionally, net assets in the sector grew by 9.4% from Kshs. 6,022.1 billion in December 2021 to Kshs. 6,589.8 billion by the end of 2022. Conversely, the tourism sector faced significant setbacks due to the pandemic, though recent improvements include a record high in international tourist visits and a substantial increase in inbound receipts. To further enhance financial performance, Kenyan firms can benefit from improved disclosure, greater accountability, technological advancements, and digitization. Additionally, strategic capital structure management can reduce financial risk, increase profitability, and improve the cost of capital for listed firms.

Capital structure decisions are crucial because they directly influence a firm's competitiveness and profitability. Poor decisions regarding the mix of financing sources can lead to financial distress, insolvency, or even liquidation. Optimal capital structure decisions involve balancing debt and equity to maximize shareholder value while minimizing the cost of capital, as highlighted by

Nasimi (2016). The correlation between a firm's capital structure and its profitability has been well-documented, with research showing that external liabilities are negatively correlated with profitability, while appropriate capital structure ratios are positively associated with investment-based profitability (Chadha & Sharma, 2015).

The study also considers the role of board gender diversity in influencing capital structure decisions and financial performance. Research suggests that diverse boards can bring different perspectives to decision-making processes, potentially leading to more balanced and effective capital structure strategies (Hordofa, 2023).

Listed companies at the NSE are significant contributors to Kenya's economy, operating under the governance of the Capital Markets Authority (CMA) and adhering to strict guidelines regarding transparency, reporting, and corporate governance (CMA, 2022). These companies span various sectors, including banking, telecommunications, manufacturing, agriculture, and energy, and play a vital role in employment, policy change, innovation, and investment attraction (NSE, 2022). However, challenges such as corporate governance issues, insider trading, and market manipulation persist, necessitating enhanced oversight mechanisms, compliance enforcement, and strengthened investor education (CMA, 2022). Despite these challenges, the strategic, flexible, and innovative approaches adopted by these firms have allowed them to navigate economic fluctuations and market volatility, contributing to Kenya's overall financial stability and growth (CMA, 2024).

1.2 Statement of the Problem

The financial performance of companies is a critical indicator of their ability to generate value for stakeholders, maintain competitiveness, and achieve long-term success (Zaglyadin, 2023). Strong financial performance reflects effective resource allocation, profitability, and investor confidence, which are vital for attracting investments and fostering economic growth (Busch & Friede, 2018). However, despite these expectations, many listed companies in Kenya struggle to achieve optimal financial performance. For example, the Capital Markets Authority's (CMA) Quarterly Statistical Bulletin for the fourth quarter of 2023 reported a significant decline in trading activity, with equity turnover dropping by 31.47% from KShs. 17.22 billion in the third quarter to KShs. 11.80 billion in the fourth quarter. Additionally, the number of shares traded fell by 24.93%, and market capitalization decreased by 3.27% to KShs. 1,439.02 billion.

Across different regions, capital structure and financial performance trends vary significantly. In Asia, capital markets are rapidly expanding, with countries like China moving towards balanced capital structures while Japan historically favors debt (Arhinful & Radmehr, 2023). Emerging markets in the region often rely more on debt due to limited equity financing options, prioritizing growth, market share, and profitability as key performance indicators (Demirgüç-Kunt et al., 2020). In Africa, including Kenya, limited access to equity finance and economic volatility lead businesses to rely more heavily on short-term debt, resulting in higher financial risk due to elevated interest rates (Otovwe, 2023). Despite these challenges, efforts are underway to improve financial systems and increase capital availability across the continent, with countries enhancing stock exchanges and regulatory frameworks (Khémiri & Noubbigh, 2020).

In Kenya, the challenges are evident as the NSE-listed firms face declining performance metrics, indicating underlying issues in capital structure management. Companies in the region are under pressure to improve profitability and attract both local and international investments. The reliance on debt, coupled with economic instability, exacerbates financial risks, making it crucial for firms to manage their capital structures effectively. Furthermore, while efforts are being made to enhance financial systems and market penetration, the need for sustainable practices and profitability remains critical as firms aim to compete on a global scale and improve overall financial performance (Agyei-Mensah, 2021).

1.3 Research Questions

i. How does debt financing impact the financial performance of companies listed on the Nairobi Securities Exchange in Kenya?

ii. What is the effect of equity financing on the financial performance of companies listed on the Nairobi Securities Exchange in Kenya?

iii. How does capital structure influence the financial performance of companies listed on the Nairobi Securities Exchange in Kenya?

iv. In what way does board gender diversity affect the financial performance of companies listed on the Nairobi Securities Exchange in Kenya?

v. Does board gender diversity play a mediating role in the relationship between debt financing and the financial performance of companies listed on the Nairobi Securities Exchange in Kenya?

vi. What is the mediating effect of board gender diversity on the relationship between equity financing and the financial performance of companies listed on the Nairobi Securities Exchange in Kenya?

vii. How does board gender diversity mediate the relationship between capital structure and the financial performance of companies listed on the Nairobi Securities Exchange in Kenya?

2.1 Theoretical Review

The study was guided by the Trade-off, Resource-Dependence and Social Role Theories. They are discussed in the subsequent sections as follows;

2.1.1 The Trade-off Theory

The Trade-off Theory, as highlighted by Graham (2001), posits that firms balance the benefits and costs of debt and equity financing to determine an optimal capital structure. Debt offers advantages like tax deductibility of interest payments, which reduces overall tax liability and enhances shareholder returns through financial leverage. However, it also introduces risks, including the obligation to meet interest payments, potential financial distress, and conflicts between debt

holders and equity shareholders (Myers, 1977). The theory suggests that firms strive to achieve an optimal mix of debt and equity to maximize value or minimize the cost of capital, with this mix being influenced by industry dynamics, business risk, and market conditions (Modigliani & Miller, 1963).

The theory is particularly relevant to the Kenyan context, where firms listed on the Nairobi Securities Exchange (NSE) must carefully consider their capital structure to optimize financial performance (Wabwoba, 2022). By examining the interplay between tax effects, borrowing authority, and other fiscal advantages, firms can design an optimal capital structure that balances the benefits of debt against its risks and costs. Moreover, the dynamic nature of capital structure decisions, influenced by factors like industry structure and market conditions, suggests that board gender diversity could also play a role in these decisions. Research indicates that gender-diverse boards may impact financing decisions, making the Trade-off Theory a valuable framework for understanding how changes in board composition can affect capital structure choices (Carter et al., 2003; Brahma et al., 2020; Manyaga et al., 2019).

Additionally, the Trade-off Theory helps explain how firms can alter their capital structure in response to changes in board composition, including gender diversity (Nguyen & Nguyen, 2021). It highlights the importance of balancing the benefits and costs of debt financing, particularly in the context of how board diversity might influence these decisions. This theory provides a basis for exploring the impact of gender inequality on the management board and its effect on capital structure decisions and financial performance.

2.1.2 Resource Dependence Theory (RDT)

Resource Dependence Theory (RDT), developed by Pfeffer and Salancik (1978), emphasizes the dependence of firms on external resources, which influences their behavior and performance. Firms operate in environments that include other entities like suppliers, customers, and regulatory bodies, creating power dynamics where those controlling valuable resources exert influence over those dependent on them. To manage this dependence and mitigate risk, organizations may pursue strategies like acquisitions, alliances, and political engagement to secure and control resources (Parente et al., 2020). RDT asserts that external factors significantly shape organizational behavior, as firms must navigate these constraints to secure the resources necessary for survival and growth (Park & Park, 2021).

RDT is relevant to understanding the relationship between external resource dependence, including capital structure, and company performance. In the Kenyan context, the theory offers insights into how board gender diversity may mediate the relationship between capital structure and financial performance at the NSE (Hordofa, 2023). The composition of the board, including gender diversity, can influence strategic decisions and resource management, thereby affecting capital structure choices and overall organizational performance. By examining dependency relations with external resources and board configuration, this study aims to explore how gender diversity on boards impacts the efficiency of financial resource management and the financial outcomes of publicly listed firms in Kenya.

The theory further provides a framework for analyzing how organizations coordinate their relationships with critical resources, including financial capital. By understanding how external resource dependence and board gender diversity interact, RDT offers a comprehensive perspective on the strategic decisions surrounding capital structure and their impact on financial performance in the context of Kenyan firms.

2.1.3 Social Role Theory

Social Role Theory (SRT), developed by Eagly and Wood (1976), posits that people's behavior is influenced by social norms associated with their various roles, including occupational, gender, and family roles. These roles shape individuals' attitudes, beliefs, and behaviors, with societal norms playing a critical role in defining these roles. SRT highlights the division of labor by gender, assigning specific tasks and roles based on gender, which influences behavior across different contexts, including the workplace. This theory is particularly useful for understanding how gender roles and expectations influence behavior and decision-making within organizations, such as corporate boards. Research suggests that gendered expectations can shape the behaviors and decisions of board members, potentially affecting strategic decisions like capital structure.

In the context of organizations, SRT provides a framework for examining how gender diversity on corporate boards influences the relationship between capital structure and financial performance. By analyzing the impact of gendered cultural norms on board members' roles and behaviors, the study aims to uncover how gender diversity can contribute to improved financial outcomes for firms listed on the NSE in Kenya. The theory also helps explain how adherence to gender roles can affect management strategies and problem-solving approaches within organizations. This study explores the dynamics of gender imbalance in corporate governance and its potential positive impact on financial performance, emphasizing the importance of board diversity in achieving better financial returns in the Kenyan market.

2.2 Conceptual Framework

A conceptual framework is a crucial structure that outlines the key variables and their relationships in a study. The conceptual framework for this study is shown in Figure 1.

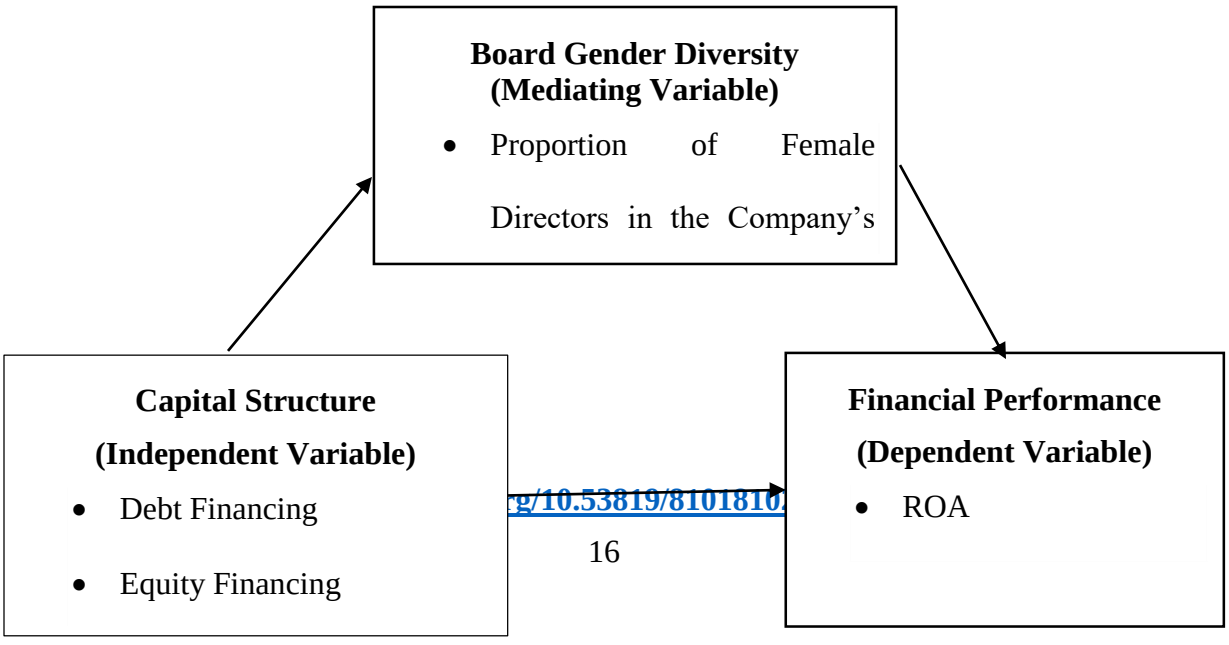

Figure 1: Conceptual framework

In this framework, capital structure is the independent variable, which will be measured by the levels of debt financing and equity financing employed by the company. Financial performance, the dependent variable, shall be assessed using the Return on Assets (ROA) metric, which reflects the company's efficiency in using its assets to generate profits. Additionally, board gender diversity serves as the mediating variable, represented by the proportion of female directors on the company's board, which is hypothesized to influence the relationship between capital structure and financial performance.

3.0 Research Methodology

This study adopts a positivist research philosophy and employs an explanatory research design to examine the mediation effect of board gender diversity on the relationship between capital structure and financial performance of companies listed on the Nairobi Securities Exchange (NSE). The target population includes 65 firms listed on the NSE from 2018 to 2023. A stratified random sampling technique was used, resulting in a sample size of 32 firms, yielding 192 observations over six periods. Secondary data was collected through document analysis, primarily focusing on audited financial reports. Data was analyzed using hierarchical regression analysis to test the hypotheses, with regression analysis diagnostic tests such as normality, homoscedasticity, autocorrelation, and multicollinearity being conducted to ensure the robustness of the results. Additionally, panel data diagnostic tests were performed, including panel unit root tests and fixed versus random effects testing. Validity and reliability concerns inherent in the secondary data were acknowledged, but direct testing was not conducted due to reliance on existing data.

4.0 Findings

This section presents the results of the study. They are structured in accordance with the set objectives and research questions. The findings are presented in the subsequent sections.

4.1 Results

This section presents the descriptive and hypothesis test results for each objective. The results are documented in the next sections.

4.1.1 Debt Financing and Financial Performance

The first objective of the study was to establish the relationship between debt financing and financial performance. The results are as presented in Table 1:

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Table 1: Debt per Year

	Year 2018 Kes (000)	Year 2019 Kes (000)	Year 2020 Kes (000)	Year 2021 Kes (000)	Year 2022 Kes (000)	Year 2023 Kes (000)
Mean	49955588.60	52889032.07	57579451.07	59977594.33	67484970.70	82834198.79
Std.Dev	93778631.30	99361296.54	107902011.47	115395041.66	132255177.26	154490121.76
Max	342915495.00	376679509.00	411650509.00	445873684.00	499638524.00	559217798.00
Min	3320.00	4299.00	3888.00	4563.00	4374.00	3942.00

Source: Field Data (2024)

Table 1 highlights the debt levels of companies listed on the Nairobi Securities Exchange (NSE) from 2018 to 2023. The findings indicate a steady increase in the mean debt over these years, starting from KSh. 49,955,588.60 in 2018, with a maximum debt of KSh. 342,915,495,000 and a minimum of KSh. 3,320,000 (Std. Dev = KSh. 93,778,631,300). By 2023, the mean debt had escalated to KSh. 82,834,198,790, with the maximum debt reaching KSh. 559,217,798,000 and the minimum at KSh. 3,942,000 (Std. Dev = KSh. 154,490,121,760). The standard deviation figures suggest significant variability in debt levels among companies each year, reflecting differing capacities and financial strategies within the listed firms.

Table 2: Income per Year

	Years 2018 Kes(000)	**Year 2019 Kes(000)**	**Year 2020 Kes(000)**	**Year 2021 Kes(000)**	**Year 2022 Kes(000)**	**Year 2023 Kes(000)**
Mean	503398.96	2971825.71	2542518.56	5190142.77	7865886.85	4844349.58
Std.Dev	17704493.91	13465788.65	15856454.06	13516858.28	17824381.95	11821802.99
Max	55289000.00	62491000.00	73657900.00	68676200.00	69593157.00	62742800.00
Min	-76535814.00	-34726907.00	-39448260.00	-564227.00	-389488.00	-926425.00

Source: Field Data (2024)

Table 2 presents the income levels of companies listed on the Nairobi Securities Exchange (NSE) from 2018 to 2023, showing considerable fluctuations in both mean income and variability across the years. In 2018, the mean income was KSh. 503,398,960, with a wide range between a maximum income of KSh. 55,289,000,000 and a minimum of KSh. (76,535,814,000) (Std. Dev = KSh. 17,704,493,910). This trend continued with some variation, reaching a peak mean income of KSh. 7,865,886,850 in 2022, with the highest income recorded at KSh. 69,593,157,000 and the minimum at KSh. 389,488,000 (Std. Dev = KSh. 17,824,381,950). By 2023, the mean income dropped to KSh. 4,844,349,580, with the maximum income being KSh. 62,742,800,000 and the minimum at KSh. 926,425,000 (Std. Dev = KSh. 11,821,802,990), reflecting ongoing volatility in income levels among the listed companies.

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4.1.2 Equity Financing and Financial Performance

The researcher sought to find out how equity financing related with fiscal performance of enlisted companies at the NSE in Kenya and the results are represented in the Table 3.

Table 3: Equity per Year

	Years	**Year**	**Year**	**Year**	**Year**	**Year**
	2018	**2019**	**2020**	**2021**	**2022**	**2023**
	Kes(000)	**Kes(000)**	**Kes(000)**	**Kes(000)**	**Kes(000)**	**Kes(000)**
Mean	20799958.36	22457844.42	21120878.57	19815343.91	50669906.59	54019838.25
Std.Dev	42680616.72	45877671.06	51424378.02	56131339.87	125429762.07	130398902.24
Max	190103625.00	194964536.00	211318388.00	206982307.00	644372237.00	653007185.00
Min	-31540228.00	-36267135.00	-91517729.00	-148922655.00	-2628063.86	-2586545.68

Source: Field Data (2024)

Table 3 highlights the variability in equity levels of companies listed on the Nairobi Securities Exchange (NSE) between 2018 and 2023. The data shows a significant increase in mean equity over the years, rising from KSh. 20,799,958,360 in 2018 to KSh. 54,019,838,250 by 2023. Despite this growth, there was considerable fluctuation in equity values, particularly in 2022 and 2023, with the highest equity reaching KSh. 653,007,185,000 and the lowest dipping to negative figures, indicating a wide range of financial positions among the listed companies.

Similarly, Table 2 reveals significant variability in income levels of NSE-listed companies during the same period. The mean income increased from KSh. 503,398,960 in 2018 to KSh. 7,865,886,850 in 2022, reflecting some recovery, but dropped again to KSh. 4,844,349,580 in 2023. The data also shows a broad range in income figures, with notable disparities between the highest and lowest recorded incomes each year, indicating ongoing fluctuations in the financial performance of these companies..

4.1.3 Capital Structure and Financial Performance

The researcher sought to evaluate the interrelation between capital structure and fiscal output of publicly enlisted companies at the NSE in Kenya and study findings presented in Table 4.

Table 4: Capital per Year

	Years	Year	Year	Year	Year	Year
	2018	2019	2020	2021	2022	2023
	Kes(000)	Kes(000)	Kes(000)	Kes(000)	Kes(000)	Kes(000)
Mean	70043868.56	77726394.07	77853352.72	88643645.79	118563952.1	137488623.6
Std.Dev	122716948.6	132250040.8	141866024.2	150879527.3	202838822.8	237996778.8
Max	413670710	457092986	496822949	540386742	669411638	804913647
Min	11198	12096.7	11820.6	12653.4	12472.3	11803.5

Source: Field Data (2024)

Table 4 highlights the capital levels of companies listed on the Nairobi Securities Exchange (NSE) from 2018 to 2023, showing a progressive increase in mean capital over the years. In 2018, the mean capital was KSh. 70,043,868,560, with the highest recorded at KSh. 41,367,071,000 and the lowest at KSh. 11,198,000 (Std. Dev = KSh. 122,716,948,600). By 2019, the mean capital rose to KSh. 77,726,394,070, with the maximum capital reaching KSh. 457,092,986,000 and the minimum at KSh. 12,096,700 (Std. Dev = KSh. 132,250,040,800).

The trend continued, with the mean capital increasing to KSh. 88,643,645,790 in 2021 and further to KSh. 118,563,952,100 in 2022, with corresponding maximum capitals of KSh. 54,038,642,000 and KSh. 669,411,638,000, respectively. By 2023, the mean capital had sharply risen to KSh. 1,374,88,623,600, with the highest capital at KSh. 804,913,647,000 and the lowest at KSh. 11,803,500 (Std. Dev = KSh. 237,996,778,800). These figures indicate significant growth in capital levels, albeit with substantial variability among the companies listed on the NSE, as evidenced by the increasing standard deviations each year.

The regression analysis outcomes indicate a significant positive relationship between capital structure and the financial performance of companies listed on the Nairobi Securities Exchange (NSE). The unstandardized coefficient (B) of 0.904 suggests that for every one-unit increase in capital structure, the financial performance is expected to improve by 0.904 units, holding all other factors constant. This strong positive correlation is further supported by a high standardized coefficient (Beta) of 0.886, indicating that capital structure has a substantial impact on financial performance compared to other predictors.

Additionally, the significance level (Sig.) of 0.000 underscores the statistical relevance of the relationship between capital structure and financial performance, suggesting that this association is not due to random chance. The regression model, which includes capital structure as a key variable, explains a considerable portion of the variance in financial outcomes among the listed companies. These findings highlight the importance of capital structure in enhancing financial performance and suggest that companies can potentially improve their fiscal results by optimizing their capital structure strategies across various sectors and company sizes.

4.1.4 Board Gender Diversity and Financial Performance

The researcher sought to establish how gender diversity of the board related with the fiscal performance of listed companies at the NSE in Kenya and results were as tabulated in Table 5.

Table 5: Board Gender Diversity per Year

	Years 2018	Year 2019	Year 2020	Year 2021	Year 2022	Year2023
Mean	.2070	.2242	.2288	.2168	.2310	.2381
Std. Deviation	.13385	.13771	.14088	.14244	.14086	.14407
Minimum	.50	.50	.50	.50	.50	.50
Maximum	0.00	0.00	0.00	0.00	0.00	0.00

Source: Field Data (2024)

Table 5 provides insights into the gender diversity ratios of companies listed on the Nairobi Securities Exchange (NSE) from 2018 to 2023, showing gradual increases over the years. In 2018, the mean gender diversity ratio was 0.2070, with the highest ratio at 0.50 and the lowest at 0 (Std. Dev = 0.13385). By 2019, the mean ratio had risen slightly to 0.2242, with the same maximum and minimum values, though the standard deviation increased slightly to 0.13771, indicating growing variability among companies.

The trend of improving gender diversity continued through 2023, with the mean ratio reaching 0.2381. The maximum ratio remained consistent at 0.50, while the minimum stayed at 0 (Std. Dev = 0.14407). Over the years, the standard deviations have gradually increased, reflecting a wider distribution of gender diversity ratios among the companies. These findings suggest that while there has been a slow but steady increase in gender diversity on boards, the levels of diversity vary significantly across different companies listed on the NSE.

The simple linear regression for mediation function of boards' gender composition in the interplay of equity financing and companies' fiscal gains was carried out and the results are presented below.

Table 6: Model summary for outcome variable: Board gender diversity

R	R-squared	Mean Squared Error (MSE)	F-statistic	df1	df2	p-value
.7772	.6040	.6254	44.2397	1	29	.0000

The model summary results in Table 6 demonstrate a strong positive relationship between equity financing and board gender diversity, with an R value of 0.7772, indicating a robust correlation. The R-squared value of 0.6040 suggests that approximately 60.4% of the variance in board gender diversity can be attributed to equity financing, highlighting its significant predictive power while acknowledging that other factors also play a role. The Mean Squared Error (MSE) of 0.6254 indicates a good model fit, and the F-statistic of 44.2397 confirms the overall significance of the model, suggesting it is highly effective. The p-value of 0.0000 further reinforces the statistical

significance of the relationship, allowing us to confidently reject the null hypothesis and affirm that equity financing is a significant determinant of board gender diversity.

Table 7: Boards' Gender Diversity Regression Coefficients: Un-Standardized

Model Coefficients for Board Gender Diversity	Coeff	SE	t	p	LLCI	ULCI
Constant	1.0604	0.7214	1.4699	0.1524	-0.4151	2.5358
Equity financing	0.7228	0.1087	6.6513	0	0.5005	0.945

Regression of coefficients outcomes in Table 7 showed constant = 1.0604. The constant term represents the anticipated value of board's gender diversity when equity financing is zero. However, the p-value (0.1524) suggests that this constant is not statistically useful. Equity financing coefficient = 0.7228. The coefficient of 0.7228 indicates that for each unit increase in equity financing, boards' gender variance increases by approximately 0.7228 units. The p-value =0.0000 confirms that this effect is statistically significant.

Table 8: Boards' Gender Diversity Regression Coefficients: Standardized

Standardized Coefficients for Board Gender Diversity	Coeff
equity financing	.7772

Table 8 showed standardized coefficient = 0.7772. This standardized coefficient allows for comparison across different predictors. It signposts that equity financing has a strong effect on board's gender variance, suggesting that it is a crucial factor in promoting diversity on management boards.

Table 9: Model Summary for Outcome Variable: Financial Performance

R	R-squared	Mean Squared Error (MSE)	F-statistic	df1	df2	p-value
0.8928	0.7972	0.2853	55.0211	2	28	.0000

Table 9 showed that R =0.8928, this value indicates a strong positive correlation between the combined effect of equity financing and boards' gender variety on fiscal outcomes. R-squared = 0.7972 this implied that approximately 80% of the variance in financial performance can be justified by the combined effect of equity financing and boards' gender variance. This suggests a high degree of explanatory power, indicating that these two factors are crucial in shaping the fiscal outcomes for NSE-listed companies. F-statistic = 55.0211; this value tests the overall significance of the model. A high F-statistic underlines that the model avails a more ideal fit than one with no predictors. p-value = 0.0000, which designates that the interplay of equity financing, boards'

gender variance, and financial performance is statistically significant, with a confidence level greater than 99%. This means we can reject the null hypothesis that postulated no relationship.

Table 10: Financial Performance Regression Coefficients: Un-Standardized

Model Coefficients for financial performance	Coeff	SE	t	p	LLCI	ULCI
Constant	0.412	0.505	0.816	0.4215	-0.6225	1.4466
Equity financing	0.5417	0.1166	4.645	0.0001	0.3028	0.7807
Board Gender Diversity	0.2895	0.1254	2.309	0.0286	0.0326	0.5464

Table 10 show that constant = 0.412, the constant term represents the expected value of fiscal gains when both equity financing and board's gender diversity are zero. However, the p-value (0.4215) suggests that this constant is not statistically meaningful. Equity financing coefficient = 0.5417, which signals that for each unit increase in equity financing, fiscal outcomes increase by approximately 0.5417 units, holding board's gender diversity constant. The p-value =0.0001, which attests that this effect is statistically significant. Boards' gender diversity coefficient = 0.2895; this underlined that for each unit increase in boards' gender variety, financial output increases by approximately 0.2895 units, holding equity financing constant. The p-value = 0.0286 affirms that this effect is also statistically significant.

Table 11: Financial Performance Regression Coefficients: Standardized

Standardized Coefficients for Board Gender Diversity	Coeff
Equity financing	0.6283
Board Gender Diversity	0.3123

Table 11 shows standardized coefficients. The standardized coefficients allow for comparison of the relative value of each forecaster. Equity financing (0.6283) has a stronger effect on financial performance than board gender diversity (0.3123), but both are significant predictors.

Table 12: Model summary for total effect

R	R-squared	Mean Squared Error (MSE)	F-statistic	df1	df2	p-value
0.871	0.7586	0.3279	91.1104	1	29	.0000

Table 12 showed R = 0.871, this indicates a strong positive correlation between equity financing and financial performance. As equity financing increases, fiscal growth tends to increase as well. R-squared = 0.7586 this shows approximately 76% of the variance in fiscal output can be explained by equity financing. This suggests a high level of explanatory power, indicating that equity servicing is a significant predictor of fiscal output. Mean Squared Error (MSE) = 0.3279; this implies the average squared variation between the detected and anticipated values of fiscal gains.

A lower MSE signals a better fit of the model. F-statistic = 91.1104; this high F-statistic meant that the model significantly predicts fiscal earnings compared to a model without predictors. p-value = 0.0000 signifies that the interplay of equity financing and fiscal output is statistically significant, with a confidence level greater than 99%. This means we reject the null hypothesis that predicted no relationship.

Table 13: Total Effect Régression Coefficients: Un-Standardized

Model Coefficients for Total effect	Coeff	SE	t	p	LLCI	ULCI
Constant	0.719	0.5223	1.3766	0.1792	-0.3492	1.7873
Equity financing	0.751	0.0787	9.5452	.0000	0.5901	0.9119

Table 13 show that constant = 0.719; the constant term represents the anticipated value of fiscal productivity when equity financing is zero. However, the p-value (0.1792) signals that this constant is not statistically significant. Equity financing coefficient = 0.751 this indicates that for each unit increase in equity financing, fiscal output increases by approximately 0.751 units. The p-value =0.0000 confirms that this effect is statistically significant.

Table 14: Total Effect Regression Coefficients: Standardized

Standardized Coefficients for Total Effect	Coeff
Equity financing	.8710

Table 14 shows standardized coefficient for equity financing = 0.8710. It demonstrates the strength of the interaction of equity financing and fiscal gains when both variables are standardized. A value of 0.8710 suggests a very strong effect size, indicating that equity financing has a substantive power on fiscal output.

Table 15: Total, direct, and indirect effects of equity financing on financial performance regression coefficients: Un-Standardized

	Coeff	SE	t	p	LLCI	ULCI
Total Effect of equity financing on financial performance	0.751	0.0787	9.5452	.0000	0.5901	0.9119
Direct effect of equity financing on financial performance	0.5417	0.1166	4.644	0.0001	0.3028	0.7807
Indirect Effect(s) of equity financing on financial performance	0.2093	0.0939			0.0233	0.3941
Completely Standardized Indirect Effect(s) of equity financing on financial performance	0.2427	0.1108			0.0295	0.4638

Table 15 illustrates that the total effect of equity financing on fiscal productivity is 0.751, indicating a strong positive relationship. The p-value of 0.0000 confirms that this effect is statistically significant. The confidence interval (0.5901 to 0.9119) excludes zero, reinforcing the strength of this effect. Furthermore, Table 34 shows that the direct impact of equity financing on fiscal gains is 0.5417, indicating that a portion of the effect of equity financing directly influences fiscal performance without mediation. The p-value of 0.0001 indicates that this effect is also statistically significant. The confidence interval (0.3028 to 0.7807) suggests that this direct effect is robust and meaningful. Additionally, the indirect effect of equity financing on fiscal performance via board gender diversity is 0.2093, indicating that part of the influence of equity financing on fiscal performance occurs through its impact on board gender composition. The bootstrap confidence interval (0.0233 to 0.3941) does not include zero, indicating that this indirect effect is statistically significant. Finally, the completely standardized indirect effect of 0.2427 further confirms the mediating role of board gender diversity. This standardized effect allows for comparison across different variables and indicates a significant mediation effect.

4.1.5 Hypothesis of mediation effect of board gender diversity in the relationship between capital structure and financial performance.

H_{07} *There is no significant mediation effect of board gender diversity in the relationship between capital structure and financial performance of listed companies at the NSE in Kenya.*

The simple linear regression for mediation function of boards' gender constitution in the interplay of capital structure and fiscal performance was carried out and the outcomes were as depicted below.

Table16: Model Summary for Outcome Variable: Board's Gender Diversity

R	R-squared	Mean Squared Error (MSE)	F-statistic	df1	df2	p-value
0.7211	0.5199	0.7583	31.4079	1	29	.0000

The model summary outcomes in Table 16 above indicated R = 0.7211, this value indicates a strong positive correlation of capital structure and board's gender representativeness. This suggests that as capital structure increases, boards' gender representativeness tends to increase as well. R-squared = 0.5199 this implied that Approximately 60% of the variance in gender representativeness of boards can be explained by capital structure. This indicates a moderate level of explanatory power, suggesting that while capital structure is a significant forecaster, other factors may also influence gender representativeness in boards. Mean Squared Error (MSE) = 0.7583. A lower MSE signals a better fit of the model. F-statistic = 31.4079, this value tests the overall significance of the model. A high F-statistic indicates that the model offers an ideal fit than a model with no predictors. p-value =0.0000, this p-value indicates that the interplay of capital structure and board's gender representativeness is statistically significant, with a confidence level greater than 99%. This means we can reject the null hypothesis that postulated no relationship.

Table 17: Board Gender Diversity Regression Coefficients: Un-Standardized

Model Coefficients for Board Gender Diversity	Coeff	SE	t	p	LLCI	ULCI
Constant	0.1494	1.0141	0.1473	0.8839	-1.9247	2.2235
Capital structure	0.7937	0.1416	5.6043	.0000	0.5041	1.0834

Regression of coefficients results in Table 17 showed constant = 0.1494; the constant term represents the expected value of board's gender representativeness when capital structure is zero. However, the p-value (0.8839) suggests that this constant is not statistically meaningful. The capital structure coefficient = 0.7937. The coefficient of 0.7937 signifies that for each unit rise in capital structure, board's gender representativeness rises by approximately 0.7937 units. The p-value =0.0000 confirms that this effect is statistically significant.

Table 18: Board Gender Diversity Regression Coefficients: Standardized

Standardized Coefficients for Board Gender Diversity	Coeff
capital structure	.7211

Table 18 showed standardized coefficient = 0.7211. This standardized coefficient allows for comparison across different predictors. It signals that capital structure has a strong effect on

board's gender representativeness, suggesting that it is a crucial factor in promoting diversity on the boards.

Table19: Model Summary for Outcome Variable: Financial Performance

R	R-squared	Mean Squared Error (MSE)	F-statistic	df1	df2	p-value
0.9159	0.8389	0.2266	72.8991	2	28	.0000

Table 44 showed that R =0.9159, this value indicates a strong positive correlation between the combined effect of capital structure and board's gender representativeness on fiscal gains. R-squared = 0.8389 this implied that approximately 84% of the variance in financial performance can be justified by the combined effect of capital structure and board's gender representativeness. This suggests a heightened explanatory power, indicating that these two factors are crucial in shaping the fiscal outcomes of NSE-listed companies. F-statistic = 72.8991, this value tests the overall significance of the model. A high F-statistic indicates that the model offers an ideal fit relative to those with no predictors. p-value = 0.0000; this p-value indicates that the interplay of capital structure, boards' gender representativeness, and fiscal gains is statistically significant, with a confidence level greater than 99%. This means we can reject the null hypothesis that predicted no relationship.

5.0 Discussion

The study reveals that debt and equity financing significantly influence the financial performance of companies listed on the Nairobi Securities Exchange (NSE). A strong positive correlation was found between debt financing and financial performance, with debt explaining 71.3% of the variance in financial outcomes. This supports the notion that strategic debt management can enhance profitability, as indicated in prior research by Ghosh et al. (2020) and Akinlo and Asaolu (2012). However, consistent with Abor (2005), the study also cautions against excessive reliance on debt, which can lead to financial distress. Similarly, equity financing was found to account for 75.9% of the variation in financial performance, emphasizing its importance in reducing financial risk and avoiding debt obligations, though it may dilute ownership, as noted by Margaritis and Psillaki (2021).

The study further highlights the critical role of capital structure in determining financial health and performance. Firms with well-balanced capital structures tend to perform better financially, reinforcing findings by Brealey et al. (2011) and Ghosh et al. (2020). Achieving an optimal mix of debt and equity is crucial for enhancing firm value and financial stability, as supported by Oladipo et al. (2020). Moreover, the study emphasizes the importance of gender diversity on corporate boards, revealing that gender-diverse boards are positively associated with improved financial performance. This aligns with the research of Adams and Ferreira (2009) and Carter et al. (2003), suggesting that diversity enhances decision-making and governance.

Finally, the study uncovers the mediating role of board gender diversity in the relationship between financing methods and financial performance. Companies with gender-diverse boards benefit from

improved financial outcomes as they increase their debt and equity financing. This finding is corroborated by Ahmed and Atif (2021) and Jun et al. (2023), who found that gender-diverse boards contribute to better financial decision-making and lower financial distress. However, the study acknowledges the complexity of this relationship, noting that the impact of gender diversity on capital structure and performance may vary depending on industry and context, as highlighted by Seebeck and Vetter (2021) and Yakubu and Oumarou (2023).

Table 20: Financial Performance Regression Coefficients: Un-Standardized

Model Coefficients for financial performance	Coeff	SE	t	p	LLCI	ULCI
Constant	-0.834	0.5545	-1.504	0.1438	-1.97	0.3019
Capital structure	0.6555	0.1117	5.8665	.0000	0.4266	0.8844
Board Gender Diversity	0.3129	0.1015	3.0823	0.0046	0.1049	0.5208

Table 20 show that constant = -0.834; the constant term represents the anticipated value of fiscal gains = when both capital structure and board's gender representativeness are zero. However, the p-value (-1.504) suggests that this constant is not statistically meaningful. Capital structure coefficient = 0.6555; this signalled that for each unit increase in capital structure, financial outcomes increase by approximately 0.6555 units, holding board's gender representativeness constant. The p-value =0.0000 attests that this effect is statistically significant. Board gender representativeness coefficient = 0.3129, which signified that for each unit rise in board gender diversity, financial performance increased by roughly 0.3129 units, holding capital structure constant. The p-value = 0.0046 affirms that this effect is also statistically significant.

Table 21: Financial Performance Regression Coefficients: Standardized

Standardized Coefficients for Board Gender Diversity	Coeff
Capital structure	0.6423
Board Gender Diversity	0.3374

Table 21 shows standardized coefficients. The standardized coefficients allow for comparison of the relative importance of each predictor. Capital structure (0.6423) has a stronger effect on fiscal gains than board's gender representativeness (0.3374), but both are significant predictors.

Table 22: Model Summary for Total Effect

R	R-squared	Mean Squared Error (MSE)	F-statistic	df1	df2	p-value
0.8856	0.7842	0.293	105.402	1	29	.0000

Table 22 showed R = 0.8856, which signified a strong positive link between capital structure and financial growth. As capital structure increases, fiscal earnings tends to increase as well. R-squared = 0.7842 this shows approximately 78% of the variance in financial productivity may be justified

by capital structure. This suggests a high level of explanatory power, indicating that capital structure is a significant predictor of financial performance. Mean Squared Error (MSE) =0.293; this signalled the average squared difference between the detected and forecasted values of financial outcomes. A lower MSE indicates a better fit of the model. F-statistic = 105.402; this high F-statistic insinuated that the model significantly predicts fiscal gains compared to a model without predictors. p-value = 0.0000; this p-value indicates that the interrelation of capital structure and fiscal gains is statistically significant, with a confidence level greater than 99%. Thus we rejected the null hypothesis that posited no relationship.

Table 23: Total Effect Régression Coefficients : Un-Standardized

Model Coefficients for Total effect	Coeff	SE	t	p	LLCI	ULCI
Constant	-0.7873	0.6304	-1.2489	0.2217	-2.0766	0.502
Capital structure	0.9039	0.088	0.2665	.0000	0.7238	1.0839

Table 23 show that constant = -0.7873; the constant term represents the expected value of fiscal gains when capital structure is zero. However, the p-value (0.2217) signals that this constant is not statistically meaningful. Capital structure coefficient = 0.9039; this meant that for each unit increase in capital structure, fiscal earnings increased by approximately 0.9039 units. The p-value =0.0000 attests that this effect is statistically significant.

Table 24: Total Effect Regression Coefficients: Standardized

Standardized Coefficients for Total Effect	Coeff
Capital structure	.8856

Table 24 shows standardized coefficient for capital structure = 0.8856. It indicates the strength of the association between capital structure and fiscal gains when both variables are standardized. A value of 0.8856 suggests a very strong effect size, insinuation that capital structure has a substantial impact on companies' fiscal gains.

Table 25 Total, direct, and indirect effects of capital structure on financial performance regression coefficients: Un-Standardized

	Coeff	SE	t	p	LLCI	ULCI
Total Effect of capital structure on financial performance	0.9039	0.088	10.2665	0.0000	0.7238	1.0839
Direct effect of capital structure on financial performance	0.6555	0.1117	5.8665	0.0000	0.4266	0.8844
Indirect Effect(s) of capital structure on financial performance	0.2483	0.0921			0.0681	0.4264
Completely Standardized Indirect Effect(s) of capital structure on financial performance	0.2433	0.0858			0.07	0.4054

Table 25 show that the total effect of capital structure on fiscal gains is 0.9039, alluding to a strong positive relationship. The p-value = 0.0000 confirms this effect is statistically significant. The confidence interval (0.7238 to 1.0839) does not include zero, underlining the strength of this effect. Further the Table 44 shows the direct effect of capital structure on fiscal earnings is 0.6555, which denoted that a segment of the effect of capital structure directly impacts fiscal outcomes without mediation. The p-value = 0.0001 denoted that this effect is also statistically significant. The confidence interval (0.4266 to 0.8844) suggested that this direct effect is sturdy and meaningful. Also, the indirect effect of capital structure on fiscal measures through board' gender representativeness is 0.2433. This effect indicates that part of the impact of capital structure on fiscal viability occurs through its influence on board's gender representativeness. The bootstrap confidence interval (0.07 to 0.4054) does not include zero, signalling that this indirect effect is statistically significant. Finally, the completely standardized indirect effect of 0.2433 further confirms the mediating function of board's gender representativeness. This standardized effect compares across different variables and indicates a significant mediation effect.

6.0 Conclusion

The study concludes that there is a significant and positive relationship between debt financing, board gender diversity, and financial performance. Companies that strategically manage their debt financing and foster gender diversity on their boards tend to experience better financial outcomes. The findings suggest that debt financing not only directly impacts financial performance but also

indirectly influences it through the enhancement of board gender diversity. This mediating effect underscores the importance of diverse perspectives in improving decision-making and strategic planning. Consequently, the study emphasizes the need for companies to adopt a balanced approach to managing their capital structure while promoting gender diversity to achieve optimal financial performance.

7.0 Recommendation

The study recommends that companies should adopt a balanced approach to their financing strategies while actively promoting gender diversity on their boards. By carefully managing debt financing and ensuring a diverse board composition, organizations can optimize decision-making processes and improve financial performance. Additionally, the study suggests that companies should consider implementing policies and practices that foster a more inclusive boardroom environment, which not only aligns with stakeholder expectations but also enhances overall corporate governance. Emphasizing the integration of diversity initiatives with financial strategies could serve as an effective measure to achieve sustainable growth and long-term success.

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