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# Effect of capital structure on the financial performance of listed non-financial firms in Nigeria: the moderating effect of board characteristics

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## ABSTRACT

This study is aimed at examining the effect of Capital Structure (CS) on the Financial Performance (PF) of listed non-financial firms in Nigeria. The paper reviewed some of the literature and theories in this field, which includes the Miller and Modigliani theory, the Pecking-order theory, and the Trade-off theory. The population of the study consists of 106 Non-financial companies listed on the Nigerian Exchange Group. However, based on the criteria set by the researchers, a judgmental sampling technique was used in selecting 57 companies. The data used in the study covers the period from 2012 to 2021 and was analyzed using multiple regression models. The finding of the study shows that Leverage (LEV) has no significant effect on Tobin's Q (TQ) but negatively and significantly affects Return on assets (ROA). Furthermore, board independence (BIN) moderates the relationship between LEV and ROA. In contrast, Board Size (BSIZE) and Board Gender (BGEN) did moderate either of the relationships. None of the board characteristics variables moderate the relationship between LVE and TQ. The study recommends that debt capital should be reduced and replaced with equity capital to reduce the negative effect that debt capital has on profitability.

**Keywords:** Capital structure, financial performance, corporate governance

## 1. INTRODUCTION

A good corporate performance is the primary goal of a company's business activities and this can be achieved through profit-making (Luo & Jiang, 2022). This is possible if a company has the necessary funds from various sources. A company raises funds needed to finance its operations and capital expenditure through equity, debt, or both. This is what it refers to as capital structure. Therefore, the capital structures of a company explain how the company raises funds to finance its operations via debt, equity, or both (Mukumb et al., 2020). Achieving financial performance, which is one of the objectives of a company, depends largely on how well or otherwise, its capital structure performed (Tanko et al., 2021). This choice, according to Brigham and Gapenski, (1996), is significant and may have an impact on how well the company can compete in its industry. A company may have trouble growing and taking the advantage of investment opportunities if it just uses internal, that is, equity capital. Therefore, businesses may have to raise debt capital to grow and boost their earnings potential.

Corporate governance is the means through which the activities of firms are governed for the well-being of all stakeholders, which will ultimately result in better financial performance (Malik & Naz, 2016). The need for corporate governance stems from the fact that agency problems arise as a result of the separation between ownership and control of firms (Jensen & Meckling, 1976). While shareholders own the firms, managers, however, manage and control them. Shleifer and Vishny (1997) opined that by having effective corporate governance mechanism, the interests of managers would be aligned with those of shareholders, which would ultimately reduce agency costs and improve performance.

Previous empirical literature usually focused on the direct relationship between capital structure and financial performance (Sheikh and Wang, 2013; Le and Phan, 2017; Ramli et al., 2019; Dinh and Pham, 2020; Mukumbi et al., 2020; Abdallah and Tursoy, 2021) and corporate governance and financial performance (Bhagat and Bolton, 2008; Nibedita, 2017; Olayiwola, 2018; Roselyn et al., 2019; Salloum et al., 2019; Ciftci et al., 2019; Kyere and Ausloos, 2020).

However, Okiro et al. (2015) assert that empirical research shows that there is a relationship between capital structure, board characteristics, and financial performance, which arises as a result of agency conflict between shareholders and managers. They further state that there is a direct or indirect relationship between capital structure and corporate governance on the one hand and financial performance on the other (Bhagat & Bolton, 2008). Based on this review of the

literature, we attempted to determine whether corporate governance moderates the relationship between capital structure and financial performance of Nigerian listed non-financial firms.

The study focuses on Nigerian firms because firms in Nigeria find it difficult to raise debt capital to finance their operations and tap into new investment opportunities (Sani & Alifiah, 2021). Therefore, as empirically noted by Ibhagui and Olokoyo (2018) and Sani et al. (2020), short-term debts make up the highest proportion of debt capital of firms in Nigeria.

The rest of this paper includes the literature review, methodology, empirical analysis, conclusion, and recommendations.

## **2. LITERATURE REVIEW**

### **Capital Structure and Firm' Performance**

To explain the relationship between capital structure and firm performance, various theories were developed. The first theory was proposed by Modigliani and Miller (1958), which suggests that in a perfect market (where there is no tax, debt is risk-free, there is no tax, information about the market is sufficient and available to all players, and there are no transaction costs, among others), the capital structure will not affect the firm's value. Furthermore, Modigliani and Miller (1963) incorporated tax into their theory. They suggested that a firm's value would increase as more debt capital was added to the capital structure. This is because debt capital is cheaper because interest is a tax-deductible expense. Thus, the capital structure should consist of a hundred percent debt capital (Muhammad et al., 2021; Luo and Jiang, 2022). The second theory is the trade-off theory. This theory was originally developed by Kraus and Litzenberger (1973) to counter the Modigliani and Miller theory (Dinh & Pham, 2020). This theory explains that the capital structure of companies is usually comprised of debt and equity. The theory agreed on the existence of a tax advantage associated with debt capital. It also states that as the company tries to take advantage of the tax benefit by raising additional debt capital, the financial risk of the company also rises. Therefore, a company can raise debt capital until it attains the optimal capital structure (Sing & Bagga, 2019). The last theory is the Pecking Order Theory, which was developed by Myers and Majluf (1984)). According to this theory, firms raise funds in a preferred order. It starts with internal sources like retained earnings, then debt capital, and finally equity. This is due to information asymmetry (Muhammad et al., 2021).

Previous studies on capital structure and financial performance arrived at a diverse conclusion. For instance, Sing and Bagga (2019) using 50 Indian companies, found a positive and significant relationship between capital structure and performance. Similarly, Mukumbi et al. (2020) used data from 16 Kenyan companies and found that capital structure positively impacts performance. Other studies that found positive relationships include (Mujahid and Akhtar (2014), Khaliq et al. (2014), 2014; Abdallah and Tursoy (2002). On the other hand, Soumadi and Hayajneh (2012) examined the effect of capital structure on performance using data from 76 Jordanian companies and found a negative and significant relationship. Other studies that found negative relationships include (Abor, 2005; Mateev, Poutziouris, & Ivnov, 2013; Rouf & Abdur, 2015).

In Nigeria's context, most studies document a negative relationship between capital structure and performance. For instance, Lawal et al. (2014) found a negative relationship between capital structure and the performance of manufacturing companies in Nigeria. Similarly, Uremadu and Onyekachi (2018) also found a negative relationship between capital structure and the performance of listed consumer goods firms in Nigeria. Likewise, Adeoye and Olojede (2019) using the Granger causality test, examined the influence of capital structure on the performance of 10 Deposit and found a significant negative relationship. Opoku-Asante et al. (2022), using cross-sectional data from two West African countries (Nigeria and Ghana), found a negative and significant effect of capital structure on performance. Nwafor et al. (2022), using a sample of 3 pharmaceutical companies in Nigeria over the period 2011-2020, found that total debt negatively affected performance. For this reason, we propose the following hypothesis:

*H<sub>01</sub>: Capital Structure has no effects on the Financial Performance of listed non-financial companies in Nigeria.*

### **Capital Structure, Board characteristics and Firm's Performance**

Agency theory plays a crucial role in explaining the relationship between capital structure, corporate governance, and performance. According to Jensen and Meckling (1976), an agency relationship exists when one person or group of persons (known as the principal) employs the services of another person (known as the agent) to perform some duties on their behalf. The agency relationship involves the principal delegating decision-making authority to the agent. An agent (managers) is expected to act in the best interest of shareholders. However, agency problems arise when managers pursue their self-interest at the expense of the interests of the shareholders, which is profit maximization (Fama & Jensen, 1983).

Kester (1986) argued that one method of reducing the agency problem is through the choice of the capital structure. A higher proportion of debt capital will decrease free cash flow and increase the risk of bankruptcy; hence, the agency problem would be resolved (Morellec et al., 2012). Also, Grossman and Hart (1982) asserted that companies with higher debt capital are likely to experience a costly bankruptcy and job loss. This would, consequently, motivate managers to make informed investment decisions and perform optimally.

The agency theory has evolved to show that corporate governance, together with capital structure choices, affect financial performance and reduce the agency problem between shareholders, managers, and debt capital providers. The agency problem can be reduced with an effective corporate governance mechanism; this will checkmate the managers' ability to influence cash flows and also engage in initiatives that are suboptimal to the company (Muhammad et al., 2021)

Evidence from the empirical literature shows that corporate governance affects capital structure and financial performance. For instance, La Rocca (2007) found that corporate governance has a mediating and/or moderating effect on the relationship between capital structure and performance. Malik and Naz (2016) empirically concluded that the corporate governance mechanism moderates the relationship between capital structure and financial performance. Also, Javeed et al. (2017) empirically examined the effect of capital structure on the financial performance of non-financial firms in Pakistan using a sample of 155 companies over the period 2008–2012 and found that board independence and ownership concentration moderate the relationship between capital structure and financial performance in a positive manner, while managerial ownership did so in a negative manner. Also from the UK, Elmagrhi et al. (2018) also find that capital structure positively impacts performance and that this relationship is moderated by corporate governance and trustee board diversity. Muhammad et al. (2021) found that corporate governance mechanisms only moderate the relationship between capital structure and performance using a sample of 224 Italian companies.

However, Wau et al. (2021) documented that corporate governance did not moderate the relationship between capital structure and financial performance among 20 Indonesian companies over the period 2019–2020. Therefore, the following hypothesis was proposed:

*H<sub>02</sub>: Board characteristics moderates the relationship between Capital Structure and Financial Performance.*

### 3. METHODOLOGY

#### Sample and data

The purpose of this study is to determine the effect of capital structure on the financial performance of listed non-financial companies in Nigeria. Secondary data was collected from annual reports and accounts of companies over the period from 2012 to 2021. Companies in the financial services sector were removed from the sample size, as were companies with missing data. The final sample size comprises 57 companies over ten years, making it 570 firm-year observations. Table I provide the summary of the sapling procedure used in the study.

#### Definition and measurement of variables

##### Dependent variable

In line with the study of Muhammad et al. (2021), this paper utilized two measures of performance. The return on assets (ROA), which is calculated by dividing net profit by total assets, and Tobin's Q (TQ), which is calculated by dividing market capitalization plus total debt by total assets.

##### Independent variable

Consistent with the study of Muhammad et al. (2021), this study used the ratio of total interest-bearing debt over total assets as a proxy for capital structure.

##### Control variables

Three control variables were used in this study. They include firm size, which is measured as the natural logarithm of total assets, and firm age. Lastly, is the industry dummy. As the data was collected from companies in different industries, 1 is assigned to manufacturing companies and 2 is assigned to service companies. Table II provides a summary of the variables used in the study.

#### Model Specification

$$TQ_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 IND_{it} + \varepsilon_{it} \text{-----} 1$$

$$ROA_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 FSIZE_{it} + \beta_3 FAGE_{it} + \beta_4 IND_{it} + \varepsilon_{it} \text{-----} 2$$

$$TQ_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 BSIZE_{it} + \beta_3 BIN_{it} + \beta_4 BGEN_{it} + \beta_5 LEV * BSIZE_{it} + \beta_6 LEV * BIN_{it} + \beta_7 LEV * BGEN_{it} + \beta_8 FSIZE_{it} + \beta_9 FAGE_{it} + \beta_{10} IND_{it} + \varepsilon_{it} \text{-----} 3$$

$$ROA_{it} = \beta_0 + \beta_1LEV_{it} + \beta_2BSIZE_{it} + \beta_3BIN_{it} + \beta_4BGEN_{it} + \beta_5LEV*BSIZE_{it} + \beta_6LEV*BIN_{it} + \beta_7LEV*BGEN_{it} + \beta_8FSIZE_{it} + \beta_9FAGE_{it} + \beta_{10}IND_{it} + \varepsilon_{it} \text{-----4}$$

Where:

$\beta_0$  = Constant

$\beta_1$  to  $\beta_6$  = Coefficient of the parameters

$\varepsilon$  = error term

i= firm

t= time

**Table 1**  
**Sample Procedure**

Initial sample size	156
Financial services	(50)
Companies listed after 2012	(12)
Companies with missing data	(37)
Final sample size	57
Observation period (2012 – 2021)	10yrs
Number of observations	570

Source: Nigerian Exchange Group

**Table 2**  
**Variable measurement**

Variable name	Variable type	Measurement	Source
<b>Dependent variables</b>			
Tobin’s Q (TQ)	Dependent	(Market capitalization plus total debt)/total asset.	Muhammad et al. (2021).
Return on assets (ROA)	Dependent	Net profit/total asset.	Muhammad et al. (2021)
<b>Independent variable</b>			
Leverage (LEV)	Independent	Total debt/total assets.	Muhammad et al. (2021)
<b>Moderating variables</b>			
Board size (BSIZE)	Moderator	Total number of the directors on the board.	Muhammad et al. (2021)
Board independence (BIN)	Moderator	Independent non-executive directors/ total number of directors.	Sani and Alifiah (2021).



Board diversity	gender Moderator	Number of women directors on board divide by the total number of directors on board.	Nekhili et al. (2020).
<b>Control variables</b>			
Firm size (FSIZE)	Control	Natural logarithm of total assets.	Muhammad et al. (2021).
Firm age (FAGE)	Control	Number of years since Incorporation.	Ilaboya and Ohiokha (2016)
Industry (IND)	dummy	Dummy variable 1= manufacturing companies, 2= service companies	Alkurdi and Mardini (2020).

Source: Authors' Compilation (2023)

## 4. RESULT AND DISCUSSION

### Descriptive statistics

**Table 3**  
**Descriptive Statistics Table**

Variable	Obs	Mean	SD	Minimum	Maximum
TQ	570	1.2510	1.2529	0.1651	4.8479
ROA	570	0.0389	0.0857	-0.1566	0.2076
LEV	570	0.1689	0.2035	0.0000	0.7001
BSIZE	570	8.9596	2.5397	4.0000	23.000
BIND	570	0.6372	0.1356	0.0000	0.9091
BGEN	570	0.1395	0.1254	0.0000	0.6667
FSIZE	570	10.211	0.6975	9.0310	11.544
FAGE	570	45.640	18.087	7.0000	98.000
IND	570	1.2632	0.4407	1.0000	2.0000

Table 3 provides descriptive statistics of the variables used in the study. Tobin's (TQ) has a mean value of 1.2510 with a standard deviation of 1.2529. This indicates a low variation between the mean and the standard deviation. It also indicates that, on average, the market value to book value of the companies is 1.25 times. It also has minimum and maximum values of 0.1651 and 4.8479, respectively. The mean value of the return on asset (ROA) is 0.0389 (approximately 4%). This means, on average, companies earn a 4% return on assets every year. The maximum return on assets earned by the companies is approximately 21%, and the minimum is given as -0.1566. Leverage (LEV), which is the measure of the capital structure, has a mean of 0.1689 and a standard



deviation of 0.035%. That means the average proportion of the debt capital of the companies is 17%. In other words, the debt capital of the companies stood at 17% of the total capital. The maximum value of LEV is 0.7001. This indicates that there are companies whose debt capital constitutes 70% of their entire capital. While the minimum value is given as 0.000, indicating that there are company(s) with zero debt capital in their capital structure.

Board size (BSIZE) has a minimum score of 4 and a maximum value of 23. This means the minimum number of members on the board of directors is 4, while some companies have up to 23 members. The average is 8.96 while the standard deviation is 2.5 indicating a wide gap between the mean and the standard deviation. The board independence index (BIN) has a mean score of 0.637 and a standard deviation of 0.1356. This means that, on average, independent non-executive directors make up 64% of the total number of directors on the board. Also, there are companies without independent non-executive directors on the board, while in some companies, non-executive directors make up 91% of the board members. On average, Women (BGEN) constitute 14% (approximately) of the members on the board. The maximum score of BGEN stood at 0.6667, indicating that in some companies, women constitute 67% of the total number of board members, while in other companies there is an absence of female representation on their boards. This is an indication that some companies are more gender diverse than others.

On the control variables, firm size (FSIZE) has a mean and standard deviation of 10.211 and 0.6975, respectively, indicating a wider gap. The maximum and minimum scores are 11.544 and 9.0310 respectively. Firm age (FAGE) has a minimum and maximum value of 7.00 and 98.00, respectively. This shows that some companies are older than others.

## Correlation Analysis

**Table 4**  
**Correlation Analysis Table**

Variables	TQ	ROA	LEV	BSIZE	BIND	BGEN	FSIZE	FAGE	IND	VIF
TQ	1.000									
ROA	0.273	1.000								
LEV	0.025	-0.322	1.000							1.02
BSIZE	0.024	-0.029	-0.057	1.000						1.25
BIND	-0.025	-0.068	0.097	-0.016	1.000					1.02
BGEN	0.100	0.191	-0.069	0.126	-0.106	1.000				1.07
FSIZE	0.086	0.223	-0.047	0.404	-0.067	0.239	1.000			1.44
FAGE	0.128	0.060	0.059	-0.001	0.0158	0.040	0.138	1.000		1.24
IND	-0.190	-0.248	0.014	0.050	0.016	-0.063	-0.318	-0.432	1.000	1.40

Table 4 contains the Pearson coefficient correlation of the variables used in the study. The highest correlation coefficient is 0.404 between BSIZE and FSIZE. However, this value is by far less than the threshold of 0.8 suggested by Hair et al. (2014). Furthermore, the variance inflation factor (VIF) result indicates that there is indeed an absence of a multi-collinearity problem. TQ is positively correlated with ROA, LEV, BSIZE, BGEN, and FAGE, while negatively correlated with BIN. ROA is negatively correlated with LEV, BSIZE, and BIND; and positively correlated with BGEN, FSIZE, and FAGE. LEV is negatively correlated with BSIZE, BGEN, and FSIZE while positively correlated with BIN and FAGE.

### Regression Analysis

**Table 5**  
**Regression result**

	MODEL I(TQ)		MODEL II(ROA)	
	Coeff.	Pvalue	Coeff.	P value
<b>Constant</b>	1.07532	0.225	-0.016047	0.771
<b>LEV</b>	0.15779	0.534	-0.126611	0.000
<b>FSIZE</b>	0.05388	0.489	0.017946	0.000
<b>FAGE</b>	0.00378	0.231	-0.000860	0.000
<b>IND</b>	-0.44718	0.001	-0.053580	0.000
<b>Model Summary</b>				
Wald chi2	23.85	0.0001	150.05	0.0000
Hausman test	60.42	0.0000	27.02	0.0000
Modified Wald test	7.5e+05	0.0000	39078.99	0.0000
Pesaran's test	13.452	0.0000	2.666	0.0077
Wooldridge test	49.146	0.0000	1.864	0.1777

Table 5 contains the regression result. In the first model, TQ is used as a measure of performance. The data is a combination of time-series and cross-sectional, thus the fixed effect and random effect were used. The Hausman specification test favored the fixed effect; however, the data is characterized by the problem of heteroscedasticity. For this reason, the generalized least squares (GLS) model was run to correct this problem.

The Wald chi2 of 23.85 with a corresponding probability value of 0.0001 indicates that the model is well-fitted. LEV positively influences TQ ( $\beta = 0.1779$ ,  $P = 0.534$ ), indicating that an increase in the level of debt capital will result in an increase in Tobin's Q. However, the probability value is more than 5% which means the relationship is not significant at all level of significance.

Firm size ( $\beta=0.05388$ ,  $P=0.489$ ) and firm age ( $\beta=0.00378$ ,  $P=0.231$ ) are positively associated with the TQ. However, the relation is also not significant as their corresponding probability values are more than 5%.

In model II, ROA is used as a measure of performance. The Hausman test is also in favor of a fixed effect; however, as in model I, the data is characterized by the problem of heteroscedasticity, and hence the Generalized Least Squares (GLS) model was adopted.

The Wald chi2 value is 150.05 with a probability value of 0.0000, indicating that the model is well-fitted. The LEV, which is the proxy for capital structure, has a negative and significant effect on ROA ( $\beta=-0.126611$ ,  $P=0.000$ ). This indicates that as the level of debt capital increases, the return on assets falls. This result is in line with the pecking order theory, which suggests that the company's source fund starts with the internal fund, the debt capital before equity which is their last resort (Myers and Majluf, 1984; Sheikh and Wang, 2013; Muhammad et al., 2014). And this result is consistent with the findings of (Muhammad et al., 2021; Nwafor et al., 2022; Evbayiro-Osagie and Enadeghe, 2022). All the control variables are statistically significant. While the FSIZE positively affects ROA ( $\beta=0.017946$ ,  $P=0.000$ ), the FAGE negatively and significantly affects ROA ( $\beta=-0.000860$ ,  $P=0.000$ ).

### Moderation Analysis

**Table 6**  
**Moderation result**

	MODEL III(TQ)		MODEL IV(ROA)	
	Coeff	P value	Coeff.	P value
Const	2.16825	0.031	-0.036946	0.548
LEV	-2.77111	0.069	-0.04265	0.647
BFSIZE	-0.014035	0.613	-0.005548	0.001
BIN	-0.76701	0.134	0.0368952	0.239
BGEN	1.33090	0.010	0.1023094	0.001
LEV_BFSIZE	0.149867	0.173	0.0123232	0.067
LEV_BIN	3.346257	0.086	-0.2817791	0.018
LEV_GEN	-3.41304	0.104	-0.0439516	0.732
FSIZE	-0.008423	0.923	0.0203521	0.000
FAGE	0.0033376	0.291	-0.0008487	0.000
IND	-0.471112	0.001	-0.0478147	0.000
<b>Model summary</b>				
Wald chi2	36.18	0.0001	188.16	0.0000
Hausman test	83.68	0.0000	59.68	0.0000

Modified Wald test	1.3e+05	0.0000	11343.75	0.0000
Pesaran's test	10.863	0.0000	2.655	0.0079
Wooldridge test	51.390	0.0000	1.632	0.2068

Table 6 displays the result of the moderation analysis. In model III, the TQ served as the dependent variable. The Hausman test in both models (III and IV) is also in favor of the fixed effect model, but the data has the significant issue of heteroscedasticity, hence the Generalized Least Squares (GLS) model was used to correct the abnormality.

LEV negatively influences TQ ( $\beta=-2.77111$ ,  $P=0.069$ ), but this relationship is not significant at 1% and 5% levels of significance. Therefore, LEV is not statistically significant to influence TQ. The corporate governance variables BSIZE ( $\beta=-0.014035$ ,  $P=0.613$ ) and BIN ( $\beta=-0.76701$ ,  $P=0.134$ ) have a negative association with TQ; however, the relationship is not significant. BGEN has a positive and significant effect on TQ ( $\beta=.33090$ ,  $P=0.010$ ).

The three interaction variables LEV\_BSIZE ( $\beta=0.149867$ ,  $P=0.173$ ), LEV\_BIN ( $\beta=3.346257$ ,  $P=0.086$ ), and LEV\_GEN ( $\beta=-3.41304$ ,  $P=0.104$ ) are not statistically significant to moderate the relationship between capital structure and financial performance. Therefore, corporate governance did not moderate the effect of capital structure on financial performance.

The control variables FSIZE ( $\beta=-0.008423$ ,  $P=0.921$ ) and FAGE ( $\beta=0.0033376$ ,  $P=0.291$ ) also have no significant effect on TQ.

Finally, in Model IV, ROA was used as a measure of financial performance. The Wald chi2 value is 188.16 with a probability value of 0.0000, indicating that the model is well-fitted. The LEV has a negative but insignificant effect on ROA ( $\beta=-0.04265$ ,  $P=0.647$ ). This indicates that capital structure did not affect performance. The corporate governance variables BSIZE ( $\beta=-0.005548$ ,  $P=0.001$ ) and GEN ( $\beta=0.1023094$ ,  $P=0.001$ ) have negative and positive significant effects on ROA, respectively.

On the interaction variables, LEV\_BIN has a probability value of less than 5% ( $\beta=-0.2817791$ ,  $P=0.018$ ). This indicates that, among the three corporate governance variables used in the study, it is the only BIN that moderates the relationship between capital structure and financial performance.

All the control variables have a significant effect on ROA. While the FSIZE has a positive effect on ROA ( $\beta=0.0203521$ ,  $P=0.000$ ), FAGE affects it negatively ( $\beta=-0.0008487$ ,  $P=0.000$ ).

## 5. CONCLUSION AND RECOMMENDATION

### Conclusion

This study examined the impact of capital structure on the financial performance of non-financial firms in Nigeria. It also examined the moderating effect of the corporate governance mechanism on the relationship between capital structure and financial performance. The paper started by reviewing the existing literature in this field. The result from the empirical analysis shows that, in the first model, capital structure has no significant effect on performance measured as TQ. In the second model, capital structure has a negative and significant effect on financial performance measured as ROA. This finding is in line with the pecking order theory developed by Myers and Majluf (1984), which states that firms when funding their operations should start with internal sources like retained earnings, then debt capital, and equity.

In the third model, the moderating effect of corporate governance on the relationship between capital structure and financial performance was examined. However, all the interaction variables are not statistically significant. This means that corporate governance did not moderate the relationship between capital structure and financial performance. This finding contradicts the findings of (Muhammad et al. (2002). Finally, in the fourth model, it was found that BIN moderates the relationship between capital structure and performance. The other two corporate governance variables, BSIZE and BGEN, have no moderating effect on capital structure and performance.

### Recommendation

The study recommends that an optimal capital structure that would increase the financial performance of the firms be used. Considering the negative effect that debt capital has on financial performance, management should reduce debt capital and replace it with equity. This will reduce the level of interest payments and, ultimately, the financial risk associated with debt capital.

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