

OWNERSHIP STRUCTURE, FIRM SIZE AND FINANCIAL SUSTAINABILITY OF COMMERCIAL BANKS LISTED AT THE NAIROBI SECURITIES EXCHANGE

Harwood Kajirwa Isabwa,
harwoodisabwa@yahoo.com,
Department of Economics, Accounts & Finance,
Jomo Kenyatta University of Science & Agriculture, Nairobi, Kenya.

Abstract

The purpose of the study was to examine the moderating effect of firm size on the relationship between ownership structure and financial sustainability of commercial banks listed at the Nairobi securities exchange. The specific objectives were; to determine the effect of government ownership structure on financial sustainability of commercial banks in Kenya, establish the effect of local ownership structure on financial sustainability of commercial banks in Kenya and to examine the effect of foreign ownership structure on financial sustainability of commercial banks in Kenya.

The study adopted a positivism research philosophy and it used a longitudinal research design. The target population was commercial banks (11) listed at the Nairobi securities exchange. The results of the study were presented using correlation and regression analysis inferential statistics.

The study found that government ownership structure had ($\beta_1 = -.691$, $P = .108$, $\alpha > 0.05$), local ownership structure had ($\beta_2 = -.038$, $P = .911$, $\alpha > 0.05$), foreign ownership structure had ($\beta_3 = .057$, $P = .868$, $\alpha > 0.05$) while firm size had ($\beta_4 = -.138$, $P = .681$, $\alpha > 0.05$). The results showed that after introducing the moderating variable (firm size) the significance level of government ownership structure (.058) improved to 0.043, the significance level of foreign ownership structure (.054) did not improve (.061), the significance level of local ownership structure (.047) improved to (.044).

Both government ownership, local ownership and foreign ownership structure have an effect on the financial sustainability of commercial banks. Firm size has also an effect on financial sustainability and it also has a significant positive moderating effect on the relationship between government ownership structure, foreign ownership structure and an insignificant negative effect on local ownership structure.

Commercial banks should advocate for good ownership structures as they boost a firm's capacity to attract investors, ensure effective monitoring mechanisms of the board and also ensure that the decision-making process in place is able to protect and promote shareholders' interests and contribute to financial sustainability.

Key words: *ownership structures, firm size, financial sustainability, return on assets*

1.0 Introduction

In the last two decades firms' ownership structure has developed considerable attention in the broader field of corporate finance and among other stakeholders. It has also become an area of

interest among investors. Any profit-making organization should be able to raise sufficient cashflows so as to meet its short-term and long-term financial obligations. Financial sustainability is a precursor for the realization of the firms' going concern principle. According to Uzel (2015), firms' that afloat remains financially sustainable. Financial sustainability is therefore crucial to any business organization's survival and continuous patronage by investors, potential investors, creditors, and other stakeholders in the business world. The Insurance industry around the world is not viable since most of the firms' have either been declared bankrupt, put under receivership or are no longer in operation.

In order to remain afloat and achieve financial sustainability, changes are being effected in the ownership structure of most firms. It is evident that it is not only the government owned companies that are changing ownership structure in most jurisdictions around the world, private companies have also followed suit, where some of them are converting to public companies. This reason for this is so as to raise more capital. Privatization has also been adopted by loss-making government owned companies so as to offload the financial burden from the government (Norman, 2010). According to Villalonga and Amit (2006) changes in the ownership structure is of paramount importance to firms as it can help revamp the financial performance of a firm. However, changes in the firm's ownership structure have raised concern as to why some organizations succeed while others fail (Iravo, Ongori & Munene, 2013).

Ownership structure therefore refers to the percentage of shares by managers i.e. managerial or insider ownership, institutions i.e. institutional ownership, state and state agencies i.e. government ownership (Ebel & Okafor, 2010). Ownership structure also relates to private individuals and firms i.e. retail ownership and family i.e. family ownership (Namita & Bharti, 2015). Ownership concentration and ownership mix are the two dimensions of viewing ownership where ownership concentration refers to the largest owner shareholding while the distribution of firm's shares with regard to the identity of the major shareholders is known as ownership mix. Financially distressed firms can realize financial sustainability if they are characterized with a higher ownership-concentration (Gonzalez & Molina, 2010).

It is on the basis of this purview that the scholars concluded that ownership structure is the basic factor that affects firms' ownership and control allocation, and it has a strong impact on

realization of financial sustainability. The type of ownership structure adopted by a firm is as a result of the vision of the company. Ownership structure therefore is defined as the dimension of corporate governance that concerns distribution of equity with regards to votes and capital as well as the identity of the equity owners (Jensen & Meckling, 1976). The ownership structure of any company is an important factor that contributes to a financially sustainable company (Ohiani, Eniola, & Lateef, 2018).

This is because corporate ownership structures encourage firms to create value in industry in terms of advanced innovations, technology, and skilled workforce development in devising control system that affects the firm's financial sustainability (Alipour, 2013; Singh, 2014). Firms' should advocate for good ownership structures as they boosts a firm's capacity to attract investors, they ensure effective monitoring mechanisms of the board and also ensures that the decision-making process in place is able to protect and promote shareholders' interests and improve the overall firm's performance. Besides, ownership structure, firm size has an effect on the relationship between ownership structure and financial sustainability. At all times, changes in the ownership structure may or may not contribute to realization of firms' financial sustainability.

Firms size varies from one firm to another and hence it influences the timing and the extend to which the restructuring of the ownership structure is undertaken. Firm size is in-terms of the total asset base, earning capacity, number of employees among others. Larger firms are capable to provide more benefits related to their profit, superior technology, and professionalism because they are controlled directly by the market. In emerging markets and developing economies, systematic and conclusive evidence on ownership structure, firm size and financial sustainability still remains scarce. Franks and Mayer (2001) opine that emerging markets have different characteristics such as different political, economic and institutional conditions, which limit the application of developed markets' empirical models. The study sought to determine the moderating effect of firm size on the relationship between ownership structure and financial sustainability of commercial banks listed at the Nairobi Securities Exchange.

1.1 Banking sector in Kenya

Kenya's banking sector has, over the 10-year study period, grown remarkably in terms of total assets, total deposits and other parameters. The banking sector is largely concentrated in favour of six large banks, which take a lion's share of the banking sector performance. The CBK groups banks into 'peer groups' based on total assets, whereby banks are classified as 'large' if their total assets are above 15 billion Kenya Shillings (Ksh), 'medium' if their total assets are between Ksh 5 billion and Ksh 15 billion and as 'small' if total assets are less than Ksh 5 billion. The classification of banks into three peer groups since 2017 has been based on the weighted composite index, which comprises total assets, deposits, capital size, number of deposit accounts and loan accounts (CBK, 2017). As at December 2019, six banks were classified as large, 15 as medium and 23 as small (CBK, 2019). The six large banks account for 52.39% of the (weighted) market size, medium banks account for 37.95% and the 23 small banks control up to 9.66% of the market. Eleven banks are listed at the Nairobi Securities Exchange. The banks have been adjusting their ownership structures in the last one decade in order to improve on their financial performance and yet the financial performance of some of the banks has deteriorated prompting takeovers. Therefore the current study sought to determine the moderating effect of firm size on the relationship between ownership structure and financial sustainability of commercial banks listed at the Nairobi Boer.

1.2 Statement of the problem

A section of the firms' listed at the Nairobi Boer have recorded a myriad of financial challenges in the last one decade which was attributed to the way those companies are controlled and directed. This has in turn affected the firms' financial sustainability. There have been significant changes in the ownership structure which have been undertaken in the last one decade and yet most of the listed firms' are still experiencing financial unsustainability. Ongore and Obonyo (2011) opine that concentrated ownership, weak incentives, and poor protection of minority shareholders to weak information standards are the factors that contribute to financial unsustainability. Mokaya and Jagongo (2015) postulated that firms' listed at the Nairobi Boer are still characterized by higher ownership concentration which provides the controlling shareholders with the opportunity to use their power to undertake activities intended to obtain personal gains to the detriment of minority shareholders and other stakeholders while adversely affecting the firms' financial sustainability. The current study sought to find out whether among

listed insurance companies financial sustainability has been affected by ownership structure and whether capital structure influences the relationship between ownership structure and financial sustainability. Empirically, there exist few studies that have been done on ownership structure and financial sustainability of listed insurance companies at the Nairobi Boer with a bias on the moderating effect of capital structure on the relationship between ownership structure and financial sustainability. The study addressed this research gap as it assessed ownership structure, capital structure and financial sustainability of commercial banks listed at the Nairobi securities exchange.

1.2 Objectives of the study

1. To determine the effect of government ownership structure of financial sustainability of commercial banks in Kenya.
2. To establish the effect of local ownership structure of financial sustainability of commercial banks in Kenya.
3. To examine the effect of foreign ownership structure of financial sustainability of commercial banks in Kenya.

2.0 Literature Review and Hypotheses Development

2.1 Concept of Ownership structure

Ownership structure can be categorized into ownership identity and ownership concentration (Lee, 2008). Ownership concentration is the distribution of shares held by majority shareholders. In the insurance sector, ownership concentration is a crucial element for the growth and development of strong and healthy banking system in emerging countries. Ownership identity is majorly categorized into foreign, domestic, public, private investors and institutional investors. Ownership structure is of paramount importance to any firm as it determines the decision making, incentives, behavior of firm and eventually the performance (Lee & Jun, 2011). Nora and Rejab (2015) opine that companies with high concentration of ownership are more prone to financial distress and crises as compared to others.

Ownership concentration is experienced much in emerging market environments and hence it has caused majority and minority shareholders to enter into potential conflicts which inturn can affect the financial sustainability of the firm (Khamis, Hamdan & Elali, 2015). Khamis et al.

(2015) further opine that the resultant of ownership concentration is improved monitoring of the management. This forms a crucial part of corporate governance as it also enhances the company's financial sustainability according to the agency theory. Tsegba and Ezi-Herbert (2011) conducted a study on ownership structure and performance of companies listed on the Nigerian Stock exchange. The study found that there is a negative relationship between ownership concentration and performance.

2.2 Ownership structure and Agency theory

The theory was espoused by Jensen and Meckling in 1976 and it emanates from the fact that ownership and control of firms is different in modern times. According to the authors, agency relationship is a situation where the principal engages the agent to act on his behalf. In the event that both the agent and principal are all utility maximizers then the agent would act on his own self-interest. In the recent times, ownership structure has received much attention because of the correlation between corporate governance and agency theory. Ownership concentration is considered to reduce the agency problem between shareholders and managers and it helps to separate ownership and control. The agency theory reveals that ownership concentration helps in monitoring the management in a better way. This is because they have an interest in the company and therefore are interested in how the company is operating since they receive a large percentage of the profits made. Ownership structure therefore plays an important part in corporate governance. Servaes and McConnell (1990) opine that the agency theory has a significant positive relationship with ownership concentration. The traditional agency theory reveals that ownership concentration increases shareholders capability to effectively monitor the management of a company. The resultant is that it prevents the management from making decisions which are in their own interest only and which could contribute to financial unsustainability of a certain company.

2.3 Empirical review

2.3.1 Government ownership structure

Government involvement in the business sector is a clear evidence of company privatization. One of many ways performed by the government is through investing in a company. Nugrahanti

and Novia (2012) examine the effect of government ownership on the bank performance and find that government ownership does not significantly affect bank performance. They consider that the government-owned companies have other objectives in social and political benefit rather than maximizing profits. Unlike private companies that focused on generating the maximum profit as their main objective (Shen & Lin, 2009). In Jordan, Zeitun and Tian (2007) opine that government ownership structure has a significant negative effect on the company financial sustainability (ROE).

A study by Arouri et al. (2014) revealed that the government ownership structure does not have a significant effect on the companies' financial sustainability. Authur, Abanis, Mabonga, Eliab and Tukei (2017) examined the effects of change in ownership structure on financial performance of privatized companies in Uganda. A unit root test was used to examine stationarity of data while a Hausman test determined the appropriate regression model. This study used a fixed effects (FE) regression model with a robust standard error option to control for heteroskedasticity and contemporaneous correlation which may lead to spurious results. The study found that government ownership has a positive influence on ROA and the Tobin's Q but a negative effect on cost efficiency. Based on the theory and previous research, we proposed a hypothesis as follows: *H₀₁: Government ownership structure has no significant effect on financial sustainability of commercial banks.*

2.3.2 Local ownership structure

Local ownership refers to the companies owned by locals and can be viewed in terms of diverse ownership and institution ownership. Diverse ownership refers to companies owned by local individuals with no single controlling shareholder. In Kenya, Kiruri (2013) researched on the effect of ownership structure on banks profitability and found that local ownership has positive significant effect on the banks profitability. Ogega (2014) examined the effect of ownership structure on the financial success of banks in Kenya. The study found that local ownership of the bank significantly affects performance. Abira (2014) conducted a study on the effects of ownership composition on financial success of businesses listed at the NSE. The study found that local ownership is positively correlated with firm's profitability. The conclusion of the study was that higher local ownership in a firm leads to higher profitability while lower local ownership leads to lower performance in firms in Kenya. Based on the theory and previous research, we

proposed a hypothesis as follows: H_02 : *Local ownership structure has no significant effect on financial sustainability of commercial banks.*

2.3.3 Foreign ownership structure

Foreign ownership is one of the parts of stock ownership structure in a company. It is considered as a positive factor for a company development. In multinational companies have some advantages (competitiveness sources) that are not owned by the domestic companies, namely: the scale and scope of economic, marketing expertise and managerial skills, technology and innovation, financial strength, as well as domestic competition (Nugrahanti & Novia, 2012). Foreign ownership is a portion of the outstanding shares that are owned by foreign investors over the total outstanding share capital (Farooque et al., 2007). Wiranata and Nugrahanti (2013) state that foreign ownership and leverage positively affects company profitability. In China, Greenaway, Guariglia, and Yu (2014) researched on the degree of foreign ownership and performance in Chinese firms and found that joint ventures perform better than wholly foreign owned firms do.

In Malaysia, Peck-Ling, Nai-Chiek and Chee-Seong (2016) examined the effect of foreign equity ownership, appointments of foreign chairman and foreign chief executive director on profitability of companies listed on the securities exchange. The study used a fixed effect regression model and found that foreign equity ownership does not have a significant effect on profitability. The results further showed that profitability only improved when foreign owners had controlling interests in the firm. Azzam and Siddiqui (2013) opine that foreign-owned firms out-perform domestic firms in financial performance.

Bokpin (2013) examined the effect of bank ownership structure and corporate governance on bank efficiency in Ghana. The study realized that foreign owned banks were most cost efficient that banks that are domestically owned albeit not necessarily more profit efficient. Foreign owned banks had better loan quality and were more profitable than domestically owned banks. Chege (2013) researched on the relationship between ownership structures and financial

performance among commercial banks listed in the NSE in Kenya. The author found that there is a positive relationship between foreign shares ownership and profitability. Based on the theory and previous research, we proposed a hypothesis as follows: *H₀₃: Foreign ownership structure has no significant effect on financial sustainability of commercial banks.*

2.3.4 Firm size

Firm size is a major factor in determining the financial sustainability of a company (Niresch & Velnampy, 2014). Mule, Mukras, and Nzioka (2015) postulate that firm size has more bargaining power on suppliers and competitors. Larger companies are capable to provide more benefits related to their profit, superior technology, and professionalism because they are controlled directly by the market. According to Mule et al. (2015), there is a positive relationship between the firm size and financial sustainability which was proxed by use of return on equity. The researchers found that changes in firm size improve the return on equity of a company. Firm size was operationalized using the log of total assets. Firm size has an important role in supporting the financial sustainability of companies’.

Firm size provides a better bargaining position in certain market conditions. In addition, a large company that uses better technology records an improvement in financial sustainability (El-Chaarani, 2014). Daskalakiset et al. (2014) opine that ownership structure may also be influenced by the size of the firm, and that the size of the firm was found to have a significant and positively relationship with financial performance. The current study examined whether firm size has a moderating effect on the relationship between ownership structure and financial sustainability. Based on the theory and previous studies we formulate the hypotheses as follows. *H₀₄: Firm size has no moderating effect on the relationship between government ownership structure and financial sustainability of commercial banks.*

H₀₅: Firm size has no moderating effect on the relationship between foreign ownership structure and financial sustainability of commercial banks.

H₀₆: Firm size has no moderating effect on the relationship between local ownership structure and financial sustainability of commercial banks.

3.0 Materials and Methods

The study used a positivism research philosophy because the philosophy depends on quantifiable observations that lead themselves to statistical analysis and the study is also guided by the research hypotheses (Kothari, 2004). All these are attributes of a positivism research philosophy. The study deals with observations on the same subjects in different times and hence the study uses a longitudinal research design. Panel data was drawn from the audited annual reports of the commercial banks between 2015 and 2019. The target population was all the commercial banks listed at the Nairobi Securities Exchange during the study period under consideration. Correlation analysis was undertaken to assess the association between the study variables. According to Wong and Hiew (2005) the correlation coefficient value (r) ranging from 0.10 to 0.29 is considered weak, from 0.30 to 0.49 is considered medium and from 0.50 to 1.0 is considered strong. Financial sustainability was assessed using ROA while ownership structure was proxied using government ownership structure, foreign ownership structure and local ownership structure. Multiple regression analysis was undertaken to assess the effect of the government, foreign and local ownership structure on financial sustainability at 5% level of significance. Government ownership was determined using outstanding shares owned by the government divided by total outstanding share capital. Foreign ownership was determined using outstanding shares owned by foreign investors divided by total outstanding share capital while local ownership was proxied using shares owned by local investors divided by the total outstanding share capital. Return on Assets was determined using $EBIT/TOTAL ASSETS$. The regression model was as follows:

$$ROA = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \quad [1]$$

Where; ε = error term; β_0 = intercept; $\beta_1, \beta_2, \beta_3$ = coefficient of X_1, X_2, X_3 .

This study examined a specific type of moderated relationship with a continuous dependent variable and a continuous independent variable and independent continuous moderating variable. Given these variables, a moderated relationship

exists if the relationship between independent variable and dependent variable is different for both levels of moderating variable. The moderated effect of firm size on the relationship between ownership structure and financial sustainability is as presented below:

$$ROA_{it} = \alpha + \beta_1 GOS_{it} + \beta_2 LOS_{it} + \beta_3 FOS_{it} + \beta_4 F_{it} + \beta_5 (GOS_{it} * F_{it}) + \beta_6 (LOS_{it} * F_{it}) + \beta_7 (FOS_{it} * F_{it}) + \varepsilon \quad [2]$$

Where ROA represents Return on Assets, F represents firm size, $GOS_{it} * F_{it}$ = Government ownership structure * firm size, $LOS_{it} * F_{it}$ = Local ownership structure * firm size, $FOS_{it} * F_{it}$ = Foreign ownership structure * firm size. Firm size was operationalized using the log of total assets.

4.0 Results and Discussions

Correlation analysis was undertaken to determine the nature of the association between ownership structure (government, local and foreign ownership structures) and financial sustainability (return on assets). The results were as presented in Table 1: Government ownership structure was found to have a strong significant negative relationship with Return on Assets ($r = -.643^*$, $p = .033$). This similar to the findings of Ongore et al. (2011); Kiruri (2013); Trien and Chizema (2011) that government ownership structure has a significant negative relationship with financial sustainability. The study results are contrary to the findings of Mrad and Hallara (2012) that government or state ownership has a positive relationship with financial sustainability. Foreign ownership structure had a strong insignificant positive relationship with Return on Assets ($r = .675$, $p = .143$). The study results are intandem with the findings of Uwuigbe and Olusanmi (2012); Ochi and Yosra (2012) that foreign ownership has a positive relationship on listed firms in the financial sector. Local ownership structure had a strong insignificant negative relationship with Return on Assets ($r = -.571$, $p = .113$). The findings differs from those of Ng'ang'a (2017) that local ownership structure has a significant positive relationship with financial sustainability. Firm size had a strong insignificant positive relationship with Return on Assets ($r = .782$, $p = .095$).

Table 1: Correlation Matrix

n=11		Return on Assets	Government ownership structure	Foreign ownership structure	Local ownership structure	Firm size
Return on Assets	Pearson Correlation	1				
	Sig. (2-tailed)					
Government ownership structure	Pearson Correlation	-.643*	1			
	Sig. (2-tailed)	.033				
Foreign ownership structure	Pearson Correlation	.675	-.698	1		
	Sig. (2-tailed)	.143	.132			
Local ownership structure	Pearson Correlation	-.571	.548	.566	1	
	Sig. (2-tailed)	.113	.171	.195		
Firm size	Pearson Correlation	.782	-.648	.903	-.700	1
	Sig. (2-tailed)	.095	.047	.041	.132	

*. Correlation is significant at the 0.05 level (2-tailed).

Regression analysis

Multiple linear regression analysis was adopted in this study as it allows us to estimate the association between two or more independent variables (government ownership structure, local

ownership structure and foreign ownership structure) and a single continuous dependent variable in this case financial sustainability as proxied by ROA. Multiple regression analysis was also adopted because it helps to assess whether confounding exists. It provides for a way of adjusting for or accounting for potentially confounding variables that have been included in the model. The regression model summary, ANOVA and regression co-efficient table are presented in the section that follows:

Model summary

The coefficient of determination was used to evaluate the model fit. The model summary is presented in the Table 2: In this table R is the correlation between the predicted values and the observed values of Y. In this case it is .742 R square indicates the percentage of variation explained by the regression out of the total variation. This value normally increases when more predictor variables are included in the model. In this study the R square value is .686. The adjusted R square value is .449 implying that 44.9% of the total change in financial sustainability of commercial banks is explained by government ownership structure, local ownership structure and foreign ownership structure.

Table 2: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.742 ^a	.686	.449	.49773

a. Predictors: (Constant), Firm size, Foreign ownership structure, Local ownership structure, Government ownership structure

Coefficients of the regression model were also tested and the results were as presented in Table 4: The results of the regression co-efficients table were then used for hypothesis testing as shown in this section.

Table 4: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	β		
1 (Constant)	4.165	1.511		2.756	.033
Government ownership structure	-.691	.366	-.671	-1.887	.108
Foreign ownership structure	.057	.331	.056	.174	.868
Local ownership structure	-.038	.330	-.039	-.116	.911

Firm size	-.138	.320	-.142	-.431	.681
-----------	-------	------	-------	-------	------

a. Dependent variable: Return on Assets

The regression model is: $ROA = 4.165 + -.691X_1 + .057X_2 + -.038X_3 + -.138X_4 + \varepsilon$

The y-intercept is 4.165 which is the predicted value of the effectiveness of financial sustainability when all the others variables are 0, implying that without inputs of the independent variables the effectiveness of financial sustainability would be 4.165. The other coefficients tell about the relationship between independent and dependent variables. Government ownership structure had ($\beta_1 = -.691$, $P = .108$, $\alpha > 0.05$). This meant that a unit increase in government ownership led to a .691 decrease in financial sustainability. The study agrees with the findings of Nugrahanti and Novia (2012); Arouri et al. (2014); Authur et al. (2017) that government ownership has an effect on the performance of the commercial banks although the extend of the effect is not statistically significant.

Local ownership structure had ($\beta_2 = -.038$, $P = .911$, $\alpha > 0.05$). This implies that that a unit increase in local ownership led to .038 decrease in financial sustainability. The current study results are intandem with the findings of Kiruri (2013); Ogega (2014); Abira (2014) that local ownership structure has an effect on financial sustainability although the extent of the effect is not statistically significant. Foreign ownership structure had ($\beta_3 = .057$, $P = .868$, $\alpha > 0.05$) implying that a unit increase in foreign ownership led to .057 increase in financial sustainability. The study results resembles the findings of Wiranata and Nugrahanti (2013); Greenaway et al. (2014); Peck-Ling et al. (2016); Azzam and Siddiqui (2013); Chege (2013) that foreign ownership structure has an effect on the financial sustainability. Firm size had ($\beta_4 = -.138$, $P = .681$, $\alpha > 0.05$) implying that a unit increase in firm size led to .138 decrease in financial sustainability. The study results are similar to the findings of Mule et al. (2015); El-Chaarani, 2014) that firm size has an effect on financial sustainability.

Moderating effect of Firm size

The results of analysis of the effect of the independent variable on the dependent variable before and after introduction of the moderating variable were introduced in this section. The independent variables herein are; Government ownership structure, foreign ownership structure and local ownership structure with firm size as the moderating variable. R-square also referred to

as coefficient of determination and significance tests were done to determine the effect of the predictor variables on the dependent variable. The R-square and the overall significance of the model were analysed before and after introducing the moderating variable to independent variable. The introduction of the moderating variable introduces an interaction effect on the prediction strength of the independent variable on the dependent variable. The interaction effect leads to either a stronger or weaker prediction power of the independent variable on the dependent variable. Table 5 shows the results of the R-square before involving the moderating variable (firm size) and after incorporating the moderating variable to the independent variables (Government ownership structure, foreign ownership structure, local ownership structure).

Table 5: Moderation tests using R-square and significance change

Estimate	Value	t- statistic	p-value	Estimate
Constant	-13.145	-2.272	.108	Constant
Government ownership structure	6.810	2.991	.058	Government ownership structure
Foreign ownership structure	4.070	3.095	.054	Foreign ownership structure
Local ownership structure	-3.948	-3.273	.047	Local ownership structure
Firm size	6.249	2.868	.064	Firm size
GOS*FS	-3.512	-3.367	.043	GOS*FS
FOS*FS	-1.548	-2.925	.061	FOS*FS
LOS*FS	2.182	3.345	.044	LOS*FS
F	3.346		.000	F
Change in F	1.763			Change in F
R	.942			R
R square	.886			R square
Adjusted R square	.622			Adjusted R square
Change in R ²	.173			Change in R ²

The results indicate that firm size has a positive moderating effect on ownership structure (R squared change of .173). Results show that after introducing the moderating variable (firm size) the significance level of government ownership structure (.058) improved to 0.043, the significance level of foreign ownership structure (.054) did not improve (.061), the significance

level of local ownership structure (.047) improved to (.044). This means that firm size moderates government ownership structure and foreign ownership structure positively and statistically significant while statistically negatively insignificant for local ownership structure. The study results resemble the findings of Daskalakiset et al. (2014) that firm size has an effect on the relationship between ownership structure and financial sustainability.

The first hypothesis (H_{01}) stated that government ownership structure has no significant effect on financial sustainability of commercial banks. The study found that the p-value was .108 thus the study failed to accept the null hypothesis and the study concluded that government ownership structure has a significant effect on financial sustainability of commercial banks. The second hypothesis (H_{02}) stated that local ownership structure has no significant effect on financial sustainability of commercial banks. The study found that the p-value was .868 thus the study failed to accept the null hypothesis and concluded that local ownership structure has a significant effect on financial sustainability of commercial banks. The third hypothesis (H_{03}) stated that foreign ownership structure has no significant effect on financial sustainability of commercial banks. The study found a p-value of .911 implying that we failed to accept the null hypothesis and concluded that foreign ownership structure has a significant effect on financial sustainability of commercial banks.

The fourth hypothesis (H_{04}) stated that firm size has no moderating effect on the relationship between government ownership structure and financial sustainability of commercial banks. The study found that the p-value was .043 implying that the null hypothesis is accepted and the study concludes that firm size has no moderating effect on the relationship between government ownership structure and financial sustainability of commercial banks. The fifth hypothesis (H_{05}) stated that firm size has no moderating effect on the relationship between local ownership structure and financial sustainability of commercial banks. The study found that the p-value was .061 implying that the null hypothesis is rejected and the study concludes that firm size has a moderating effect on the relationship between local ownership structure and financial sustainability of commercial banks. The sixth hypothesis (H_{06}) stated that firm size has no moderating effect on the relationship between foreign ownership structure and financial sustainability of commercial banks. The p-value was .044 implying that the null hypothesis is accepted and the study concluded that firm size has no moderating effect on the relationship

between foreign ownership structure and financial sustainability of commercial banks as shown in Table 6:

Table 6: Summary of results of hypotheses tested

	p-values	Decision
H₀1: Government ownership structure has no significant effect on financial sustainability of commercial banks.	.108	Reject the null
H₀2: Local ownership structure has no significant effect on financial sustainability of commercial banks.	.868	Reject the null
H₀3: Foreign ownership structure has no significant effect on financial sustainability of commercial banks.	.911	Reject the null
H₀4: Firm size has no moderating effect on the relationship between government ownership structure and financial sustainability of commercial banks.	.043	Accept the null
H₀5: Firm size has no moderating effect on the relationship between foreign ownership structure and financial sustainability of commercial banks.	.061	Reject the null
H₀6: Firm size has no moderating effect on the relationship between local ownership structure and financial sustainability of commercial banks.	.044	Accept the null

5.0 Conclusion and Recommendations

Most of the listed commercial banks have achieved financial sustainability because of the adjustments that have undertaken in regards to ownership structure. This is because the study findings revealed that both government ownership structure, local ownership structure and foreign ownership structure have an effect on the financial sustainability of commercial banks. Firm size besides having an effect on financial sustainability it moderates the relationship between government ownership structure and foreign ownership structure positively and statistically significant while statistically negatively insignificant for local ownership structure. It is also evident that corporate ownership structures encourage commercial banks to create value in industry in terms of advanced innovations, technology, and skilled workforce development in devising control system that affects the firm's financial sustainability. The study also concludes that ownership structure is the basic factor that affects firms' ownership and control allocation, and it has a strong impact on realization of financial sustainability. The study recommends that commercial banks should advocate for good ownership structures as they boosts a firm's capacity to attract investors, ensures effective monitoring mechanisms of the board and also

ensures that the decision-making process in place is able to protect and promote shareholders' interests and improve the overall firm's performance.

References

1. Abira, A. (2014). *The effect of ownership structure on financial performance of companies listed in the Nairobi Securities Exchange* [Unpublished masters' thesis]. University of Nairobi.
2. Arouri, H., Hossain, M., & Muttakin, M.B. (2014). "Effects of board and ownership structure on corporate performance". *Journal of Accounting in Emerging Economies*, 4(1), 117-130.
3. Authur, S., Abanis, T., Mabonga, E., Eliab, B., & Tukei, M. (2017). Ownership structure and financial performance of companies in Uganda. *Journal for Studies in Management and Planning*, 3(13), 81-101.
4. Azzam, M., & Siddiqui, S. (2013). Domestic and foreign bank's profitability: Differences and their determinants. *International Journal of Economics and Finance*, 2(1), 33-40.
5. Bokpin, G.A. (2013). Ownership structure, corporate governance and bank efficiency: an empirical analysis of panel data from the banking industry in Ghana. *Corporate Governance: The International Journal of Business in Society*, 13(3), 274-287.
6. Chege, J.W. (2013). *Relationship between ownership structure and financial performance among commercial banks listed in the Nairobi Securities Exchange in Kenya* [Unpublished masters' thesis]. University of Nairobi.
7. CBK (2017). *Bank supervision annual report*, Central Bank of Kenya, Nairobi. Retrieved from <https://www.centralbank.go.ke>
8. CBK (2019). *Bank supervision annual report*, Central Bank of Kenya, Nairobi. Retrieved from <https://www.centralbank.go.ke>
9. El-Charani, H. (2014). The success keys form family firms: Comparison between Lebanese and French Systems. *Lebanese Sciences Journal*, 15(2), 133 – 150.
10. Greenaway, D., Guariglia, A., & YU, Z. (2014). The more the better? Foreign ownership and corporate performance in China. *European Journal of Finance*, 20(7-9), 681-702.
11. Iravo, M., Ongori, J., & Munene, C. (2013). Factors affecting the performance of hotels and restaurants in Kenya. A case of Kisii County. *Interdisciplinary Journal of Contemporary Research in Business*, 4(12), 897-928.
12. Jensen, M., & Meckling, W. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
13. Juniarti, B., & Sentosa, A. A. (2009). Pengaruh good corporate governance, voluntary disclosure terhadap Biaya Hutang (Costs of Debt). *Jurnal Akuntansi dan Keuangan*, 11(2), 88-100.
14. Kiruri, R.C. (2013). *Effects of ownership structure on bank profitability in Kenya* [Unpublished masters' thesis]. University of Nairobi.
15. Khamis, R., Allam, M.H., & Wajeeh, E. (2015). The relationship between ownership structure dimensions and corporate performance: Evidence from Bahrain. *Australasian Accounting, Business and Finance Journal*, 9(4), 38-56.
16. Lee, S. (2008). Ownership structure and financial performance: Evidence from panel data of South Korea. *Journal of Corporate Ownership and Control*, 6(2-2), 254-267.

17. Masdupi, E. (2005). Analisis dampak struktur kepemilikan pada kebijakan hutang dalam mengontrol konflik keagenan. *Jurnal Ekonomi dan Bisnis Indonesia*, 20(1), 57-59.
18. Mokaya, M. A., & Jagongo, A. (2015). The effect of ownership structure on the financial performance of firms listed at the Nairobi Securities Exchange. *International Journal of Finance and Accounting*, 4(11), 1-17.
19. Mule, R.K., Mukras, M.S., & Nzioka, O.M. (2015). Corporate size, profitability, and market value: an econometric panel analysis of listed firms in Kenya. *European Scientific Journal*, 11(13), 376-396.
20. Mrad, M., & Hallara, S. (2012). The impact of residual government ownership on performance and value creation: The case of privatized French companies. *Procedia - Social and Behavioral Sciences*, 62(1), 473-488.
21. Nugrahanti, Y. W., & Novia, S. (2012). Pengaruh struktur kepemilikan sebagai mekanisme corporate governance terhadap Kinerja Perbankan. *Jurnal Manajemen*, 11(2), 151-170.
22. Ng'ang'a, N.P. (2017). *Effect of ownership structure on financial performance of companies listed at the Nairobi Securities Exchange in Kenya* [Unpublished PhD thesis]. Jomo Kenyatta University of Agriculture and Technology.
23. Ochi, A., & Yosra, S. (2012). Ownership structure and efficiency of Tunisian Banking sector. *Journal of Finance and Investment Analysis*, 1(3), 239-254.
24. Ogega, D. A. (2014). *The effect of ownership structure on the financial performance of Commercial Banks in Kenya* [Unpublished masters' thesis]. University of Nairobi.
25. Ohiani, D.L., Eniola, E.S., & Lateef, O.M. (2018). Effect of ownership structure on financial performance of listed Insurance firms in Nigeria. *Journal of Accounting, Finance and Auditing Studies*, 4(3), 123-148.
26. Ongore, V.O., & Kobonyo, P.O. (2011). Effects of selected corporate governance characteristics on firm performance: Empirical evidence from Kenya. *International Journal of Economics and Financial Issues*, 1(3), 99-122.
27. Peck-Ling, T., Nai-Chiek, A., & Chee-Seong, L. (2016). Foreign ownership, foreign directors and the profitability of Malaysian listed Companies. *Procedia-Social and Behavioural Sciences*, 219(1), 580-588.
28. Shen, W., & Lin, C. (2009). Firm profitability, state ownership, and top management turnover at the listed Firms in China: A behavioral perspective. *Corporate Governance: International Review*, 17(4), 443-456.
29. Trien, L., & Chizema, A. (2011). State ownership and firm performance: Evidence from the Chinese listed Firms. *Organizations and Markets in Emerging Economies*, 2(1), 72-90.
30. Tsegba, I., & Ezi-Herbert, W. (2011). The relationship between ownership structure and firm performance: Evidence from Nigerian listed Companies. *African Journal of Accounting, Economics, Finance and Banking Research*, 17(7), 51-63.
31. Uwuigbe, U., & Olusanmi, O. (2012). An empirical examination of the relationship between ownership structure and the performance of firms in Nigeria. *International Business Research*, 5(1), 208-215.
32. Wiranata, Y.A. & Nugrahanti, Y.W. (2013). Pengaruh struktur kepemilikan terhadap profitabilitas perusahaan manufaktur di Indonesia. *Jurnal Akuntansi dan Keuangan*, 15(1), 15-26.

33. Zeitun, R., & Tian, G. G. (2007). Does ownership affect a firm's performance and default risk in Jordan? Corporate governance: *The International Journal of Business in Society*, 7(1), 66-82.