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# OWNERSHIP STRUCTURE AND FINANCIAL PERFORMANCE OF QUOTED MORTGAGE BANKS IN NIGERIA

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## **Abstract**

*The financial performance of mortgage banks worldwide has been a significant source of worry among researchers, professionals, and other stakeholders because of the substantial role mortgage banks play in people's well-being and economic activity. Despite mortgage bank reforms, the mortgage banking systems in Nigeria are still developing. They remain at a low level of financial performance, poor financing management, and decline in economic performance indicators due to poor ownership structure among mortgage banks in Nigeria. This study examines the effects of ownership structure (significant shareholding, government holding, and minority holding) on financial performance indicators (earnings per share, net profit margin and bank size via total assets) of Nigerian mortgage banks. Ex-post facto research design was employed as well as the panel regression method of analysis, and data was sourced from selected mortgage banks in Nigeria from 2011 to 2020. The study found that ownership structure components (significant shareholding, government holding, and minority holding) have positive and significant effect on financial performance indicators of selected mortgage banks in Nigeria at less than a  $p < 0.05$  level of significance. The study concluded that ownership structure components affect financial performance indicators of selected mortgage banks in Nigeria. Therefore, the study recommended that there is a need for mortgage banks in Nigeria to increase their ownership structure in terms of significant shareholding, government holding, and minority holding), as it was found that ownership structure absolutely affects the financial performance indicators of mortgage banks quoted in Nigeria.*

**Keywords:** Financial Performance, Government Holding, Significant Shareholding, and Minority Holding

## **1. Introduction**

The financial performance of mortgage banks across the globe has been a significant concern among scholars, professionals, and other stakeholders due to the substantial contribution mortgage banks play in the well-being of citizens and economic activities. Mortgage banks offer loans to clients to them purchase real estate properties. However, the dearth of housing stock, both in number and quality/ functionality, abound virtually in every country, mainly in developing countries vary from one country to another hence creating challenges in achieving

sound and targeted financial performance among mortgage banks (Kim, Laufer, Pence, Stanton, & Wallace, 2018). Globally, among developed, developing, and emerging economies, Goodman, Parrott, Ryan, and Zandi (2020) stated that most accounts of the late-2000s housing and mortgage market meltdown blame it on falling house prices, lax underwriting, and other factors that resulted in credit losses in the mortgage system thus created uncontrollable challenges on financial performance indicators in the mortgage banking industry. Financial Crisis Inquiry Commission (2021) asserted that the collapse of mortgage banks was fueled by continuous decline in economic performance indicators, low-interest rates, accessible and abundant credit, inadequate regulation, and toxic mortgages, creating a full-fledged crisis in the mortgage banking industry.

Developed countries like the United States of America, the United Kingdom, Belgium, France, among others, mortgage banks financial performance indicators were characterized with challenges of unstable and fast decline on total assets, net profit, and return on equity due to the availability of long-term funds that align with the period required for the mortgage loans, low earning income when compared to the price of houses leading to a high level of affordability (Mortgage Metrics Report, 2021). Likewise, in developing countries such as Ghana, Nigeria, Cameroon, South Africa, among others, mortgage banks were faced with similar challenges such as low saving culture, poor saving mobilization mechanism, meager long-term funds to fit with mortgage loan duration, low incomes, inadequate access to construction financing, lopsided ownership structure (African Development Bank Report, 2021). These challenges have resulted in unstable financial performance indicators among mortgage banks in developing countries.

Dakhlallhi, Rashi, Amalina, Abdullah, and Dakhlallh (2021) argued that ownership structure is a governance tool that assists stakeholders in aligning their priorities with company goals (Blair & Stout, 2017). The ownership structure is the property claims made by managers and investors who have no direct link with the company's management. Furthermore, previous studies found ownership structure to be vital aspect of corporate governance frameworks and fundamental corporate governance processes (Loay, Jamal, & Mah'd, 2018). The incompatibility of interests between management and shareholders, particularly between majority and minority shareholders, is one of the issues that existing companies face (Mang'unyi, 2011). This inconsistency comes at a price known as the cost of agency (Aguilera, Judge, & Terjesen, 2018). However, ownership structure does not only focus on the business owners, but also takes into consideration liability, control, tax and profit sharing. This implies that the issue of ownership regardless of the ownership style (private, government or public) is important in mortgage banking firms.

Enyia and Udungeri (2018) pointed out that mortgage banks, whether owned by private or government, are characterized with partial ownership in Nigeria, which created challenges in achieving targeted financial performance indicators. Despite the regulatory reform in Nigeria's mortgage banking industry, there are still several issues such as bias ownership concentration, weak corporate governance, and maladministration; thus, wine down targeted financial performance indicators in the mortgage banking industry (Oluba, 2020). In the light of the above discussion, ownership structure has been a source of concern to both the Nigerian government and private stakeholders of Nigerian mortgage banks. Despite existing regulations enacted by government on credit management and considerable banking reforms in the mortgage industry in Nigeria, there exist biased ownership structure mechanism and poor credit management of mortgage banks leading to the reduced financial performance and low return on assets in the past couple of years (Usunobun & Omoghosa, 2019).

Though several studies such as Dakhlallah et al. (2020), Jarbou, Abu-Serdaneh, and Latif Mahd (2018), Kao, Hodgkinson, and Jaafar (2019), Koehn and Santomero (2019), Muthoni and Nasieku (2018), and Ng'ang'a (2017) have examined how ownership structure has impacted on the performance of banking firms. These past studies employed ownership concentration, domestic ownership, and foreign ownership as proxied for ownership structures. Still, they failed to consider how significant shareholding, government holding, and minority holding as proxied for ownership structure affect financial performance indicators (earnings per share, net profit margin and bank size via total assets) of mortgage banks in Nigeria. Thus, there exist gap in the literature especially within Nigeria context that this study intended to fill.

The main objective of the study is to examine the effect of ownership structure on financial performance of selected mortgage banks quoted in Nigeria while the specific objectives are to;

- i. Examine the effect of ownership structure components (significant shareholding, government shareholding, and minority shareholding) on earning per share of mortgage banks quoted in Nigeria;
- ii. Determine the effect of ownership structure components (significant shareholding, government shareholding, and minority shareholding) on net profit margin of mortgage banks quoted in Nigeria; and
- iii. Investigate the effect of ownership structure components (significant shareholding, government shareholding, and minority shareholding) on bank size (total assets) of mortgage banks quoted in Nigeria

Considering the gap aforementioned, the study hypothesized that;

**H0<sub>1</sub>:** There is no significant effect of ownership structure components (significant shareholding, government shareholding, and minority shareholding) on earning per share of mortgage banks quoted in Nigeria

**H0<sub>2</sub>:** There is no significant effect of ownership structure components on the net profit margin of mortgage banks quoted in Nigeria

**H0<sub>3</sub>:** There is no significant effect of ownership structure components on the bank size (total assets) of mortgage banks quoted in Nigeria

## **2. Literature Review**

Discussed within this section is the conceptual review, theoretical framework, and empirical review of literature related to the present study.

Ownership structure, according to Gichohi (2018), is a structure that defines the shareholders and their various categories. Ng'ang'a (2017) defined ownership structure in relation to the decision-making capability of an organization as well as equity distribution in terms of votes and capital. It is the argument of Tanui, Yegon, and Bonuke (2019) that ownership structure is vital in shaping an organizations' corporate governance system. Thus, the study conceptualized ownership structure as significant shareholding, government holding, and minority holding.

Financial performance can be conceptualized as an organization's to be efficient in its operations survive and grow in the aspect of operating income, retained earnings, shareholders' funds, return on assets, and profit before tax. The present study measures mortgage bank financial performance using earnings per share, net profit margin and total assets (bank size).

## **Theoretical Framework**

The study anchored on stakeholder theory; as the perspective of stakeholder approach was first introduced into the management theory as an answer to dissatisfaction with the unilateral financial criteria of effectiveness in corporate governance and firm performance. It is rooted in the work of Richard Freeman in 1984. A stakeholder is defined as ‘any group or individual who can affect or is affected by the achievement of the organization’s objectives’ (Freeman, 1984). The main assumption of the stakeholder theory is that an organization’s effectiveness is measured by its ability to satisfy not only the shareholders, but also those agents who have a stake in the organization and so as to achieve firm financial performance (Freeman, 1984). For the stakeholder theory, the primary criticism is that it fails to deal with the problem of balancing the potential conflicting interests of all different constituencies. Even so, there is no way for the stakeholders to claim for any failure on the part of the directors. Shareholders are no doubt, an important constituent and profits are a critical feature of this activity, but concern for profits is the result rather than the driver in the process of value creation (Rahid, 2020).

## **Empirical Review and Gap in the Literature**

The link between ownership structure and organizational performance have been examined in various contexts. Among past related studies, Asri (2017) examined the impact of ownership structure comprising of institutional ownership and administrative ownership, on wage quality and firm value while San Martin-Reyna (2018) and Rashid (2020) examined the impact of ownership composition on profit management. Both studies found that institutional ownership and management ownership positively affect firm value. Maswadeh (2018) investigated the impact of ownership structure consisting of concentration ownership, institutional ownership, and foreign ownership in terms of credit rating and company size as controlling variables on earnings management in Jordanian industrial companies. A significant impact of concentration ownership was found in minimizing earnings management processes. Similarly, no significant impact was found of institutional ownership on foreign ownership in earnings management practices in Jordanian industrial companies. Saona, Muro, and Alvarado (2020) in their study assessed how ownership structure and the characteristics of the board of directors affect earnings management. It was found that ownership structure and board of directors had a significant impact on earnings management.

Hanan, Xiaoyan, and Muhammad (2016) show that board size negatively affected firm performance. it was further revealed that board independence significantly impacted on performance as measured by return on equity, invested capital, and Tobin's Q). Abdolreza (2016) and Oyerinde (2014) conducted a study which showed sales growth to be positively correlated with all indicators of value creation. However, revenue growth was positively associated with the return on assets. Positive relationship was found between economic value added and CEO duality. No correlation was found between the market value-added and Jensen's alpha and all indicators of corporate governance. A negative and significant relationship was further found between return on assets and the auditor's time, while the return on equity was negatively correlated with the auditor's time and the change of CEO. Mwanzia and Ochanda (2017) assessed the relationship between the economy, the market, and cash value added as value-based performance indicators and corporate governance. The results revealed that ownership concentration was found to have a significant relationship with economic and cash value-added, while internal ownership was revealed not to be a significant factor in growth performance. Furthermore, external ownership was found to increase economic value-added and declined market value-added.

Despite various empirical studies reviewed, no study to the best of researcher’s knowledge employed significant shareholding, government shareholding, and minority shareholding as measures or components or proxied for ownership structure and their aggregate effect such as (significant shareholding, government shareholding, and minority shareholding ) on each financial performance indicators like earning per share, net profit margin and bank growth (total assets) of quoted mortgage banks in Nigeria. Thus, there exists an empirical gap to fill.

### 3. Methodology

The study employed *ex-post facto* research design within the study variables from 2011 to 2020. The study population comprised of 33 mortgage banks, and 12 mortgage banks were selected due to availability of data and they listed in Nigeria stock market. The study employed panel regression method of analysis and used Hausman test for the selection of either fixed, random or pooled panel regression models. The measures adopted for the variables and their respective *apriori* expectations are presented on the table 1 below:

**Table 1: Measurement of Variable**

Variables	Proxied	Measurement	Apriori Expectation
Ownership Structure	Significant Shareholding (SSH)	Between 1-5 holders	+/-
Ownership Structure	Government Holding (GH)	Private-zero holding Govt – Between -50%-80%	+/-
Ownership Structure	Minority Holding (MH)	Less than 20%	+/-
Financial performance	Earnings Per Share (EPS)	(Net income - preferred dividends) ÷ average outstanding common shares	
Financial performance	Net Profit Margin (NPM)	Divide net income by total revenue and multiplied by 100	
Financial performance	Bank Size (BS)	Total Assets	

**Source: Authors’ Computation (2022)**

### Model Specification

Two variables were identified in this study, independent and dependent variables. Based on the variables the following models were proposed:

Y = Dependent Variable (i.e. Financial Performance (FP) measured by (y<sub>1</sub>, y<sub>2</sub>, y<sub>3</sub>)

X = Independent Variable (i.e. Ownership Structure (OS) measured by (x<sub>1</sub>, x<sub>2</sub>, x<sub>3</sub>)

Where;

y<sub>1</sub>= Earnings Per Share (EPS)

y<sub>2</sub>= Net Profit Margin (NPM)

y<sub>3</sub> = Bank Size (BS)

x<sub>1</sub> = Significant Shareholding (SSH)

x<sub>2</sub> = Government Shareholding (GH)

x<sub>3</sub>= Minority Shareholding (MH)

β<sub>0</sub> = constant

$\beta_1$ -  $\beta_3$  = coefficient

$\varepsilon_{it}$  = panel regression model

The *a priori* expectations will be  $\beta_1 > 0$ ,  $\beta_2 > 0$ ,  $\beta_3 > 0$

**Hypothesis One**

$EPS = f(SSH_{it}, GH_{it}, MH_{it})$

$EPS_{it} = \beta_0 + \beta_1 SSH_{it} + \beta_2 GH_{it} + \beta_3 MH_{it} + \mu_i + \varepsilon_{it}$  -----Equation 1

**Hypothesis Two**

$NPM = f(SSH_{it}, GH_{it}, MH_{it})$

$NPM_{it} = \beta_0 + \beta_1 SSH_{it} + \beta_2 GH_{it} + \beta_3 MH_{it} + \mu_i + \varepsilon_{it}$  -----Equation 2

**Hypothesis Three**

$BS = f(SSH_{it}, GH_{it}, MH_{it})$

$BS_{it} = \beta_0 + \beta_1 SSH_{it} + \beta_2 GH_{it} + \beta_4 MH_{it} + \mu_i + \varepsilon_{it}$  ----- Equation 3

**4. Analysis and Interpretation**

**Table 2: Descriptive Statistics**

	SSH	GH	MH	EPS	NPM	BS
Mean	15.2298	1.97209	32.13897	7.02465	15.09138	27.2417
Median	6.875488	6.527562	27.865672	2.445641	7.908765	13.85945
Maximum	3104.0	5.134	153.9	70.45	38.38376	28.07476
Minimum	697.6	0.760	7.63	7.26	8.701209	16.54382
Std. Dev.	752.3	1.452	44.21	16.5	6.083109	4.073292
Skewness	2.865590	4.245760	4.234575	0.821340	2.876541	1.943249
kurtosis	11.81121	19.03515	18.97404	3.302873	6.9451209	3.732919
Jarque-Bera	5.87987	10.29516	35.89709	123.61205	95.85289	5.352289
Probability	0.090987	0.061980	0.298763	0.295029	0.010094	0.00326
Obs	120	120	120	120	120	120

**Source: Authors’ Computation (2022)**

The probability of the Jarque-Bera shows that the data for the study variables such as significant shareholding (SSH), government holding (GH), earnings per share (EPS), and minority holding (MH) are normally distributed except for Net Profit Margin (NPF) and Bank Size (BS) since the probability value for Jarque-bera is less than 5% unlike SSH, GH, EPS, and MH.

**Table 3: Correlation Coefficients for Multicollinearity Test**

Variables	SSH	GH	MH	Variance Inflation Factor (VIF)
SSH	1			1.76
GH	0.155	1		1.82
MH	-0.350	0.341	1	1.13

**Source: Authors’ Computation (2022)**

Table 3 indicates that the correlation coefficients of the relationship among the explanatory variables are quite below the rule of thumb threshold of 0.8. This implies that including these explanatory variables in the same model will not cause a problem of severe multicollinearity.

**Table 4: Panel Result Table for Hypothesis One**

<i>Variables</i>	<i>Fixed Effect (FE)</i>	<i>Random Effect (RE)</i>	<i>Pooled Regression (PR)</i>
SSH	1.717 (0.326) [2.546] {0.032}**	0.011 (0.126) [0.032] {0.933}	3.024 (1.094) [3.216] {0.010}**
GH	-0.610 (0.317) [-4.521] {0.060}***	0.019 (0.089) [0.021] {0.826}	0.032 (1.046) [0.103] {0.482}
MS	-0.741 (0.361) [-2.189] {0.045}**	-0.096 (0.223) [-0.021] {0.664}	-0.149 (2.158) [-0.298] {0.349}
Constant	75.677 (36.942) [3.532] {0.046}**	-3.471 (13.66) [-0.032] {0.799}	-1.440 (2.846) [-0.243] {0.884}
Breusch-Pagan (Lagrange Multiplier) (LM) Test	$\chi^2(1) = 37.72$ (0.0010)	$\chi^2(1) = 5.46$ (0.0097)	$\chi^2(1) = 114.53$ (0.0021)
Hausman Test	$\chi^2(3) = 29.18$ (0.0152)	$\chi^2(3) = 27.30$ (0.0365)	$\chi^2(3) = 113.60$ (0.0063)
F-Test	F(3,116) = 23.14	Wald chi2(3) = 5.54	F(3,116) = 9.62
Pesaran Cross-sectional Dependence (CD)	1.368 (p>5% = 0.735)		
N	120	120	120
Ajd-R <sup>2</sup>	0.42	0.18	0.21

**Dependent Variable: Earning Per Share (EPS)**

**Notes:** FE, RE and PR represent Fixed Effect Panel Regression, Random Effect Panel Regression and Pooled Regression; Standard errors ( ), t-statistic [ ] and p-value { } are reported in parentheses. \*, \*\* and \*\*\* show the 10%, 5% and 1% significance level respectively. Where; Significant Shareholding (SSH), Government Holding (GH), and Minority Holding (MH)

Table 4 shows the results for model 1 for hypothesis one. The study adopted fixed effect (FE) panel regression, as Government Shareholding (GH) and Minority shareholding (MH) have negative and significantly affect Earning Per Share (EPS) while Significant Shareholding (SSH) has positive but insignificantly affect EPS of selected mortgage banks in Nigeria. Thus, this study rejected null hypothesis one.

**Table 5: Panel Result Table for Hypothesis Two**

<i>Variables</i>	<i>Fixed Effect (FE)</i>	<i>Random Effect (RE)</i>	<i>Pooled Regression (PR)</i>
SHH	1.217 (0.499) [4.321]	0.616 (0.198) [3.278]	0.838 (0.111) [2.934]



	{0.018}**	{0.002}***	{0.050}**
GH	-1.338 (0.478) [-3.221]	0.323 (0.147) [2.983]	-0.177 (0.073) [-3.215]
	{0.087}*	{0.028}**	{0.069}*
MS	-1.678 (0.534) [-5.732]	1.405 (0.325) [4.032]	-1.250 (0.207) [-4.110]
	{0.093}*	{0.000}***	{0.048}**
Constant	176.26 (54.42) [2.156]	96.47 (19.40) [0.021]	102.886 (9.190) [1.821]
	{0.002}***	{0.910}	{0.036}**
Breusch-Pagan (LM) Test	$\chi^2(1) = 12.63$ (0.0331)	$\chi^2(1) = 14.78$ (0.0017)	$\chi^2(1) = 22.94$ {0.0002}
Hausman Test	$\chi^2(3) = 1.75$ (0.6732)	$\chi^2(3) = 4.98$ (0.3671)	$\chi^2(3) = 2.94$ (0.1063)
F-Test	F(3,116) = 36.89	Wald chi2(3) = 22.58	F(3,116) = 18.73
Pesaran CD	0.358 (p<5% = 0.231)		
N	120	120	120
Ajd-R <sup>2</sup>	0.314	0.518	0.652

**Dependent Variable:** Net Profit Margin (NPM)

**Notes:** FE, RE and PR represent Fixed Effect Panel Regression, Random Effect Panel Regression and Pooled Regression; Standard errors ( ), t-statistic [ ] and p-value { } are reported in parentheses. \*, \*\* and \*\*\* show the 10%, 5% and 1% significance level respectively. Where; Significant Shareholding (SSH), Government Holding (GH), and Minority Holding (MH)

Table 5 shows that the random effect model is suitable for this analysis representing model two for hypothesis two. In this study, Government Shareholding (GH) and Minority shareholding (MH) have negative and significantly affect Net Profit Margin (NPM). In contrast, Significant Shareholding (SSH) has a positive but insignificantly affected NPM of selected mortgage banks in Nigeria. Thus null hypothesis two rejected.

**Table 6: Panel Result Table for Hypothesis Three**

Variables	Fixed Effect (FE)	Random Effect (RE)	Pooled Regression (PR)
SSH	5.450	6.721	3.732

	(1.030)	(1.155)	(1.057)
	[6.342]	[3.753]	[4.964]
	{0.007}***	{0.001}**	{0.002}***
GH	3.060	-1.13	-1.136
	(1.040)	(4.546)	(9.967)
	[7.352]	[-0.021]	[-0.229]
	{0.030}**	{0.910}	{0.910}
	5.570	7.44	7.447
	(1.570)	(3.46)	(3.469)
	[3.452]	[2.012]	[3.211]
	{0.013}**	{0.031}**	{0.036}**
Constant	2.021	-6.253	-6.252
	(9.751)	(2.159)	(2.159)
	[0.032]	[-2.971]	[-4.921]
	{0.837}	{0.004}	{0.005}
Breusch-Pagan(LM) Test	$\chi^2(1) = 17.63$	$\chi^2(1) = 12.74$	$\chi^2(1) = 14.894$
	(0.064)	(0.073)	(0.0221)
Hausman Test	$\chi^2(3) = 65.02$	$\chi^2(3) = 45.89$	$\chi^2(3) = 97.36$
	(0.0002)	(0.0015)	(0.0201)
F-Test	F(3,116) = 89.61	Wald chi2(3) = 22.87	F(3,116) = 15.72
Pesaran CD	0.828 (P>5% = 0.391)		
N	120	120	120
Adj-R <sup>2</sup>	0.523	0.509	0.255

**Dependent Variable:** Bank Size (BS)

**Notes:** FE, RE and PR represent Fixed Effect Panel Regression, Random Effect Panel Regression and Pooled Regression; Standard errors ( ), t-statistic [ ] and p-value { } are reported in parentheses. \*, \*\* and \*\*\* show the 10%, 5% and 1% significance level respectively. ” .” Where; Significant Shareholding (SSH), Government Holding (GH), and Minority Holding (MH)

Table 6 shows that this study adopted fixed effect (FE) panel regression, as Significant Shareholding (SSH), Government Holding (GH), and Minority Holding (MH) have positive and significant impact Bank Size measure with Total Assets (TA). Thus null hypothesis three rejected.

## 5. Conclusion and Recommendation

This study focused on ownership structure proxies (significant shareholding, government holding, and minority holding) on mortgage bank financial performance indicators such as

(earnings per share, net profit margin and bank size via total assets). The study concluded that ownership structure components (significant shareholding, government holding, and minority holding) affect financial performance indicators in Nigeria. This indicated that ownership structure dimensions such as significant shareholding, government holding, and minority holding play major and vital role in improving financial performance measure like earnings per share, net profit margin and bank size via total assets among quoted mortgage banks in Nigeria.

From the finding, this study recommends that;

(i) It is essential for mortgage banks in Nigeria to increase their ownership structure in terms of (significant shareholding, government holding, and minority holding) in order to enhanced earning per share, as it was found that ownership structure certainly significantly improve affects earning per share of quoted mortgage banks in Nigeria; (ii) Regulators of mortgage banks in Nigeria should enforce management of both private and government institutions mortgage to embrace significant shareholding, government holding, and minority holding in their ownership structure so as to boost and achieve targeted net profit margin in the Nigerian mortgage banking industry; and (iii) Government should inculcate the habit of private and government shareholding in the drive of ownership structure of mortgage in Nigeria which in turn increase mortgage bank size in Nigeria.

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