

# Effect of Board Religion Diversity on Financial Performance of Quoted Deposit Money Banks in Nigeria

John Abuh Oyidih

Nasarawa State University Keffi Nigeria

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## ABSTRACT

The effect of board diversity, like, gender, ethnicity, etc on financial performance have been widely studied. However, very few research have been carried out in the area of the the effect of religion diversity on financial performance. This study examines the effect of board religion diversity on financial performance of quoted deposit money banks in Nigeria. The population comprises of all the deposit money banks in Nigeria while thirteen (13) quoted deposit money banks were sampled based on their being listed on the Nigerian Exchange Limited all through the study period of 2010 to 2021. The data were analyzed using Shapiro-Wilk Normality, Pearson correlation, Heteroskedasticity Breusch-Pagan Test and Breusch-Pagan Lagrangian Multiplier Test while hypotheses were tested using Pooled Ordinary Least Square regression model. The results show that religion diversity (RD) has a significant positive effect on financial performance (proxied by return on assets (ROA)) of quoted deposit money banks in Nigeria for the period under review. The study recommends that the regulators – Central Bank of Nigeria (CBN) and boards of deposit money banks in Nigeria should encourage different religious practices on the boards of banks to enhance their financial performance in Nigeria.

Keywords: Religion Diversity, Return on Assets, Listed Deposit Money Banks, Financial Performance

## INTRODUCTION

Board diversity as a mechanism of corporate governance is an age-old term and refers to the demographic characteristics of a board of director. Diversity may be viewed in various ways but this study focuses on diversity from the perspective of the religion of board members. Though there are many religions practiced in Nigeria, this study focused on the two dominant religion in Nigeria – Islam and Christianity. We were able to establish that the board members of all the banks chosen for the study, during the study period are either adherent of the Islamic religion or Christian religion. Corporate governance, to which board diversity is one of the mechanisms, is as old as the history of modern corporations. Corporate governance can be defined as that responsibility and accountability that companies owe their diverse stakeholders. It is the system by which companies are directed and controlled (Cadbury Committee, 1992). According to Jenkinson and Mayer (1992), corporate governance refers to the processes and structures by which the business and affairs of institutions are directed and managed, in order to improve long term shareholders' value by enhancing corporate performance and accountability, while taking into account the interest of other stakeholders. The pride of place that corporate governance currently enjoy stem from the recent failures and scandals of some world class corporations like Enron, WorldCom, Lehman Brothers, Polaroid, Swiss Air and Woolworths just to mention a few.

There have been several studies on corporate governance and financial performance most of which use mechanisms like board size, number of board meetings, independence of the board, among others but only a handful are in the area of board diversity. Some of such prior studies that used other mechanisms aside from board diversity, especially in Nigeria, are Kajola, (2008), Uwuigbe, (2011) Akpan and Riman, (2012), Joshua, et al (2013), Obetan, et al (2014), Adekunle and Aghedo, (2014) and Ogege and Boloupremo,



(2014). This paper uses board diversity demographics with particular emphasis on gender and return on assets as financial performance proxy. The results of past research work in this area are as diverse as the number of studies carried out thereby creating a need for more study.

The key issue addressed by this current study is whether religion diversity of the board of listed deposit money banks in Nigeria affect their financial performance. A balanced board composition, in terms of religion, is usually encouraged. Most of the previous studies on corporate governance and financial performance in Nigeria use board size, board composition, audit committee and independence of the board as against board diversity. That a lot of these studies did not look at board diversity and that the results of previous studies are almost as varied as the number of studies creates a need for this work.

The research question in this study is about the extent to which the religious belief of board members affects the financial performance of listed deposit money banks in Nigeria while the objective of the study is to interrogate the effect of religious diversity of board members ion the financial performance of listed deposit money banks in Nigeria. The null hypotheses formulated for testing in this study therefore is that the religious affiliation of the members of the board of listed deposit money banks in Nigeria has no significant effect on their financial performance.

## LITERATURE REVIEW

#### **Conceptual Literature**

In this section of the paper, we will define and review the concepts of board diversity and financial performance. Before the conceptual discussion on board diversity however, there is a need for an appreciation of the concept of corporate governance, the ambit of which, board of directors and consequently board (religion) diversity falls. The term corporate governance is a relatively new one both in the public and academic debates although the issues it addresses have been around for much longer dating as far back as Adam Smith's (Wealth of Nations) time of 1776 (Bocean & Barbu, 2007). Corporate governance is the rules, processes or laws by which businesses are operated, regulated and controlled. A well-defined and enforced corporate governance provides a structure that, at least in theory, works for the benefit of everyone concerned by ensuring that the enterprise adheres to accepted ethical standards and best practices as well as to formal laws. According to Imhanze (2015), corporate governance is the framework of rules and practices by which a board of directors ensures accountability, fairness and transparency in a company's relationship with its all stakeholders (financiers, customers, management, employees, government and the community). Additionally, he stated that the corporate governance framework consists of (1) explicit and implicit contracts between the company and the stakeholders for distribution of responsibilities, rights and rewards, (2) procedures for reconciling the sometimes conflicting interest of stakeholders in accordance with their duties, privileges and roles and (3) procedures for proper supervision, control and information flows to serve as a system of checks and balances. Corporate governance can therefore be seen as acting responsibly, fairly and transparently to all stakeholders of a company.

There are several corporate governance mechanisms that includes board size, board composition, independence of directors, audit committees, number of board meetings, chief executive officer duality and board diversity, among others. An important discuss in recent academic literature is that a diversified board engender sound corporate governance observance. Both the Higgs Review of 2003 and Walker Review of 2009 stressed the importance of board diversity. Board diversity, as a corporate governance mechanism, does not have a uniform definition though matters like religion, gender, race, age, experience, education background, professional qualification, personal attributes, etc are considered as critical features that determine diversity. Board diversity means having people of different attributes on the board of directors. The attribute selected for this study is religion diversity. Religion diversity, according to this study, refers to the Muslim-Christian proportion of the board. Religion diversity is the independent variable of this study.



Religion is the belief in and worship of a superhuman controlling power, especially a personal God or gods. According to Durkheim, (1912), a religion is a unified system of beliefs and practices relative to sacred things, that is to say, things set apart and forbidden – beliefs and practices which unite into a single moral community called a church, all those who adhere to them. She said further that religion is the self-validation of a society by means of myth and ritual. Religion is a system of symbols (creed, code, culture) by means of which people or a community of people orients themselves in the world with reference to both ordinary and extra ordinary powers, meanings and values (Albanes, i1932). In the forward to the book, written by Taylori (1992), Nevile categorized the elements of religion into three. The first element of religion, according to him, is mythic, philosophical or theological cosmology defining the fundamental structures and limits of the world and forming the basic ways in which cultures and individuals imagine how things are and what they mean. The second element according to him is rituals which are the finite set of repeatable and symbolizable actions that epitomize things a tradition takes to be crucial to defining the normative human place in the cosmos. The third element is that of tradition which have some conception and practical procedures for fundamental transformation aimed to relate persons harmoniously to the normative cosmological elements, like oath of spiritual perfection. Smart (1998) identified seven dimensions of religion as myth, ritual, doctrine, ethics, social dimension, experiential dimension and artistic dimension.

There are many religions practiced world-wide which includes Christianity, Islam, Buddhism, Hinduism, Confucianism and Judaism. In Nigeria, the two major religions practiced in the country are Islam and Christianity. Over 85% of Nigerians are either Christians or Muslims. Other religion practices in Nigeria include African traditional religion and others. The sentiment about religion in Nigeria is so high that most critical issues are usually given religious colouration. Getting things done or achieving a milestone is most times linked to one's religious connections and affiliations. It is largely believed in Nigeria that belonging to the same faith with persons in leadership positions, both in the private and public sectors, is a prerequisite for achieving success in an endeavour. The usual Christian-Muslim connotations given to most policy matters, both in the private and public sectors of the Nigerian economy, makes the study of the impact of religious diversity on firm values in Nigeria a desired one. This study shall focus ion the two major religions of Islam and Christianity and group the members of the board of directors of the selected banks into these two religious' beliefs. The study aims to find a relationship between either of these religious beliefs and the values of the banks the adherents superintend over in Nigeria

Financial performance could be viewed as the financial returns associated with investments in a given entity. Financial performance and profitability are loosely and interchangeably used to mean one and the same thing. Financial performance is usually a measure of the health and wellbeing of a company. According to Barney (2002) in Gentry and Shen (2010), financial performance is the fulfilment of the economic goals of the firm. In this study, an accounting financial performance measure of return on assets (ROA) is used as proxy for financial performance. Return on assets is the earnings after taxation expressed as a proportion of assets used to generate the profit.

## **Empirical Framework**

Not many studies had been carried out before relating religion diversity to firm performance due perhaps to the fact that the firm's objective of shareholders value maximization is an acceptable value in all religions and thereby making a religion-based diversity an irrelevant contexti(Ahmed & Bukth, 2019). This study titled "Effect of Employee Diversity ion Firm Performance in Bangladesh" is about the most recent in the area of religion diversity and firm value. This line of argument is however punctuated by the current practice of faith-companies and practices like Islamic banking that abhor interest payments but instead promote profit sharing and rentals. Ali and Azmii(2016), revealed that the religious orientation has no impact on the performance and that their result is robust to various proxies. They contended that while other diversity areas like gender, ethnicity, etc versus performance have been fairly well researched into, those



regarding impact of religious diversity ion performance and stability have been completely ignored. Their study was premised on the belief that if the majority of board members in a typical Islamic bank are Muslims, it can have a positive impact on the performance as they would better understand the importance of the substance of the shari'ah compliant dealings and that can translate into good performance and make the banks more stable. Their finding was very profound as itnimpliesithat a non-Muslim member of the board of directors is able to run the Islamic banking business as good as a Muslim board member. It is important to note that the study covered both Islamic and conventional banks operating in Malaysia during the nine-year period from 2005 to 2013. Along the same line, Jelil, Sunday and Rufus (2018) found that board religion diversity was negatively and insignificantly related to return on assets (ROA) and Tobin's Q. However, Hassan and Marimuthu (2018) found that in the light of Islamic diversity, Islamic gender diversity (Muslim women/Sunni/Shia) and Islamic ethnic diversity (non-Sunni) have a positive and significant impacts on firm financial performance. They also found that Islamic ethnic diversity (non-Sunni) in the boardroom has a significant and positive impact on firm financial performance (Tobin's Q, ROA and ROE). g the same line

## **Theoretical Framework**

There are several theories on corporate governance. The theories include agency, stakeholder, resource dependence and stewardship theories. While this work is underpinned by resource dependence theory, below is a brief explanation of the theories generally. Agency theory is one of the oldest theories in corporate governance studies. It is premised on modern corporations' model in which ownership is divorced from management where the managers acting as agents of owners are perceived to be self-interested and pursue objectives different from those of the owners. According to Shapiro (2005) some incentives like commissions, bonuses, piece rates, equity ownership, stock options, profit sharing, share cropping, deductibles, etc are used as options to align the agent's interests with the principal's objectives.

Resource dependence however look at directors, as corporate governance tool, from the perspective of resources that directors can offer an organization. The theory opposed the agency theory's view of the suspicion by the shareholders that the managers will act opportunistically and selfishly. The key contribution of the resource dependence theory, as developed by Pfeiffer and Salancik (1978), is the observation that the board, and in particular its constitution of the non-executive element, can provide the firm with a vital set of resources. Seeing the board as a source of resources presents a good dimension to the board's role of creating high performance. The stakeholder theory expands on the limitations of agency theory by emphasizing the entire stakeholders as against a narrow focus on owners-managers (principal-agent) relationship. As a typical firm is fundamentally a nexus of stakeholder relationships who hold the tangible and intangible resources needed for the firm's maintenance, focus should be on these entire stakeholders. Freeman, et al (2004) believed that stakeholder theory begins with the assumption that values are necessarily and explicitly a part of doing business.

Stewardship theory, which is related to the resource dependence theory, postulate motive of executive different from that put forward by the agency theorists. Here, as against the self-interested and self-serving motives of executives under agency theory, stewardship theory emphasizes the pro-organization motives. The theory affirms that the problem of governance may lie not in the self-interest of the executive but rather in the assumptions that distant others (investors and regulators) make as to their self-interested motives. Donaldson and Davis (1991) argue that in agency theory, shareholder interests require protection of incumbency of roles of board chair and CEO while stewardship theory argues that shareholder interests are maximized by shared incumbency of these roles. This study is however underpinned by the resource dependence theory as directors are viewed from their resource supply context.

## METHODOLOGY

This study used a longitudinal research design to address the research objective. The design is used to



examine the statistical relationship between two or more variables. The population of the study consists of all the quoted deposit money banks in Nigeria on the Nigerian Exchange Limited for the period 2010 to 2021 financial years. The sample size of this study comprises of thirteen (13) quoted deposit money banks in Nigeria covering. The study employed panel data mainly from secondary sources which are quantitative in nature. The data were obtained from the annual reports and accounts of the quoted banks submitted to the Nigerian Exchange Limited. The technique of data analysis employed by this study is panel multiple regression analysis. The study adopted this technique and ascertained the effect of religion diversity on financial performance of quoted deposit money banks in Nigeria. The data were analyzed using STATA 15 and the outcome were used to test the research formulated hypothesis. In view of this, panel data analysis was adopted for the study. Various robustness tests were carried out to test the validity of the research result.

Financial performance is proxied by return on assets (ROA) which is measured by profit after tax over total assets and is a function of religion diversity. Therefore;

ROA = f(RD)

Econometrically, the above equation is rewritten into a model as follows:

 $ROAit = \beta 0 + \beta 1RDit + \mu it....(1)$ 

Where:

 $\beta$ 1: parameter to be estimated with a-priori expectation.

 $\beta 1 > 0$ 

ROA = Return on Assets

RD = Religion Diversity

 $\beta o = Constant$ 

 $\mu = Error term$ 

i = Firms

t = Periods

A-priori expectation: RD > 0

Table 1 Variable Measurement

Variable	Acronym	Type of variable	Measurement	Justification
Return on Assets	ROA	Dependent	Profif after fax/Total assets	Semra et al. (2016), Siti and Hassan (2015)
Religion Diversity	RD	Independent	Christian directors on the total	Enakirerhi and Chijuka (2016), Semra et al. (2016), Siti and Hassan (2015).

Source: Researcher's compilation, 2022.



## **RESULTS AND DISCUSSION**

The data of thirteen (13) deposit money banks regarding return on assets (ROA) and religion diversity (RD) were used. The data were analysed with the aid of Stata 15 software using Descriptive Statistics, Shapiro-Wilk Test, Pearson Correlation, Heteroscedasticity test, Hausman Specification Test and robust random effect regression model.

#### **Descriptive Statistics**

Table 2 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min.	Max.
ROA	156	0.024	0.045	- 0.099	0.266
RD	151	77.929	13.679	31.25	93.75

Source: Researcher's Computation using STATA 15 software

Table 2 shows that return on assets (ROA) has a minimum value of -0.0987, a maximum value of 0.2658 and a mean value of 0.0237256 that is within the minimum and maximum indicating a good spread within the period studied. The table also reveals that ROA has a standard deviation of 0.0453927 that is more than the mean, which implies that it had a strong growth during the period under review.

Table 2 shows that the religion diversity (RD) has a minimum value of 31.25, a maximum value of 93.75 and a mean value of 77.92921 that is within the minimum and maximum values indicating a good spread within the period studied. The Table also reveals that RD has a standard deviation of 13.6791 that is less than the mean, which implies that it had a slow growth for the period under review.

#### **Shapiro-Wilk Test for Normality**

Table 3 Normality Test

Variable	OBS	W	V	Z	Prob. Chi2
Residual	151	0.84647	17.967	6.551	0

Source: Researcher's Computation using STATA 15 software

Table 3 above shows the probability value of residual of 0.00 which is not normally distributed around the mean value. This indicates that one of the basic assumptions of linear regression technique is violated, which according to Gujarati (2003) is corrected using robust regression technique.

#### **Pearson Correlation**

Table 4 below is the Pearson correlation matrix for the data set to show the extent of associations between the variables.

Variable	ROA	RD
ROA	1	



RD	0.1721	1
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\* = Significant at 1%

\*\* = Significant at 5%

Source: Researcher's Computation using STATA 15 software

The correlation matrix determines the degree of relationships between the proxies of independent variable and the dependent variable. The result from table 4 shows 17% positive and weak association between religion diversity (RD) and return on assets (ROA) of quoted deposit money banks in Nigeria, from correlation coefficient of 0.1721.

#### Heteroscedasticity test

 Table 5: Heteroscedasticity Test

Type of test	Chi2	P-Value
Heteroscedasticity Test	0.25	0.5522

Source: Researcher's Computation Using STATA 15 software

To establish that the data for this study was robust for the model, heteroscedasticity test was carried out. However, the study revealed that data is heteroskedastic free; as such the basic linear regression model is reliable. This can be confirmed from the heteroskedasticity result in table 5 above which revealed the chi2 value of 0.25 with a p-value of 0.5522.

## **Breusch-Pagan Lagrangian Multiplier Test**

Table 6 Breusch-Pagan Lagrangian Multiplier Test

Variable	Chibar2	P-Value
ROA	1.56	0.432

Source: Researcher's Computation using STATA 15 software

The Breusch-Pagan Lagrangian Multiplier test was conducted to give an insight into an actual test to be carried out between Random Effect Model and Pooled Ordinary Least Square Regression. From the Breusch-Pagan Lagrangian Multiplier test, the chibar2 value of (1.56) and the probability of (0.432) in table 6 above, therefore, suggests that Pooled Ordinary Lease Square Regression is more appropriate instead of REM.

#### Religion Diversity and Financial Performance using Pooled Ordinary Least Square Regression

 Table 7 Pooled Ordinary Least Square Regression

Variable	Coefficients	t-value	Prob.
Cons.	31210.4	11.19	0
RD	44.0799	6.9	0.006
R-squared	0.6648		



Adj R-squared	0.6508	
F-value	47.59	
Prob. > F	0	

Source: Researcher's Computation using STATA 15 software

Table 7 above indicated that 65% variation of return on assets is predicted by the effect of religion diversity with (Adjusted R-sq of 0.6508). This indicates that the independent variables are properly combined and used. The F-value of 47.59 with a P-value of 0.0000 signified that the model is fit for the study.

To examine the effect of religion diversity on financial performance of quoted deposit money banks in Nigeria, the formulated hypothesis was tested using a pooled ordinary least square regression model.

The result also reveals that the t-value of 6.90 and the corresponding p-value of 0.00 shows that religion diversity (RD) has a significant positive effect on return on assets (ROA) of quoted deposit money banks in Nigeria for the period under review. Based on this, the null hypothesis which says that religion diversity (RD) has no significant effect on return on assets (ROA) of quoted deposit money banks in Nigeria is rejected.

## **DISCUSSION OF FINDINGS**

## **Religion Diversity and Firm Financial Performance (ROA)**

The study reveals that religion diversity (RD) has a significant positive effect on financial performance of quoted deposit money banks in Nigeria for the period under review. This implies that a percentage increase in religion diversity increases the financial performance of quoted deposit money banks in Nigeria. This finding is in line with the a-priori expectation and also in line with the Resource Dependence Theory which underpinned this study. The finding is equally in consonance with that of Hassan and Marimuthu (2018 where they stated that in the light of Islamic diversity, Islamic gender diversity (Muslim women/Sunni/Shia) and Islamic ethnic diversity (non-Sunni) have a positive and significant impacts on firm financial performance. They also found that Islamic ethnic diversity (non-Sunni) in the boardroom has a significant and positive impact on firm financial performance (Tobin's Q, ROA and ROE). Along the same line, just like the findings in this study, Abubakar, et al (2014) found that gender diversity has a significant and positive influence on firm's financial performance. However, the finding of this present study does not support the findings in Ali and Azmi (2016) where they found that religious orientation has no impact on financial performance. Jelil, Sunday and Rufus (2018) found that board religion diversity was negatively and insignificantly related to returns on assets (ROA) and Tobin's Q. negative relationship and Campbell and Minguez -Vera (2007) as well as Rose (2007) which both found no effect of gender diversity on financial performance. Also, Abdullah and Ismail (2017) found that gender diversity is negatively associated with Tobin's Q and ROA which is at variance with the finding of this study.

#### CONCLUSION AND RECOMMENDATIONS

The appointment of people with different religious believe system on the boards of deposit money banks will increase the level of their financial performance in Nigeria. The appointment of people with different religious believe on the boards of deposit money banks in Nigeria will no doubt enhance their financial performance. Therefore, different religious practices must be encouraged on the boards of banks to enhance the financial performance of deposit money banks in Nigeria.

Based on the above conclusion, it is hereby recommended that the Central Bank of Nigeria and boards of



deposit money banks in Nigeria should encourage different religious practices on the boards of banks to enhance their financial performance in Nigeria.

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# APPENDICES

## Appendix A

Data of 13 Sa	Data of 13 Sampled Banks in Nigeria covering 2010-2021							
Firm	Year	id	RD	ROA				
Access Bank	2010	1	80	0.0178				
	2011	1	92.86	0.0144				
	2012	1	86.67	0.0208				
	2013	1	81.25	0.0182				
	2014	1	81.25	0.0215				
	2015	1	93.33	0.0254				
	2016	1	93.33	0.0248				
	2017	1	93.33	0.0187				
	2018	1	81.25	0.0172				
	2019	1	93.75	0.0127				
	2020	1	88.24	0.0182				



	2021	1	87.5	0.0044
ETI	2010	2	78.57	0.0036
	2011	2	75	0.0178
	2012	2	73.33	0.0059
	2013	2	73.33	0.008
	2014	2	73.33	0.0168
	2015	2	83.33	0.0063
	2016	2	83.33	0.0032
	2017	2	90.91	0.011
	2018	2	91.67	-0.0009
	2019	2	84.62	0.0063
	2020	2	84.62	0.0031
	2021	2	84.62	0.0125
FBN	2010	3	53.33	0.0135
	2011	3	57.14	0.0071
	2012	3	66.67	0.0238
	2013	3	60	0.0182
	2014	3	60	0.0191
	2015	3	66.67	0.0036
	2016	3	66.67	0.0026
	2017	3	81.82	0.0076
	2018	3	81.82	0.0107
	2019	3	81.82	0.0119
	2020	3	83.33	0.0117
	2021	3	55.56	0.0169
FCMB	2010	4	80	0.0138
	2011	4	76.47	-0.0195
	2012	4	86.67	0.0135
	2013	4	90.91	0.0458
	2014	4	90	0.041
	2015	4	90	0.0195
	2016	4	90	0.0284
	2017	4	91.67	0.0116
	2018	4	90.91	0.0267
	2019	4	90.91	0.0269
	2020	4	90.91	0.0227
	2021	4	90.91	0.0357
Fidelity	2010	5	80	0.0122
•	2011	5	80	0.0081
	2012	5	83.33	0.0215
	2013	5	81.25	0.0075
	2014	5	80	0.0116



	2015	5	78.57	0.0127
	2016	5	82.35	0.005
	2017	5	92.31	0.0159
	2018	5	84.62	0.012
	2019	5	92.86	0.0202
	2020	5	83.33	0.0164
	2021	5	84.62	0.0093
GTB	2010	6	87.5	0.0342
	2011	6	92.86	0.0315
	2012	6	92.86	0.0528
	2013	6	92.86	0.0458
	2014	6	85.71	0.011
	2015	6	87.5	0.0098
	2016	6	81.25	0.0485
	2017	6	78.57	0.0571
	2018	6	78.57	0.0615
	2019	6	78.57	0.0565
	2020	6	78.57	0.0439
	2021	6	83.33	0.0576
Stanbic IBTC	2010	7	92.31	0.021
	2011	7	91.67	0.0075
	2012	7		0.0145
	2013	7		0.1105
	2014	7		0.1736
	2015	7	85.71	0.13
	2016	7		0.0066
	2017	7		0.2584
	2018	7	75	0.1436
	2019	7	80	0.2658
	2020	7	81.82	0.1795
	2021	7	81.82	0.2068
Sterling	2010	8	45.45	0.0161
-	2011	8	46.15	0.0092
	2012	8	45.45	0.012
	2013	8	40	0.0117
	2014	8	64.29	0.0109
	2015	8	66.67	0.0129
	2016	8	71.43	0.0062
	2017	8	73.33	0.0079
	2018	8	78.57	0.0087
	2019	8	78.57	0.0087
	2020	8	78.57	0.0087
	1	1	1	1



	2021	8	78.57	0.0083
UBA	2010	9	73.68	0.0015
	2011	9	72.22	-0.0099
	2012	9	75	0.0245
	2013	9	78.95	0.021
	2014	9	82.35	0.0171
	2015	9	87.5	0.0215
	2016	9	78.95	0.0187
	2017	9	84.21	0.0145
	2018	9	88.24	0.0114
	2019	9	78.95	0.0152
	2020	9	81.25	0.0109
	2021	9	81.25	0.0105
UBN	2010	10	71.43	0.1396
	2011	10	71.43	-0.0987
	2012	10	85.71	0.0036
	2013	10	86.67	0.0058
	2014	10	88.24	0.0223
	2015	10	89.47	0.0178
	2016	10	88.24	0.0141
	2017	10	83.33	0.0096
	2018	10	93.33	0.0139
	2019	10	93.33	0.0142
	2020	10	92.86	0.0119
	2021	10	92.31	0.0075
Unity Bank	2010	11	33.33	0.0407
	2011	11	31.25	0.0065
	2012	11	31.25	0.0156
	2013	11	38.89	-0.0559
	2014	11	50	0.0259
	2015	11	53.33	0.0106
	2016	11	53.33	0.0044
	2017	11	53.33	-0.0953
	2018	11	55.56	-0.0365
	2019	11	55.56	0.0115
	2020	11	55.56	0.0042
	2021	11	60	0.0059
Wema	2010	12	87.5	0.0799
	2011	12	80	-0.0344
	2012	12	75	-0.0205
	2013	12	72.73	0.0048
	2014	12	75	0.0062



	2015	12	76.92	0.0059
	2016	12	83.33	0.0062
	2017	12	75	0.006
	2018	12	75	0.007
	2019	12	72.73	0.0081
	2020	12	76.92	0.0047
	2021	12	80	0.0077
Zenith	2010	13	84.62	0.0186
	2011	13	83.33	0.0172
	2012	13	84.62	0.0393
	2013	13	83.33	0.029
	2014	13	83.33	0.027
	2015	13	90	0.0263
	2016	13	83.33	0.0278
	2017	13	84.62	0.0325
	2018	13	76.92	0.0334
	2019	13	78.57	0.0328
	2020	13	76.92	0.0278
	2021	13	76.92	0.0296

## Appendix B

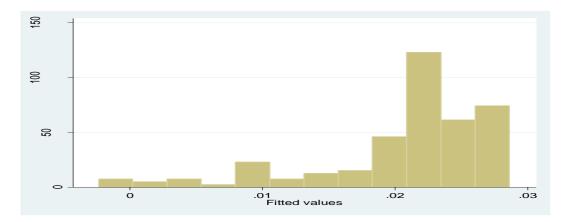
. summarize roa rd

Variable	Obs	Mean	Std. Dev.	Min	Max
roa	156	.0237256	.0453927	0987	.2658
rd	151	77.92921	13.6791	31.25	93.75

. swilk residual

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	Z	Prob>z
residual	151	0.84647	17.967	6.551	0.00000



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. pwcorr roa rd

	roa	rd
roa	1.0000	
rd	0.1721	1.0000

. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity Ho: Constant variance Variables: fitted values of roa

> chi2(1) = 0.35 Prob > chi2 = 0.5522

. regress roa rd

Source	SS	df	MS		Number of obs =	26
Model Residual Total	6.5411e+09 3.2988e+09 9.8399e+09	24 137	11e+09 449723 597525		F( 1, 24) = Prob > F = R-squared = Adj R-squared = Root MSE =	0.0000 0.6648 0.6508
roa	Coef.	Std. Err.	t	P> t	[95% Conf. I	nterval]
rd _cons	44.07987 31210.39	6.389772 2789.582	6.90 11.19	0.000		57.26771 36967.81