

Internal Control Environment and Risk Asset Quality of Financial Institutions in Nigeria

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Abstract

Despite various government intervention efforts to safeguard the financial institutions in Nigeria, asset quality of firms in the institutions continues to deteriorate in view of the persistent weak control environment. This study was conducted to assess the effect of control environment (board size, audit committee size and board diversity) on the risk asset quality of financial institutions in Nigeria. The study adopted ex-post facto research design using panel data gleaned secondarily from the annual reports of the selected institutions spanning 2010-2021. The population consisted of all the eleven (11) categories of the financial institutions in Nigeria as at December 31, 2021. Four categories consisting of 38 elements were purposively sampled for the study. Data were analyzed using Feasible Generalized Least Square regression (FGLS). The results showed that board size and board diversity had negative and significant effect, while audit committee size had positive and significant effect on the risk asset quality of financial institutions in Nigeria. The study concluded that board diversity and board size have potentials to attenuate the spate of non-performing loans in Nigeria. It was recommended that, since the 2012 CBN directive advocating 30% gender parity is not narrowing the gender gap, there is need for mandatory legislation through an act of parliament to deepen gender inclusion in Nigerian laws as was the case in Norway and Spain. Also, increase in the number of board size should be sustained.

Keywords: Board Size, Board Diversity, Control Environment, Audit Committee, Financial Institutions, Non-Performing Loan Ratio.

1. Introduction

Countries across the globe now make concerted efforts to strengthen their financial institutions in order to enhance their risk assets quality. In the developed economies such as United States, Canada, France, Italy, United Kingdom, good assets quality is maintained as shown in the world database. This is sequel to the fact that these countries were able to curtail their loan provisions through efficient control environment. In recent time, the banking segment in Nigeria has started witnessing distresses beginning from 2018 despite various reforms carried out by the regulatory bodies such as Central Bank of Nigeria (CBN), Security and Exchange Commission (SEC), Financial Reporting Council of Nigeria (FRCN), Nigerian Deposit Insurance Corporation (NDIC) to safeguard the risk assets quality of financial institutions. This is not far-fetched from poor control environment in place. In the wake of continual corporate failures, the role of control environment particularly over the risk assets cannot be ignored in the financial institutions since it creates a frame of mind in which organization functions (Ofei *et al.*, 2020). This therefore presupposes that the control environment in term of board size, board diversity and audit committee size must be taken into consideration.

Of recent, control environment is not working perfectly as financial institutions still

parade poor risk asset quality through increased non-performing loans due to insider dealings. This clearly attests to the fact that something is wrong with the control environment. For instance, Chijoke (2018) explains that aggravated board politics led to the impairment in the risk assets of Diamond Bank in Nigeria and thereafter taken over in April 2019 by Access Bank Plc. Furthermore, in April 2021, CBN relieved the appointment of First Bank board members when it was obvious that the bank had been plagued with significant non-performing insider loan (Emma & Babajide, 2021). This scenario is not different from the position of Bebeji (2013) that insider abuse contributes greatly to the problem of financial institutions in Nigeria.

Cursory review of extant literature such as Ogwiji *et al.* (2021), Ofei *et al.* (2020), Awen *et al.* (2018), have shown that an increasing number of studies have been conducted on control environment of Deposits Money Banks (DMBs) in Nigeria linking the variable concepts to financial performance, risk management and profitability. Unfortunately, these scholars excluded other financial institutions that are involved in asset creation. To fill this gap, the present study extended discourse of control environment to other categories of financial institutions in Nigeria. Hence, the main objective of this study was to assess the effect of control environment on the risk assets quality of financial institutions in Nigeria with specific reference to board size, audit committee size and board diversity.

2. Literature Review

2.1 Risk Asset Quality

According to Bulus and Lawal (2021), asset quality refers to the classification of credits in line with the probability of repayments. Risk asset as described by Mbatabbey (2019), Bishinu (2019), Vijaya and Aruna (2018), Egungwu and Egungwu (2018) comprises loan portfolio of the financial institutions which represents dominant assets of financial institutions. Risk assets in the financial institutions comprise of loans and advances to customers that are meant to earn interests to the organization (Nwosu *et al.*, 2020; Abdulazeez *et al.*, 2019; Bishinu 2019). Since loans comprise majority of banks' assets, it therefore carries greater portion of risk to the capital (Temile *et al.*, 2019). The studies of Popoola *et al.* (2021) submit that the quality of asset remains a strong determinant for measuring the performance of financial institutions. Plethora of studies such as Runche (2023), Jacqueline (2023), Harimurti (2022), Popoola *et al.* (2021) maintain that asset quality of financial institutions could be impaired by both banks' specifics and external factors. The studies of Mbatabbey (2019), Abdulazeez *et al.* (2019), and Jessie *et al.* (2019) submit that risk asset quality of financial institutions could be measured in the ratio of non-performing loans to total loans outstanding.

2.2 Control Environment

As explained by COSO (1992), a control environment is a set of standards, structure and processes that provides basic effective control across the organization. International Standards for the Professional Practice of Internal Auditing Standards (2011) defines control environment as behavior of the board and management regarding the significance of control within the organization. When effective control environment is absent, no amount of information and technology processes and level of operating efficiency could provide reasonable assurance to the stakeholders (Awen *et al.*, 2018). As posited in the study of Tekalign (2019), control environment is seen as bedrock of all components because of its strategic implication. The studies of Ofei *et al.* (2020), Tekalign (2019), Awen *et al.* (2018), Asiligwa (2017), reflect factors in the control environment to include organogram, uprightness, philosophy, ethics, management capability, attitude of key executives, operating styles, audit committee in governance participation, level of oversight, assignment of

authority and human resource policies. All these needs strategic direction from the above (Awen *et al.*, 2018). Organization flourishes when they put in place control environment that brings efficient execution of operations (Ogwuji, *et al.*, 2021).

2.2.1 Board Size

Board size, as explained by Anjala and Shikha (2016), consists of total number of directors including executive and non-executive on the board of the firm. Furtherance to this, the ideal board sizes vary from one organization to another depending on the capacity of the firm. However, code of corporate governance (2006) pegs board size to a minimum of 5 and maximum of twenty (20) members in Nigeria. The most important component of the control environment is the board of directors. According to Andreas and Theodoros (2019), board of directors is saddled with the responsibility of taking strategic decisions as far as control system is concerned. The board structure is central towards accomplishing the objectives of the organizations. With this, board of directors is required to perform oversight function to the management. However, Abdulazeez *et al.* (2019) aver that problems always emanate from the board of directors.

In the view of Isik and Ince (2016), board of directors is regarded as a subset of governance mechanism in which the deeds and misdeeds of managers could be appraised and evaluated. Board of directors plays a crucial role in maximizing shareholders wealth by exercising control over the management (Orji, 2018). For effectiveness in the oversight function, there must be adequate board size. However, efforts should be dissipated towards a composition of board members with proven quality. Thus, board size is conceptualized as the total number of executive directors and non-directors on the board of financial institutions.

2.2.2 Audit Committee Size

Audit committee comprises of Non-Executive Directors (NEDs) in an organization and their major role is to strengthen the audit quality in an establishment. According to AbuZraiq and Fadzil (2018), the responsibility of the audit committee is to mediate objectively between the executive management and the external auditor when conflict arises. According to Company Allied Matters Act (2014) and Corporate Governance Code (2011), financial institutions are required to put in place a robust audit committee of not less than 6 to perform enhanced oversight functions. While some stick to this, others are not sticking to this requirement as observed in the annual reports of the chosen financial institutions. Osemene and Fakile (2018) opine that audit committee plays a crucial role in the financial institutions as they deliberate and report on external auditors finding. This committee provides reasonable assurance on the compliance issues and scrutinizes financial records for quality control (Akpey & Azembila, 2016).

2.2.3 Board Diversity

From the views of Olufemi (2021), board diversity entails having a range of varying people that differs from each other in term of gender, experience, skills and demographic characteristics in such a way that the board will be less homogenous. Diversity in the board structure has capacity to bring diverse and robust skills, experiences and other qualities into bear which may enhance decision making (Kaguongo, 2018; Ilaboya & Ashafoke, 2017). In the opinion of Granovetta (2019), the presence of women in the board composition brings varying connections and networks that could be used to navigate the previously neglected banking business areas because they are classified as a special class. In addition, Rahmat and Fani (2020) claim that women tend to be conservative than men as they are termed to be risk averse and ensure tighter supervision than men.

However, Olufemi (2021) notices that Nigeria does not have a clear pattern as to board diversity gender particularly in the banking sector. Kilie (2015) observes that most

companies even in the advanced dominated economies have few women directors on their board. In view of this gender parity, Norway introduced an initiative mandating companies to adopt specific quota (40%) that will address gender gap in 2000. Furthermore, countries such as France, Italy and Spain followed suit by implementing similar quota system. Malaysia adopted 30% gender quota, while countries such as the UK, Germany and Sweden offers voluntary targets in respect of women on boards (Hinds, 2015).

2.3 Theoretical Review

The study adopts Resource Dependency Theory as framework for this research. This theory originated in 1970 and provides insight that larger board size brings a wide variety of expertise and knowledge from diverse fields. The principle of resource dependency theory was that, firms engage transactions with other actors and its environment in order to acquire more resources. According to Ilaboya and Ashafoke (2017), resource dependency theory offers a theoretical foundation supporting board of directors as resources to the organization as they are able to exert control over their environment by assimilating needed resources to survive. In the view of Olufemi (2021), organizations secure resources from environment so as to reduce uncertainty and improve organization performance optimally. Board members that have different skills, cultural background, gender are very strategic to the organization as they may be able to attract resources due to their heterogeneity (Ogboi, *et al.*, 2018). According to Terjesen, *et al.* (2009) as cited in the study of Bamanga and Alhassan (2020), resource dependency theory views organizations as operating an open-door system that needs to exchange and acquire resources in order to survive.

2.4 Board Size and Risk Asset Quality

Studies such as Emmanuel *et al.* (2022), Abdulazeez *et al.* (2019), Dosumu *et al.* (2018), indicated negative and insignificant effect between board size and asset quality. However, scholars such as Egungwu and Egungwu (2018), Anjala and Shikha (2016), Isik and Ince (2016) found positive and significant effect between board size and asset quality. Furthermore, Pham (2021), Andreas and Theodoros (2019), indicated that board size has negative and significant effect on the asset quality of various sampled banks in their domain. Most of these scholars used secondary source of data from the financial statements of the sampled banks. Furthermore, inferential statistics were used to arrive at the results particularly through the use of Ordinary Least Squared (OLS), Generalized Least Squared (GLS) and Bayesian Linear Regression (BLR). The reporting environments include Ghana, Nigeria, India, Turkey, Vietnam, US and Spain. Apart from the fact that some of these studies have contextual gap, the study of this magnitude could have been extended to other categories of financial institutions in Nigeria. Hence, the study hypothesizes that
 H_{01} : Board size has no significant effect on the risk assets quality of financial institutions in Nigeria.

2.5 Audit Committee Size and Risk Asset Quality

Scholars such as Arifa *et al.* (2021) in Bangladesh, Motaz *et al.* (2019) in Jordan, Thomas *et al.* 2019 in Kenya and Salisu *et al.* (2015) conducted studies on audit committee size and how it affects the loan loss provisions. Through the use of various techniques such as Generalized Least Squared (GLS), Binary Logic Regression and multiple regression analysis, it was discovered that audit committee size has negative and significant effect on asset quality. However, Olabisi and Oladutire (2023) posited that audit committee size has positive influence on the performance of DMBs in Nigeria through the use of regression estimation technique. It was observed that the study of Arifa *et al.* (2021) has data up to 2017 while, Motaz *et al.* (2019) and Thomas *et al.* (2019) also have data to 2016 and 2017 respectively which is considered old. The study of Olabisi and Oladutire (2023) could have

extended discussions to other category of financial institutions in Nigeria. Considering the above, the hypothesis was tested;

H₀₂: Audit Committee size has no significant effect on the risk assets quality of financial institutions in Nigeria.

2.6 Board Diversity and Risk Asset Quality

Abidin *et al.* (2022) in a study conducted in Indonesia through the use of partial least square confirmed that board diversity has significant and negative effect on the asset quality. However, the study made use of one-year financial information which was not enough to generalize the outcome of the study. Also, the study of Olufemi (2021), in Nigeria submitted that women on board do not necessarily guarantee improvements in the financial performance of banks. Furthermore, Ramat and Fani (2020) in the study conducted in Indonesia found that board diversity has significant and negative effect on the asset quality of financial institutions. As claimed by Bamanga and Alhassan (2020) through the use of GLS, it was found that female representation on the board has positive and significant effect on the performance of banks in Nigeria. In the same vein, Imade (2019) concluded the board diversity is positive and statistically significant with corporate performance in Nigeria. All these studies failed to extend discussions beyond DMBs. In view of the foregoing, the study hypothesizes that;

H₀₃: Board diversity has no significant effect on the risk assets quality of financial institutions in Nigeria.

2.5 Conceptual Framework



Source: Authors' compilation (2023)

3. Data and Methods

The study adopted *ex-post facto* research design. This was based on the fact that data used were based on historical evidence. Data were gleaned from the financial records of the chosen financial institutions covering 2010-2021. The population of this study comprised of all eleven (11) categories of financial institutions in Nigeria as at 31st December 2021. Out of the eleven (11) categories, four (4) categories, consisting of 38 elements were purposively considered. They are deposit money banks, development financial institutions, non interest banks and merchant banks. The base year of 2010 was the period Asset Management Corporation of Nigeria (AMCON) was established to stabilize, revitalize the financial system and efficiently resolve the Non- Performing Loans (NPLs) in the financial sector.

3.1 Model Specification

For the purpose of assessing the effect of control environment on the risk asset quality in Nigeria. This study adapted the model of Asiligwa (2017). This present study modified the model of Asiligwa (2017) by using risk assets quality as dependent variable. The model was now tested in Nigeria with the use of secondary data. The independent variable was proxy as board size, audit committee size and board diversity. For simplicity, the model was estimated in form of linear equation as follows;

$$NPLR_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 ACS_{it} + \beta_3 BD_{it} + e_{it} \dots\dots\dots (1)$$

Where;

$NPLR_{it}$ = Non-Performing Loans Ratio (NPLR) of bank i at time t , as dependent variable

BS_{it} = Board Size of bank i at time t , as independent variable

ACS_{it} = Audit Committee Size of bank i at time t , as independent variable

BD_{it} = Board Diversity of bank i at time t , as independent variable

It 2010-2021 = Annual time series of the pooled data

P_{0it} = Intercepts

P_{1it} - P_{11it} = Coefficient Slope

e = Stochastic error time

The analyses were done using both descriptive and inferential statistics involving Feasible Generalized Least Squared.

4. Data Analyses and Discussion of Findings

This chapter encompasses the presentation and the analysis of collected data using descriptive statistics, and Feasible Generalized Least Squared (FGLS) estimation technique for data analysis.

4.1 Descriptive Statistics

This encapsulates the summary of the co-efficient in the data sets. The descriptive statistics of the variables were presented in Table 1. From the descriptive statistics in Table 1, on the average, the sampled financial institutions have 10% as rate of non-performing loan which is far cry from the CBN benchmark and the international best practices of 5%. The implication there from is gradual depletion of the risk assets. Fred (2018), declare that high rate of default beyond the acceptable benchmark portends a great danger to the going concern of the financial institutions. The standard deviation of 16% indicates the existence of dispersion in sizes among the sampled financial institutions.

Most of the financial institutions used for this study have between 2 and 21 board size composition. The mean board size of 12 represents an indication of relatively higher board size which is within the size recommended by the code of Corporate Governance in Nigeria and therefore suitable for this study. Furthermore, the Audit Committee Size (ACS) on the average has 5 members with the minimum composition of 0 and the maximum composition of 8 within the period under review. According to Company Allied Matters Act (2014) and Corporate Governance Code (2011), financial institutions are required to put in place a robust audit committee of not less than 6 to perform enhanced oversight functions. Hence, the mean score of 5 members violates the regulatory requirement.

Table 1 further show that financial institutions in Nigeria jettison compliance with the CBN regulations mandate of minimum 30% female representation on their boards. The mean value of 26% is lower than the threshold set by the CBN. The minimum sample of 0% implies that some financial institutions within the period under review did not have female representation in the board. Furthermore, the result in Table 1 depicts that variables of the study are both skewed in positive and negative directions indicating non-normality in the data with the exception of board size. In addition, all variables have positive kurtosis. This implies that they are leptokurtic, and their tails are longer and fatter and their central peak is higher and sharper.

Table 1: Descriptive Statistics Results

Variables	Mean	Std. Dev.	Minimum	Maximum	Skewness	Kurtosis
NPLR	0.10	0.16	0	1.07	3.01	12.65
BS	11.97	3.65	2	21	0.00	2.84
ACS	5.03	1.37	0	8	-1.05	3.91
BD	0.16	0.14	0	0.87	1.23	6.05

Source: Authors' computation (2023)

4.2. Internal Control Environment and Risk Asset Quality

Table 2 presents the summary of ordinary Least Square (OLS), random fixed effect and Feasible Generalized Least Squared (FGLS) multiple regression results. To investigate the effect of control environment on the risk asset quality of financial institutions in Nigeria, the study employs the use of Feasible Generalized Least Squared (FGLS) method to correct for the orthogonality effect that was present in the ordinary least square and fixed and random effect estimation. In the presence of heteroskedasticity, regression using Feasible Generalized Least Square (FGLS) offers potential efficiency because it could be used to estimate the coefficient of multiple linear regression models and their covariance matrix (Popoola *et al.*, 2021). From the result of FGLS in Table 2, board size and board diversity exert negative and significant effect on the asset quality of financial institutions in Nigeria at [Coef. = -0.002(0.009)] and [Coef. = -0.316(0.000)] respectively at 1 percent. However, audit committee size is positive and also significant at 1 percent on the asset quality of financial institutions in Nigeria [Coef. = 0.032(0.000)]. In the light of the foregoing, the study fails to accept null hypothesis that states that control environment does not have significant effect on the asset quality of financial institutions in Nigeria based on the Wald Chi(3) result of 122.96{0.0000}. Furthermore, the finding implies that control environment has mixed effect on the asset quality.

Table 2: Regression Results of Internal Control Environment and Risk Asset Quality

	OLS Model	FE Model	RE Model	FGLS Model
	-0.033	0.002	-0.000	-0.002
	{0.896}	{0.527}	{0.876}	{0.009}*
ACS	1.453	0.009	0.005	0.032
	{0.020}*	{0.404}	{0.634}	{0.000}**
	-0.121	-0.148	-0.164	-0.316
	{0.034}*	{0.084}	0.047*	{0.000}**
CONS		0.070	0.136	0.067
		{0.330}	{0.045}*	{0.000}**
F/Wald Stat	7.65	1.49	4.07	122.96
Probability	0.0001	0.218	0.253	0.0000
R-Squared	0.048	0.016	0.013	
Vif	3.94			
Hettest		399.12/{0.0000}		
Hausman			5.61 {0.0856}	
AR(1)		10.03 {0.0036}		

Note: (1) parentheses are p-values; (2) *, **, implies statistical significance at 5% and 1% levels respectively

Source: Authors' Computation, (2023).

4.3 Discussion of Findings

Table 2 presents the estimation FGLS results showing the effect of control environment on the risk asset quality of financial institutions in Nigeria using board size, audit committee size and board diversity as proxy variables. From the results, board size has negative and significant effect on the risk assets quality [Coef. = -0.002(0.009)]. With this outcome, it implies that a unit increase in the board size would lead to a unit decrease of 0.009 in the non-performing loans of the sampled financial institutions in Nigeria. The result points to the fact that larger board size enhances the asset quality. The finding of this study was in tandem with the position of Pham (2021) in a study conducted in Vietnam that board size has negative and significant effect on the asset quality of Joint stocks commercial banks in Vietnam. Furthermore, Andreas and Theodoros (2019) in the United States, express support to the finding that board size has negative and significant effect on the asset quality of US banking sector. Also, Akwaa-Sekyi and Gene (2016), submit that board size have negative and significant effect among the listed Spanish banks.

The outcome of study conducted by Egungwu and Egungwu (2018) in Nigeria was at variance with the outcome of this study by submitting that board size has positive and significant influence on the risk assets quality of deposit money banks. In this category also, was the study of Anjala and Shikha (2016) in India that board size has positive and significant effect on the asset quality of firms in India. Furthermore, the studies of Isik and Ince (2016) in Nigeria, Paul and Simon (2014) in Nigeria claim that board size has positive and significant effect on the asset quality. From the study conducted by Abdulazeez *et al.* (2019), board size has negative and not significant effect on asset quality. In addition, Saseela (2019), Dosumu *et al.* (2018) posit that board size has a negative and not significant effect on the asset quality judging from Nigerian reporting environment.

Table 2 also provides insight that audit committee size has positive and significant effect on the risk assets quality of financial institutions in Nigeria [Coef. =0.032(0.000)]. This implies that an increase in the audit committee size would lead to an increase in the non-performing loan in Nigeria and the effect is significant. Corroborating this outcome was Olabisi and Oladutire (2023) in Nigeria. This outcome does not resonate with the study of Arifa *et al.* (2021) in Bangladesh which states that audit committee size has negative and significant effect on the non-performing loans of listed banks in Bangladesh. Also, Motaz *et al.* (2019) find that audit committee size has negative and significant effect on the credit risks of banks in Jordan. Equally, Salisu *et al.* (2015) within the Nigerian context submit that audit committee size exerts negative and significant effect. However, Angahar and Mejabi (2013) conclude that audit committee size has negative effect, but not at significant level.

The result of board diversity has it that there exists a negative effect at significant level on the asset quality of financial institutions in Nigeria [Coef. = -0.316(0.000)]. This therefore presupposes that, an increase in board diversity would lead to reduction in the non-performing loans of financial institutions particularly in the Nigerian environment and its effect cannot be underestimated. Supporting this outcome were the studies of Abidin *et al.* (2022), Rahmat and Fani (2020) in Indonesia and Ilaboya and Ashafoke (2017) in a study conducted in Nigeria. Expressing dissatisfaction with the present outcome were Bamanga and Alhassan (2020), Ogboi *et al.* (2018) and Imade (2019) in Nigeria that board diversity has positive and significant effect on non-performing loans. However, Kaguongo (2018) in Kenya and Rafinda *et al.* (2018) in India, have it that board diversity does not have significant effect on the asset quality of financial institutions.

5. Conclusion and Recommendations

Further to the persistent distresses of financial institutions in Nigeria which was occasioned by poor control environment, the study was conducted to assess the effect of control environment on the risk asset quality of financial institutions in Nigeria using board size, audit committee size and board diversity as proxy of investigation. Though, there have been many debates on whether control environment have effect on the risk asset quality of financial institutions or not across the globe. Based on the analysis conducted through the use of FGLS, it was discovered that board size and board diversity have capacity to enhance the asset quality of financial institutions in Nigeria at significant level. In view of this, proposing legislation would go a long way in solving the issue of gender parity.

Based on the findings of this study, it was recommended that since the 2012 CBN directive advocating 30% gender parity is not narrowing the gender gap, there is need for mandatory legislation through an act of parliament to deepen gender inclusion in Nigerian laws as was the case in Norway and Spain. Also, increase in the number of board size should be sustained as this tends to reduce the spate of non-performing loans. Oversight function of the audit committee with respect to its size should be accorded urgent attention by ensuring that composition of the committee is such that would add more value to the financial institutions in order to achieve improved asset quality.

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