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Effect of corporate governance on risk management of selected deposit money banks in Nigeria

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Abstract--This paper addresses effect of corporate governance on risk management by bank. Selected deposit money banks base on FOBES list were selected to address the effect in question. The questions asked to which answers were provided among others includes: To what extent (if any) does board strength, shareholders influence and management efficiency influence or affect capital risk, credit risk and liquidity risk of banks in Nigeria. The study is limited to six randomly selected listed commercial banks in Nigeria over the period of six years. In carrying out the analysis, the panel data regression analysis method was adopted. The variables used for this analysis are: the board index and management influence as proxies for corporate governance; capital risk, credit risk and liquidity risk all as proxy variables for risk taking by banks. The data were sourced from the audited financial statements of the sample banks. The estimated result revealed a negative relationship between capital risk and corporate governance which invariably means that the capital risk goes up as Corporate Governance disclosure increases. The result further shows that the more the corporate governance disclosure, the less the credit and liquidity risk taking by the banks in Nigeria.

Keyword--corporate, risk management, deposit money, banks.

Introduction

Financial institutions have always been an important part of any economy (Harrison and Joseph 2017). This sector has not only aided in the facilitation of Nigerian business transactions, but it has also made a significant contribution to West Africa's economic growth (Adekunle et al., 2018). The Nigerian banking crises have demonstrated that banks not only incur excessive risks, but that the dangers vary by bank. Some banks take on more risks than their capital can handle, while others that were doing well suddenly declared big losses, with some even going bankrupt Musa, Ifurueze, and Success (2013). Poor risk management, according to Goswami (2011), is one of the reasons for the failures. In this regard, there is a bottleneck impeding risk management's ability to influence and play an active role at business decisions in most banks, since they are unable to influence and play an active role in business decisions, and their considerations are subordinated to profitability interests. As a result, basic risk management criteria such as avoiding strong asset concentrations and reducing return volatility have been disregarded.

By its very nature, the banking industry is a high-risk endeavor. It's dangerous since it's the only business where the share of borrowed cash exceeds the equity of the owners. Financial leverage is frequently connected with a high level of risk. This can be seen in a case where false rumors, whether true or not, sparked financial panic and, as a result, a bank run. Even in the presence of a good lender of last resort, Adekunle et al. (2019) suggested that few banks can withstand a continuous run. As a result, some of the most serious hazards that banks confront are endogenous, while others are exogenous to the financial system (Magnus 2016). Risk management and disclosure of risk management strategy by individual banks and their groups are emphasized in the current code of corporate governance established by the Central Bank of Nigeria, (2018). Despite these strict restrictions, the financial services sector, particularly banks, continues to be vulnerable to crisis and default Musa, Success and Iyaji (2014).

There is a possible dispute among the stakeholders on the topic of risk if the firm is viewed as a nexus of relationships among diverse stakeholders (Jensen & Fama, 1983). Managers may want to invest in assets that generate a larger return in the near term in order to increase their salary Musa, Success and Nwaorgu (2015). Shareholders, on the other hand, will be very interested in a stable return with minimal risk. Regulatory agencies are looking for a benchmark of excellent governance practices in order to manage these two competing goals. That is, the optimal governance mix and structure that will offer a corporation with a greater return while posing the least amount of risk and ensuring consistent, long-term growth.

Review of Literature

Different researchers and practitioners have looked at and defined corporate governance in different ways. However, they have all pointed to the same conclusion, resulting in a greater degree of agreement in the definition. Coleman, et al. (2016) described corporate governance as the relationship between the company and its shareholders, or in a broader sense, the company's relationship

with society as a whole. Mayer (1999) proposes a broader definition, claiming that it refers to the sum of the processes, structures, and information used to guide and oversee an organization's administration. As a result, this study takes a broader approach and defines corporate governance in the context of banking as the way in which a bank's systems, procedures, processes, and practices are managed to allow positive relationships and the exercise of power in the management of assets and resources, with the goal of increasing shareholder value and satisfaction while improving accountability, resource use, and transparency. The agency theory, stakeholder theory, and stewardship theories are the three important theories of corporate governance highlighted by Sanda, et al. (2015) in their paper titled corporate governance systems and business financial performance in Nigeria. The three most prominent theories of corporate governance are the agency theory, stakeholder theory, and stewardship theory, which are explored below:

Operational Risk

Operational risk is defined by the Basel Accord (2017) as the risk of direct or indirect loss as a result of insufficient or failed internal processes, people, and systems, or external events. Operational risks are caused by malfunctions in information systems, reporting systems, internal monitoring rules and internal procedures designed to take timely corrective steps, or compliance with internal risk policy guidelines (Bessis, 2011). As a result, operational risks manifest themselves at various levels, including human errors, processes, and technical and information technologies. Because operational risk is a "event risk," without effective risk tracking and reporting, certain significant risks will be overlooked, with no trigger for corrective action, which can have disastrous implications. Increased reliance on sophisticated technology, expanding retail operations, growing e-commerce, outsourcing of functions and activities, and increased use of structured finance (derivative) techniques that claim to reduce credit and market risk have all contributed to banks' operational risk being higher (Greuning and Bratanovic, 2019) and Musa, Ifurueze and Bernard (2013).

Stewardship Theory

The term steward refers to the job relationship between the principle (owner) and the steward (manager, et al 1997; Donaldson and David, 1997). Unlike agency theorists, who see CEOs and directors as self-serving and opportunistic, stewardship theorists reject agency assumptions, claiming that directors' interests are frequently aligned with shareholders'. "Organizational role-holders are conceived as being motivated by a need to achieve and gain intrinsic satisfaction through successfully performing inherently challenging work, to exercise responsibility and authority, and thus to gain recognition from peers and bosses," Donaldson and Davis (1991) suggest (Donaldson and Davis, 1991). They discovered a "merging of individual ego and the corporation" in managers who have worked for a company for a long time (Donaldson and Davis, 1991, p.51). Managers may also perform their duties out of a sense of obligation. Donaldson and Davis suggested that personal perception encourages individual calculative behavior by managers, thus tying individual self-esteem with corporate prestige, citing the work of Silverman (1970). To properly comprehend the premise of

stewardship theory, Davis, et al. (1997) claimed that a psychological and situational evaluation of the theory is essential. According to stewardship theory, there is no underlying, systemic problem with executive motivation (Cullen, Kirwan and Brennan, 2006). This suggests that where managers derive intrinsic satisfaction from their work, extrinsic incentive arrangements are less essential.

Agency Theory

Agency theory has long been used as a lens in organizational research, particularly in family firm research (Le Breton-Miller, et al., 2005; Goel et al., and Miller, 2009). The agency hypothesis is based on economic theory and dominates the literature on corporate governance. The dominance of agency theory is influenced by two reasons, according to Daily et al. (2003). To begin with, the idea is conceptually straightforward, reducing the business to two participants: managers and stockholders. Second, it is a widely held belief that human beings are self-interested. The stewardship notion is used in this research. The adoption is based on the linear link between the theory's assumption and the study's goal. Part of the assumption is that the principle will put in place an organizational governance structure that empowers and motivates the manager's presumed other-interested firm performance, resulting in higher firm performance (Davis et al., 1997). This suggest that where principal enacts a sound and robust organizational governance structure, credit risk, liquidity risk, capital risk, management efficiency will be better managed properly.

Methodology

The methods employed for data analysis includes regression analysis and other statistical tests such as t-test, F-test, standard error test was also discussed. The population for this study consists of all the 22 universal listed banks in Nigeria as at 2020. The time frame considered for this study is 2012 to 2020. This 8-year period, although shorter shall be considered for this research due to non-availability of complete data for 2020 as a result of the fact that the banks have not publish their annual report as at the time this research is being carried out. The research shall be limited to six selected listed deposit moneys in Nigeria. This was based on the top Nigerian banks on the Forbes list of top 2020 world biggest companies in year 2020. The banks with the highest market (Customers based) and largest distribution network in Nigeria with a formidable total assets value among other banks which include GTB, First bank plc, Access bank plc, Zenith bank, UBA, Skye bank. In analyzing the relationship between corporate governance and risk management of listed commercial banks in Nigeria, the panel data regression analysis method shall be adopted. This is because the study combined time series and cross-sectional data.

Model Specification

Model 1

$$CR = f(BI_t, ME_t) \dots\dots\dots (1)$$

$$CR_t = \beta_0 + \beta_1 BI_{it} + \beta_2 ME_{it} + e_t, \dots\dots\dots (2)$$

Where:

CR = Capital Risk
 BI = Board Index
 ME = Management efficiency
 e_t = the error term

The “a-priori expectations” are such that:

$\beta_1 < 0$ (Better risk management should be the result of a stronger board. i.e. the stronger the board, the lower the capital risk)

$\beta_2 < 0$ (The bank's capital adequacy requirement will be met thanks to more efficient management.)

Model II

$$CD = f(BI_t, SI_t, ME_t) \dots\dots\dots (3)$$

$$CD_t = \beta_0 + \beta_1 BI_{it} + \beta_2 SI_{it} + \beta_3 ME_{it} + e_t \dots\dots\dots (4)$$

Where:

CD = Credit Risk
 BI = Board Index
 SI = Shareholders influence
 ME = Management efficiency
 e_t = the error term

$\beta_1 < 0$ (Better risk management should be the result of a stronger board. i.e. the stronger the board, the lower the credit risk)

$\beta_2 < 0$ [A higher value suggests increased shareholder confidence, which also offers better protection for deposits (and debts) that support, the greater the shareholders' influence, the lower the credit risk exposure]

$\beta_3 < 0$ (A more efficient management team is expected to assess credit worthiness more accurately, resulting in fewer loss provisions.)

Model III

$$LR = f(BI_t, SI_t, ME_t) \dots\dots\dots (5)$$

$$LR_t = \beta_0 + \beta_1 BI_{it} + \beta_2 SI_{it} + \beta_3 ME_{it} + e_t \dots\dots\dots (6)$$

Where:

LR = Liquidity Risk
 BI = Board Index
 SI = Shareholders influence
 ME = Management efficiency
 e_t = the error term

$\beta_1 < 0$ (Better risk management should be the result of a stronger board. i.e. the stronger the board, the lower the capital risk)

$\beta_2 < 0$ [A higher value suggests increased shareholder confidence, which also offers better protection for deposits (and debts) that support]

$\beta_3 < 0$ (liquidity risk management, a more efficient management will strive to strike a balance between investing liquid funds to earn a higher return and staying liquid to meet deposit withdrawal requests)

Proxy Variables for Corporate Governance

The board index shall be used to proxy the corporate governance. Thus, three non-financial variables shall be considered in calculating the board index for the purpose of this study. The board index shall be constructed with the following variables: board size, composition of the audit committee and board independence. A corporate governance disclosure index (CGDI) will then be computed by using the following formula:

$$\text{CGDI} = \frac{\text{Total Score of the Individual Company}}{\text{Maximum Possible Score Obtainable by Company}} \times 100$$

Research Hypotheses

For the purpose of the accuracy of this study and to offer useful answers to the research question, the research hypotheses to be tested are:

- **H₀₁:** Board strength does not have significant impact on capital risk, credit risk and liquidity risk exposure of banks in Nigeria.
- **H₀₂:** Shareholders' influence does not have significant impact on capital risk, credit risk and liquidity risk exposure of banks in Nigeria
- **H₀₃:** Management efficiency does not have significant impact on capital risk, credit risk and liquidity risk exposure of banks in Nigeria.

Table 1.1
Regression Result for Panel Data

$CR_t = -0.177359 + 0.425340BI_{it} - 0.103315$
 Model 1: Dependent Variable: CR
 Cross-sections included: 8
 Total panel (balanced) observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
	-			
C	0.177359	0.088005	-2.015323	0.0521
CGDI	0.425340	0.117086	3.632712	0.0009
	-			
ME	0.103315	0.091612	-1.127746	0.2676

R-squared	0.630948	Mean dependent var	0.056100
Adjusted R-squared	0.558581	S.D. dependent var	0.075358
			-
S.E. of regression	0.064887	Akaike info criterion	2.552672
			-
Sum squared resid	0.138942	Schwarz criterion	2.420712
Log likelihood	48.94810	F-statistic	7.103386
Durbin-Watson stat	0.579680	Prob(F-statistic)	0.002719

Source: Eview 5 software output

Model 2:

$$CD_t = 0.107918 - 0.051918CGDI - 0.0171909SI - 0.037841ME$$

Dependent Variable: CD
Cross-sections included: 6

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
C	0.107918	0.113794	0.948366	0.3501
	-			
CGDI	0.051918	0.172366	-0.301206	0.7652
	-			
SI	0.071909	0.078436	-0.916787	0.3661
	-			
ME	0.037841	0.116052	-0.326068	0.7465

R-squared	0.573610	Mean dependent var	0.044633
Adjusted R-squared	0.515114	S.D. dependent var	0.077942
			-
S.E. of regression	0.079299	Akaike info criterion	2.126750
			-
Sum squared resid	0.201225	Schwarz criterion	1.950804
Log likelihood	42.28151	F-statistic	0.604239
Durbin-Watson stat	2.077492	Prob(F-statistic)	0.617047

Model 3: Dependent Variable: LR

$$LR_t = 0.1009868 - 1.353201CGDI + 0.865636SI - 0.083636ME$$

Method: Panel Least Squares

Sample: 2012 2020
 Cross-sections included: 6
 Total panel (balanced) observations: 48

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
C	1.009868	0.479220	2.107318	0.0430
-	-	-	-	-
CGDI	1.353201	0.725887	-1.864204	0.0715
SI	0.865636	0.330319	2.620609	0.0133
-	-	-	-	-
ME	0.083636	0.488732	-0.171128	0.8652
R-squared	0.598608	Mean dependent var	0.208928	
Adjusted R-squared	0.533478	S.D. dependent var	0.356699	
S.E. of regression	0.333951	Akaike info criterion	0.748795	
Sum squared resid	3.568746	Schwarz criterion	0.924741	
-	-	-	-	-
Log likelihood	9.478303	F-statistic	2.643509	
Durbin-Watson stat	1.307796	Prob(F-statistic)	0.066017	

Source: Eview 5 Software output

The regression equation's result is provided in table 1.1. The dependent variables in the equations are capital risk, credit risk, and liquidity risk, whereas the independent variables are corporate governance disclosure index, shareholder influence, and management efficiency. The F-values in the first model, which are significant at 5%, and in the third model, which are significant at 10%, demonstrate that our models do not suffer from specification bias. However, the coefficient of determination (R²) for model 1 suggests that the explanatory variables account for around 63 percent of the change in capital risk, while the adjusted R-squared of 55.8% further supports this effect. The independent factors also account for 57.4 percent of the change in credit risk in the second model. The R² of 0.599 in the third model indicates that the independent variables account for around 59.9% of the change in liquidity risk.

Model 1: Capital risk

The regression result for the first model shows that the association between capital risk and corporate governance proxy does not match our predicted outcome. This usually indicates that when the level of Corporate Governance transparency rises, the capital risk rises as well. At 1%, the corporate governance transparency index coefficient is substantial (p-value 0.0009). The coefficient, on the other hand, is positive. As a result, corporate governance appears to have a

considerable impact on capital risk taking. This is to be expected, given the central bank's strict minimum capital adequacy requirements. The management efficiency variable (ME) has a negative but non-significant coefficient (p-value 0.2676). The outcome is in line with our expectations. When this variable has a greater value, it indicates that management is inefficient. As a result, the data suggests that banks with better management keep less equity as a percentage of total assets. This finding is in line with a management team that is maximizing the utilization of excess debt. (above the legal minimum).

Model II: Credit risk

Although the sign matches to our stated assumption, the corporate governance disclosure variable has no significant (p-value 0.7652) influence on credit risk for this specification. The findings suggest that the more corporate governance information there is, the less credit risk banks take. This sour connection was to be expected. Given that the board of directors is ultimately responsible for loan policies, it is logical to assume that as the board becomes stronger and corporate governance disclosure increases, the banks' loan policies will get tighter, resulting in lower credit risk. Credit risk is unaffected by the shareholder influence variable (SI), as assessed by the loans-to-deposit ratio. The equity-to-loans ratio shows a negative coefficient with a p-value of 0.3661. This corresponds to our expectations. According to the conversional literature, investors express their disapproval of greater risk-taking behavior by requesting less bank shares, resulting in a decline in share prices, which is why the equity ratio has a negative relationship with credit risk.

Model III: Liquidity risk

With a p-value of 0.0715, the board corporate governance index is negative and significant. It was assumed that the connection would be sour. This means that the more corporate governance information there is, the less liquidity risk banks will take. The idea is that companies with better corporate governance are less prone to take liquidity risks. This might be construed as improved liquidity risk management. However, it is important to note that this should not be done at the expense of earnings. The shareholder influence (SI) coefficient, as measured by the loans-to-deposit ratio, is positive and substantial (p-value 0.01). As a result, an increase in this variable (the ratio of loans to deposits) boosts liquidity. This is a pleasant surprise. Liquidity would be expected to fall, as loans are typically made as a substitute for deposits (which could have been used to acquire liquid assets). Although the management efficiency coefficient is negative, it is not statistically significant. The implication is that a less efficient management team may have more liquid assets on hand. As a result, the findings show that banks with better management hold a smaller ratio of liquid funds to total deposits.

Conclusion

The corporate governance transparency index, as measured by the study, has a negative link with both credit and liquidity risk, however this relationship is not substantial in the case of capital risk. Corporate governance is strongly positively connected to capital risk, which differs from the expected conclusion, which could

be attributed to the central bank's severe minimum capital adequacy rule. According to the study, management efficiency has a negative but non-significant impact on capital risk, credit risk, and liquidity risk. As a result, the findings suggest that banks with more efficient management keep lower equity relative to total assets because less efficient management may not be aware of the full extent of their credit risk and thus fail to make adequate provisions or intentionally understate loan loss provisions. This finding is in line with a management team that is maximizing the utilization of excess debt (above the legal minimum).

Finally, the research shows that shareholder involvement has a negative but non-significant effect on credit risk. This finding is reinforced by the conversional literature, which claims that investors express their displeasure of increased risk-taking behavior by desiring fewer of the bank's shares, causing share values to decline. Despite being unexpected, shareholder influence is strong and positively related to liquidity risk. The implications of this study, particularly in Nigeria, are that bankers are prone to overlooking certain dangers and even disobeying regulatory norms intended to limit such risks. Because of management's inadequate attitude toward risk, particularly credit default risk, a large number of banks have failed, some are struggling, and others are in crisis. These banks' boards of directors are responsible for identifying their significant risks, as well as their sources, and devising methods for mitigating them. Starting with the board of directors, everyone should be aware of the risk management structure and culture. Of course, having a structure in place isn't enough; you also need the bravery and determination to put it in place swiftly and successfully. The end outcome may not be massive profits, but rather the banking institution's survival in an increasingly competitive business. Based on the findings of this research, we therefore present the following recommendations which will be useful to stakeholders.

- Management must exercise caution when establishing a credit policy that will not have a detrimental impact on profitability, and they must understand how credit policy influences the functioning of their banks. Improper credit risk management lowers bank profits, lowers asset quality, and increases loan losses and non-performing loans, all of which can lead to financial distress.
- A risk management group or function should be led by a senior executive with direct access to the board. This person should be in charge of all parts of the bank's risk management structure. The head of the risk management group should report to the board on a regular basis and should have unrestricted access to any member of management and non-executive board members. Going straight to the Chairman should not be considered a "nuclear" option.
- Boards should examine their internal audit departments to verify that they are suitably resourced, led by a high-ranking executive with board access, and adequately paid.

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