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*Corporate Governance Mechanisms and Financial
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Corporate Governance Mechanisms and Financial Distress in the Nigerian Banking Context

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Abstract

The study investigates the impact of corporate governance mechanisms on financial distress scenarios of banks quoted on the Nigerian Exchange Group. The theoretical framework of the relationship is hinged on the upper echelon theory (given the echelon occupied by Boards and Chief Executives of firms). The study utilises a sample of fourteen (14) banks over a five-year period (2004-2008). The justification for this period is premised on the proliferation of distress scenarios among Nigerian banks. The banks are segmented into two distinct groupings based on their financial health status (distressed and non-distressed categorisations). The marginal effect estimates of the binary logistic regression are utilised in analysing the model. The empirical results reveal that CEO characteristics and board characteristics are significant predictors of the probability of financial distress among Nigerian quoted banks. The study recommends increased financial literacy for CEOs, and enhanced participation and activeness of members in board and committee meetings.

Keywords: CEO Attributes, Board Attributes, Banks, Economy, Distress Probabilities

Introduction

The banking sector in any economic setting is one of the most critical sectors that perform the important role of promoting economic growth whilst engendering stability of the economy's financial system (Ayoola & Obokoh, 2018). Banks function in an important intermediation role by bridging the divide between the surplus and deficit segments of the economy. The financial health status of banks are therefore of utmost importance to any economy, as uncertainties within the sector could lead to instability and equilibrium shifts within the economy. The global economic downturn during the 2007/2008 financial year led to distress scenarios for many banks. The OECD (2009) report highlighted that the financial crisis experienced during the period was predicated on the weakness and failures of the corporate governance of several financial institutions. These weaknesses in corporate governance structures of the financial institutions (of which banks are most prominent) are believed to have been major motivators of the distress scenarios experienced by the financial institutions during the period and therefore justifies investigation of the casual empirics.

Extant studies on financial distress have utilised variable combinations such as accounting ratios (Altman, 1968; Taffler, 1983; Zmijewski, 1984), market-based ratios (Almansour, 2015; Charitou & Trigeorgis, 2004) and to a certain degree, macroeconomic factors (Dewi & Hardi, 2017; Ohlson, 1980) in the

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determination of the probability of financial distress among firms. A paucity of research on the degree to which corporate governance contributes to financial distress seemingly exists in the African context. The economic climate of African companies is wrought with corporate governance issues especially as it relates to the workings of the Board of Directors and the functioning of the Chief Executive Officer (CEO). Cases in note in this regard include those of the defunct Oceanic Bank PLC and Intercontinental Bank PLC in Nigeria where their CEOs exhibited domineering roles over the board which eventually put the banks in jeopardy (Pam, 2013). The Central Bank of Nigeria (CBN) had to intervene through informal government assistance into the financial issues of these aforementioned banks along with the salvaging of other distressed banks (Afribank PLC, Equatorial Bank PLC, Finbank PLC, Platinum Habib Bank PLC, Skye Bank, Spring Bank PLC and Union Bank PLC) which not only had implications for the industry in particular, but the economy at large (Babajide, Olokoyo, & Adegboye, 2015). This scenario buttressed the assertion of Zhang, Xie, Lu, and Zhang (2016) that failures of financial institutions have significant impact on the economy, and government's attempt to rescue such institutions garner substantial costs.

Literature Review

Theoretical Framework

The theoretical framework of the study is hinged on the upper echelon theory. The upper echelon theory was originally developed by Hambrick and Mason (1984), but was updated by Hambrick (2007). The theory asserts that organisational outcomes are products of the characteristics of their executives which include, but are not limited to the experiences, personalities, values and interpretations of strategic situations. This suggests that the health status of a firm is dependent on the dispositions and biases of the powerful actors (the board of directors) of the firm.

The theory focused on two subordinate tenets which motivated the segmentation of the corporate governance mechanisms utilised in this study. The first tenet was based on the position that the totality of the board characteristics would provide better explanations of organisational outcomes as opposed to focus on single executives (e.g. the CEO). The premise of this tenet is the presupposition that firms are complex entities and the management of such entities would involve shared activities. These sharing of activities and responsibilities ultimately translates into strategic behaviours and outcomes which are products of collective capabilities, cognitions and interactions (Hambrick, 2007).

The second stream focuses on the narcissistic behaviours of the individuals believed to be at the central helm of affairs (the CEO). Narcissistic behaviours of the CEO are usually borne out of the tendency for the CEO to dominate the board to some appreciable extent, and also the tendency for the institutional and regulatory frameworks to accommodate such behaviours (Hambrick, 2007). In economic settings where regulatory frameworks such as the code of corporate governance place restrictions on the powers of the CEO, organisational outcomes would be more attributable to the combined board than to the individual CEO.

Nigeria has experienced both regimes with seemingly lax frameworks in prior times, but with improved amendments in recent years. Motivating these amendments was the need to reduce the incidence of firm distress and failure by strengthening the functioning of the board in being able to check the excesses of the CEO. This study utilises these two streams of interest (collective board attributes and individual CEO attributes) in analysing the impact of corporate governance mechanisms on the probability of financial distress among quoted Nigerian banks.

Empirical Review

Chen (2014:3) defined corporate governance as “an integrated set of internal and external control mechanisms designed to maximise firm value and ensure that the firm generates a return on their holdings”. Corporate governance has gradually evolved as a coping mechanism utilised by corporations to engender firm survival through adaptation to environmental dynamism. This is seen in constantly changing governance structures, strategies and legislations in order to cater for exigencies as they occur. Examples of such legislations are the Sarbanes Oxley (SOX) act in the United States that arose as a result of major corporate collapses such as those of Enron and WorldCom in 2001 and 2002 respectively, and the SEC Code of Corporate Governance (2011) in Nigeria (later repealed by the National Code of Corporate Governance, 2016 and subsequently, 2018) that was an outcome of the 2008/2009 financial crisis. New governance structures and legislations were mostly borne out of major corporate failures as well as distress scenarios experienced by corporations during the period of economic and financial crises (Chen, 2014). The aim of such restructuring and legislative enactments was partly geared at reducing the incidence of distress scenarios and corporate failure experienced around the world.

One of the foremost studies on the relationship between corporate governance and financial distress is that of Daily and Dalton (1994). They found that corporate governance was a better predictor of distress in relation to financial and firm size proxies, indicating the superior explanatory power of the governance variables. Wu (2007) built on the assertions of Daily and Dalton (1994) that corporate governance has the likelihood to significantly impact firm performance as well as the possibility of financial distress. Wu (2007) utilised ten corporate governance variables and found seven of them to have significant impact on financial distress prediction as well as improve the overall classification accuracy. He also found the higher incidence of financial distress in Taiwan to be a function of weak corporate governance.

Lee and Yeh (2004) tested the hypothesis that weak governance structures led to reduction in corporate value. They utilised several corporate governance variables such as control rights (cash flow rights), stock pledge ratio, adjusted control rights, institutional shareholdings, ratio of board seats held by large shareholders, management participation and founder participation. They found that corporations which exhibited weak corporate governance were likely to encounter increased distress situations and high probability of eventual failure.

Bredart (2014) examined the impact of corporate governance on financial distress. Using a dataset from the United States consisting of three hundred and twelve firms between 2007 and 2011, he sought to determine the impact of board configuration on financial distress. The study utilised a matched pair of the sample to segregate between distressed and non-distressed firms (representing a total of one hundred and fifty six distressed and non-distressed firms respectively). The distressed firms were classified as such based on firms that had filed for the chapter seven (liquidation) or chapter eleven (reorganisation) of the US Bankruptcy Code. The findings reveal the existence of a significant dichotomy in the board configuration of distressed firms from those of non-distressed firms.

Ciampi (2015) utilised a model comprising corporate governance variables to capture the efficacy of financial distress prediction. The study focused on small enterprises and the results revealed a divergence from those of large enterprises. The findings indicate that the presence of CEO duality, a majority shareholder and reduced number of external/foreign directors enhance the firm's stability thereby reducing the likelihood of financial distress. Also, the model that incorporated the corporate governance variables was found to have better distress prediction accuracy than the model based purely on financial/economic

variables. This finding was similar to that of Lin, Liang, and Chu (2010) where a hybrid prediction model that incorporated non-financial (corporate governance) variables lead to better distress prediction accuracy as compared to models based exclusively on financial data.

Baklouti, Gautier, and Affes (2016) examined the effect of several corporate governance indices on the probability of financial distress with major focus on European commercial banks. Their sample included one hundred and forty seven commercial banks filtered from eighteen European Union countries during the period between 2005 and 2011. They utilised corporate governance mechanisms of board characteristics, ownership concentration as well as the banks' CAMEL (Capital adequacy, Asset Quality, Management, Earnings, Liquidity) rating indicators. Their results indicate the predictive ability of corporate governance in determining financial distress both at the micro level (firm level) and the macro level (economy level).

Berger, Imbierowicz, and Rauch (2016) examined the role that corporate governance plays in instigating financial distress in banks. Corporate governance indices inclusive of management structure, compensation structure and ownership structure of the banks were analysed in relation to the probability of financial distress. The study utilised a sample of eighty five distressed and two hundred and fifty six non-distressed banks between the first quarter of 2007 and the third quarter of 2010. Their results indicate that ownership structure; in terms of large amounts of shareholdings by both high-level and low-level management significantly increased the propensity for financial distress.

Kristanti, Rahayu, and Huda (2016) investigated the determinants of financial distress in Indonesian family firms and utilised several corporate governance variables inclusive of gender diversity, location of directors, CEO qualification and independence of the board. They defined family firms as corporations where a specific family possessed more than 25% of the total firm shareholdings, with the remaining shares held by smaller shareholders who do not possess up to the 25% shareholding. Their study focused on a purposive sample of seven family owned firms between 2010 and 2014. All the corporate governance variables utilised were found to be significant predictors of financial distress.

A paucity of research on the degree to which corporate governance contributes to financial distress prediction seemingly exists in the African context. The economic climate of African companies is however fraught with corporate governance issues especially as it relates to the workings of the Board of Directors and the functioning of the Chief Executive Officer (CEO). This prompted Ombaba and Kosgei (2017) to

investigate the role of some corporate governance indices in engendering distress situations. Executing their analysis with a dataset of thirty nine Kenyan listed firms for a period of ten years (2004-2013), they found board independence and board tenure to be important factors that could lead to financial distress if not properly monitored. Also, Ayoola and Obokoh (2018) investigated the contributions of corporate governance indices to financial distress in the Nigerian banking sector. Their study gave indication of the possession of large shareholdings by the Chairman and CEO, and the existence of large board sizes dominated by members with limited knowledge of banking complexities in distressed banks. Their empirical evidence show that bank distress is a function of weak corporate governance mechanisms.

Methodology

The analysis entails the utilization of appropriate estimation technique to ascertain the existence of significant relationships or otherwise between corporate governance mechanisms and the distress classification of the banks. The study covers a five-year period (2004-2008) and uses a stratified sample of two equal groupings of fourteen banks (seven distressed and seven non-distressed banks). Distress probabilities are captured with dichotomous coding of 0 and 1 based on the financial health status of the banks.

Note that the data setup of the dependent variables in the model is unique. The dependent variable for the model structure is qualitative in nature and therefore necessitates the application of qualitative dependent variable estimation technique. A logit form is specified to capture the probability of a bank being financially distressed given the indicators used in the study. In the model, the probability of bank distress is assumed to depend on corporate governance mechanisms. The model is specified as:

$$Pr(Y=1) = f(CEO, BOARD) \quad (1)$$

CEO represents the CEO characteristics while *BOARD* represents board characteristics. In estimating the model, we consider that the response of Y , y_i can take the values one and zero with probabilities π_i and $1 - \pi_i$ respectively. For the individual banks $n_i = 1$ for all i . This defines the stochastic structure of the model. Suppose further that the logit of the underlying probability π_i is a linear function of the predictors, then:

$$\text{logit}(\pi_i) = x_i' \beta \quad (2)$$

x_i is a vector of covariates and β is a vector of regression coefficients. Thus, β_j represents the change in the logit of the probability associated with a unit change in the j -th explanatory variable holding all other

variables constant. As demonstrated in Rodriquez (2007), exponentiating (2) provides the odds for the *i*-th firm given by:

$$\frac{\pi_i}{1 - \pi_i} = \exp\{x_i'\beta\} \quad (3)$$

Solving for the probability π_i in the logit model in equation (3) gives the model:

$$pr(Y = 1/CEO, BOARD) = \frac{1}{1 + \exp\{CEO + BOARD\}} \quad (4)$$

The left-hand-side of equation (4) is the probability scale, while the right-hand side is a non-linear function of the predictors. It is difficult to “express the effect on the probability of increasing a predictor by one unit while holding the other variables constant” (Rodriguez, 2007:21). To address this problem, the marginal effects (which show the probability of a bank being distressed arising from proportional change in any of the independent variables) are computed. Marginal effects are obtained by taking derivatives with respect to the given independent variable as:

$$\frac{d\pi_i}{dx_{ij}} = \beta_j \pi_i (1 - \pi_i) \quad (5)$$

This implies that the marginal effect of the *j*-th explanatory variable on the probability π_i depends on the coefficient β_j and the value of the probability. Imputing the individual explanatory variables into the model, the resulting model becomes:

$$FDIS_{it} = \beta_0 + \beta_1 CEO_BD_{it} + \beta_2 YEARS_{it} + \beta_3 CEO_G_{it} + \beta_4 CEO_FIN_{it} + \beta_5 BD_TOT_{it} + \beta_6 NEM_TBD_{it} + \beta_7 WOM_R_{it} + \beta_8 BD_COM_{it} + \beta_9 BD_MEET_{it} + \varepsilon_t \quad (6)$$

FDIS is financial distress captured by dichotomous variables of 0 and 1. *CEO_BD* is the ratio of CEO shareholdings to total board shareholdings. *YEARS* is the ratio of number of years on the position to maximum tenure. *CEO_G* is the gender of the CEO measured as dichotomous variables of 1 if the CEO is female, otherwise 0. *CEO_FIN* is the degree of the CEO’s financial literacy (measured as the sum of the total score of accounting/finance qualifications gotten as follows: BSc related degree in accounting/finance = 1, MSc related degree in accounting/finance inclusive of MBA = 2, PhD related degree in accounting/finance = 3, Professional qualifications in accounting/finance related fields = 1 for each professional qualifications obtained). *BD_TOT* is the ratio of board shareholdings to total shareholdings. *NEM_TBD* is the ratio of non-executive board members to total members of the board. *WOM_R* is the ratio of women on the board to total board members. *BD_COM* is the number of existing board committees. *BD_MEET* is the number of board meetings for the financial period.

Results and Discussions

We begin the analysis with the result of the descriptive statistics which gives a summary overview of the quantitative characteristics of the variables. The results of the descriptive statistics are presented in table 1:

Table 1: Descriptive Statistics

Variable	CEO BD	YEARS	CEO G	CEO_ FIN	BD_ TOT	NEM_ TBD	WOM_ R	BD_ COM	BD_ MEET
Mean	0.3262	0.6	0.0714	4.5	0.0537	0.6243	0.071	4.2	5.6714
Median	0.273	0.4	0	5	0.0261	0.6364	0.069	4	5
Maximum	0.9326	1.9	1	7	0.3176	0.7778	0.25	8	15
Minimum	0	0.1	0	1	0.0003	0.4444	0	3	4
Std. Dev.	0.21	0.5343	0.2593	1.7672	0.0684	0.0895	0.0634	1.5566	2.276
Skewness	0.7983	1.2888	3.3282	-0.23	1.8856	0.0379	0.6704	1.2659	1.6067
Kurtosis	3.2371	3.2793	12.076	2.0188	6.6238	1.8343	3.1486	3.4856	5.7211
Jarque- Bera	7.5998	19.6089	369.536	3.4253	79.7853	3.9795	5.3093	19.384	51.7168
Probability	0.0223	0	0	0.1803	0	0.1367	0.0703	0.0001	0

The results in table 1 highlight the mean, median, maximum and minimum values, standard deviation, skewness, kurtosis and Jarque-Bera statistics of the variables. Most of the variables possessed standard deviations that are lower than their respective mean values indicating a low level of dispersion among the variables. There also exists a relative lack of symmetry in the distributions, as most of the variables are positively skewed; indicating a longer tail on the right side of the distributions. The variable distributions are also mostly leptokurtic, indicative of higher and sharper peaks. Flowing from the skewness and kurtosis outcomes, the Jarque-Bera statistics is indicative that most of the variables are not normally distributed.

Table 2: Correlation Matrix

Correlation Probability	CEO_BD	YEARS	CEO_G	CEO_FIN	BD_TOT	NEM_T BD	WOM_R	BD_COM	BD_MEET
CEO_BD	1 -----								
YEARS	0.3453 0.0034	1 -----							
CEO_G	0.4427 0.0001	0.1568 0.1947	1 -----						
CEO_FIIN	-0.207 0.0854	0.2363 0.0489	-0.5532 0	1 -----					
BD_TOT	0.0004 0.9972	0.5118 0	-0.0036 0.9761	0.2471 0.0391	1 -----				
NEM_TBD	0.064 0.5984	-0.1505 0.2135	0.0881 0.4682	0.1423 0.2399	0.1393 0.25	1 -----			
WOM_R	0.2052 0.0883	0.0539 0.6571	0.1623 0.1793	0.2233 0.063	0.0540 0.6566	0.0108 0.9291	1 -----		
BD_COM	-0.0921 0.4478	-0.0418 0.7311	-0.1435 0.2357	0.1633 0.1767	-0.2007 0.0956	-0.2423 0.0432	-0.1456 0.229	1 -----	
BD_MEET	0.1118 0.3567	0.1418 0.2416	-0.1560 0.197	-0.0810 0.5047	-0.0373 0.7586	-0.2553 0.0329	-0.0050 0.967	0.5505 0	1 -----

Table 2 highlights the results of the correlation analysis. The highest correlation values exist between CEO_G and CEO_FIN ($r = -0.5532$) and BD_COM and BD_MEET ($r = 0.5505$), and can be classified as moderate correlations. Most of the other associations portrayed low correlation values giving an indication of the possible absence of multicollinearity in the model.

The results for the effect of corporate governance indicators on the probability of banks' financial distress are presented in table 3. Two sets of results are originally computed for the model (the original logit estimates and the marginal estimates). The output from the original logit estimates do not provide effective outcomes that can be used to evaluate the impacts of the explanatory variables on the dependent variable, hence, the analyses of the effects are based on the marginal estimate for the model.

Table 3: Corporate Governance Mechanisms and Financial Distress

Variable	Logit			Marginal Effects		
	Coef.	Z	P> z	Coef.	Z	P> z
Constant	-3.031	-1.200	0.229	--	--	--
CEO_BD	-0.268	-0.160	0.871	0.052	0.160	0.871
YEARS	-0.804	-2.010	0.031	0.157	2.040	0.029
CEO_G	19.603	0.020	0.987	-3.827	-0.020	0.987
CEO_FIN	0.741	2.240	0.025	-0.145	-2.620	0.009
BD_TOT	-5.905	-1.150	0.252	1.153	1.190	0.235
NEM_TBD	2.127	0.570	0.570	-0.415	-0.570	0.567
WOM_R	-11.795	-2.010	0.044	2.302	2.270	0.023
BD_COM	-0.405	-2.520	0.012	0.079	2.620	0.010
BD_MEET	0.241	3.370	0.000	-0.047	-2.450	0.014
<i>Pseudo R²</i>			0.187			
<i>LR-test</i>			-39.45			
<i>Wald test Prob > chi²</i>			0.034			
<i>N</i>			70			

The LR value is relatively low and negative (LR = -39.45), while the probability of the Wald test coefficient ($\chi^2 = 0.034$) is significant at the five percent (5%) level of significance. This shows that the null hypothesis of no significant relationship between all the independent variables combined and the dependent variable is rejected; an indication that the estimated model has impressive overall significance. This is further buttressed by the fact that five out of the nine governance indicators passed the significance test, making them significant factors that explain financial distress among banks. From the results, the coefficient of the ratio of number of years on the position of CEO to maximum tenure (YEARS), the ratio of women on the board to total board members (WOM_R), and the number of existing board sub-committees (BD_COM) are positive, indicating that they tend to amplify the probability of banks to be financially distressed. This implies that the closer the CEO is to the exhaustion of his/her tenure, the more prone the bank is to financial distress. It therefore appears that CEOs tend to make less efficient decisions when they are close to the termination of their tenures thereby exposing the banks to higher probability of distress.

In the same vein, the higher the number of women on the board, the higher the probability of financial distress among banks. Indeed, one additional woman in board membership leads to a rise in probability of financial distress of banks by as much as 2.3 percentage points. Proliferation of board committees is also

seen to have capacity to increase the probability of bank financial distress. The other two significant variables; degree of CEO financial literacy (CEO_FIN) and number of board meetings for the financial period (BD_MEET) both have negative impacts on the probability of financial distress. Apparently, it is not the number of board committees that help to stem financial distress in banks, but rather, the activeness of such committees (captured by number of board meetings) that provide adequate background and avenue for ensuring the reduction of the likelihood of financial distress among banks. Also, the degree of financial literacy of the CEO is a major factor in limiting the probability of financial distress, as the existence of a CEO with broader financial background and better financial exposure helps to stem the probability of financial distress in banks.

Conclusion

The study examines the role of corporate governance mechanisms in engendering financial distress among quoted Nigerian banks. The study contributes to literature on financial distress by adding to the paucity of African studies on the subject matter. The study focused on the CEO specific characteristics and the general board characteristics and utilises a period base that culminates in the global financial crises that occurred between 2008 and 2009. The results highlight the existence of relationships between corporate governance mechanisms and financial distress among Nigerian banks. The ratio of number of years on the position of CEO to maximum tenure, the degree of CEO financial literacy, the ratio of women on the board to total board members, the number of board sub-committees and the number of board meetings for the financial period are the key governance determinants of banks' financial distress.

The study recommends the use of financial literacy as part of the selection criteria in the appointment of the CEO. Also, there should be increased scrutiny on the actions and decisions of the CEO as the termination of the tenure approaches. Despite growing calls for feminine inclusivity in corporate settings, firms should be careful not to overburden their boards with women in a fastidious drive to achieve gender equality, but should rather ensure that women selected to function on the board are deserving of the appointment as opposed to sentiments. The proliferation of board committees also serves as an enabling tool for financial distress, hence, firms should concentrate more on strengthening the effectiveness of the board and existing committees along with adequate participation of members in the board and committee meetings as opposed to possessing numerous board committees with lackadaisical members.

Data Availability Statement

The data for the study were gathered independently by the authors from the annual reports of the banks contained in the sample. These annual reports are domiciled in the library of the Nigerian Exchange Group (NGX). The extracted data utilised for the study are available on request from the authors.

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