Erah, D. O.; Ikhu-Omoregbe, G. O.

Article

Corporate governance and earnings quality : evidence from distress likelihood quoted firms

Accounting and taxation review

Provided in Cooperation with:
University of Benin, Benin City, Nigeria

This Version is available at:
http://hdl.handle.net/11159/4360

Original Research Article

CORPORATE GOVERNANCE AND EARNINGS QUALITY: EVIDENCE FROM DISTRESS LIKELIHOOD QUOTED FIRMS

D. O. Erah, PhD[1] & G. O. Ikhu-Omoregbe[2]

[1]Department of Accounting, Faculty of Management Sciences, University of Benin, Benin City. +234 8054155040
[2]Department of Accounting, Faculty of Management Sciences, University of Benin, Benin City.

* For correspondence, email: dominic.erah@uniben.edu

Abstract

The study is a longitudinal survey of quoted non-financial firms with the likelihood of being distressed, unlike most previous studies that neglect distress as a potential reason for earnings quality. The total quoted firms in Nigeria Stock Exchange as at December 2016 is 178 which constituted the population of the study out of which a target population of 96 non-financial quoted firms were considered for the study while the sample size of 84 out of the 96 quoted non-financial firms with Altman's Z-Score of less than 1.8 were studied within a period of 2011 to 2016 for the study. Purposive sampling technique was employed in selecting sampled firms that fell below the required standard. Historical data were obtained from the financial statements and accounts of sampled firms. Corporate governance variables were regressed on the dependent variables, namely, Earnings quality using Jones Model (JMODEL) and Modified Jones Model (MJOHNES) while pooled data regression was employed. The findings revealed that Chairman Ownership (CAMSH), CEO ownership (CEOSH) and Directors Ownership (DHOLD) were statistically significant, while Board Size, Board independence and Board gender have no significant effect on earnings quality of likelihood distress companies in Nigeria. The study, therefore, recommends that companies should not expand the Board size of likelihood distress companies as a means to managing earnings quality; Board chairman and CEO shares ownership should be discouraged for likelihood distress companies if reduced earnings management tendencies are to be checked. Board gender, if correctly used, can help to reduce earnings management in likelihood distress companies.

Keywords: Corporate governance, Earnings management, Chairman Ownership, Board gender, Board size.
JEL Classification: G340

1.0   INTRODUCTION

Corporate governance continues to receive increasing emphasis both in academic research and practice following its importance in enhancing transparency, integrity and credibility in financial reporting (Blue Ribbon committee Report 1999; Ramsay Report 2001; Sabanes-Oxley 2002; & Al-Faki 2006). To build stakeholders' confidence in the activities of management, there is the need for good corporate governance practices in firms (Aborode, 2005). The separation of ownership and control in firms creates the potential for conflict of interest between directors and shareholders. Similarly, the presence of active cooperate governance practice helps to mitigate such conflict. Conversely, the absence of good corporate governance could bring about the high level of such conflicts. Firms with stronger corporate boards are associated with more disclosures, lower earnings management and higher earnings quality (Ashbaugh, Collins, & LaFond, 2006). The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation such as, the board, managers, shareholders, audit committee and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs (Adetunji & Olawoye, 2009).

However, there are still cases of earnings manipulation and unethical accounting practices by managers which could have implications on earnings quality of firms in Nigeria (Shehu & Musa 2014). These cases of unethical accounting practices have brought to the fore the need for the practice of good corporate governance as a means to check earnings manipulation and to ensure earnings quality in quoted firms. Dechow and Schand (2004) posited that there is a need for academic research to understand the cost and consequences of corporate governance mechanisms like board size, board independence, managerial shareholdings, audit committee independence, and chairman holdings about earnings quality. Some studies such as Arabborzoo, Rashidpuran, and Arabi (2015), Fadio, Ibikunle, and Oba (2013), Nkanbia-Davis, Gberegbe, Ofurum, and Egbe (2016), and Omoye and Eriki (2014), have examined in depth some issues on the relationship between corporate governance and earnings quality in both developed and developing countries like Nigeria. To the best of our knowledge, a minimal attempt has been made to investigate

quoted firms particularly those firms with a probability of being distressed. Corporate governance mechanism can help in classifying quoted companies into active (high), and weak (low) earnings quality category in a panel data structure using Altman's Z score methodological approach. The works of Chtourou, Bedard, and Courteau (2001) provided some substantial contribution to the classification of earnings quality of quoted firms based on corporate governance mechanism but was based on cross-sectional data only. Prior studies mainly focused on accrual measures for earnings quality using either the Jones or Modified Jones Model or the Dicheow and Dichev (2002) Model. This study filled this gap by applying a panel data methodology approach in classifying Nigerian quoted firms using Altman's Z score formula to identify those firms that are weak and with distress likelihood in the future before applying the Modified Jones Model in analysing corporate governance mechanism about earnings quality. Similarly, this study introduced the chairman's ownership as a variable which to the best of our knowledge, may not have been considered in other known studies.

The broad objective of this study is to investigate corporate governance and earnings quality among quoted firms in the non-financial sector in Nigeria. Following the introduction, section two focuses on literature review and hypotheses development. Section three presents the methodology of the study. Section four focuses on data estimation and discussion of findings while conclusion and recommendations are the basis for section five.

2.0 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Corporate governance intuitively means a set of structures or processes through which the activities or operations of an organisation is managed and controlled to achieving long- term performance and accountability without compromising the interest of other stakeholders. The concept of corporate governance is multi-dimensional and multi-disciplinary. This is because it cuts across accounting, finance, politics, psychology, sociology, macroeconomics, organisation and informational theory (Turnbull, 1997). The need for corporate governance as a monitoring mechanism evolved from the divorce of owners from administrators of economic resources which is increasingly

becoming a salient feature of modern corporations. Corporate governance as a fallout of the principal-agent problem has been subjected to considerable scrutiny since the 1930s great depression both in the empirical and regulatory front and recently, following the wave of corporate failures ravaging both public and private concerns. This interest has been to provide a governance framework that would serve the interest of stakeholders. Corporate governance related mechanisms, help constraints the opportunistic behaviour of corporate managers and align their interest to the wealth-maximising interest of investors. It involves monitoring the actions, policies, procedures and decisions of the organisation, its agents and stakeholders through laws, regulations and accepted business practices, which in the free market economy dictates the relationship between corporate managers on the one hand and those who invest their economic resources in the business firm on the other hand. The multi-disciplinary nature of corporate governance may lead to the existence of a widely acceptable definition hence it is viewed and defined variedly by scholars and practitioners. The Organization for Economic Cooperation and Development (OECD) in 2012 in its principles of corporate governance defined corporate governance as a set of relationship between business managers, the board of directors, shareholders and other stakeholders. Momoh and Ukpong (2013) viewing from a business perspective, saw corporate governance as a set of systems targeted at making corporate managers accountable to shareholders for the effective and efficient management of the company in the best interest of the company and shareholders. Lemo (2010) similarly defined corporate governance as a group of rules which dictate the ways by which companies are managed and controlled by corporate directors with the sole objective of promoting the profit oriented objective of shareholders who do not form part of the management cadre of the organisation. Central bank of Nigeria (CBN, 2014) through its code of corporate governance developed to promote a transparent and efficient banking system that would engender the rule of law and encourage division of responsibilities in a professional and objective manner, define corporate governance as rules, processes and law through which institutions are operated, regulated and governed. The unified national code of corporate governance issued by the financial reporting council of Nigeria (NCCG; 2016) defined corporate governance as the right and responsibilities among all

parties that have a stake in the firm, inclusive of the environment in which the firm operates and the relevant government. Following from the various definitions, it follows a logical sequence that corporate governance consists of rules, laws and regulations laid down by regulatory agencies and other players in the business environment to guide the way a firm is governed or managed by management.

Concept of earnings quality

Financial reporting is viewed as one of the important components of a firm's accounting system. This is because it makes available the information necessary for making rational and informed economic decisions regarding corporate performance and profitability (Mohammadi, 2014). It provides an avenue for measuring and making available the information necessary for evaluating a firm past performance as well as information that will enable financial statement user's access and foretell future performance and profitability (Pandey, 2005). Earning which can also be seen as the profit or income of a company derived from its operational activities is the single most important output of the financial reporting process, and it is disclosed in the statement of profit or loss and other comprehensive income. It is probably one of the most observed items in the financial statement since it discloses the profitability of the firm; the efficiency of management in the utilisation of economic resources entrusted to them and determines the dividend policy pursued by the firm. Earning is the net benefit of a firm's operation and the amount on which corporate tax is charged. It is an enhancement of shareholder's wealth. Earning is said to be of high quality if it increases as a result of increase in revenue or reduction in operating cost and not due to external factors such as inflation. The issue of earnings quality became an issue of mainstream concern to regulators, accountants and other stakeholders in the financial reporting environment following the frequency of financial fraud particularly in earning reported and the informative role earning plays in their decision-making model. Yee (2006) posited that the quality of earning is high if it quickly and precisely reflects the firms fundamental earning. That is, the timelier and accurately earning reflect shocks in the present value of expected future dividends, the more the earnings quality. For this reason,

standard-setting organisations such as Financial Accounting Standard Board and International Accounting Standard Board strive to develop standards that improve earning quality and many other changes in auditing, corporate practices and regulatory framework have similar objectives (Ewert & Wogenhofer, 2009)

The common signal for low quality earning includes large deviation of earning numbers from actual cashflows, unwarranted deviation from industry and peer benchmarks, large accruals and long-term estimates, continuous surpassing of analyst forecast, inconsistent applications of accounting policies and methods, weak corporate governance mechanism (Dechow & Schrand, 2004). Lo (2004) asserted that earnings quality and earning management have some things in common that is, if earning management practice is high, earnings quality will be low, but if there are no earning management practices, there is no guarantee that earning quality will be high, since earning management is not the only factor that reduces the quality of earnings. The quality of earnings is shaped by factors categorised into internal and external. The internal factors which are usually the product of managerial opportunism include accounting and auditing function, internal control and corporate governance. The external factors which are not resultant of discretionary managerial behaviour include industry membership, macroeconomic condition, accounting standard and natures of the business. The internal and external factors as asserted in Dichev, Graham, Harvey, and Rajgopal (2012) have an almost equal impact on the quality of earnings reported. Managers opportunistically managed earnings by indulging in various forms of accounting abuses such as too early recognition of questionable revenue, transferring current revenue and expenses to a future period, capitalisation revenue expenses, and so on to mask the true performance of the organisation thus masking earning less decision-useful.

Measures of earnings quality

Earnings quality which is one of the several proxies or measures of financial reporting quality has been used in several empirical papers (Chalaki, Didar, & Raahinezhad, 2012; Jouini, 2013; Omri, & Klai, 2011 and Onourah & Imene, 2016). It is according to Balsam, Krishman, and Yang (2003) the most comprehensive measure or proxy for financial reporting quality.

Earning quality has been studied empirically by several scholars. (Schippers & Vincent, 2003; Dechow and Schrand, 2004; Francis, Olisson and Schippers, 2006; Dechow, Ge and Schrand, 2010). Different measures of earning quality have been suggested by scholars from the empirical front. Schippers and Vincent in their study identified seven (7) measures of earning quality: persistence, predictability, variability, the ratio of cash flow from operation to income, changes in total accrual, discretionary accrual and ratio of accrual to cash flow. Francis et al. (2004) similarly in their study identified seven (7) measures or proxy of earning quality classified into the accounting-based measure and market-based measures. The accounting based measures which use solely accounting information in their measurement include accrual quality, persistence, predictability and smoothness while market-based measures which use both accounting and market information in their measurement include value relevance, timeliness and conservatism. Review of extant literature on earnings quality revealed that one or a combination of the several measures identified is used in the measurement of earning quality. The measures usually adopted in empirical and theoretical papers are accrual quality, earning persistence, earnings predictability, earning conservatism, value relevance of earning, earning timeliness, and earning smoothness.

Financial likelihood distress

The financial statement is a significant source of information to stakeholders. According to Altman and Beaver, a financial statement is sufficient information to be used as a discriminating function for large businesses (Horrigan, 1968). Tam and Kiang (1992) argued that the prediction of bankruptcy distress likelihood is probably one of the most critical business decision-making problems because the decision made affect the entire life span of business. Early warning of financial likelihood distress is a serious concern not only to academic researchers but also to practitioners. Nagarand and Kaustav (2016) defined financial distress as a state where firms are facing financial difficulties concerning weak cashflows and profitability. It also refers to a firm's inability to service its debt or other obligations. The inability of such nature emanates from weak cash flows and profitability. Nagar and Kaustav (2016) noted that distress throws new challenges before managers of the firm to take real economic

actions which would lead to an improvement in the firm's long-run performance. Rogers and Stocken (2005) posited that managers worry about losing their jobs in difficult times and hence provided highly optimistic forecasts, thereby promising to restore sound financial condition. According to Koch (2002) distress creates problems for firms in an area related to labour suppliers, customers, and creditors. To avoid these problems, managers may need to manipulate earnings. Nagarand and Kaustav (2016) claimed that firms in financial distress need to take actions that earnings are not manipulated which would improve their cashflows and profitability both in the long-run and short-run.

Besides the data disclosed in the financial reports, if firm managers intentionally falsify accounting records, the distress will be more serious. However, these signs are deliberately concealed, ambiguous and unobvious. The financial distress early warning models established by the Z-Score by Altman (1968) and the logistic regression by Ohlson (1980) revealed that among the different financial variables, profitability and the debt ratio (financial structure) are the causes of financial distress. Chava and Jarrow (2004) argued that the default of different industries be affected by different degrees of competition and accounting ratio characteristics. Shumway (2001) indicated that the age of a listed firm might affect the probability of it experiencing financial distress. Nagarand and Kaustav (2016) stated that the factors affecting firm characteristics have been summarised, and include growth opportunities, profitability, industry category, the age of listed firms and so on. It is anticipated that firm characteristics are related to accounting conservatism and financial distress.

3.0   METHODOLOGY

Theoretical Framework

There are some theoretical perspectives which are used in explaining the impact of corporate governance on reported earning quality. They include agency theory, economic theory, stakeholder theory and transaction cost theory. This study is however based on the knowledge and assumptions of agency theory. The choice of the theory is premised on its extensive use in corporate governance studies.

Agency Theory

It has its root in economic theory. It was developed by Berle and Means (1932) and developed further by Jensen and Mecklings (1976). It deals with the contractual relationship that existedetween principals and agents, under which the principal delegate the power to make decisions or carry out some service to the agent. In the corporate scene, shareholders or provider of economic resources for carrying out the business are the principals while corporate managers are the agent charged with the responsibility of running the company on behalf of shareholders.

Corporate managers have an interest that is contrary to the interest of shareholders. This conflict of interest between shareholders and corporate managers creates the agency cost and information asymmetry. Example of such cost includes making decisions that are suboptimal for shareholders interest. The agency cost is more intense, especially if both the shareholder and agents are utility minimiser's because the presumption is that corporate managers will not act in the best interest of shareholders. Corporate governance mechanism such as board of directors and audit committee is established to discourage corporate managers from pursuing their interest which is at variance with wealth maximizing interest of shareholder, hence Dellopratus, (2005) opined that these corporate governance mechanisms are aimed at aligning corporate manager's interest with the wealth-maximizing interest of shareholders, reducing the information gap between them and constraining the opportunistic tendency and activity of corporate managers. In a situation where there is a conflict of interest between shareholders and corporate managers which have potential agency cost, corporate managers are charged with the responsibility of preparing a financial statement. Corporate managers may opportunistically manage reported earning to promote their interest, and when this occurs, the quality of reported earning becomes in doubt.

Model Specification
The model specification of this study was adopted from the Jones Model [1991] and the Modified Jones Model by Dechow, Sloan and Sweeney (1995), were used to calculate the discretionary accruals. These were specified as follow:

$$\frac{TA_{ci,t}}{TA_{si,t-1}} = \beta_0 + \beta_1\left(\frac{\Delta\text{Re}v}{TA_{si,t-1}} - \frac{\Delta A\text{Re}c_{i,t}}{TA_{si,t-1}}\right) + \beta_2\left(\frac{PPE_{i,t}}{TA_{si,t-1}}\right) + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

Where, $TA_{ci,t}$ =Total Accruals, calculated as firm i is income before extraordinary items and discontinued operations, minus cash flows from continuing operations plus extraordinary items and discontinued operations in year t;

$TA_{si,t-1}$ =Total Assets for firm i in year t - 1;

$\Delta\text{Re}v$ =Change in net revenue for firm i from year t - 1 to t;

$\Delta A\text{Re}c_{i,t}$ = Change in accounts receivable for firm i from year t - 1 to t;

$PPE_{i,t}$ = Gross property plant and equipment;

$$EARNQ_{it}^{DA} = \varepsilon_{i,t} = \left|\frac{TA_{ci,t}}{TA_{si,t-1}} - \frac{\hat{TA}_{ci,t}}{TA_{si,t-1}}\right| \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(2)$$

$EARNQ_{it}^{DA}$ = earnings quality level proxy by absolute discretionary accrual scaled by total assets. The $EARNQ_{it}^{DA}$ value can assume positive or negative values and can be classified into the pooled multiple regression with an error term (ε_t)

First Dependent Variable (JMODEL):

This was specified in Jones Model [1991] form as:
$JMODEL = \eta_0 + \eta_1 BSIZE_{it} + \eta_2 BIND_{it} + \eta_3 FBIND_{it} + \eta_4 CEOS_{it} + \eta_5 CAMSH_{it} + \eta_6 DHOLD_{it} + \eta_7 IFRS_{it} + \eta_8 BIG4A_{it} + \eta_9 JPPET_{it} + \eta_{10} FSIZE_{it} + \mu$ …………………………...(3)

Second Dependent Variable (MJOHNES):
This was specified in Modified Jones Model (MJOHNES) [1995] form as:

$MJOHNES = \eta_0 + \eta_1 BSIZE_{it} + \eta_2 BIND_{it} + \eta_3 FBIND_{it} + \eta_4 CEOS_{it} + \eta_5 CAMSH_{it} + \eta_6 DHOLD_{it} + \eta_7 IFRS_{it} + \eta_8 BIG4A_{it} + \eta_9 JPPET_{it} + \eta_{10} FSIZE_{it} + \mu$ ………………………………………...................(4)

Where;
JMODEL = Jones Model (1991) used as a proxy for earnings quality level (absolute discretionary accrual scaled) of distress likelihood as indicated in equation 3.
MJOHNES = Modified Jones Model used as a proxy for earnings quality level (absolute discretionary accrual scaled) of distress likelihood as indicated in equation 4.
η_0 = Constant
η_1 to η_{10} = Coefficients of the independent variables
BSIZE = Number of individuals on the board
BIND = Board Independence which is measured as the ratio of Non-Executive Director/Total Board Size.
FBIND = Female Board Director (FBIND) measured the ratio of female board members/Total Board Size.
CEOSH = Chief Executive Officer Shareholding(CEOSH) measured as some shares held by CEO divided by total shares of the firm (i) at the time (t).
CAMSH = Chairman's shareholding (CAMSH) measured a number of shares held by the chairman divided by total shares of the firm (i) at the time (t).
DHOLD = Directors shareholding (DHOLD) measured as total shares held by directors divided by total shares.
IFRS = International Financial Reporting Standard measured as "1" for the year of adoption, otherwise "0."
BIG4A = Big 4 auditors measured "1" if the firm is audited by one of the BIG 4, otherwise "0".

JPPET = Assets intangibility (JPPET) measured as total intangible Asset divided by total Assets.
FSIZE = Firm size measured as Natural Log of Total assets

Research Design

This study employed a longitudinal research design which involves repeated observations of the same variables over a long period, unlike the cross-sectional design which examines variables at a point in time. The longitudinal time framework for this study is ten (10) years which is 2006-2015.The choice of this period was necessitated by the fact that some non-financial organisations could have engaged in earnings manipulations as a result of the high level of earnings management practices of some banks resulting in the sack of some CEOs and some directors of banks which may have implications on non-financial sectors. Variables examined include earnings quality proxy with discretionary accrual (DACC) and corporate governance variables proxy with Board Size, Board independence, Board Gender, Chairman Ownership, CEO ownership, Directors ownership and control variables consist of BIG4, Firm size International Financial Reporting Standard (IFRS) and Asset Tangibility. However, it is an ex-post-facto type of research and quantitative research design in nature. The number of quoted firms in Nigeria Stock Exchange as at December 2016 was 178 which constituted the population of the study out of which a sub-population of 126 non-financial quoted firms were considered for the study while the sample size of 84 out of the 126 sampled firms was arrived at using Altman's Z-score. Historical data were generated from the ann

The descriptive statistics provided some insights into the nature of the selected firms that were used in this study.

Table 1 Descriptive Statistics

	BIG4A	BIND	BSIZE	CAMSH	CEOSH	DHOLD	FBIND	FSIZE	FRS	JPPET	JMODEL	MJOHNES
Mean	0.60	0.63	8.85	4.12	3.96	13.86	0.07	6.97	0.64	0.58	0.00	0.00
Median	1.00	0.65	8.00	0.12	0.02	2.63	0.00	6.94	1.00	0.56	0.02	0.02
Maximum	1.00	0.92	23.00	60.00	49.76	80.00	0.38	8.98	1.00	3.27	0.57	0.57
Minimum	0.00	0.25	4.00	0.00	0.00	0.00	0.00	4.84	0.00	0.01	-3.54	-3.51
Std. Dev.	0.49	0.15	2.66	9.99	8.55	19.78	0.08	0.78	0.48	0.38	0.28	0.28
Skewness	-0.40	-0.26	1.56	3.18	2.43	1.94	1.18	-0.02	-0.59	2.64	-7.89	-7.67
Kurtosis	1.16	2.62	8.17	13.93	8.67	7.51	4.04	3.17	1.34	18.25	99.28	95.46
Jarque-Bera	42.94	4.37	389.05	170.61	596.01	376.76	71.07	0.32	43.93	2778.38	101.53	937.04
Probability	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.00
Observations	256	256	256	256	256	256	256	256	256	256	256	256

Table 1 shows the Board Size (BSIZE) had a median value of 8; this indicates that the average number of board of directors of distress likelihood companies in Nigeria is 8. This, therefore, means that any troubled company in Nigeria with more than 8 board of directors could be tag as using too many board members. The maximum (23) and minimum values (4) of board size also shows that some distressed likelihood companies have either under or over an average number of board of directors. Board independence (BIND) had a median value of 0.65; this indicates that on the average over 65% of the directors of most distress likelihood companies in Nigeria are non-executive directors. The maximum (0.92) and minimum values (0.25) of board independence also showed that the lowest proportion of non-executive directors in distressed likelihood companies in Nigeria was 25%. While Board Gender Diversity (FBIND) had a median value of 0.00 while the mean was 0.07, this indicates that on the average distress likelihood companies in Nigeria do not have the tendencies to include female in their board. Likewise, Chairman Ownership (CAMSH) had a median value of 0.02 and a mean value of 4.12; this indicates that on the average less than 5% of the chairmen of a board hold shares in our sampled distress likelihood companies in Nigeria. Also, CEO ownership (CEOSH) had a median value of 0.12 and a mean value of 3.96; this indicates that on the average less than 5% of the CEOs of a board hold shares in our sampled distress likelihood companies in Nigeria.

Directors Ownership (DHOLD) had a median value of 2.63; this indicates that on the average less than 5% of the Directors of a board hold shares in our sampled distress likelihood companies in Nigeria. In the case of our control variables- Big-4

Auditors (BIG4A) shows that about 60% of the companies selected were audited by the Big-4(KPMG, PWC, AKINTOLA WILLIAMS DELOITEE and ERNST and YOUNG). In the case of Firm size (SIZE) and Asset Tangibility (JPPET), the difference between the maximum and minimum values shows that the sampled 85 companies are not dominated by small companies or capital intensity firms. This, therefore, indicates that distress likelihood can be found in both large and small companies. A look at the Jones Model (JMODEL) and Modified Jones Model (MJOHNES) model for earnings quality showed that there is little or no difference in the mean, median and even the difference in their minimum and maximum value. This, therefore, means that both models for measuring earnings quality are expected to provide similar findings since their statistical properties are also identical. The Jarque-Bera (JB) values were 101536.80 and 93704.12 respectively with its associated probability of 0.000. This provides empirical evidence to reject the assumption of normality.The Jarque-bera (JB) probability value with less than 0.10 shows that in general that there is no sample outlier in the data that would impair the generalisation from this study.

Correlation Matrix

Table 2

Summary of Correlation Matrix

	JMODEL	MJOHNES
BIG4A	0.038	0.048
BIND	-0.028	-0.035
BSIZE	0.017	0.025
CAMSH	0.040	0.033
CEOSH	0.060	0.060
DHOLD	-0.051	-0.064
FBIND	0.014	0.017
FSIZE	0.042	0.064
IFRS	0.035	0.030
JMODEL	1.000	0.997
JPPET	-0.189	-0.188

In the Modified Jones Model (MJOHNES)model for earnings quality, the correlation coefficient shows that earning quality in distress likelihood companies in Nigeria has a weak positive association with most of the corporate governance variables such as Board Size (BSIZE = 0.017), Board Gender

Diversity (FBIND = 0.014), Chairman Ownership (CAMSH = 0.040), CEO ownership (CEOSH = 0.060) except for Board independence (BIND = -0.028), and Directors Ownership (DHOLD = -0.060) that were weakly negative associated. In the case of our control variables- *Big-4 Auditors (BIG4A = 0.038), Firm size (SIZE = 0.042), IFRS ADOPTION (IFRS = 0.035) had a weak and positive correlation while Asset Tangibility (JPPET = -0.189) had a weak and negative correlation. The results from* Jones Model (JOHNES) model for earnings quality is similar to that of Modified Jones Model (MJOHNES) model for earnings quality. Their correlation coefficient was 0.997.

This means that the modified Jones Model result is also the same as the Jones Model in the context of our sampled distress likelihood firms in Nigeria. The correlation matrix, in summary, indicates that there is a weak correlation between corporate governance and earnings quality in distress likelihood companies in Nigeria. To find out the effect significance of corporate governance on earnings quality in distress likelihood companies in Nigeria we used regression analysis, but before using the regression, a Multicollinearity test is needed.

Multicollinearity Testing

To test for the existence of multicollinearity, the Variance Inflation Factor (VIF) test was used to test the results for the Jones Model (JMODEL) and Modified Jones Model (MJOHNES) for earnings quality respectively. The VIF for each of the variables was less than the threshold of 10, and the overall VIF mean value was less than 5. This indicates that the explanatory variables were not substantially correlated with each other and this implies a complete absence of multicollinearity in the explanatory variables.

Table 3: JMODEL Variance Inflation Factors

Variable	VIF
C	NA
BSIZE	1.560233
BIND	1.108159
FBIND	1.145833
CEOSH	1.65334
CAMSH	1.58774
DHOLD	2.051031
BIG4A	1.207083
IFRS	1.107794
JPPET	1.090458
FSIZE	1.604474

Table 4: Variance inflation factor (VIF) for MJOHNES Variance Inflation Factors

Variable	VIF
BSIZE	1.560233
BIND	1.108159
FBIND	1.145833
CEOSH	1.65334
CAMSH	1.58774
DHOLD	2.051031
BIG4A	1.207083
IFRS	1.107794
JPPET	1.090458
FSIZE	1.604474

As observed in the results above, the VIF for each of the variables was much lesser than the threshold of 10, and the overall VIF mean value was less than 5. This indicates that the explanatory variables included in the MJOHNES were not substantially correlated with each other and this implies a complete absence of multicollinearity in the explanatory variables.

Table 5: Results of the pool regression

Method: Least Squares

Included observations: 262

Variable	Coefficient	t-Statistic	Prob.
C	0.121352	0.608436	0.5434
BSIZE	0.00948	1.20341	0.22990
BIND	0.01390	0.11432	0.90910
FBIND	-0.01659	-0.07425	0.94090
CEOSH	0.00655	2.66633	0.00820
CAMSH	*0.00391*	*1.85213*	*0.06520*
DHOLD	*-0.00283*	*-2.30447*	*0.02200*
BIG4A	*0.02461*	*0.64630*	*0.51870*
IFRS	-0.00703	-0.18922	0.85010
JPPET	-0.158443	-3.347961	0.0009
FSIZE	-0.019845	-0.718509	0.4731
R-squared	0.069847		
Adjusted R-squared	0.032789		
F-statistic	1.884806		
Prob(F-statistic)	0.047672		

The above table shows that of the ten (10) explanatory variables, only four were significant determinants of earning quality in the Jones Model (JMODEL). These were CEO ownership (positive effect), Chairman Ownership (positive effect), Directors Ownership (negative impact) and Asset Intangibility (negative effect).

However, due to the nature of the data which have cross-section properties, the problem of heteroskedasticity was suspected. Thus a Breusch-Pagan-Godfrey heteroskedaticity test was conducted.

Table 6: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	6.319437	Prob. F(10,251)	0.000
Obs*R-squared	52.69644	Prob. Chi-Square(10)	0.000

Source: Author's compilation (2017)

The Breusch-Pagan-Godfrey test for heteroskedasticity statistic is unsatisfactory. It shows the presence of heteroskedasticity in the Model since the pooled data f-statistic probability value (0.00) is less than 10%. To correct this problem, White heteroskedasticity-consistent standard errors & covariance

Model were estimated. The results obtained were all adjusted for heteroskedasticity since our sampled companies were heterogeneous and consisted of firms from different industries with different business activities. The result is presented below;

Table 7: Dependent Variable: JMODEL

Method: Least Squares
Included observations: 262
White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	t-Statistic	Prob.
C	0.121352	0.364606	0.7157
BSIZE	0.009476	0.683726	0.4948
BIND	0.013899	0.155753	0.8764
FBIND	-0.01659	-0.087066	0.9307
CEOSH	0.00655	2.815369	0.0053
CAMSH	0.003907	2.154808	0.0321
DHOLD	-0.002825	-2.388086	0.0177
BIG4A	0.024607	0.486445	0.6271
IFRS	-0.007028	-0.227623	0.8201
JPPET	-0.158443	-0.6888	0.4916
FSIZE	-0.019845	-0.373445	0.7091
R-squared	0.069847		
Adjusted R-squared	0.032789		
F-statistic	1.884806		
Prob(F-statistic)	0.047672		
Prob (Wald F-statistic)	0.0285148		

Following the above, the adjusted coefficient of determination (adjusted R-squared) from the pooled OLS results of 265 distress likelihood firms observations showed that our corporate governance indicators jointly explained about 6% of the systematic variations in overall earnings quality using the Jones Model. The f-statistic value of 1.88 and its probability value of 0.02 showed that the overall model is statistically significant and valid.

Table 8: MJOHNES Pooled Results

Dependent Variable: MJOHNES

Method: Least Squares
Included observations: 256

Variable	Coefficient	t-Statistic	Prob.
C	0.09088	0.449642	0.6534
BSIZE	0.009653	1.205317	0.2292
BIND	0.007142	0.058057	0.9538
FBIND	-0.039038	-0.171678	0.8638
CEOSH	0.007606	2.850383	0.0047
CAMSH	0.004358	1.95557	0.0517
DHOLD	-0.003168	-2.487869	0.0135
BIG4A	0.032529	0.829263	0.4078
IFRS	-0.009385	-0.24848	0.804
JPPET	-0.16221	-3.364907	0.0009
FSIZE	-0.01508	-0.537824	0.5912
R-squared	0.07539		
Adjusted R-squared	0.037651		
F-statistic	1.997664		
Prob(F-statistic)	0.034197		

A careful observation of the table above shows a similar trend exhibited in the Modified Jones Model (MJOHNES) regression when compared to Jones Model (JMODEL). The above table shows that only four variables were significant determinants of Modified Jones Model earnings quality in the MJOHNES model. These were CEO ownership (positive effect), Chairman Ownership (positive effect), Directors Ownership (negative impact) and Asset Intangibility (negative effect). These same four variables were also significant in the Jones Model.

The cross section properties of the data suggested we conduct a heteroskedasticity test on the Modified Jones Model. Thus a Breusch-Pagan-Godfrey test was conducted.

Table 9: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	6.3579	Prob. F(10,245)	0.000
Obs*R-squared	52.74579	Prob. Chi-Square(10)	0.000
Scaled explained SS	1681.762	Prob. Chi-Square(10)	0.000

Source: Author's compilation (2017)

The Breusch-Pagan-Godfrey test for heteroskedasticity statistic shows the presence of heteroskedasticity in the model since the p-value was statistically significant at 1% level. The White heteroskedasticity-consistent standard errors & covariance model were estimated to correct the issue of heteroskedasticity in

the Modified Jones Model. The results obtained were all adjusted for heteroskedasticity since our sampled companies were heterogeneous and consisted of firms from different industries with different business activities. The result is presented below;

Table 10: Dependent Variable: MJOHNES

Method: Least Squares
Included observations: 256
White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	t-Statistic	Prob.
C	0.09088	0.267442	0.7894
BSIZE	0.009653	0.696287	0.4869
BIND	0.007142	0.077397	0.9384
FBIND	-0.039038	-0.210387	0.8335
CEOSH	0.007606	2.633677	**0.009**
CAMSH	0.004358	2.09885	**0.0369**
DHOLD	-0.003168	-2.496467	**0.0132**
BIG4A	0.032529	0.584809	0.5592
IFRS	-0.009385	-0.291374	0.771
JPPET	-0.16221	-0.697598	0.4861
FSIZE	-0.01508	-0.275231	0.7834
R-squared	0.07539		
Adjusted R-squared	0.037651		
F-statistic	1.997664		
Prob(F-statistic)	0.034197		

The f-statistic value of 1.99 and its probability value of 0.03 show that the overall model is statistically significant and valid

Discussion of Findings

The findings are discussed as follows:

The study deduced that board size is statistically insignificant; suggesting that board size has no significant effect on earnings quality of distress likelihood firms in Nigeria. The implication is that board size is a weak determinant of earnings quality of distress likelihood firms in Nigeria. The positive coefficients results of the board size supported our apriori expectations. The existence of an insignificant relationship between board size and earnings quality is consistent with the findings of Ramsay and Mather (2004) and Mayoral and Sanchez-Segura (2008). Howeveer it negates the findings of Abed, Al-Attar and Suwaidan (2012), Uwalomwa, Daramola and Anjolaoluwa (2014) who found a positive and significant relationship between

board size and earnings quality for companies without focusing on distress likelihood companies.

This study also observed that Board independence (BIND) appeared to have a positive influence on earnings quality but was statistically insignificant. This indicates that board independence is a weak determinant of earnings quality of distress likelihood firms in Nigeria. This showed that board independence has no significant influence on earnings quality of distress likelihood companies in Nigeria. This buttressed the findings of Reskino (2015), Arabborzoo, Rashidpuran, and Arabi (2015), Chaharsoughi and Ralman (2013), who revealed that board independence has no significant effect on earnings quality. However, studies of Lee (2013), Heirany, Sedrabadi, and Mehdjordi (2013), Fodio, Ibikunle and Oba (2013), Azaeez and Thames (2016) argued against our finding that Board independence can significantly reduce earnings quality. This finding suggests that board independence cannot help distress likelihood companies to manage the pressure of cooking their books. Appeared to have a negative influence on Jones model and Modified Jones Model earnings quality but was statistically insignificant.

The result shows that board gender diversity is not significantly related to earnings quality. The implication is that female board gender is a weak determinant of earnings quality of distress likelihood firms in Nigeria. The existence of a negative relationship between board gender diversity and earnings quality is consistent with the work of Omoye and Eriki (2014) that used companies without focusing on only distressed likelihood companies. Our results negate the existence of positive relationship found in the works of Damagum, Oba, Chima and Ibikunle (2014), Galzar and Wang (2011) and Gui (2012).This finding suggests that board gender if correctly used, can help to reduce earnings management in distress likelihood companies.

Moreover, it was observed that CEO Ownership exhibited a positive and statistically significant relationship with earnings quality of distress likelihood companies in Nigeria. This finding implied that CEO interest or ownership in the firm is a strong determinant of earnings quality of distress likelihood. This means that distress likelihood companies in Nigeria with CEOs having more shares would significantly cook their financial reports. This

is explicitly supported by Johari et al. (2008), Adebiyi and Olowookere (2016) even though they did not use distressed likelihood companies.

This study also found that there exists a positive and statistically significant relationship between Board chairman ownership and Jones Model and Modified Jones Model earnings quality of distress likelihood companies in Nigeria. The result suggested that chairman's ownership is a strong determinant of distress likelihood firms. This means that distress likelihood companies in Nigeria with chairman having more shares would significantly cook their financial reports.

Lastly, Directors ownership was found to be negatively related to Jones Model and Modified Jones model earning quality distress likelihood. This relationship was also found to be statistically significant. Although the result indicates strong determinant, however, it is negative. This finding indicated that directors' ownership has a significant effect on earnings quality of distress likelihood firms in Nigeria. The negative relationship found between directors share ownership and earnings quality is consistent with the study of Shah and Shah (2014), Usman and Yero (2014) who used all companies without focusing on distress likelihood firms.

5.   CONCLUSION AND RECOMMENDATIONS

Conclusion

Corporate governance continues to be fundamental issues to firms because of the roles it plays in its existence. The effectiveness of corporate governance is to ensure better financial reporting, promoting transparency and accountability practices and protecting against corporate failure. Corporate distress is not a sudden incident. It is a long-term phenomenom. The earlier the firm will be aware of their position the better decision they can take to turn around the firm. Ability to promptly predict likelihood distress firm is useful to shareholders and other stakeholders to take necessary actions to avert potential distress. Regular checking of the financial health of firms can help to avoid sudden corporate failure or likelihood distress firms. Corporate governance processes are essential in maintaining the credibility of firms' financial statements and safeguarding against earnings

manipulation and enhance earnings quality of likelihood distress firms.

Earnings quality is of interest to users of financial statements because earnings, and the varied metrics derived therefrom, are utilised in making decisions. The various corporate governance mechanisms such as the board size, board independence, board gender as well as chairman's ownership, directors shareholding, chief executive officer (CEO) ownership, and external auditors (Big 4 and non-Big 4) have implications on earnings quality of likelihood distress firms. Weak corporate governance structure provides an opportunity for managers to engage in behaviour which results in lower quality of reported earnings. Costs and consequences of poor earnings quality result in likelihood distress of firms. The effectiveness of the monitoring functions of the boards of directors, coupled with various interests of the directors, chairman, the chief executive officer can help in ensuring earnings quality. Corporate governance mechanisms improve the managers' stewardship and consequently increase the earnings quality of likelihood distress firms. It is therefore concluded that corporate governance practices like board size, board independence, board gender, chairman's, CEO, and directors ownership or interest in the firm have relationship and implications on earnings quality of distress likelihood quoted firms in Nigeria.

Recommendations

Various policy recommendations for necessary implementations are below:

1. Companies should not expand the board of distress companies as a means to managing earnings quality. The board size should be based on the size of the firm, and the board should be duly constituted.
2. The independence board should be people of integrity and professional qualifications in different disciplines.
3. Board gender if correctly used can help to reduce earnings management and ensure earnings quality. As such more women should be introduced or included in the board
4. CEO shares ownership should be discouraged for distress likelihood companies if reduced earnings management tendencies is to be checked
5. Board chairman with shares ownership should be discouraged for distress likelihood companies if reduced earnings management tendencies are to be checked.
6. More directors outside the board chairman and CEOs should be encouraged to own shares in distress likelihood companies to provide monitoring on the chairman and CEOs tendencies to engage in dangerous earnings management practices.

REFERENCES

Aborode, R. (2005). Strategic financial management. Lagos: Masterstroke Consulting

Adebiyi, W.K., & Olowookere, J.K. (2016). Ownership structure and the quality of financial reporting. Evidence from Nigeria deposit money banks. *International Journal of Economics, Commerce and Management* 1, 541-552.

Adetunji, M.B., & Olawoye, O. (2009). The effects of internal and external mechanism on governance and performance of corporatefirms in nigeria. *Journal of Corporate Ownership & Control*, *2*(3) 1-7

Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The Journal of Finance, 23*(4), 589-609.

Arabborzoo, A., Rashidpuran, S., & Arabi, A. (2015). The impact of corporate governance on earnings quality. *Journal of Scientific Research and Development, 2* (1), 127-132.

Ashbaugh H., Collins, D., LaFond, R., (2006). The effects of corporate governance on firms credit ratings. *Journal of Accounting and Economics 42* (1–2), 203–243.

Balsam, S., Krishman, J., & Yang, J.S. (2003). Auditor's industry specializations and earning quality. *Journal of Practice and Theory 22,* 71-97.

Chaharsoughi, M.T & Rahman, R.A. (2013).Corporate governance and earning quality: Evidence from listed companies in Iran. *Journal of Modern Accounting and Auditing 9*(6),790-794.

Chalaki, P., Didar, H., & Riahinezhad, M. (2012). Corporate governance attributes and financial reporting quality: Empirical Evidence from Iran. *International Journal of Business and Social Sciences, 3*(15), 223-229.

Chava, S., & Jarrow, R. A. (2004). Bankruptcy prediction with industry effects. *Review of Finance, 8*(4), 537-569.

Dechew, P., Ge, W., & Schrand, C (2010). Understanding earning quality. A review of their proxies, determinant and consequences. *Journal of Accounting and Economics 50*(23), 344-401

Dechow, P., Sloan, R. and Sweeney, A., (1995). Detecting earning management". *The Accounting Review,*70, 193-225.

Dechow, P.M., & Dichev, I.D. (2002). The quality of accrual and earnings: the role of accrual estimation error. *Accounting Review, 77(*4), 35-59.

Dechow, P.M., & Schrand, C.M. (2004). Earning Quality. New York: The Research Foundation of CFA Institute.

Dichev I., J. Graham, C. Harvey, and S. Rajgopal. (2012). Earnings quality: Evidence from the Field. *Working paper, Emory University and Duke University.*

Ewert, R., & Wogenhofer, A. (2010). Earning quality metrics and what they measures. Working capital university of Graz.

Fodio, M.I., Ibikunle, J., & Oba, V. C. (2013).Corporate governance mechanisms and reported earnings quality in

listed Nigerian insurance firms. *International Journal of Finance and Accounting, 2*(5), 279-286.

Francis, J.I, Olsson, P., Schipper, K. (2006). Earning quality. *Foundation Trends in Accounting, 1*(4), 259-340.

Jensen, M. & Meckling, W. (1976). Theory of the firm: Managerial Behavior, Agency Cost and Ownership Structure. *Journal of Financial Economics, 3*,305-360.

Johari, N.H., Saleh, N.M., Jaffar, R., & Hassan, M.S. (2008). The influence of board independence, competency and ownership on earning management in Malaysia. *International Journal of Economics & Management, 2*(2), 281-306.

Jouini, F. (2013). Corporate governance systems and the quality of accounting information. *Mediterranean Journal of Social Sciences, 4*(2), 129-142

Koch, A. S. (2002), Financial distress and the credibility of management earnings forecasts/ GSIA Working Paper No. 2000-10. Pittsburgh, PA: Carnegie Mellon University.

Lee, Y. (2013). Can board of directors improve the quality of earnings? Evidences from Taiwan. *Advances in Management & Applied Economics, 3(*3), 46-66.

Lemo, H. (2010). The impact of corporate strategy on capital structure of Australian companies. *Managerial & Decision Economics, 15,*245-253.

Lo, K (2007) Earning Management and Earning quality. *Journal of Accounting and Economics,* 1-17.

Mohammadi, S.M. (2014). The relationship between financial reporting quality and investment efficiency in Tehran stock exchange. *International Journal of Academic Research in Business and Social Sciences, 4(*6), 104-113.

Momoh, O.A., & Ukpong, M.S. (2013). Corporate governance and its effects on the Nigerian insurance industry. *European Journal of Globalization and Development Research, 8*(1), 477-491.

Nagar, N & Kaustav, S. (2016). Earnings Management Strategies during Financial Distress. *Research and Publications,* WP (2-3),1-42.

Nkanbia-Davie, L. O., Gberegbe, F. B., Ofurum, C.O., & Egbe, S. (2016). Corporate governance and earnings quality of listed banks in Rivers State. *International Journal of Business and Management Invention, 5*(7), 29-33.

Ohlson, J. A. (1980). Financial Ratios and the Probabilistic Prediction of Bankruptcy. *Journal of Accounting Research, 18*(1), 109-131.

Omoye, A.S & Eriki, P.O. (2014). Corporate governance determinant and earning management: Evidence from Nigeria quoted companies. *Mediterranean Journal of Social Science, 5(*23), 553-564.

Onourah, A.C., & Imene, O.F. (2016). Corporate governance and financial reporting quality in selected Nigerian companies. *International Journal of Management Sciences and Business Administration, 2* (3), 7-16.

Reskino (2015). The effect of corporate governance on earnings quality with surplus free cash flow as moderating variable. *Research Journal of Finance and Accounting, 6*(4), 129-138.

Rogers, J. L. and Stocken, P. C. (2005), "Credibility of management forecasts". *The Accounting Review*, 80 (4,) 1233-1260.

Schipper, K. and Vincent, L., (2003). Earnings quality. *Accounting Horizons* 17, 97-110.

Shay, K., & Shay, A. (2014). The impact of corporate governance and ownership structure on earning management: Evidences from listed companies in Pakistan. *The Lahore Journal of Economics, 19*(2), 27-70.

Shumway, T. (2001). Forecasting bankruptcy more accurately: A simple hazard model. *The Journal of Business, 74*(1), 101-124.

Usman, S.H., & Yero, J.I. (2014). Ownership concentration and earning management practices of Nigeria listed

conglomerates. *America International Journal of Contemporary Research, 2*(7), 157-171.

Uwalomwa, U., Daramola, S.P., & Anjolaoluwa, O. (2014). The effects of corporate governance mechanisms on earnings management of listed firms in Nigeria. *Accounting and Management Information Systems, 13* (1), 159–174.

Yee, K. (2006), Earnings quality and the equity risk premium: a bench mark model, *Contemporary Accounting Research, 23* (3), 833 – 877.