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Audit committee effectiveness and audit quality of listed insurance companies in Nigeria

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Abstract
This study examines the effects of audit committee effectiveness on audit quality of listed insurance companies in Nigeria using secondary data extracted from published audited annual reports and accounts of insurance companies in Nigeria. 15 companies out of the total 25 listed insurance companies in Nigeria with 150 firm-year observations for a period of 10 years, 2008-2017 form the study sample size. Ordinary least square (OLS) regression model was employed to analyze the data and test the hypotheses with the aid of STATA version 14. The result shows that audit committee meetings and audit committee independence have a positive and significant effect on audit quality of listed insurance companies in Nigeria. The other elements of audit committee effectiveness do not have a significant effect on audit quality of listed insurance companies in Nigeria. The study recommends that: (i) the board of directors of Nigerian insurance companies should review or revisit their policy on the number of meetings to change from a minimum of 4 and maximum of 8 meetings to a minimum of 6 and 10 maximum meetings per annual for audit committees. This is because regular meetings provide an opportunity for the audit committee to attend critical issues, which in turn improve audit quality; (ii) the regulatory authorities who are responsible for monitoring listed insurance companies in Nigeria should come up with policies or revisit the policy on audit committee size. To mandate all insurance companies to have a uniform maximum of 7 members for the audit committee in respective of the company's' size. This will go a long way in improving the monitoring capability of audit committee independence toward achieving audit quality of listed insurance companies in Nigeria.

Keywords: Audit quality, committee meetings, committee independence, committee expertise, committee size.

1. Introduction
Auditing as we know today dates back to the ancient Egypt and Rome, more than 5,000 years ago. At that time, individuals were engaged to review work performed by agents (professional managers) who were charged with the responsibility of running the day-to-day affairs of the businesses. The essence of this was to detect fraud and irregularities. This is because there were no structured businesses and as such no formal internal control mechanisms were put in place for proper reporting. Despite that there was no structured put in place for proper reporting, an independent person was hired to ensure that returns from businesses accurately reflected revenue generated as presented by professional managers (agents). The idea of bringing in an independent person then was to come and listen and to reveal if fraud and irregularities were perpetrated by managers.

The lack of no structured for proper reporting caused the financial statement not to pass through the third party (auditor) as owner supervised manager directly. These limits the intermediary services of the third party who should have supervised the work performed by agents. However, as businesses continue to expand in an atmospheric environment, there was a need for the financial statement to pass through the third party (auditor). Therefore, manager no longer presents the financial statement of a business to the owner directly, such prepared financial statement would pass through auditor who constitutes a profession providing services to the people (Adeyemi & Fagbemi, 2010) [5]. The essence is to show that the audit is designed specifically to meet the needs of financial statement users, such as investors, creditors, prospective creditors and government institutions (Al-Thunebat, 2006) [7].

The current day businesses, due to innovations and changes that have taken place in accounting, financial reporting and auditing create the separation between owners and

Managers, and as such, managers only communicate their stewardship of the firm's resources To the owners through the financial statement which passes through the independent auditor. The independent auditor, as a professional holding responsibility in carrying the trust of the investors, needs to ensure that such trust resulted in audit quality via the verification and examination of financial statement prepared and presented by managers (Frohnen & Clarke, 2002) [22]. Therefore, audit report should reflect the auditor's opinion regarding the company and with a reasonable assurance assuring investors, creditors, public and any resource providers in an organization that the company's accounting and stewardship of the company are correct, which referred to as "audit quality".

Audit quality is the capability, integrity, and ability of auditors to detect noise on the financial statement, such as material misstatement, errors or omission and to polish the financial statement prepared and presented by the company's management. If noises (material misstatement, errors or omissions) are found on the financial statement and auditors could not detect, eliminate or reduce them, users of financial statements will question the competency and integrity of auditors. This shows that, for investors and creditors to consider audits to be quality, it must be free from material misstatement and provide a warning signal in case of a firm's impending bankruptcy in the form of going concern opinion. Auditors also need basic requirements in the verification and examination of the financial statement, which are direct influences, such as personal attributes (auditor skill and experience, ethical values, mindset, soundness of methodology used, effectiveness of tools used and technical competence) to enhance the credibility of financial statements to users of accounting information. Such basic professional requirements add value to the credibility of financial information.

Furthermore, audit quality is subject to many direct and indirect influences. While some place more emphasis on direct influences on audit quality, others rely on indirect influences. Direct influence according to International Auditing and Assurance Standards Board (IAASB, 2014) are grouped into three categories: inputs, outputs and context factors, while the indirect influence, on the other hand, is linked to output factors from companies owners which constitute pressure from individual owners, the political influence of the owners and environmental factors. These indirect influences from company’s owners affect audit quality, which gives rise to the setting up of the audit committee in the company.

Audit committees are one of the vital operating committees of a company' board of directors that is charged with supervisory responsibility, monitoring and overseeing financial reporting and disclosure of both financial and non-financial information. The AC acts as intermediary between the management, internal and external audit functions. Globally, corporate governance regulation requires all companies to construct an audit committee to ensure the credibility and reliability of the financial statement leading to audit quality. In Nigeria, the Companies and Allied Matters Acts (CAMA) 1990 [13] as amended established audit committee as an additional segment of control and certification in order to support and make annual accounts of public companies more acceptable and reliable (Ekumankama & Uche, 2009) [19]. This means that the audit committee is established to checkmate the management, internal and external audit functions. Therefore, the ability or capability of the audit committee to produce desired output "is audit committee effectiveness". The desired output is the credibility, integrity, and reliability of the financial statement resulting in audit quality.

An effective audit committee is not only compliance with relevant codes and regulations. According to Ekumankama and Uche (2009) [19], for the audit committee to be more efficient in Nigeria context, there is a need for changes to be made in both law and practice. Such changes include qualification for membership, technical nature, appropriate discipline, appropriate remuneration, membership tenure, classification of members among others, without which audit committee cannot effectively perform their primary functions targeted at improving the quality and information content of company's financial reports.

Insurance sector of many countries is the service sector. This sector generates a significant impact on the economy by mobilizing domestic savings. Insurance sector absorbs the loss, stabilizing financial and promotes trade and commercial activities, which resulted in economic growth and development. Allows these sectors to collapse due to poor audit quality will affect investors, creditors, potential investors, public and government institution greatly. Therefore, this study examines the effect of audit committee effectiveness on audit quality of listed insurance companies in Nigeria.

Practically, the auditor is expected to be independent of the management of the company being audited. However, a number of factors like familiarity, the threat of replacement and the provision of management advisory services appear to impair auditor's independence. Other factors such as conflict of interest between the auditor's statutory role and the other services undertaken for a client (UK House of Common Treasury Committee, 2008). Audit failures globally have brought great disappointment to investors, creditors, public and government including listed insurance companies in Nigeria. In the developed countries, for example, Enron corporation in the United States collapse in 2002 due to poor audit quality. Arthur Andersen, one of the famous five audit firms in the world declined to bark as a watchdog but rather was being influenced by the management of Enron corporation to cover up their wrongdoing, which resulted to the collapse of the company due to lack of credibility of the audit report.

In the developing country particularly, Nigeria. The Cadbury Nigeria Ltd, one of the manufacturing firms in Nigeria also experienced Enron's situation where the management of the company falsified its accounts in 2006 and the company's financial position was overstated to the tune of over N13 billion (Okaro & Okafor, 2013; Otusanya & Lauwo, 2010) [39, 40]. In reality, the company was operating on losses to the tune of between N1billion to N2 billion Naira. Akintola Williams and Delloite (AWD), one of the famous big 4 audit firms in Nigeria did not bark as a watchdog, rather they conspired with the company's executive director to have carried out the act (Otusanya & Lauwo, 2010 in Abah, 2018) [40, 1].

The insurance sector is regarded as one of the driving force of economic growth and development of any nation. In

developed economies, the insurance sector contributes a significant portion to the gross domestic product (GDP). For example, in China, the insurance sector contributed 4.2% to the gross domestic product (GDP). In Japan, the insurance sector contributed 4.4% to the gross domestic product (GDP). In the UK, the insurance sector contributed 3% to the gross domestic product (GDP). In the USA, the insurance sector contributed 3.1% to the gross domestic product (GDP). In developing country specifically Nigeria, the insurance sector contributed 0.4% to the gross domestic product (GDP). This percentage is far below what is happening in the developed economies. This could be as a result of many factors including lack of confidence of foreign investors on the Nigerian insurance sector, audit quality of the sector, quality of management saddled with the responsibility of managing the sector, performance of the insurance sector and other determinants. The researcher is disturbed as to why the low contribution of the sector to gross domestic product (GDP) in Nigeria. The study is, therefore, examine the audit committee effectiveness and audit quality in the insurance sector in Nigeria.

The main objective of this study is to evaluate the effectiveness of the audit committee on the audit quality of the listed insurance companies in Nigeria. The specific objectives are to: examine audit committee meetings on audit quality of listed insurance companies in Nigeria; evaluate audit committee independence on audit quality of listed Nigerian insurance companies in Nigeria; examine audit committee expertise on audit quality of listed Nigerian insurance companies; and investigate audit committee size on audit quality of listed insurance companies in Nigeria.

Given the proceedings, the following hypotheses were formulated and tested: H_1 Audit committee meetings have no significant effect on audit quality of listed insurance companies in Nigeria; H_2 Audit committee independence has no significant effect on audit quality of listed insurance companies in Nigeria; H_3 Audit committee Expertise has no significant effect on audit quality of listed insurance companies in Nigeria; and H_4 Audit committee Size has no significant effect on audit quality of listed insurance companies in Nigeria.

The study hopes to address the issues of audit failures in the insurance companies in Nigeria. Audit committees were established due to frequent audit failures resulting to collapse of most corporations. The failure of the audit was linked to auditor's personal attributes. On the other hand, it was attributed to companies owners. Therefore, if audit committees are effective and ensure strict compliance with relevant laws, rules, and regulation, standards, and procedures being followed by auditors without undue influence or interruption from any committee member, audit quality will be achieved. This will prevent the sudden collapse of some companies witness in the past like that of Enron, Skye bank among others.

The findings of the study are also useful to the regulators and policymakers who will be equipped with information on factors that affect audit quality in the Nigerian context for future regulatory strategies. This could assist them to deploy or adopt other strategies for policy formulation and reforms in the sector. The result of the study provides insight for policymakers and regulatory agencies towards initiating innovative avenue to strengthen the relationship between the shareholders of the business firm and management.

The findings of the study will also add to the existing knowledge of the literature on audit committee effectiveness on audit quality. This will enhance and promoting investment decision particularly on insurance companies in Nigeria. It will also assist the researcher wishing to further research in the field of accounting, finance, and auditing as it serves as the reference point for the further research study.

2 Literature Review

The study developed a conceptual framework to link the independent and dependent variables. The independent variables in this study consist of audit committee size, audit committee independence, audit committee meeting, and audit committee expertise. The dependent variable was audit quality measured by audit fees and audit firm size, while firm size and firm age were used as the control variable. Table 1 below shows the conceptual framework for the study.

Table 1: Audit Committee Effectiveness and Audit Quality

Independent variables	Dependent variables	Control variables
1 Audit committee size 2 Audit committee independence 3 Audit committee meeting 4 Audit committee expertise	1 Audit fees 2 Audit firm size	1 Firm size 2 Firm Age

Source Built by researcher based on literature

The concepts of audit committee date back to 1940 in the case of McKesson and Robbins, where nonexistent inventories valued at approximately $10 million and overstated accounts receivable by approximately $9 million (New York Stock Exchange, 1940) [38]. This gave rise to the setting up of a special committee of the board composed of directors who are not officers of the company (John, 1953) [38]. This scandal of McKesson and Robbins enable the corporation and the accounting profession to see that appointment of an audit committee by the board of directors should be recognized. Not only recognition but as mechanisms for monitoring, supervision and possibly, to remedies the fraudulent act of management. However, for the audit committee to be effective, certain conditions need to certify. These are committee size, committee independence, committee meetings, and committee expertise, without which the committee will not be effective.

Audit committee size is a selected number of members of a company's board of directors whose responsibilities include assisting auditors to remain independent of management. Usually, the audit committee is made up of 3-5 or sometimes as many as seven directors including the chairman who is not part of company management (UK Corporate Governance Code, 2010) [45]. This indicates that the size of the committee is the sum of members of the group chosen by the governing bodies. The size of audit committee depends on the size of the company. A large company may produce 5-7 members, while a small company may have 3-5 members.

Audit committee meetings according to UK corporate governance code (2010) [45], is a committee of directors and

enterprises shareholders representative whose specific responsibility is to review the annual financial statements before submission to the board of directors. The primary role of the committee is to meet and consider ways to implement or enhance practice that will help the company conducting effective operations. Each committee member during sitting will consider what is most effective for its circumstances but subject to certain practices that are valuable to the company for implementation. The total number of meetings depends on the company's terms of reference and the complexity of the company's operations. However, the more frequent the audit committee meets, the more opportunity it has to discuss current issues facing by the company.

Audit committee independence is a selected group of persons who do not rely on others for assistance for their responsibilities and decisions. This means that the audit committee is a committee who prefers to do tasks alone without depending or consulting the parties that have the financial interest in the organization. In other words, the audit committee is a committee that is the independence of the internal auditors, the external auditors and from parties that may have a financial interest in the business being audited. The independence of the audit committee is characterized by integrity and objective approach. The independence requires the committee to carry out their responsibilities freely without intervention from the company's management and those parties with a financial interest.

Expertise in the real sense is a special skill or knowledge that one acquires from experience, training, study, or practice. It is a basis of credibility of a person who is perceived to be knowledgeable in an area or topic due to his or her study, training, or experience in the subject matter. Audit committee expertise is an essential characteristic in accomplishing its oversight responsibilities and protects shareholders' interests. It is crucial for audit committee members to have expert knowledge in accounting and finance in order to understand the nitty-gritty of auditing practices. The knowledge in the field of accounting and finance enable the members to have the ability to contribute immensely to the auditing process thereby improve audit quality.

There are different theories relevant to this research, but the study anchored on agency and power theories. Agency theory believes that the segregation and control in the business create the conflict of interests between principal and agents and, as such, companies are induced to utilize control mechanisms to decrease agency costs and information asymmetry like audit committee (Kalbers & Fogarty, 1998). According to Pincus, Rusbarsky, and Wong (1989) [41], the audit committee was established primarily in circumstances where agency costs is too high to improve the quality of information passing from managers to shareholders. In the same vein, the agency theory optimize that, to ensure the effectiveness of audit committee, managers are mandatory to prepare financial statements and specify the returns generated by the companies (Kipkoech & Rono, 2016) [30].

The power theory, on the other hand, believes in the ability of the audit committee to act successfully against the resistance of other resources in the company and introducing value creation for all stakeholders. French and Raven (1959) [21] identified five types of power: reward, coercive, legitimate, expert and referent. Mintzberg (1983) [36] combined reward and coercive powers and refers it to as sanction. He described sanction power as the ability to control over resources of the organization. The power theory believes that audit committee acquired legitimate power from the corporate board of directors, which was the backbone behind audit committee effectiveness (Kalbers & Fogarty, 1993) [29]. This legitimate power metamorphosed into sanction power from where the ability of the audit committee in making decisions that can have impacts on rewards and punishments to other parties, such as company management, internal auditors and external auditors.

Moses, Ofurum, and Egbe (2016) [37] investigate the impact of audit committee size on financial reporting quality in Nigeria. The study population consists of 15 Deposit Money Banks listed on the Nigeria stock exchange for the period 2014. Regression techniques was utilized for data analysis. The findings show that audit committee size has no significant impact on financial reporting quality. The findings of this study could be as a result of short period, as one year study period cannot give a valid result; therefore, expanding the study period to 10 years period could make a difference. Anderson, Mansi, and Reeb (2004) [8] examine the effect of audit committee size on audit quality of Ghanaian financial companies. The study sampled 20 financial companies out of 68 listed financial companies on Ghana stock exchange for the period 2000 to 2004. Multiple regression was used for data analysis. The findings show that audit committee size has a significant and negative influence on audit quality. Mazlina, Nava, and Jenny (2006) [34] assess the effect of audit committee size on audit quality in Malaysia. The population of the study consists of 76 companies listed on the Malaysian financial market for the period 2002-2005. The questionnaire was administered to internal executive auditors of the companies. The findings show a significant and positive relationship between audit committee size and the audit quality. A study of this nature could have used secondary sources of data. The primary data using questionnaire with yes or no responses cannot give the accurate result to depend upon.

Hoitash and Hoitash (2009) [24] examine the effect of audit committee meetings and audit quality in Australia. The study population consists of 2, 393 public companies audited by large and small audit firms in Australia for the period 2008. Logistic regression was used for data analysis. The study shows that audit committee meeting is significantly and positively related to audit quality. One year study period is insufficient to give valid result and, as such expanding the study period to 10 years could yield better output. Lifschutz, Jacob, and Feldshtein (2010) [31] evaluate the effect of the audit committee meeting on audit quality in Israel. The population consists of 100 companies on the Tel-Aviv stock exchange for the period 2004 to 2008. Multiple regression analysis was utilized for data analysis. The study finds that the audit committee meeting is positively and significantly associated with audit quality, while Aryan (2015) [9] examines the relationship between audit committee characteristics on audit quality in Nigeria. The study sampled 69 companies out of 91 companies in the industry for the period 2009 to 2014. Multiple regression

was used to analyze the data. The result shows a negative relationship between audit committee meetings and audit quality.

Chen, Moroney, and Houghton, (2005) [14], investigate the effect of audit committee independence and audit quality in Australia. The study sample 458 companies out of 510 companies listed on the ASX for the period 2000 to 2001. Logistic regression was used for data analysis. The study finding shows that audit committee independence has a significant and positive association on audit quality. The study period is short to give a reliable result and, as such, extending the period of the study to 10 years could make a difference. Abbort, Parker, Peters, and Raghunandan, (2003) [3] examine audit committee independence and audit quality in the USA. The study sample 310 companies out of 538 registers by SEC for the period 2001. Multivariate regression was used for data analysis. The study finding shows that audit independent committee has a significant and negative effect on audit quality. Majiyebo, Okpanachi, Nyor, Yahaya, and Mohammed (2018) [32] examine the effect of audit committee independence on audit quality in Nigeria. The population of the study consists of 15 listed deposit money banks (DMB) for the period 2007 to 2016. The modified Jones model was adopted to analyze the data. The study reveals that audit committee independence has a negative but significant effect on audit quality of listed deposit money banks in Nigeria. The study used only two measurement variables for audit quality. Therefore, increasing audit quality into four measurement variables could yield better output.

Jerubet, Chepenge-Ene, and Tenai (2017) [27] assess the effect of audit independence on audit quality in Kenya. The study population consists of 46 firms listed on the Nairobi stock exchange for the period 2014. Descriptive and inferential statistics were used to analyze data. The findings show that audit committee independence has a negative and significant effect on audit quality. The finding of the study could have been affected by the period as one year is not adequate to give a valid result. Therefore, expanding the study period to 10 years could give different output. Yadirichukwu and Ebimobowei (2013) [46] examine the effects of audit committee expertise on audit quality in Nigeria. The population of the study consists of 35 companies listed on the Nigerian stock exchange for the period 2007 to 2011. The study used multiple regression analysis for data analysis. The finding shows that audit committee expertise has a significant effect on audit quality. Salawu, Okpanachi, Yahaya, and Dikki (2017) [43] examine the effects of audit committee expertise and meeting on audit quality in Nigeria. The study sample 15 consumer goods firms out of 23 listed consumer goods companies on Nigeria Stock Exchange for the period 2006 to 2016. Multiple regressions were used for data analysis. The findings show that audit committee expertise has a significant and positive effect on audit quality. Ten year study period is sufficient to give a valid result. However, using four independent variables and two measurements of audit quality could add value and make a difference.

3 Methodology

The study adopts longitudinal research design using panel data. It is an effect study using multiple regression models to examine the effects of audit committee effectiveness on audit quality. The study uses the annual reports and accounts of listed insurance companies in Nigeria on the floor of the Nigerian Stock Exchange for 10 years (1st January 2008 to 31st December 2017). Twenty-five listed insurance companies form the total population for the study. Filters were employed to consider some companies and eliminate others (Abu & Nyor, 2016) [4]. The percolate removes all the companies listed after 31st December 2008. As they cannot produce complete data required for the study. The infiltrate also weed out all companies that had disappeared from the trading schedule of NSE as at 31st December 2017. Therefore, a total of 10 companies were weeded out. As they cannot produce data required for the study. Thus, 15 insurance companies form the sample size of the study as they met the criteria, which have the complete data for all the variables of the study for the period under review.

This paper adopts the Maryam (2013) [13]; Rajendran (2017) [42]; Yinusa and Babalola (2014) [47] model with modification. The model is adopted and, the variables modified to suit the environment for the research. Therefore, the model for the study is as shown below:

$$Y_{it} = \alpha_0 + \beta_1 X_{it} + \beta_2 C_{it} + \varepsilon_{it} - - - - - - - - (1)$$

Where; Y_{it} = Dependent Variable of firm i for time period t;

α = Constant intercept

β_1=Coefficient of explanatory variables;

X_{it} = Explanatory variables of firm i for time period t;

β_2 =Coefficient of control variables;

C_{it}= Control variables of firm i for time period t; and

ε_{it} = Error term of firm i for time period t.

From equation 1 above, the following models were developed:

Y_{it}= [AFS_{it} +$AFEE_{it}$] ---------- (2)
X_{it}= [ACM_{it} +ACI_{it} +$ACMEX_{it}$ +ACS_{it}] ---------- (3)
C_{it}= [$SIZE_{it}$ +AGE_{it}] ---------- (4)

Substituting equation 2, 3 and 4 into equation 1 the model below was formulated;

$AFS_{it}=a_o + \beta_1 ACM_{it} + \beta_2 ACI_{it} + \beta_3 ACMEX_{it} + \beta_4 ACS_{it} + \beta_5 SIZE_{it} + \beta_6 AGE_{it} + e_{it}$ ---------- (5)

$AFEE_{it}=a_o + \beta_1 ACM_{it} + \beta_2 ACI_{it} + \beta_3 ACMEX_{it} + \beta_4 ACS_{it} + \beta_5 SIZE_{it} + \beta_6 AGE_{it} + e_{it}$ ---------- (6)

Where;
AFS=Audit Firm Size,
AFEE=Audit Fees,
ACM=Audit committee meeting,
ACI=Audit committee independence,
ACMEX=Audit committee expertise,
ACS=Audit committee size,
TA=Total asset (size),
AGE=Age.

A priori expectations $\beta 1>0$, $\beta_2>0$, $\beta_3>0$, $\beta_4>0$, $\beta_5>0$, $\beta_6>0$

There is an expectation that explanatory and control variables (ACM, ACI, ACMEX, ACS, TA, and AGE should

have a positive and significant impact on the dependent variable (AFS and AF). To ascertain whether the data for this study fits into the above model, the variance inflation factor (VIF) test would be conducted to check the existence of multicollinearity among independent variables; the Shapiro-Wilk (W) test would be conducted to check the normality or otherwise of the data; and the Breusch Pagan test would be conducted to ascertain the existence of heteroscedasticity or not among the variables of the study.

4 Results and Discussion

The section presents the results. It includes the presentation, analysis and, interpretation of collected data from published annual reports of the insurance companies. After that, conclusion and recommendations are made based on the findings of the study.

Table 2: Descriptive Statistics

Variable	Mean Stat	Std Dev Stat	Min Stat	Max Stat	OBS
AFEE	3.994037	.3313185	3.230449	4.740363	150
AFS	.4933333	.5016305	0	1	150
ACM	.7618957	.1542845	.4771213	1.146128	150
ACIND	.5253667	.161187	.25	.8	150
ACMEX	.6422667	.1265449	.4	.8	150
ACS	.7633333	.0489142	.60206	.845098	150
SIZE	7.102867	.5010035	6.51	9.67	150
AGE	.94	.2382824	0	1	150

Source STATA 14 Output Results based on study data

Table 2 shows a descriptive statistics panel data set made up of 15 companies, eight variables and a total of 150 observations for 10 years (2008-2017). The AFEE has a mean of 3.994037, the standard deviation of.3313185, a minimum of 3.230449, and a maximum value of 4.740363. This suggests that for all the 15 listed insurance companies in Nigeria, there is an average value of 3.994037 with a deviation of.3313185 around the mean. The mean value of 3.994037 implies that most audit firms in Nigeria charged high remuneration for auditing insurance companies for the period under review with improve audit quality. The AFS has a mean of.4933333, the standard deviation of.5016305, and a maximum value of 1. It implies that for all the 15 listed insurance companies in Nigeria, there is an average value of.4933333 with a deviation of.5016305 around the mean. The mean value of.493333 is close to 1 maximum value. That was in line with the data set of the study as firms audited by audit firm size was coded 1 and, those investigated by non-audit firm size was coded 0. The mean AFS of.4933333 and a maximum value of 1, indicating that most Nigerian insurance companies are audited by audit firm size during the study period. The mean value of both AFEE and AFS stand at 3.994037 and.4933333, meaning that the contribution of audit fees and audit firm size of the listed insurance companies to the audit quality on an average is good. This may be as a result of the improve audit committee effectiveness.

The audit committee has a mean of.7618957, a standard deviation of. 1542845, a minimum of.4771213 and a maximum of 1.146128 indicating that the committee had the good number of meetings in each year that enhance audit quality of insurance companies in Nigeria. The mean value of audit committee independence is.5253667, a standard deviation of.161187, a minimum of.25, and a maximum of.8, implying that the members of the audit committee are relatively independent of the management board. This enables the committee members operating in a most effective and efficient manner. The average value of audit committee expertise is.6422667, a standard deviation of.1265449, a minimum of.4, and a maximum of.8, showing that the number of persons with accounting and finance knowledge on average is twice or more in the committee.

Audit committee size has a mean of.7633333, a standard deviation of.0489142, a minimum of.60206, and a maximum of.845098. This implies that the size of the audit committee of listed insurance companies in Nigeria during the study period on average has the maximum of 8 members. Firm size has a mean of 7.102867, a standard deviation of.5010035, a minimum of 6.51 and a maximum of 9.67 implying that on the averaged firm size of listed insurance companies is 7.10 with a variation of 0.5 around this during the period. The highest assets size was 9.7, while the lowest assets size was 6.5. The highest assets size of 9.7 and the lowest size of 6.5 suggesting that the assets size of all the listed insurance companies during the study period were not of the same size. Some companies have high assets value compare with others. Firm age has a mean of.94, a standard deviation of. 2382824, a minimum of 0 and a maximum of 1 implying that the average age of the listed insurance companies in Nigeria is.94 years with a variation of.2382824 around this during the period. The minimum of 0 and maximum of 1 conforms with the study plan as firm age was dichotomized as 0 and 1.

Table 2 also depicts the high standard deviation of all the independent variables. The high standard aberration shows that there is no uniformity in the number of audit committee members of the listed insurance companies in Nigeria. That resulted into broad divergence of variables from their mean. If the normal distribution of numbers of committee members existed. The standard deviation would have been within the acceptable maximum of 2.

The Result of Data Normality Test

The research work used the Shapiro-Wilk (W) data normality test to determine how normal the data collected is. The test was conducted to check a variable that emanates from a normally distributed population. It was meant to test the null hypothesis that the data were not normally distributed at a 0.05 (5%) level of significance. The results of the test are seems in table 2 below:

Table 3: Results of Data Normality Test

Variables	W	V	Z	P Value
AFEE	0.99299	0.815	-0.463	0.67816
AFS	0.99937	0.073	-5.925	1.00000
ACM	0.98805	1.391	0.747	0.22740
ACIND	0.96192	4.430	3.374	0.00037
ACMEX	0.92634	8.570	4.870	0.00000
ACS	0.93595	7.452	4.553	0.00000
SIZE	0.65045	40.671	8.401	0.00000
AGE	0.81182	21.896	6.997	0.00000

***Source*:** STATA 14 Output results based on study data

A thorough examination of Table 3 shows that the P-value of five variables were less than or equal to 5% significant

level, while the data for audit quality variables, such as audit fees and audit firm size including audit committee meetings are normally distributed. The five independent variables failed the normality test, as the tests were significant at 5% with a confidence level of 95%, showing that the data does not fit the normal distribution. The failures of the five variables were due to several reasons: first, when the sample size is adequately large, the normality of data is not required (Wooldridge, 2009) [48]. The 15 listed insurance companies selected for 10 years is sufficiently large, and as such, the normality of data was not required. Second, in a panel data set, there were repeated observations in the same components. The repeated perceptions from the same unit usually cause a problem, since the perceptions are, very likely, not independent, which most times violates normality assumptions (Baltagi, Song, Jung, & Koh, 2007; Baltagi, Song, & Koh, 2003; Elliott & Woodward, 2007) [10, 11, 18]. Third, in panel dataset where observations are repeated across the sample firms for several years, data normality become a sufficient condition, but not a necessary condition for the model to be a good model (Alejo, Galvao, Montes-Rojas, & Sosa-Escudero, 2015; Baltagi, Song, Jung, & Koh, 2007) [11, 10, 6]. It simply means that despite the failure of the normality test in these variables, it does not affect the model of the study.

Table 4: Results of Multicolinearity test

Variables	VIF	1/VIF
Acm	2.43	0.411063
Acmex	1.95	0.511779
Acind	1.42	0.703985
Size	1.08	0.929749
Acs	1.07	0.934471
Age	1.06	0.944795
Mean VIF	1.50	

Source STATA 14 Output results based on study data

Table 4 shows that the Acm has a VIF of 2.43 at a 0.411063 tolerance, indicating that the data for audit committee meetings were not highly collinear with the data for other explanatory variables; Acmex has a VIF of 1.95 at a 0.511779 tolerance, signifying that there was no perfect collinearity between audit committee expertise and other independent variables; Acind has a VIF of 1.42 at a 0.703985, meaning that there wass no perfect collinear with other explanatory variables; size has a VIF of 1.08 at a 0.929749 tolerance, showing that the data for firm size was not highly collinear with the data for other independent variables; Acs has a VIF of 1.07 at a 0.934471 tolerance, indicating that there was no perfect collinearity between audit committee size and other explanatory variables, while age has a 1.06 at a 0.944795 tolerance, which is an indication that firm age was not perfectly collinear with other independent variables. However, the mean VIF for all explanatory variables is 1.50. In each case, VIF is less than 4 and tolerance level is less than 1 respectively, showing that there was an absence of perfect multicollinearity among the independent variables. The mean VIF of 1.50 also attests that the models for testing the hypotheses were fit and reliable.

Table 5: Results of Heteroscedasticity

TEST	CHI-Square	P-Value
Breuch pagan /Cook Weisberg test model 1	0.07	0.7916
Breuch pagan /Cook Weisberg test model 2	0.00	0.9596

Source STATA 14 Output results based on study data

The Breusch Pagan/Cook-Weisberg test was conducted to test the null hypothesis that the error variances were all equal (homoscedasticity), while the alternative assumed that error variances are a multiplicative function of one or more variable. The alternative hypothesis states that the error variance increase (or decrease) as the predicted value Y increases. This means that the large the predicted value of Y, the large the error is. On the other hand, a large chi-square would indicate that heteroscedasticity was present. However, the evidence from Breuch pagan/cook-Weinberg coefficient of 0.07 and 0.00 with p-value 0.7916 and 0.9596 for both models confirms the perfect absence of heteroscedasticity for both models. Also, the Breuch pagan /Cook Weisberg test is evidence of the absence of serial correlation.

Regression Results

Table 6: Regression Results Model 1 and 2

Model I:AFEE					MODEL II:AFS			
Variables	**Coefficient**	**T-Value**	**P-Value**		**Coefficient**	**T-Value**	**P-Value**	
CONST	1.851065	-4.21	0.001		-1.115963	-5.34	0.231	
ACM	.7869548	0.13	0.001		1.389023	1.30	0.000	
ACIND	.4309985	-4.36	0.009		.1410475	-5.10	0.621	
ACMEX	-.054524	-1.71	0.823		1.243288	1.78	0.004	
ACS	.0252431	0.63	0.957		-.2638379	1.83	0.746	
SIZE	.1510497	3.81	0.001		-.0575638	-2.88	0.471	
AGE	.2764106	7.65	0.004		.3070701	-2.47	0.067	
R^2				0.3714				0.1570
Adj R^2				0.3450				0.1216
F. stat				14.08				4.44
P-Value				0.0000				0.0004

Source STATA 14 Output results based on study data

The result as summarized in Table 6 reveals that model 1 is statistically significant as the validity of the model is evident. The R^2 (3714) in table 5 is the multiple coefficients of determination. It gives the percentage of the total variation in the dependent variable explained by the explanatory variable jointly. Hence, it signifies 37.14% of

the total variation in audit quality of listed insurance companies in Nigeria caused by audit committee effectiveness. The Adjusted R-square shows the degree of freedom of the model only. It explains also about 34.50% of the total systematic variations in audit quality. This aberration (34.50%) in audit quality of the listed Nigerian insurance companies is substantially accounted for by the different explanatory variables. Also, the P-value of 0.0000 for the estimation confirms the fitness of the model. However, model 2 with R^2 of 1570 and Adjusted R-Square of 12.16% show the variation in audit quality of listed insurance companies in Nigeria is not substantially accounted for by all the explanatory variables. Therefore, for analysis, model 1 only will be used.

Table 7: egression Results- Model 1

Variable	Coefficient	T-Value	P-Value
CONST	1.851065	-4.21	0.001
ACM	0.7869548	0.13	0.001
ACIND	0.4309985	-4.26	0.009
ACMEX	-0.054524	-1.71	0.823
ACS	0.0252431	0.63	0.957
SIZE	0.1510497	3.81	0.001
AGE	0.2764106	7.65	0.004

Source STATA 14 Output results based on study data

Table 7 shows that three of the coefficients of the explanatory variable are positive. These are audit committee meetings, audit committee independence and, audit committee size. The two control variables, firm size, and age are also positive except that of the coefficient of audit committee expertise turn negative. Audit committee meetings and audit committee independence are significant at 5% level of significance, while audit committee expertise and audit committee size are insignificant. The two control variables, firm size, and firm age are also significant at 5% level of significance. These reveal that all elements of audit committee effectiveness and control variables used in the study explain the insurance companies listed in Nigeria except audit committee expertise and audit committee size. Table 6 is used to test each of the hypothesis.

Hypothesis 1 states that audit committee meetings have no significant effect on audit quality of listed insurance companies in Nigeria. The regression result in table 7 shows that the audit committee meetings of listed insurance companies in Nigeria during the study period have a significant and positive effect on audit quality. Table 7 shows a coefficient value of 1.851065 and P-Value of 0.001, which is statistically significant at 5% level of significance. It provides us with evidence of rejecting the null hypothesis and accepting the alternative hypothesis that audit committee meetings have a significant effect on audit quality of listed insurance companies in Nigeria. This finding conforms with the result of Hoitash and Hoitash (2009) [24]; Lifschutz *et al*. (2010) [31], who also find a significant and positive relationship between audit committee meetings and audit quality. However, this finding contradicts the outcome of Aryan (2015) [9], who find a significant and negative relationship between audit committee meetings and audit quality.

Hypothesis 2 states that audit committee independence has no significant effect on audit quality of listed insurance companies in Nigeria. The regression result as presented in table 7 shows that the audit committee independence is positively and statistically significant at 5% level of significance. The coefficient value of 0.4309985 and P-Value of 0.009 attest to the fact. The result provides us with evidence of rejecting the null hypothesis. And as such, accepting the alternative that audit committee independence has a significant effect. This finding is compatible with the report of Chen *et al*. (2005) [14] who also find a significant and positive relationship between audit committee independence and audit quality. However, the finding is contrary to the result of Abbort *et al*. (2003); Jerubet *et al*. (2017) [27]; Majiyebo *et al*. (2018) [32], who find a significant and negative relationship between audit committee independence and audit quality.

Hypothesis 3 states that audit committee expertise has no significant effect on audit quality of listed insurance companies in Nigeria. The result of the regression as revealed in Table 7 depicts that the audit committee expertise is positive and statistically insignificant. The coefficient value of -0.054524 and P-Value of 0.823 attest to the fact. The result provides us with evidence of accepting the null hypothesis, thereby, rejecting the alternative that audit committee expertise has no significant effect. This finding is in line with the report of Dimkpa and Kolorapha (2001) [17], who also find the insignificant and positive relationship between audit committee expertise and audit quality. However, The finding disagrees with the result of Salawu *et al*. (2017) [43]; Yadirichukwu and Ebimobowei (2013) [46], who find a significant and positive relationship between audit committee expertise and audit quality.

Hypothesis 4 states that the audit committee size has no significant effect on audit quality of listed insurance companies in Nigeria. The regression result in table 7 shows that the audit committee size of listed insurance companies in Nigeria during the study period has an insignificant and positive effect on audit quality. Table 7 shows a coefficient value of 0.0252431 and P-Value of 0.957, which is statistically insignificant. It provides us with evidence of accepting the null hypothesis and rejecting the alternative hypothesis that the audit committee size has no significant effect on audit quality of listed insurance companies in Nigeria. This finding conforms with the result of Moses *et al*. (2016), who also find no significant effect of audit committee size on audit quality. However, this finding contradicts the outcome of Mazlina *et al*. (2006) [34], who find a significant and positive relationship between audit committee size and audit quality.

The findings of this study were based on the balanced panel data collected for 10 years (2008-2017) from a sample of 15 listed insurance companies on the Nigerian Stock Exchange. The result of the estimated regression shows that audit committee meetings and audit committee independence have a significant and positive effect on audit quality. While audit committee expertise and audit committee size have an insignificant effect. Also, the R^2 of 37.14% and the Adj-R^2 of 34.50% evidence that audit committee effectiveness used in this study proved to be determinants of audit quality despite the low R^2 of 47.14% and Adj-R^2 of 34.50%. Firm age and firm size as a control variable have a significant and positive effect on audit quality. That means that the age and size of the corporation is an important determinant on audit quality.

5 Conclusion and Recommendations

In view of the findings, the study concludes that the audit committee meetings of insurance companies in Nigeria have a positive effect on audit quality measured by audit fees, indicating that the more frequent the committee meets, the better and effective in resolving issues affecting the companies. Therefore, increasing or maintaining the number of meetings held by the committee in the companies to a justifiable number of meetings can help enhance audit committee contribution toward improving audit quality; and

The audit committee independence is significantly and positively associated with audit quality measured by audit fees. It signifies that audit committee independence contributes positively to audit quality. Thus, reviewing the number of audit committee independence upward would enhance their contribution more toward sustaining audit quality in the listed insurance companies in Nigeria.

Given the proceedings, the following recommendations are put forward:

(i) The board of directors of Nigerian insurance companies should review their policy regarding a number of meetings from a minimum of 4 and maximum of 8 meetings to a minimum of 6 and 10 meetings per annual for audit committees. This is because committees who meet regularly devoted adequate time in attending to critical issues that would affect companies negatively.

(ii) The regulatory authorities who are responsible for monitoring the compliance of corporate governance by listed insurance companies in Nigeria, should come up with policies or revisit the policy on audit committee size. The policy should mandate all insurance companies to have a uniform of maximum 7 members for the audit committee in respect of the company's' size. The committees should have a maximum of 5 non-executive directors and inside executive directors. Such policies, if formulated and implemented will go a long way in encouraging the monitoring capability of audit committee independence toward improving audit quality of listed insurance companies in Nigeria.

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