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Original Research Article

Auditor Independence and Audit Quality

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Abstract

The study investigates the impact of auditor's independence on audit quality of the insurance companies listed on the Nigerian Stock Exchange (NSE) from 2013 to 2016. The study utilised a sample size of 24 insurance companies which was determined using the Yamane formula. The study made use of secondary data which were sourced from the audited annual financial statements of the sampled companies. The data were analysed using descriptive statistics, correlation matrix and the panel regression technique. The findings show that there is a significant negative relationship between audit firm tenure and audit quality, while the relationship between audit firm rotation and audit quality was positive and statistically insignificant. Company size showed a strong positive relationship with audit quality. The study recommends that the relevant regulatory bodies should commence the enforcement of the proposed three-year professional audit tenure requirement to constrain lengthy auditor-client relationships which could impair auditor's independence thereby reducing audit quality.

Keywords: Auditor independence, Audit quality, Auditor rotation, Audit tenure, Audit opinion.

JEL Classification Codes: M420

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1.0 INTRODUCTION

In recent times, Nigeria has battled towards breaking loose from the recent excruciating economic recession; the need to maintain investors' confidence in the capital market through high-quality audit and transparent financial reporting is unequivocally paramount. Considering that some investors in the past decade, appeared to have lost confidence on the authenticity, integrity, effectiveness and significance of the audit function owing to cases of incessant accounting scandals which were largely linked to poor audit quality associated with a perceived lack of auditor independence, among other factors (Okolie, 2014; Babatolu, Aigienohuwa & Uniamikogbo, 2016); ensuring higher audit quality may help to wholesomely restore investors' confidence in this critical economic situation the country is facing. Auditors are saddled with the responsibility of examining the financial report of organisations for the purpose of ascertaining whether it represents that which they purport (Abubakar, 2012). The primary purpose of an audit, therefore, is to provide company shareholders with an expert and independent opinion as to whether the annual financial statement of the company reflects a true and fair view of the financial position of such company, and whether they can be relied upon for investment decision purposes. However, for the auditor to give the expected unbiased and honest professional opinion on the trueness and fairness of financial statements to the shareholders, the auditor needs to be independent of the client company, so that the audit opinion will not be influenced by any relationship between them.

Audit independence, therefore, refers to the ability of the external auditor to act with integrity and impartiality during his/her auditing functions (Akpom & Dimkpah, 2013). Independence, in this context, represents the means by which an auditor demonstrates that he can objectively perform his task. However, doubts are sometimes expressed regarding the independence of external auditors as most auditors could reach audit opinions and judgments that are heavily influenced by the wish to maintain good relations with the client company. If this happens, the auditors can no longer be said to be independent, and the shareholders may not rely on their opinion. A typical example would be the relationship between Enron and their auditors, Arthur Andersen in the year 2000, where the latter received about \$27million for non-audit services, compared with \$25million for audit services. In the aftermath of Enron's demise, the accounting firm was accused of not acting independently. Similar cases of corporate and accounting scandals in Nigeria such as Cadbury Nigeria Plc, African Petroleum (AP), Savannah Bank, Nampak, Finbank, Spring Bank, Intercontinental Bank, Bank PHB; Oceanic Bank Plc, AfriBank Plc, among others, were equally publicised. One common phenomenon in the majority of these bankruptcy cases is that most of the corporations had clean auditor's reports before their eventual collapse (Dabor & Dabor, 2015)

Numerous studies have attempted to examine the nexus between audit independence and audit quality in the Nigerian audit market. Majority of the existing studies, such as Enofe, Mgbame, Okunega, and Ediae (2013); Akpom and Dimkpah (2013); Oladipupo and Emife (2016); Babatolu et al (2016), were

of the view that the length of the audit tenure is among the major factors that impair auditor's independence, with some of the aforementioned studies adopting the tenure of an auditor as proxy for auditor independence (see Babatolu, et al., 2016; Enofe et al., 2013).

Also, there are several schools of thought which exist; one group believes that lengthy audit tenure tends to result in an opportunity cost of auditor independence, which in turn impairs audit quality. The other group argues that that auditor independence and audit quality increase with lengthy auditor tenure because auditors may require ample time to gain expertise in audit business and acquire client-specific knowledge over time (Enofe et al., 2013). Developed countries such as Japan and Netherlands have specified and enforced maximum period or tenure for rotation of auditors and audit partners (basically every five years), there is presently no limit period for the rotation and tenure of audit firms and audit partners in Nigeria (Odia, 2015).

In Nigeria, many of the empirical evidence from this area of study dwell more on listed deposit money banks (see Babatolu et al., 2016; Kighir, 2013; and Enofe et al., 2013). Not much empirical studies exist, particularly about auditor's independence among Nigerian Insurance firms. This is an indication of a possible paucity of auditor independence researches in the insurance sector, hence the need for this study. More so, considering the vital roles that insurance companies play in the development of the financial sector especially through the Nigeria Deposit Insurance Corporation (NDIC), and the fact that most banks were distressed due to unsecured (uninsured) loans which they were unable to recover; beaming the research light on auditor's independence in the insurance sector will contribute to the recent discussions on auditor rotation and tenure in pursuance of increased auditor independence in response to global best practices. To this extent, the broad objective of this paper is to expand the empirical evidence to the stream of research on auditor independence and audit quality in Nigeria. The specific objectives are to: Determine the impact of audit firm tenure on audit quality in listed insurance firms in Nigeria; and examine the relationship that exists between audit firm rotation and audit quality in listed insurance firms in Nigeria.

2.0. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Auditor's independence may be defined as an auditor's unbiased mental attitude in making decisions throughout the audit and financial reporting process. An auditor's lack of independence increases the possibility of being perceived as not being objective. This means that the auditor will not likely report a discovered breach (Deangelo, 1981). Auditor independence is seen as very important for the reliability and integrity of financial reporting (Wallman, 1996). Auditor independence involves independence of mind and may also be more important in financial reporting. Two types of auditor independence were developed by Mautz and Sharaf (1961) namely practitioner-independence (or independence in fact), and profession independence (or independence in appearance). The Code of Ethics for professional accountants (table A) describes independence of mind as "the state of mind that permits the expression of a conclusion without being affected by influences that compromise

professional judgment, thereby allowing an individual to act with integrity and exercise objectivity and professional scepticism”(table A). The Code of Ethics defines independence in appearance as “the avoidance of facts and circumstances that are so significant that a reasonable and informed third party would be likely to conclude, weighing all the specific facts and circumstances, that a firm, or a member of the audit team’s, integrity, objectivity or professional scepticism has been compromised”. Safeguarding auditor independence is essential for the creditworthiness of the auditor and its reputation. Not only is the perceived independence of the auditor important for the auditor itself but also for the client and their audited figures

Beattie, Brandt, and Fearnley (1999) argued that there are four factors (or threats) that could influence the perceived auditor’s independence. Among the major threats to auditor independence are the fees received by the auditor for audit and non-audit services, the length of the audit tenure and auditor rotation. The impaired independence of an auditor results in poor audit quality and allows for greater earnings management and lower earnings quality (Okolie, 2014). Auditor tenure may impair Auditor's independence. As the auditor-client relationship lengthens, the auditor may develop a close relationship with the client and become more likely to act in favour of management, resulting in reduced objectivity and audit quality. The proponents of mandatory rotation equally argued that the longer an auditor tenure, the lesser its objectivity, while opponents claim that constant auditor rotation is expensive to execute. Davis, Soo, and Tromperter (2000), agreed that there is no empirical evidence about the effect of rotation on auditor cost and quality. Similarly, providing non-audit services, as earlier stressed as in the case of Arthur Anderson, increases the economic bond between the auditor and the client, and there is a widespread belief that auditors might sacrifice independence in order to retain clients who are paying large amounts in non-audit fees (DeFond, Raghunandan, & Ubramanyam, 2002).

Audit quality is an important issue that is considered by various interest groups in the company, audit scope and capital market. Because audit quality is barely visible in practice, research in this area has always been faced with many problems of definition. One of the most common definitions of audit quality was that by DeAngelo (1981), which suggests that audit quality is the market assessment of the likelihood that the auditor (i) detect significant distortions of the financial statements or employers accounting system and (ii) report significant distortions. Arens, Elder, Beasley and Fielder (2011: 105) also saw the quality of the audit as “how well an audit detects and report material misstatements in financial statements, the detection aspects are a reflection of auditor competence, while reporting is a reflection of ethics or auditor integrity, particularly independence”. However, if the auditor does not remain independent, he/she may be less likely to report irregularities which may impair the audit quality.

Babatolu et al. (2016) examined the effect of auditor’s independence on audit quality among seven (7) purposively selected deposit money banks in Nigeria from 2009 to 2013. The population of their study comprised of twenty (20) listed deposit money banks in Nigeria. Adopting descriptive statistics,

correlation and ordinary least square (OLS) regression technique, their findings revealed that there is a positive relationship between audit fee, audit firm rotation and audit quality, while a negative relationship exists between audit firm tenure and audit quality. On the correlation matrix, the association between audit quality and leverage was strong, negative and statistically significant, while that between audit quality and company size was equally strong, positive and statistically significant.

Okolie (2014) analysed the relationship and effects of auditor tenure and auditor independence on the earnings management (discretionary accruals) of companies in Nigeria. The study employed the use of secondary data derived from the Nigerian Stock Exchange fact book on a total of 342 company year observations. The empirical analysis shows that audit tenure and auditor independence exert significant effects and exhibit a significant relationship with the amount of discretionary accruals of quoted companies in Nigeria.

Ilaboya and Ohiokha (2014) investigated the impact of audit firms' characteristics on audit quality. They proxy the dependent variable (audit quality) using the usual dichotomous variable of 1 if big 4 audit firm and 0 if otherwise. Data for the study were sourced from the financial statements of 18 food and beverage companies listed on the Nigerian Stock Exchange market within the period studied (2007-2012). They adopted multivariate regression technique with emphasis on Logit and Probit method in analysing their data for the study. Their study revealed a positive relationship between firm size, board independence and audit quality whereas there is a negative relationship between auditor's independence, audit firm size, audit tenure and audit quality.

Enofe et al. (2013) empirically examined the relationship between audit quality and auditors independence in Nigerian listed companies. To achieve this objective, they conducted a cross-sectional analysis adopting audit quality as dependent variable which was measured by the fees charged by the audit firms. The independent variables they used include audit tenure, board independence, and ownership structure. Using the ordinary least square (OLS) regression analysis, their results indicated that as auditors' independence increase, the quality of the audit also improves.

Adeniyi and Mieseigha (2013) examined the effect of audit tenure on audit quality in Nigeria. A dummy value of 1 was used if a firm employs the services of any of the big 4 auditors and 0 if otherwise for audit quality, while auditor tenure was measured in terms of number of years spent as auditor for sample company (dummy variable of 1 for a period extending beyond three years, else 0). Their study revealed that the relationship between tenure and audit quality was inverse and this could stimulate the discourse on the sensibleness of changing auditors after a period as it may be effective at increasing the level of audit quality. Other variables examined alongside tenure such as board size, board independence and director ownership was found to be inversely related to audit quality. Mgbame, Eragbhe and Osazuwa (2012) examine the relationship between audit partner tenure and audit quality. They used Binary Logit Model estimation technique in analysing the relationship between the tenure of an auditor and audit quality. Their findings reveal that there is a negative relationship between auditor tenure and audit quality, though the variable was

not significant. The other explanatory variables (ROA, Board Independence, and Director Ownership and Board size) considered alongside auditor tenure were found to be inversely related to audit quality aside from Returns on Assets which exhibited a positive effect.

Adeyemi and Okpala (2011) opined that an audit firm's tenure could result in a loss of auditor's independence. A long audit-client relationship could lead to an alignment of the auditor's interest and that of its client which makes truly independent behaviour of the auditor a probability. The study concluded that audit firm rotation does not necessarily enhance audit independence in Nigeria. This could be due to the unity of professional attitude among auditors and similarity in cultural bias and orientation. or tenure may have a significant effect on the audit quality

Kabiru and Abdullahi (2012) carried out an empirical investigation into the quality of audited financial statements of deposit money banks in Nigeria, using both primary and secondary data and from the population of 21 banks, they select a sample of 5 banks publicly quoted companies in Nigeria. They found that Independence of an auditor does significantly improve the quality of audited financial statements of money deposit banks in Nigeria. Compliance with auditing guidelines has a positive and significant effect on the quality of audited financial statement of money deposit banks in Nigeria. Material misstatement does significantly affect the quality of audited financial statements of money deposit banks in Nigeria. They also found that audited financial statements of Nigerian money deposit banks, if re-audited by other independent auditors, will give the same result and conclusion.

Oladele (2010) examined the determinants of auditors' independence in Nigerian public enterprises using primary data collected via a questionnaire administered in the Nigerian Ports Authority Headquarters Lagos. Using the percentage method and chi-square hypothesis test, the study revealed that the independence of the auditor has a significant impact on the accountability disposition of Nigerian public enterprises. His results also show that the provision of other services by the auditor as well as non-rotation of auditors are some of the strong factors, which may negatively impact on the auditor's independence and objectivity in Nigerian audit market.

In line with the review of literature above, the following null hypotheses were tested in the course of the study:

H₀₁: There is no significant relationship between audit firm tenure and audit quality.

H₀₂: There is no significant relationship between audit firm rotation and audit quality.

3.0 RESEARCH METHODS

The ex-post facto research design was adopted. The population of the study comprised of all the insurance companies listed in the financial sub-sector of the Nigerian Stock Exchange (NSE) from 2013 to 2016. As at the year ended 2016, there were 26 insurance companies listed on the floor of the NSE. In

determining the actual sample size that was selected, the researcher applied the Yamane (1967) formula as shown below:

The formula is given as:

$$n = N / 1 + N (e)^2$$

Where:

n = sample size, N = population size (26),

1 = Constant, e = Allowable error margin.

Here, we considered the 5% level (0.05).

Thus, the sample size used in this study is given as:

$$26 / 1 + 26(0.0025)$$

$$26 / 1 + 0.065$$

$$26 / 1.065$$

$$= 24.4$$

Sample size $n = 24$ listed Insurance companies.

Thus, a total of twenty-four (24) Insurance firms were purposively hand-picked based on data availability (see appendix for full list).

In line with most audit quality determinants studies such as Babatolu et al. (2016) and Enofe et al. (2013), the panel data analysis technique was employed due to the combination of cross-sectional and time series data in the study. The multiple regression models used in the study was adapted from Babatolu et al. (2016) where audit firm tenure and rotation was used to proxy auditor's independence. Based on previous studies, as the one aforementioned, firm size was deployed to control for size for this study. It takes the following form:

$$\text{Audit Quality} = f(\text{Auditor's Independence}) \dots \text{Equ (1)}$$

Adding the two proxy variables as independent variables and the control variable, we have:

$$\text{Audit Quality} = f(\text{Audit firm tenure, Audit firm rotation, Firm size}) \dots \text{Equ (2)}$$

In econometric form, we have:

$$\text{AUDQ}_{it} = \beta_0 + \beta_1 \text{AUDTN}_{it} + \beta_2 \text{ROTN}_{it} + \beta_3 \text{FSIZE}_{it} + e_t \dots \text{Equ (3)}$$

Where:

β_0 = Intercept; β_{1-3} = Unknown Coefficients

AUDQ = AUDIT QUALITY = measured as the natural log of audit fee charged by the audit firm of company i in year t (Enofe et al., 2013), AUDTN = AUDIT FIRM TENURE = length of audit-client relationship of company i in year t , measured as "1" if 3yrs+ and "0" if otherwise (Babatolu et al., 2016), ROTN = AUDIT FIRM ROTATION = measured as "1" if company i rotates audit firm in

year t and “0” otherwise (Babatolu et al., 2016), $FSIZE = FIRM\ SIZE =$ measured as natural logarithm of total assets of company i in year t (Babatolu et al., 2016), and $e_t = Error\ term$.

The *apriori* expectations were predicted as: $\beta_1 < 0$; $\beta_2 > 0$; and $\beta_3 > 0$

4.0 RESULTS AND DISCUSSION

The analysis of the descriptive statistics, correlation and regression outputs are presented in the following sub-sections:

Table 1 Descriptive Statistics

	AUDQ	AUDTN	ROTN	FSIZE
Mean	33107.48	0.562500	0.135417	15.93140
Median	22750.00	1.000000	0.000000	15.08066
Maximum	96000.00	1.000000	1.000000	20.84860
Minimum	10000.00	0.000000	0.000000	11.96070
Std. Dev.	24779.41	0.498682	0.343964	2.218879
Skewness	1.064199	-0.251976	2.131019	0.550933
Kurtosis	2.806194	1.063492	5.541242	2.405218
Jarque-Bera	18.27054	16.01612	98.49151	6.271499
Probability	0.000108	0.000333	0.000000	0.043467
Sum	3178318.	54.00000	13.00000	1529.415
Sum Sq. Dev.	5.83E+10	23.62500	11.23958	467.7253
Observations	96	96	96	96

The descriptive statistics in Table 1 shows the characteristics of the variables from the twenty-four (24) insurance companies that formed the overall sample of the study. Audit quality herein is represented by the actual amount of its proxy (audit fees) as opposed to its padded values. As observed, the mean value of AUDQ stood at N33107.48 which imply that the total audit fee paid by the sample insurance companies for the period was N33, 107.5m (in billions), with the minimum value being N10, 000m and the highest N96, 000m. The standard deviation of 24779.41 is not too far from the average value showing a minimal dispersion (\pm) from the mean audit fee. The result also shows a mean value of 0.562500 for AUDTN, meaning that about 56% of the sampled insurance companies have retained their auditors for a period beyond 3 years. There was equally fewer audit firm rotation as the mean value of ROTN (audit firm rotation) stood at 0.135417 with a standard deviation of 0.343964. The average company size of the selected firm is 15.93140. All the variables were

descriptively represented with the Jarque-Bera values largely suggesting a normally distributed data set.

Table 2 Correlation Matrix

Covariance Analysis: Ordinary

Date: 11/18/17 Time: 10:41

Sample: 2013 2016

Included observations: 96

Correlation				
t-Statistic				
Probability	AUDQ	AUDTN	ROTN	FSIZE
AUDQ	1.000000			

AUDTN	-0.329990	1.000000		
	-3.389221	-----		
	0.0010**	-----		
ROTN	0.067445	-0.448750	1.000000	
	0.655392	-4.868530	-----	
	0.5138	0.0000**	-----	
FSIZE	0.091290	-0.100356	0.025209	1.000000
	0.888802	-0.977928	0.244488	-----
	0.3764	0.3306	0.8074	-----

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2 presents the correlation analysis of the variables employed in the study. As observed from the result, a weak positive correlation exists between the dependent variable (AUDQ) and audit firm rotation (ROTN) and firm size (FSIZE): ROTN ($r=0.067$) and FSIZE ($r=0.091$). On the other hand, audit firm tenure (AUDTN, $r=-0.33$) have a strong negative association with AUDQ at 1% level. This suggests that longer audit tenures tend to decrease the audit quality (AUDQ). On the inter-relationships among the independent variables, AUDTN has a significant inverse association with ROTN ($r=-0.45$) implying that longer audit firm tenures will likely reduce auditor rotation, while increased rotation will reduce longer tenures significantly. There was no issue of high-correlation among the variables which would have been an indication of a problem of multicollinearity. Thus, the selected variables are properly suited for conducting the regression estimations.

The panel regression estimation procedure was employed to determine whether there is a significant relationship between the independent variables (audit firm tenure and auditor rotation) and the dependent variable (audit quality) proxied here as the natural log of total fees paid to an auditor in a financial year. The

Pooled OLS, Fixed effect and Random effect techniques were all estimated to provide a comprehensive overview of the results. However, the fixed effect and the random effect were resented due to fact that they recognised the heterogeneity or individuality that may exist among the sampled companies while the former (Pooled OLS) does not. However, to help determine the most appropriate model (between the fixed and random effect models) to adopt/interpret, the Hausman test was thus employed (see Table 3).

Table 3 Hausman Tests

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	13.445771	3	0.0038

The Hausman test results in Table 3 were performed on the panel data to determine the most desirable model of the Random Effects or Fixed Effects. The following hypothesis applies H_0 : Random Effect Model is consistent and H_1 : Fixed Effect Model is consistent. Decision Rule: If the p-value is less than 5 percent we can accept alternative hypothesis that fixed effect is consistent. Based on the outcome of the results, the probability value of $0.0038 > P = 0.05$ passed the significance test at 5 percent, which confirms the appropriateness of the fixed effect model in capturing the relationships among the variables

Table 4: Results of the Fixed and Random Effect Models

Dependent Variable: AUDQ

Method: Panel Least Squares

Date: 11/18/17 Time: 10:31

Periods included: 4 (2013–2016)

Cross-sections included: 24

Total panel (balanced) observations: 96

	FIXED EFFECT				RANDOM EFFECT		
Variables	Coefficient	t-Statistic	Prob.		Coefficient	t-Statistic	Prob.
C	8.588699	8.995505	0.0000	C	9.906495	12.13834	0.0000
AUDT	-0.289678	-2.33625	0.0224	AUDTN	-0.39620	-1.83292	0.0700*

N		2	**		6	9	
ROTN	0.070963	0.26757 1	0.7898	ROTN	- 0.05853 4	- 0.22404 5	0.8232
FSIZE	0.197280	3.34231 4	0.0013 ***	FSIZE	0.12353 2	2.51470 4	0.0136**
R²			0.683	R²			0.091
Adjusted R²			0.563	Adjusted R²			0.061
F-stat (p-value)			5.71(0. 00)	F-stat (p-value)			3.05 (0.03)
Durbin Watson			1.927	Durbin Watson			1.378

*** Significant at the 0.01 level. ** Significant at the 0.05 level. *Significant at the 0.1 level.

From Table 4, the statistical significance of both models was assured at the 1% and 5% levels respectively owing to the F-statistics value of 5.71 (p-value < 0.01) for the fixed effect model and f-statistics value of 3.05 (p-value < 0.05) for the random effect model. On the percentage of the variation in audit quality (AUDQ) that was accounted for by the independent variables taken together, the result showed a total of 68.3% (for fixed effect). The adjusted R-squared which controls for the effect of the inclusion of successive explanatory variables on the degrees of freedom stood at 56.3%. This implies that the remaining proportion of about 43.7% was not captured by the model and has been taken care of by the error term.

A look at the slope coefficients of the independent variables shows the existence of a negative relationship between auditor's tenure (AUDTN) and the dependent variable (AUDQ) as depicted by the slope coefficient of -0.289678. On the other hand, a positive relationship was witnessed among audit firm rotation (ROTN), firm size (FSIZE) and audit quality (AUDQ). These signs on the coefficients appeared same on both models (except for ROTN), but differed in term of significance levels. On the level of significance, it could be observed that both audit firm tenure (AUDTN) and firm size (FSIZE) passed the significance test at 1% and 5% levels respectively. This shows that a unit increase in audit firm tenure will likely lead to a significant decrease in audit quality by up to 0.29 units approximately. On the other hand, an increase in audit firm rotation

(ROTN) would likely lead to an insignificant increase in audit quality because the p-value of 0.7898 (79%) is higher than 5%. The Durbin-Watson statistics value of 1.927 is close to the value of 2 which suggests that stochastic dependence between successive units of the error term is not inherent in the series.

Based on the outcome of the empirical analysis, the results showed that there is a significant inverse relationship between audit firm tenure and audit quality. This validates our apriori expectations. What this indicates is that audit quality is strongly dependent on audit tenure which our review shows are can impair auditor's independence. Thus, the lengthier an auditor stays engaged in an organisation, the more likely that the quality of the audit function will lower; while the shorter the audit firm tenure, the more likely that audit quality will soar. This negative sign obtained by this result is consistent with the studies of Babatolu et al. (2016) and Ilaboya and Ohiokha (2014). Chijoke, Emmanuel, and Nosakhare (2012), but differs regarding the significant level. Both studies found an insignificant negative relationship between audit tenure and audit quality using Nigerian data. However, the result supports that of Adeniyi and Mieseigha (2013) who found evidence that longer audit firm tenure impairs auditor independence thereby significantly affecting audit quality.

On the relationship between audit firm rotation and audit quality, the result shows that a positive relationship exists. This supports the submission of Babatolu et al. (2016) that rotating of audit firms on a regular basis will most likely increase audit quality because the regular rotation of auditors can help checkmate some of the threats to the independence of auditors which could adversely affect or jeopardise the quality of the audit. However, the variable of ROTN was not statistically significant in this study which could be attributed to the distinctive peculiarities of our sample when compared to previous studies. The positive relationship is further supported by the studies of Davis et al. (2003) and Carcello et al. (2004), which also argued that rotation of audit firms is a way of improving audit quality because over-familiarity with the auditee may lead to non-audit services thereby influencing the judgemental reasoning and fresh point of view of auditors.

On the control variable, firm size, its relationship with audit quality is positive and statistically significant at 1% level of significance. This goes to suggest that larger firms are more likely to have higher audit quality due to their massive financial strength. Thus, they could afford to engage the Big4 audit firms which studies show (due to their experience) are most likely to charge more and deliver higher audit quality. This result is in tandem with that of Ilaboya and Ohiokha (2014).

5.0. CONCLUSION AND RECOMMENDATIONS

This study examines the relationship between auditor's independence and audit quality in the Nigerian insurance industry. Two independent variables (audit firm tenure and audit firm rotation) were used to capture auditor independence and were regressed against audit quality variable. The study reveals that longer audit firm tenure has the likelihood to significantly reduce audit quality; while

frequent audit firm rotation has the likelihood to increase audit quality, though not significantly. Also, findings from the descriptive statistics show that more than half of the listed insurance companies in Nigeria had retained their auditors for periods longer than 3 years, while less than 15% frequently rotates their auditors. By implication, the bonding, as well as the auditor-client relationship among listed insurance companies, appear to be on the increase which in the long-run may impair the independence of the audit firms. It is therefore suggested that since audit firm tenure has a strong negative influence on audit quality, the relevant regulatory bodies should commence the enforcement of the proposed three-year professional audit tenure requirement to constrain lengthy auditor-client relationships which could impair auditor's independence. More so, firms should be encouraged to promote frequent auditor rotation to limit the chances of auditor-client over-familiarity with might be an opportunity cost for auditor independence.

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APPENDIX (RESULTS & DATA)

Descriptive Statistics

	AUDFEES	AUDTN	ROTN	FSIZE
Mean	33107.48	0.562500	0.135417	15.93140
Median	22750.00	1.000000	0.000000	15.08066
Maximum	96000.00	1.000000	1.000000	20.84860
Minimum	10000.00	0.000000	0.000000	11.96070
Std. Dev.	24779.41	0.498682	0.343964	2.218879
Skewness	1.064199	-0.251976	2.131019	0.550933
Kurtosis	2.806194	1.063492	5.541242	2.405218
Jarque-Bera	18.27054	16.01612	98.49151	6.271499
Probability	0.000108	0.000333	0.000000	0.043467
Sum	3178318.	54.00000	13.00000	1529.415
Sum Sq. Dev.	5.83E+10	23.62500	11.23958	467.7253
Observations	96	96	96	96

Correlation

Covariance Analysis: Ordinary

Date: 11/18/17 Time: 10:41

Sample: 2013 2016

Included observations: 96

Correlation t-Statistic Probability	AUDQ	AUDTN	ROTN	FSIZE
AUDQ	1.000000 ----- -----			
AUDTN	-0.329990 -3.389221 0.0010	1.000000 ----- -----		
ROTN	0.067445 0.655392 0.5138	-0.448750 -4.868530 0.0000	1.000000 ----- -----	
FSIZE	0.091290 0.888802 0.3764	-0.100356 -0.977928 0.3306	0.025209 0.244488 0.8074	1.000000 ----- -----

Pooled OLS

Dependent Variable: AUDQ

Method: Panel Least Squares

Date: 11/18/17 Time: 10:33

Sample: 2013 2016

Periods included: 4

Cross-sections included: 24

Total panel (balanced) observations: 96

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.69802	0.841629	13.89926	0.0000
AUDTN	-0.840776	0.250597	-3.355086	0.0012
ROTN	-0.328923	0.361599	-0.909635	0.3654
FSIZE	0.029074	0.050347	0.577472	0.5650
R-squared	0.120225	Mean dependent var		11.64374
Adjusted R-squared	0.091536	S.D. dependent var		1.136349
S.E. of regression	1.083092	Akaike info criterion		3.038291
Sum squared resid	107.9242	Schwarz criterion		3.145139
Log likelihood	-141.8380	Hannan-Quinn criter.		3.081481

F-statistic	4.190714	Durbin-Watson stat	0.916012
Prob(F-statistic)	0.007925		

Fixed Effect

Dependent Variable: AUDQ

Method: Panel Least Squares

Date: 11/18/17 Time: 10:31

Sample: 2013 2016

Periods included: 4

Cross-sections included: 24

Total panel (balanced) observations: 96

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.588699	0.954777	8.995505	0.0000
AUDTN	-0.289678	0.123993	-2.336252	0.0224
ROTN	0.070963	0.265211	0.267571	0.7898
FSIZE	0.197280	0.059025	3.342314	0.0013

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.682727	Mean dependent var	11.64374
Adjusted R-squared	0.563175	S.D. dependent var	1.136349
S.E. of regression	0.751044	Akaike info criterion	2.497554
Sum squared resid	38.92066	Schwarz criterion	3.218777
Log likelihood	-92.88260	Hannan-Quinn criter.	2.789084
F-statistic	5.710701	Durbin-Watson stat	1.927376
Prob(F-statistic)	0.000000		

Random Effect

Dependent Variable: AUDQ

Method: Panel EGLS (Cross-section random effects)

Date: 11/18/17 Time: 10:32

Sample: 2013 2016

Periods included: 4

Cross-sections included: 24

Total panel (balanced) observations: 96

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.906495	0.816132	12.13834	0.0000
AUDTN	-0.396206	0.216160	-1.832929	0.0700

ROTN	-0.058534	0.261262	-0.224045	0.8232
FSIZE	0.123532	0.049124	2.514704	0.0136
Effects Specification				
			S.D.	Rho
Cross-section random			0.680064	0.4505
Idiosyncratic random			0.751044	0.5495
Weighted Statistics				
R-squared	0.090534	Mean dependent var		5.628438
Adjusted R-squared	0.060878	S.D. dependent var		0.817820
S.E. of regression	0.792535	Sum squared resid		57.78633
F-statistic	3.052772	Durbin-Watson stat		1.377522
Prob(F-statistic)	0.032400			
Unweighted Statistics				
R-squared	0.062237	Mean dependent var		11.64374
Sum squared resid	115.0377	Durbin-Watson stat		0.691964

Hausman Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	13.445771	3	0.0038

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
AUDTN	-0.173359	-0.396206	0.010159	0.0270
ROTN	0.070963	-0.058534	0.002079	0.0045
FSIZE	0.197280	0.123532	0.001071	0.0242

Cross-section random effects test equation:

Dependent Variable: AUDQ

Method: Panel Least Squares

Date: 11/18/17 Time: 10:38

Sample: 2013 2016

Periods included: 4

Cross-sections included: 24

Total panel (balanced) observations: 96

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.588699	0.954777	8.995505	0.0000
AUDTN	-0.173359	0.238505	-0.726859	0.4698
ROTN	0.070963	0.265211	0.267571	0.7898
FSIZE	0.197280	0.059025	3.342314	0.0013

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.682727	Mean dependent var	11.64374
Adjusted R-squared	0.563175	S.D. dependent var	1.136349
S.E. of regression	0.751044	Akaike info criterion	2.497554
Sum squared resid	38.92066	Schwarz criterion	3.218777
Log likelihood	-92.88260	Hannan-Quinn criter.	2.789084
F-statistic	5.710701	Durbin-Watson stat	1.927376
Prob(F-statistic)	0.000000		

Fixed Cross-Weighted

Dependent Variable: AUDQ

Method: Panel EGLS (Cross-section weights)

Date: 11/18/17 Time: 10:34

Sample: 2013 2016

Periods included: 4

Cross-sections included: 24

Total panel (balanced) observations: 96

Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.031133	0.527178	17.13108	0.0000
AUDTN	-0.289678	0.123993	-2.336252	0.0224
ROTN	-0.098965	0.121120	-0.817085	0.4167
FSIZE	0.175060	0.033579	5.213432	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

R-squared	0.716350	Mean dependent var	23.61992
Adjusted R-squared	0.609467	S.D. dependent var	23.84704

S.E. of regression	0.736093	Sum squared resid	37.38644
F-statistic	6.702213	Durbin-Watson stat	2.074799
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.680011	Mean dependent var	11.64374
Sum squared resid	39.25384	Durbin-Watson stat	1.941669

Insurance Companies	Year	AUDQ	AUDTN	ROTN	FSIZE
African Alliance Insurance	2013	10.49127	1	0	15.91
	2014	10.49127	0	1	15.83
	2015	11.22524	0	0	16.12
	2016	12.17045	0	0	16.18
Alico Insurance	2013	11.81303	1	0	16.25
	2014	12.17045	1	0	16.35
	2015	12.55673	0	1	16.98
	2016	12.79386	0	0	16.32
Universal Insurance Company	2013	13.17115	0	0	16.54
	2014	13.69334	1	0	11.96
	2015	11.7967	0	1	12.03
	2016	12.33737	0	0	12.1
Consolidated Hallmark Insurance	2013	12.33737	1	0	12.58
	2014	12.43718	1	0	12.56
	2015	10.4631	1	0	14.04
	2016	11.08214	1	0	14.29
Continental Reinsurance	2013	13.43571	0	1	14.41
	2014	11.51293	0	0	14.59
	2015	11.52288	0	0	14.64
	2016	11.60824	1	0	18.28
Cornerstone Insurance	2013	11.3266	1	0	18.59
	2014	10.04325	0	0	16.06
	2015	10.4631	0	0	16.48
	2016	11.08214	1	0	16.46
Equity Assurance	2013	11.23189	1	0	16.54
	2014	11.12726	0	1	16.45
	2015	11.28978	0	0	19.65
	2016	11.69525	0	0	13.2

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Goldlink Insurance	2013	9.952278	1	0	13.96
	2014	10.30895	1	0	18.45
	2015	11.0021	1	0	19.13
	2016	11.40199	1	0	19.21
Great Nigerian Insurance	2013	11.87757	0	1	19.32
	2014	12.20607	0	0	19.61
	2015	12.42922	1	0	19.46
	2016	9.998798	1	0	18.36
Guinea Insurance	2013	10.02127	1	0	14.65
	2014	10.91509	1	0	14.82
	2015	11.09741	1	0	14.89
	2016	11.08214	1	0	14.91
International Energy Insurance	2013	11.22524	1	0	18.19
	2014	11.63514	1	0	19.91
	2015	10.65726	0	1	14.24
	2016	11.22524	0	0	14.4
Lasaco Assurance	2013	11.51293	0	0	14.59
	2014	11.53273	0	0	14.41
	2015	11.61729	1	0	14.84
	2016	13.48407	0	1	15.05
Law Union And Rock Insurance	2013	11.51293	0	0	19.14
	2014	10.4631	0	0	13.25
	2015	11.03279	1	0	13.36
	2016	11.77529	1	0	13.35
Linkage Assurance	2013	11.83501	1	0	13.42
	2014	11.54248	1	0	13.49
	2015	11.81303	1	0	14.7
	2016	11.89819	1	0	15.83
Mutual Benefits Assurance	2013	10.54534	1	0	19.34
	2014	10.66896	1	0	20.04
	2015	11.35041	0	1	20.04
	2016	11.51293	0	0	20.34
N.E.M. Insurance	2013	11.90834	0	0	20.53
	2014	11.90834	1	0	20.44
	2015	11.65095	0	1	20.85
	2016	11.0021	0	0	16.89

Niger Insurance Co	2013	11.22524	0	0	14.08
	2014	11.40756	0	1	14.14
	2015	11.69525	0	0	14.58
	2016	11.69525	0	0	14.65
Prestige Assurance Co	2013	11.69525	1	0	14.89
	2014	11.91839	1	0	15.01
	2015	10.4631	1	0	15.57
	2016	10.59663	1	0	14.58
Regency Alliance Insurance	2013	11.4721	1	0	14.65
	2014	11.65019	1	0	14.89
	2015	11.51293	1	0	15.01
	2016	11.77309	0	1	15.04
Sovereign Trust Insurance	2013	11.77529	1	0	15.3
	2014	10.04325	1	0	14.89
	2015	10.23996	1	0	14.93
	2016	11.08214	1	0	16.4
Standard Trust Assurance	2013	11.22524	1	0	15.48
	2014	11.51293	1	0	15.88
	2015	11.22524	1	0	16.06
	2016	11.40756	1	0	16.19
Standard Alliance Insurance	2013	10.7579	1	0	15.04
	2014	11.18442	1	0	14.94
	2015	11.58989	1	0	13.67
	2016	12.10071	1	0	13.52
UNIC Insurance	2013	12.10071	1	0	14.26
	2014	12.26434	0	1	14.54
	2015	12.42922	0	0	15.12
	2016	15.2018	0	0	18.29
Unity Kapital Assurance	2013	15.83041	0	0	18.25
	2014	15.83041	0	0	18.24
	2015	15.95558	0	0	18.05
	2016	11.964	0	0	14.4