

## JOINT AUDITS AND AUDIT QUALITY OF FINANCIAL STATEMENTS IN LISTED COMPANIES IN NIGERIA

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### ABSTRACT

This study examined the impact of joint audits on three different audit quality proxies, namely: audit delay, auditor independence and audit fees. The study made use of secondary data extracted from the annual reports of sixty-three (63) companies listed on the Nigerian Stock Exchange (NSE) for a 5-year period (2014-2018). Three panel regression models were developed to accommodate the three audit quality proxies; while firm size, complexity and risk were also included in each of the equations as control variables. The data analysis techniques used includes descriptive statistics, correlation matrix and panel regression techniques. Result showed that, joint audits have negative and non-significant impact on audit delay as well as non-significant effect on audit fees. However, no linear relationship was established between joint audits and auditor independence. On the three control variables, only firm size and firm complexity significantly influenced both audit delay (negatively) and audit fees (positively), while firm risk was insignificant in the both established models. The study recommends, among others, that companies may reconsider their stance on the engagement of joint auditors in order to balance the audit market concentration between the Big4 and the smaller audit firms in Nigeria.

**Key Words:** Audit Delay, Audit Fees, Audit quality, Auditors Independence, Joint Audit

### INTRODUCTION

Over the years, several audit reforms were made with the goal of restoring the confidence of investors whose trust in the capital markets were dented owing to the auditing scandals involving one of the then 'Big Five' accounting firms, Arthur Anderson (Nicole, Sophie, Jaana, & Cedric, 2012). Examples of such reforms are the Sarbanes-Oxley Act of 2002 geared towards improving auditor independence in a bid to enhance audit quality; the 'green-paper' issued by the European Commission (EC) in 2010 which suggested the mandatory implementation of joint audit as a way of enhancing audit quality and

promoting audit market dynamics in European corporations (Okaro, Okafor & Ofoegbu, 2018) and in Nigeria, the Institute of Chartered Accountants of Nigeria (ICAN), who, through its 50th President and Chairman of Council made a case for the promotion of joint audit in Nigeria as a means of raising the quality of financial reporting (Ajaegbu, 2014).

Many countries around the world such as France, Kuwait, India (for state-owned enterprises), Saudi Arabia and Algeria (for banks) currently operate it as a mandatory practice; while others permit it as a voluntary practice such as Denmark, Sweden, and Germany (Lobo, Paugam, Zhang, & Casta, 2017).

The culture of joint audit is also not uncommon in Africa as countries like South Africa, Algeria, Congo, Ivory Coast, Morocco and Tunisia have all made policies on joint audit implementation, on either a mandatory or voluntary basis (Deng, Lu, Simunic & Ye, 2014; El-Hamdi, 2017; Okaro et al., 2018). While in Nigeria, the culture of joint audit is equally not a new phenomenon, although the “Big4” audit firms and other interest groups opposed its mandatory implementation “as proposed by ICAN and Financial Reporting Council of Nigeria (FRCN); it has remained a voluntary practice as they preferred” (Okaro, et al, 2018, p.318). As such, publicly quoted companies and shareholders, who deem it fit, appoints more than one audit firm to audit their financial statements (Jinadu, Ojeka, & Agbeyangi, 2015). It is as a result of the increasing implementations of joint audit by different countries and the controversies surrounding making it a mandatory requirement for publicly listed companies in Nigeria, that have triggered the wide academic research interests on the concept of joint audit and its effects on the adopting firms. Also in Nigeria for instance, the oligopolistic nature of the audit market is gradually pushing the smaller audit firms out of the market for audit services (Ajaegbu, 2014). Ilaboya, et al, (2017) pointed out just about 3% of listed firms make use of joint auditors and about 80% of listed firms are audited by the Big4 audit firms. Thus, implementing a mandatory joint audit regime may contribute in promoting compliance with the Local Content Act of 2010 by giving the smaller audit firms the much needed opportunity, thereby reducing the workload on the Big4.

The survey of available literature shows that recent empirical studies squarely focusing on joint audits are relatively few in Nigeria. To the best of our knowledge, the few available

empirical studies are largely based on questionnaire surveys (Jinadu et al., 2015) or experimental studies (Okaro et al., 2018) and produced mixed evidences. In all, not much is known about how joint audit affects audit delay in Nigeria to the best of the researcher's knowledge. There is need, therefore, to carry out such study using Nigerian data in order to understand the impact of joint audits on different audit quality proxies, such as audit delay, auditor independence and audit fees. Arising from the above, the broad objective of this study is to examine the relationship between joint audits and audit quality in Nigeria. However, the specific objectives are to: ascertain the effect of joint audit on audit delay in listed Nigerian companies; find out how joint audit affect auditor independence in Nigerian listed companies; and identify the extent to which joint audit affects audit fees of listed Nigerian companies.

## LITERATURE REVIEW

### Concept of Joint Audit

Joint audit, according to PwC (2011), is a method where two independent audit firms work together to issue one audit opinion to a firm. Ajaegbu (2014) also defined joint audit as “an audit on a legal entity (the auditee) by two or more auditors to produce a single audit report, thereby sharing responsibility for the audit”. Generally, joint audit can be described as the coming together of more than one audit firm to audit the financial statement of a given legal entity with the common goal of arriving at a single audit report. This act of collaboration in professional audit practice, as described above, clearly depicts the concept of 'Joint Audits' (Gatawa, 2015). It follows therefore that, in a joint audit, both audit firms share the responsibility of executing the entire audit task and jointly share the rewards thereof in an agreed

proportion, as well as bear joint liability in case of an audit failure (Abdollahiebli, 2018; Okaro et al., 2018). The advocates of joint audit such as the (European Commission [EC] (2010; 2014) believe it would increase the probability of detecting errors and enhance audit quality by improving audit evidence precision - as it is often said that 'two heads are better than one'. They also believe it would enhance auditor independence as it would be difficult for the client to jointly develop economic bonding with two different audit firms (Lobo, Paugam, Zhang, & Casta, 2017). Others like Okaro et al. (2018) also believe it would reduce audit market concentration by strengthening the market position of the non-Big4 audit firms as well as mitigating biases that affect

auditor judgement (Marnet, Barone, & Gwillian, 2019). The opposing group, however, contends that joint audit would increase audit costs astronomically without meaningful quality improvements and may also induce a free-riding problem between the audit firms (Deng, Lu, Simunic & Ye, 2014; Razinger-Sakel, Audosset-Coulier, Kettumen, & Lessage, 2013).

**Summary of the Literature Review**

This overview will help to provide a better understanding regarding the previous research conducted on joint audits in different jurisdictions which led to the summary and gap identification in the ensuring sub-section.

**Table 2.1: Summary of Prior Studies**

s/n	Author(s)	Topic/Objective(s)	Country	Methodology	Major finding(s)
1	Marnet et al. (2019)	To examine if joint audit reduce bias and enhance scepticism in financial statement audits	United Kingdom	Theoretical and empirical literature review	Joint audit has a positive impact on audit quality
2	Okaro et al (2018)	Empirical evaluation of benefits and costs of joint audits in Nigeria	Nigeria	Primary data via questionnaire on 400 ICAN accounting professionals. Used simple percentages and independent t-test statistics.	There is no consensus on the desirability of mandatory joint audits in Nigeria among stakeholders, whereas there is general agreement that the benefits of the joint audit will outweigh the costs involved.

3	Jin, Hwang & Kang (2018)	Whether joint audit system improves a company's earnings quality.	China	Secondary data consisting of 16,822 firm-year observations (2001-2006). Panel data	earnings management is lower for joint audited enterprises than for single audited enterprises. Thus, the joint audit method enhances the efficiency of earnings.
4	Mandour Elharidy & Mokhtar (2018)	Examining the effect of joint and dual audits on earnings management practices	Egypt	Secondary data of 104 firm-year observations (2010-2014). Panel data	The relation between joint audit and discretionary accruals is negative. Large businesses that conduct a mutual audit are less interested in the management of accrual profits.
5	Holm and Thinggaard (2018)	Audit quality differences in joint audit vs single audits.	Denmark	Both primary and secondary data. Used Descriptives, correlations and regressions.	Audit quality by a single big four audit firm is the same as it is in joint audits with either one or two big four audit firms.
6	Haak, Muraz, & Ziesenib (2018)	Joint Audits : does the allocation of audit work affect audit quality and audit fees?	France	Secondary data of French audit market (2009–2012) Multivariate Analysis	They found that, relative to an unbalanced work allocation, a more balanced audit work allocation between the engaged audit firms decreases the audit efficiency and raises the audit fee
7	Abdollahiebli (2018)	The implications of the use of joint audit on audit quality and audit costs.	Iran	Theoretical and empirical literature review	The audit quality effect of the joint audit is poor and inconsistent. The conditions for joint audits contribute to higher audit costs.
8	El-Hamdi (2017)	Market perception of the abolishment of mandated joint audit in Germany.	Denmark and France	Secondary data of all listed firms from Denmark and France that were active between 2003 and 2006. OLS	Compared with a single audit, the compulsory joint audit is valued negatively. The valuation of the voluntary joint audit is higher than the mandated joint audit.

9	Bianchi (2017)	Effect of auditors' collaboration on audit quality.	Italy	Secondary data of Italian private companies consisting of 2,733 observations. Panel data.	In some joint engagements, there is a beneficial correlation between several audit quality proxies and the cooperation of auditors.
10	Ilaboya et al (2017)	Examining audit fee determinants in Nigeria	Nigeria	Secondary data of 56 listed companies (2008-2014). Used panel data	There is a negative and negligible association between joint audit and abnormal audit fees (i.e. joint audit reduces abnormal audit fees).
11	Lobo et al. (2017)	The effect of joint auditor pair composition on audit quality.	France	250 listed firms spanning the period 2006–2009. Used descriptive statistics and regression analyses.	There is less clarity in the composition of the joint audit issues for organizations audited by a Big 4 -Big 4 auditor pair, and vice versa for Big4 vs. non Big4 pairs.
12	Alfraih (2016)	Corporate governance mechanisms and audit delay in a joint audit setting.	Kuwait	Secondary data of 195 companies in 2013. Used multivariate regression model.	The joint audit (particularly those involving Big4) significantly reduces the delay in the audit.
13	Bredinger & Larsson (2016)	Investigated how firms' accounting quality is linked to joint audit.	Sweden	Secondary data, 400 firms (2013 -2014). Used joint audit as a dichotomous variable.	Applying a joint audit does not mean that the standard of accounting is high.
14	Kermiche & Piot (2016)	Audit market dynamics in a mandatory joint audit setting.	France	Secondary data of 400 audit clients (2003 - 2009). Used Markovian analysis.	There are possible advantages of joint audits to mitigate the concentration of the audit market; but to accomplish this goal, a joint audit should not be imposed.

15	Lesage et al (2016)	Effect of the abolishment of joint audit in Denmark: Its effect on audit fees and audit quality.	Denmark	Secondary data of non-financial listed Danish companies (2002–2010).	Higher payments are correlated with the joint audit; the correlation between the joint audit and irregular accruals is small. Higher audit fees can, therefore, not be justified by greater audit accuracy.
16	Olowookere & Inneh (2016)	factors affecting auditors choice in quoted manufacturing coys in Nigeria	Nigeria	308 questionnaires to coy shareholders. Used descriptive statistics and Logistics regression	In order to minimize market concentration, mandatory joint audits can be useful given that one joint auditor is not a Big Four audit company.
17	Jinadu et al (2015)	To decide whether the decision to implement joint audit in Nigeria would be associated with audit quality and earnings quality.	Nigeria	Primary data focusing on accounting academics and professionals. Used mean and ANOVA.	joint auditors' presence would not contribute positively to the accuracy of the audit, but rather would raise the expense of the audit.
18	Aliyu, Musa, & Zachariah (2015)	Impact of audit quality on earnings management of listed DMB's in Nigeria	Nigeria	Secondary data of ten (10) banks (2006-2013). OLS	Joint audit and audit firm size have significant negative impact on the earnings management. Banks should use joint audits.
19	Velta & Azibi (2015)	Are joint audits a proper instrument for increased audit quality (proxied by abnormal working capital, abnormal accruals and audit fees)?	Germany and France	306 Germany and French companies between 2008 and 2012. Used multivariate analyses. Used OLS.	Joint audits do not have a significant positive effect on audit quality (& audit fees) and market concentration in Germany and France.
20	El-Assy (2015)	Effect of joint audit on earnings conservatism, as proxy for audit quality.	Egypt	Secondary data of 32 companies listed on the Egyptian stock exchange (2009-2013).	Companies audited by joint auditors are more conservative than those audited by single auditors. No significant difference in joint auditor's compositions (whether Big4 or not).

21	Deng et al. (2014)	Do joint audits improve or impair audit quality?	France	Equilibrium analysis on listed French companies.	Joint audits by one big firm and one small firm impair audit quality by inducing a free-riding problem between audit firms, thereby reducing audit evidence precision.
22	Audoussert-Coulier (2014)	The behaviour of audit fees in a joint audit setting	France	Secondary data of 108 firms for 2002 and 2003. Used Descriptive Statistics and multiple regressions.	Hiring two Big4 auditors as joint auditors does not require the payment of a higher Big4 premium compared to the choice of one Big4 auditor paired with a smaller auditor.
23	Lesage, Ratzinger-Sakel, & Kettunen (2012)	How joint audit affects audit fees and abnormal accruals.	Denmark & France	Secondary data from Danish listed companies (2002 - 2010). Used Multivariate regressions.	No significance association between audit fees and joint audit, same with abnormal accrual and joint audit.
24	Andre et al. (2016)	To find out if mandatory joint audits lead to higher audit fees.	France, Italy and UK	Secondary data covering 210 UK listed firms. 177 French firms and 102 Italian firms. Using inferential statistics.	Mandatory joint audits are significantly associated with higher audit fees in Germany & France. However, joint audit increases audit fees in France separately, but not Germany.

**Summary and Gap Identification**

The above analysis of literature offers so many insights. First of all, a handful of studies have explored the relationship between joint audits and foreign authors have performed multiple audit quality proxies, ranging from earnings management and quality (Jin et al., 2018; Mandour et al., 2018), audit fees and audit quality (Abdollahiebli, 2018; Bianchi, 2017; Bredinger & Larsson, 2016; Holm & Thinggaard, 2018; Haak et al., 2018). Nonetheless, just a handful (Jin et al., 2018; Mandour et al., 2018) found empirical evidence

that joint audit increases audit quality and its related proxies, while several others (Abdollahiebli, 2018; Holm & Thinggaard, 2018; Lesage et al., 2016; Ratzinger-Sakel et al., 2013; Velte & Azibi, 2015) that tried to find an association between joint audit and audit quality were not successful or rather, found it statistically insignificant. The lack of convergence among the foreign studies is an indication that the effects of joint audits on audit quality proxies are still largely unclear, and requires more empirical evaluations. Secondly, on studies by Nigerian authors, it was observed from the review that only few



researchers (e.g. Aliyu et al., 2015; Ilaboya et al., 2017; Jinadu et al., 2015; Okaro et al., 2018) have empirically examined the effect of joint audits in the Nigerian context. In spite of the observed minimal focus on joint audits by the Nigerian authors, majority of the available studies did not successfully ascertain that joint audit will enhance audit (or accounting) quality, save for Aliyu et al. (2015). Studies like Ilaboya et al. (2017) and Jinadu et al. (2015) found joint audit insignificant in explaining abnormal audit fees and audit quality respectively, while Okaro et al. (2018) used questionnaire method and gathered no agreement among stakeholders on the desirability of mandatory joint audits in Nigeria. Be that as it may, most of the studies like (Aliyu et al., 2015; and Ilaboya et al., 2017) recommended joint audits for Nigerian firms as a way of enhancing audit quality – which can be translated as a call for more empirical studies.

In all, it was also observed that audit delay, as an audit quality proxy, have not received commensurate attention in prior studies – like other audit quality constructs such as auditor independence and audit fees. A scan of the available studies showed that only one of the previous studies (Alfraih, 2016) incorporated the variable of 'audit delay' as a measure of audit quality in a joint audit study and found that joint audit significantly reduces audit delay in Kuwait. To the best of our knowledge, none of the retrieved Nigerian studies examined the effect of joint audits on audit delay. This constitutes a gap in literature.

Moreover, considering that there are two contending schools of thought in the debate as to whether joint audits should become a mandatory requirement for listed companies or remain a voluntary practice, evidence from the previous outcomes shows that legitimate arguments can

still be advanced both for and against the adoption of joint audits – meaning it is still largely difficult to ascertain where the weight of the arguments lies. Whether on the proponents' conventional wisdom that “two heads are better than one” or on the critics view of a probable free riding and social loafing issues associated with collaborations in achieving a given task. However, since there is apparently limited evidence to tow either line, the need for further studies can be justified. Thus, this study, in addition to examining the effect of joint audit on auditor independence and audit fees (both audit quality proxies), intends to bring in the variable of 'audit delay' which appears not to have gotten enough attention in joint audit studies. The study intends to contribute to existing literature from the above stated perspective.

## **THEORETICAL FRAMEWORK**

Stigler(1971) notes that the central focus of the theory is that unfair rates are likely to be paid by a monopoly service provider (such as the dominance of Big4 in the audit market) and, thus, some sort of regulation is required to protect the public interest. This captures the principle behind (for/against) joint audit proponents. Second, the principle of public interest stresses that regulation should optimize social welfare and that regulation is the product of a cost/benefit analysis to assess whether the cost of enhancing the market's activity outweighs the amount of improved social welfare (Lesage et al., 2012).

The organizations supporting joint audits, such as the European Commission (for EU countries) and ICAN, are addressing two contentious views on this subject (as in Nigeria). The supporters of the joint audit argued that it would improve the efficiency of the audit and balance the concentration of the audit industry, while the opponents emphasized that it would increase the



cost of the audit. The counterargument is that, most certainly, the advantages will outweigh the costs involved. In relating it to this study, the major question is: do joint audit actually enhance the three selected audit quality proxies proposed in this study? In case of a positive answer, then the propositions of the proponents of joint audit would be considered an act on behalf of public (general) interest. In case a negative answer, then the arguments of the opposing groups (e.g. the Big4 audit firms) will appear as a legitimate self-interest action.

**Game Theory:** Game theory is a model that captures the competitive interaction between two (or more) players in order to maximize their own self-interest, both anticipating and acting accordingly (i.e, as rational players). Auditing is the most popular area where game theory can be applied in the field of accounting. The first one to use game theory to research joint audit was Paugam and Casta (2012). They showed that the assignment of two Big4 auditors (sharing equal credibility costs associated with likely low impairment-related disclosures) in a joint audit task from a game theory perspective would lead to the dilemma-solution of the inmate, according to which 'doing nothing' is the dominant strategy because neither of the Big4 auditors would have an incentive to take corrective action as they both share the reputation cost (Lobo et al., 2013).

On the contrary, the prevailing approach for the auditor will be to take corrective steps to increase the amount of financial disclosures, as Big4 auditors matched with non-Big 4 auditors bear a significant, if not all, part, of the credibility costs associated with disability testing management. In Big4 with Big4 matching, the "do nothing" approach is therefore more likely to be dominant - leading to low quality results; pairing the Big4 with non-Big4 auditors is more likely to lead to

higher quality results (Paugam & Casta, 2012).Aligning the theory with this study, it is assumed that players (auditors) within the game (joint audit arrangement) are rational and will strive to maximize their pay-offs in the game (audit assignment) – in terms of ensuring rationality in the allocation of audit work vis-a-vis audit fees, maximisation of independence and quick audit process (i.e. duration of audit report lag).

## METHODOLOGY AND MODEL SPECIFICATION

This study adopted the longitudinal research design. A sample of sixty-three (63) companies formed the sample size of the study. The simple random sampling technique was used in the selection to ensure that companies in each of the sectors that constitute the population had equal chance of been represented. Secondary data was used for the study. The data were retrieved from the published annual reports and accounts of Nigerian listed companies from 2014 to 2018 (5yrs). The choice of 2014 as the start-year of the study is to accommodate the year in which ICAN advocated, through its 50th President and Chairman of the Council, the promotion of joint audits of publicly listed companies in Nigeria as a way of increasing the standard of financial reporting. In the estimation of the models and in the determination of the causal link between the variables, the panel regression analysis was used.

### Model Specification

The model for this study builds on the model of Velte (2017) and hence the model specification below

$$\text{Audit delay} = f(\text{joint audits, size, complexity, risk}) \dots \dots \dots (1)$$

$$\text{Auditor independence} = f(\text{joint audits, size, complexity, risk}) \dots \dots \dots (2)$$

Auditor fees =  $f$  (joint audits, size, complexity, risk)..... (3)

In econometric form, we have:

$$AUDL_{it} = \beta_0 + \beta_1JOA_{it} + \beta_2SIZ_{it} + \beta_3CLX_{it} + \beta_4RIS_{it} + e_{it} \dots\dots\dots (4)$$

$$AUIND_{it} = X_0 + X_1JOA_{it} + X_2SIZ_{it} + X_3CLX_{it} + X_4RIS_{it} + e_{it} \dots\dots\dots (5)$$

$$AUFEE_{it} = Y_0 + Y_1JOA_{it} + Y_2SIZ_{it} + Y_3CLX_{it} + Y_4RIS_{it} + e_{it} \dots\dots\dots (6)$$

Where:

$\beta_0, X_0$ , and  $Y_0 = Constants$  or Intercepts

$\beta_1$  to...  $\beta_4$ ;  $X_1$ ...  $X_4$ ; and  $Y_1$  to... $Y_4 = Unknown$  coefficients to be estimated

s/n	Variables	Definition	Type	Measurement	Used by:
1.	AUDL	Audit delay	Dependent	“The number of days that elapse from the closure of the financial accounting period until the day the auditor’s report is signed”	Alfraih (2016, p.304)
2.	AUIND	Auditor independence	Dependent	Ratio of audit fee to company’s revenue	Adeniyi & Mieseigha (2013)
3.	AUFEE	Audit fees	Dependent	Natural log of audit fees.	Deng et al . (2014); Velte & Azibi (2015)
4.	JOA	Joint audits	Independent	“Dummy variable; value 1 if the client firm employs a joint audit, otherwise zero”	Velte & Azibi (2015 , p.538)
5.	SIZ	Firm size	Control	Natural log of total asset at the end of the financial year	Alfraih (2016); Audousset-Coulier (2014)
6.	CLX	Firm complexity	Control	The square root of the number of consolidated subsidiaries, associates and joint ventures	Alfraih (2016); Audousset-Coulier (2014)
7.	RIS	Firm risk	Control	The ratio of total liabilities (debt) to total assets.	Alfraih (2016); Audousset-Coulier (2014)

Source: Researcher's Compilation (2020)

#### 4. Data Presentation and Analyses

##### Presentation of Results

**Table 4.1:** *Descriptive Statistics*

	AUDL	AUDIND	AUDFEE	JOA	SIZ	CLX	RIS
<b>Mean</b>	95.72381	0.006351	83897.60	0.069841	515663110	9.380952	0.637315
<b>Median</b>	84.00000	0.001396	23000.00	0.000000	28392951	9.000000	0.608716
<b>Maximum</b>	488.0000	0.481078	910000.0	1.000000	8223984226	53.00000	2.547496
<b>Minimum</b>	29.00000	0.000108	100.0000	0.000000	321068.0	0.000000	0.009180
<b>Std. Dev.</b>	68.04750	0.038309	151498.9	0.255285	1.25E+09	7.672908	0.305286
<b>Skewness</b>	4.457349	11.07548	2.859899	3.375391	3.367541	2.750828	2.375147
<b>Kurtosis</b>	23.68179	130.9238	11.93298	12.39327	14.98590	13.52906	14.53620
<b>Jarque-Bera</b>	6657.110	221224.0	1476.749	1756.211	2480.928	1852.323	2042.895
<b>Probability</b>	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
<b>Sum</b>	30153.00	2.000640	26427743	22.00000	1.62E+11	2955.000	200.7541
<b>Sum Sq. Dev.</b>	1453965.	0.460815	7.21E+12	20.46349	4.90E+20	18486.29	29.26474
<b>Observations</b>	315	315	315	315	315	315	315

**Source: Eviews 10 (2020)**

As observed in Table 4.1, AUDL has a mean value of 95.72 which implies that average audit report lag of the studied sample is 96 days approximately. This is slightly above the 90 days limit for deposit money banks in Nigeria based on BOFIA requirements but within the acceptable disclosure period stipulated by the Companies and Allied Matters Acts (CAMA) 2004 in Nigeria. It is worthy of note that the study sample consists of 20 financial companies (13 banks and 7 insurance firms) and 43 non-financial companies. The minimum and maximum values of 29 and 488 days respectively suggests that while some companies disclose their annual report as early as within one month after the financial year end, some take more than one calendar year, but those are few exceptional cases. The variable of AUDFEE, run using the raw audit fees data, showed that the average audit fees paid by the sampled companies within the period covered stood at ₦83.9 million with minimum and maximum values of ₦1 million and ₦910 million respectively.

The variable of JOA (joint audits) suggests that

about 7% out of the 63 sampled companies uses joint auditors. On the variable of firm size (run here using the raw total assets data), the result showed that the average total assets of the entire sample is ₦515,663,110 ('000). The largest company, by way of total assets, has a total assets value of ₦8,223,984,226 ('000) while the smallest sized firm has a total asset of ₦321,068 ('000). On firm complexity (CLX), which captures how diversified the sampled companies are in terms of number of subsidiaries, showed a mean value of 9.38 implying that the average number of subsidiary among the sample is 9. Some of the companies have no subsidiary as shown by the minimum value of 0.00 while some of the sampled firms (e.g. Eco bank) have up to 53 subsidiaries. On firm risk (RIS), as proxied using the debt ratios of the firms, the outcome showed a mean value of 0.637 which implies that majority of the sampled firms are highly leveraged. It is also observable from the probability values of the Jargue Bera statistic of all the series are significantly lower than the 5% level,- indicating departure from normality. This can be attributed to

the usage of some of the variables in their raw form for the descriptive statistics (e.g. total assets, audit fees and complexity); they were then

transformed into their natural log forms prior to their usage in the multivariate analysis.

### 4.3 Multivariate Analysis

**Table 4.2:** *Correlation Analysis*

<i>Panel 1</i>	AUDL	JOA	SIZ	CLX	RIS	<i>Panel 2</i>	AUDIND	JOA	SIZ	CLX	RIS	<i>Panel 3</i>	AUFEE	JOA	SIZ	CLX	RIS
AUDL	1					AUDIND	1					AUFEE	1				
	----						----						----				
JOA	0.281	1				JOA	-0.012	1				JOA	0.183	1			
	(0.000)	----					(0.827)	----					(0.001)	----			
SIZ	-0.101	0.217	1			SIZ	-0.117	0.217	1			SIZ	0.599	0.341	1		
	(0.075)	(0.000)	----				(0.039)	(0.000)	----				(0.000)	(0.000)	----		
CLX	-0.131	0.107	0.469	1		CLX	-0.152	0.107	0.469	1		CLX	0.416	0.107	0.537	1	
	(0.020)	(0.058)	(0.000)	----			(0.007)	(0.058)	0.000	----			(0.000)	(0.058)	(0.000)	----	
RIS	-0.135	-0.017	0.468	0.183	1	RIS	0.009	-0.017	0.468	0.183	1	RIS	0.446	-0.017	0.281	0.183	1
	(0.016)	(0.759)	(0.000)	(0.001)	----		(0.868)	(0.759)	0.000	0.001	----		(0.000)	(0.759)	(0.000)	(0.001)	----

Source: EViews 10, 2020Notes: the p-values are in brackets

Table 4.2 presents the correlation analysis of variables. Panels 1, 2, and 3 represent the outlook of the three models used in the study. From panel 1, there is a strong positive correlation between the joint audit variable (JOA) and the variable of AUDL which is significant at the 1% level. This implies that joint audit (JOA) and audit report lag (AUDL) likely moves in the same direction. The remaining three firm-specific attributes (SIZ, CLX and RIS) are negatively correlated with the variable of AUDL at 10%, 5% and 5% level of significance respectively. This means that firm size, complexity and risk move in opposite direction with audit report lag.

From panel 2, it was observed that, all things being equal, higher firm size (SIZ) and complexity (CLX) would likely be associated with lower auditor independence (AUDIND), while the association between joint audits and auditor independence is non-significant.

The outcome of the panel 3 reveal a probability value of 0.0011 is statistically significant at the 1% level implying that as joint audits increase, so do audit fees, all things being equal. The remaining three variables of SIZ, CLX and RIS have positive correlation coefficients of 0.599, 0.416 and 0.446 respectively and are statistically significant (at 1% level) as their p-values were all lesser than 0.01. What this suggests is that larger, risky and complex firms are strongly associated with higher audit fees as all moved in the same direction in line with the result. Also, observable from the result of the three panels is that the issue of high correlation was non-existent. This highest correlation coefficient is 0.599 (i.e. between SIZ and AUFEE in panel 3). Thus, the problem of multicollinearity is unlikely present among the series. Further regression diagnostic tests were conducted as presented in the next sub-section.

**Multivariate Analysis**

**Table 4.3: Results of the Hausman Tests**

<b>Model One:</b>			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	14.680730	4	0.0054
<b>Model Two:</b>			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.166754	4	0.9967
<b>Model Three:</b>			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	7.654778	4	0.1051

**Source: Compiled from Eviews 10 output (2020)**

table 4.3 above presents the three Hausman endogeneity measures, describing each of the three research models. The null hypothesis is that the random effect model is consistent, while the alternative hypothesis is that it is consistent with the fixed effect model. The rule of judgment is to accept the alternative hypothesis that if p-value < 0.05, the fixed effect is consistent or accept the null hypothesis that if p-value > 0.05, the random effect is consistent.

The likelihood values of model one (0.0054) are

less than 0.05 based on the outcome of the three results, while those of models two and three (0.9967 and 0.1051 respectively) surpassed the critical p-value of 5 percent (i.e. > 0.05). This confirms the appropriateness of the fixed effect model in capturing the relationships among the panels of model one, while the random effect method will be adopted for the model two and three. Table 4.6 below presents the extracted outcome of the regression estimation results.

**Table 4.4 Result of the Panel Regression Results (Models 1, 2 and 3)**

Dependent Variables: AUDL, AUDIND, AUFEE

Method: Panel Least Squares

Sample: 2014 2018

Periods included: 5

Cross-sections included: 63

Total panel (balanced) observations: 315

<i>Independent Variables</i>	<b>Model 1 (FEM)</b>		<b>Model 2 (REM)</b>		<b>Model 3 (REM)</b>	
	<b>Coefficient</b>	<b>P-value</b>	<b>Coefficient</b>	<b>P-value</b>	<b>Coefficient</b>	<b>P-value</b>
C	483.7158	0.0002	0.037376	0.1920	1.819843	0.0133
JOA	-30.88809	0.2780	0.001667	0.8817	0.072374	0.5622
SIZ	-19.42213	0.0119**	-0.001569	0.3951	0.442018	0.0000**
CLX	-17.01702	0.0014**	-0.003801	0.3197	0.194682	0.0337*
RIS	1.828597	0.8838	0.010982	0.1531	0.023702	0.7467
R-squared	0.652144		0.013894		0.306614	
Adjusted R-squared	0.559570		0.001170		0.297667	
F-stat (p-values)	7.04 (0.000)**		1.09 (0.36)		34.3 (0.000)**	

Source: EViews 10 (2020) \*\*, \* significant at 1% and 5% levels; FEM=fixed effect; REM=random effect model

Table 4.4 presents the extracted output of the three research models. Although both the fixed and random effects methods were run, the fixed effect outcome was presented for model 1 while the random effect results were presented for interpretation of models two and three. This is due to the outcome of the Hausman's test as reported in Table 4.3. However, it can be observed from the overall probability values of the three models (in the last row of the table) that the joint statistical significance of the models at the 5% levels can only be established in models one and three, as model two was found to be insignificant therefore portrays unreliable statistical results. This means that whereas there is linear relationship between the dependent variables and the explanatory variables (taken together) in model one and model three; no linear relationship could be established for model two. Thus, the use of AUDIND as audit quality proxy in model two could not fit the data (with F-stat of 1.09 and overall p-value of 0.36 or 36%), therefore analysing the model two output is considered redundant.

Going further, it can be observed from the outcome of model 1, as shown in the first column,

the proportion of the variation in audit report lag (AUDL) that was accounted for by the explanatory and control variables taken together is 65.2%. The adjusted R-squared that governs the effect on degrees of freedom of the inclusion of successive explanatory variables stood at 0.559577 (about 56 percent ). This suggests that the remaining proportion of approximately 44 percent was not captured by the model and hence captured by the error term. This is an indicator that the explanatory capacity of the model is above average. The path and contribution to the conduct of the audit quality proxy (AUDL) of each of the explanatory and control variables is determined by the signs of the coefficients and their level of significance.

In respect to that, the result showed that the coefficient values of the four (4) explanatory variables have negative signs as depicted by the coefficient values of -30.89, -19.422 and -17.02 for joint audits (JOA), firm size (SIZ) and firm complexity (CLX) respectively.

However, while the main independent variable (i.e. Joint audit) is not statistically significant owing to a high probability value of 0.278 (27.8%), the controlling variables of SIZ (p-



value=0.0119) and CLX (p-value=0.0014) are both significant at 5% and 1% levels respectively. Thus, holding other variables constant, increases in firm size (SIZ) and firm complexity (CLX) would lead to significant decreases in audit report lag (AUDL) by up to 19.4 and 17 units respectively, while a unit increase in JOA (joint audits) have the tendency of decreasing audit delay, but not significantly. The remaining control variable of firm risk (RIS) have positive coefficient value of 1.839 and an insignificant probability value of 0.8838 (>0.05). What this implies is that firm risk, as proxied using debt ratio, does not significantly influence audit delay (AUDL).

From the third column, the result of the random effect model 3 showed an adjusted R-squared value of 0.29767 which signifies that about 30% of the systematic variation in the dependent variable of audit fees (AUFEE) is jointly accounted for by the explanatory (JOA) and control variables (SIZ, CLX and RIS). On the coefficient signs of the variables, the independent variable of joint audits (JOA) as well as the three control variables of firm size (SIZ), firm complexity (CLX) and firm risk (RIS) all showed positive coefficient signs with values of 0.072, 0.442, 0.195 and 0.024 respectively. However,

just as in the model one, only firm size (SIZ) and firm complexity (CLX) was statistically significant, howbeit with different coefficient signs. This implies that, while increases in firm size and complexity significantly reduce AUDL in model one, their effect on another audit quality proxy (AUFEE) is significantly positive. Thus, all things being equal, a unit increases in SIZ and CLX will trigger a corresponding increase in audit fees (AUFEE) by up to 44.2% and 19.5% respectively. On the other hand, the insignificant positive sign of the joint audit variable (JOA) is a sign that joint audits have the likelihood of causing a non-significant increase in audit fees.

**Test of Hypotheses**

The three (3) null hypotheses earlier formulated in the first chapter of this study are checked in this sub-section in order to address the research questions. The decision rule is that if the probability value (p-value) is greater than 0.05 or if the t-statistics are less than 2.0, the null hypothesis will be accepted or the null hypothesis will be rejected if the probability (p-value) value is less than 0.05 and the t-statistics are less than 2. The summary of the hypotheses results are shown in Table 4.8 below:

**Table 4.7** Summary of Hypotheses Testing

	<b>Hypotheses</b>	<b>Prediction</b>	<b>Actual Result</b>	<b>Decision</b>
Ho1	Joint audit have no significant effect on audit delay in Nigerian listed companies.	Significantly negative	Negative – Insignificant (p-value=0.278)	Accept null
Ho2	Joint audit do not significantly affect auditor independence of listed companies in Nigeria.	Significantly positive	No linear relationship	Accept null
Ho3	There is no significant effect of joint audit on audit fees in Nigerian listed companies.	Significantly positive	Positive – Insignificant (p-value=0.562)	Accept null

Source: Researcher’s compilation (2020)

### **Discussion of Findings**

The study resulted in the acceptance of null hypothesis one (Ho1), which means that joint audits in Nigeria have a non-significant adverse effect on audit delays. What this means is that higher levels of joint audit will possibly, but not dramatically, reduce audit delays. The negative coefficient sign agrees with the result of a study by Alfraih (2016) which incorporated the variable of audit delay as an audit quality proxy and found that joint audit significantly reduces audit delay in Kuwait. However, unlike theirs, our result did not pass the significance test at any level. This could be attributed to the peculiarity of this study compared to Alfraih (2016). Firstly, their study covered only 2013 and over 50% of their sampled engaged joint auditors compared to just 7% found by our study in a five-year period.

The second research model could not be interpreted because no linear relationship could be established. This could be attributed to the measurement of auditor independence adopted. However, going by the statement of the null hypothesis two (Ho2), it can be claimed that the null hypothesis of no significant effect of joint audit on auditor independence is accepted. Abinitio, the idea behind the development of the second hypothesis was based on the arguments of Paugham and Casta (2012) and Velte (2017) that engaging more than one auditor increases transparency and objectivity, coupled with the researcher's conjecturing that will be difficult for the client to influence more than one auditor in a joint audit arrangement. The acceptance of the second hypothesis validates the findings of Deng et al. (2014), which found that joint audits do not inherently improve auditor competence or independence as a result of free riding and internal opinion shopping - meaning that under joint audits (especially one involving one large

company and one small company) auditor independence is often more likely to be compromised. The outcome is also close to that of Lobo et al. (2017) which found that joint audit does not affect auditor independence in isolation, citing other factors like the combination of such joint audit arrangement.

From the outcome of the third hypothesis test led to the acceptance of the third hypothesis of no significant effect of joint audits on audit fees in Nigeria. Realistically, the positive relationship exhibited by the variable of joint audits is in line with game theory which projects that greater efforts towards high quality audit outcomes are more when a big audit firm pairs with a smaller audit firm. And this is what is currently obtainable in the Nigerian setting as observed during the data collection process where it was discovered that all the firms that engaged joint auditors had the combination of Big4 pairing non-Big4, unlike in other jurisdictions like South African where majority of the joint audit partnering are Big4 vs Big4. Our result on joint audits and audit fees also supports Lesage et al. (2016) and Lesage et al. (2012) which both found that joint audit is associated with higher fees among Danish companies. The result is equally similar to the findings of Ilaboya et al (2017) which showed that joint audits do not affect audit fees significantly. The study of Velta & Azibi (2015) also found that joint audits, although positive, does not have significant effect on audit fees in a combination of French and German companies.

### **Conclusion and Recommendations**

Based on the outcome of the empirical analyses in the previous chapter in relation to the specific research objectives, the major findings of the study can include: That the effect of joint audits on audit delay is negative and insignificant. This means that

firms engaging joint auditors are most likely associated with shorter audit report lag, but the impact is not significant. That a non-significant positive relationship exists between joint audit and audit fees. This means that firms engaging joint auditors have more likelihood of paying higher audit fees. However, such nexus would not be significant. That firm size and firm complexity are highly significant in explaining variances in both audit delay and audit fees in Nigeria.

Based on these outcomes, it can be concluded that although there are indications from the results that joint audits poses negative and positive impact on audit delay and audit fees respectively, their relationships are not statistically significant within the context of this study. It can also be concluded that company attributes like firm size and complexity are major influencers of both audit fees and audit delay, while firm risk (using debt ratio) was insignificant and can be considered as not of crucial importance in the context of this study.

Based on the findings of this study, the study recommends that Regulatory bodies like ICAN may need to reignite the existing campaign for a mandatory audit regime, since there are theoretical projections that it would enhance auditor independence without significantly raising audit fees which usually has economic implications on firms' earnings and regulatory bodies should ensure strict compliance with the relevant requirements of corporate governance structures in fostering auditor independence among listed companies.

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