Effect of Audit Quality on Earnings Management of Listed Oil and Gas Marketing Companies in Nigeria

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Abstract

This study examined the effect of audit quality proxied by audit firm size, auditor industry specialization, auditor tenure, and audit committee financial expertise on earnings management represented by discretionary accruals of listed oil marketing companies in Nigeria. The study also examined the effect of the interaction between audit committee financial expertise and auditor industry specialization on earnings management of sampled firms. To achieve these objectives, the study used fourteen listed oil marketing companies that had consistently published their audited annual financial reports from 2011 to 2020, and analyzed the data using multiple regression technique. The dataset was first analyzed using pooled-OLS regression technique. However, in view of the panel nature of the dataset, it was further analyzed using fixed and random effects regression models The result of the fixed effect regression analysis revealed that audit firm size, auditor industry specialization, and audit committee financial expertise are positively associated with earnings management at less than 5% significance level respectively. In contrast, auditor tenure and the interaction between audit committee financial expertise and auditor industry specialization were negative and significantly associated with earnings management of firms at less than 5% significance level respectively. Overall, the study concluded that audit quality attributes of audit firm size, auditor industry specialization, auditor tenure, audit committee financial expertise and the interaction between audit committee financial expertise and auditor industry specialization had significant effect on earnings management of listed oil and gas marketing companies in Nigeria. In view of the results, the study recommended among others auditor tenure of three years and above in order to check earnings management of firms in Nigeria. Also, auditor industry specialization should be encouraged by regulators such as SEC as the interaction between audit committee financial expertise and auditor industry specialization mitigates earnings management of firms in Nigeria.

Keywords: Auditor industry specialization, Audit Tenure, Audit Committee Financial Expertise, Audit Firm Size, Earnings Managements

INTRODUCTION

Financial reporting is one of the primary responsibilities of management which enables them give account of their stewardship. Managers of public companies are expected to prepare and present annual financial reports to shareholders, who are owners of the firm and other interested users such as creditors, analysts, government, and the general public to enable them assess the performance and financial position of the reporting entity. The main objective of financial reporting therefore is the provision of information on the financial performance and position of the reporting entity that is useful to different users, to enable them assess the stewardship of management and make informed economic decisions (International Accounting Standards Board (IASB), 2008; Glautier, Underdown, & Morris, 2011). This means that published financial reports that fail to meet the information needs of its users do not achieve their intended purpose. In order to achieve this objective, information contained in financial statements has to meet basic qualitative attributes of relevance and faithful representation in addition to quantitative attributes. Relevance of financial statements information is associated with the extent to which published financial information is able to influence the decision of the users. Faithful representation on the other hand entails that published financial statements information should be verifiable, neutral and complete (IASB, 2008).

The need for financial reporting arises originally because of the separation of ownership from management and control in modern day business organizations. This relationship creates conflict of interests and information asymmetry between the shareholders (principal) and managers (agent), who are involved in the day to day running of the firm. The conflict sometimes reflects in the preparation of financial statements as managers use their discretion over accounting choices to manipulate financial information contained in published financial reports for their personal benefit at the expense of other stakeholders. Reported accounting information is, therefore, often not free from complete bias as expected by different users of the financial reports. In Nigeria, the oil and gas sector contribute significantly to the economic growth of the country. According to the Central Bank of Nigeria (CBN, 2010), the industry contributes about 90% of Nigeria's foreign exchange earnings. Despite its strategic importance, the operations of the oil industry have been associated with allegations of scandalous financial practices recently. For example, the Punch (February, 2015) reported the case of non-remittance of funds to the federation account and excessive expenditure of oil proceeds by the Nigerian National Petroleum Corporation (NNPC). Similar allegations are associated with listed oil marketing companies in Nigeria as exemplified by the case of African Petroleum (now Forte Oil) Plc, where a credit facility of 24 billion naira was not disclosed in the financial statements of the company (Samaila, 2014). Interestingly, this material omission occurred under the watch of a big 4 audit firm that is expected to constrain such unscrupulous practice.

Owing to the importance of the oil sector to the economy of Nigeria and the allegations of manipulative tendencies labelled against the oil and gas industry, it is imperative to examine the earnings management behaviour of oil and gas marketing companies and the extent to which audit quality affects such behaviour. This study is therefore motivated by the fact that researches in this area which are mostly foreign based documented inconsistent and mixed findings due largely to jurisdictional and sectoral differences. The inconclusiveness of findings has provided incentive for further research effort. In addition, the fact that the oil sector in Nigeria has undergone a number of reforms particularly from 2009, coupled with dearth of local empirical studies on the association between audit quality and earnings management practices of the sector, make a study that will enable better understanding of the nature and extent of the association more desirable. Also, most of the prior studies on audit quality and earnings management in Nigeria such as Okolie, Izedonmi and Enofe (2013) and Okolie (2014) focused more on audit firm size, audit fees and auditor tenure even though the literature has listed other proxies of audit quality. This approach limits the generalisability of findings concerning the effect of audit quality on earnings management of firms in Nigeria in general and listed oil marketing companies which have been ignored by prior studies. A study that includes more variables such as auditor industry specialization is undoubtedly desirable as it provides a better understanding of the effect of audit quality on earnings management of firms in Nigeria. Though this study does not cover all the variables ignored by previous studies, the inclusion of more variables such as auditor industry specialization is important as it enables us to determine the effect of the interaction between auditor industry specialization and audit committee financial expertise on earnings management of firms in Nigeria.

Furthermore, the two studies in Nigeria focused on non-financial companies listed on NSE generally, and not specifically in relation to oil and gas marketing companies. The importance of oil and gas marketing companies to the Nigerian economy as evidenced in the large volume of trade in shares on the floor of the NSE, implies that these companies deserved to be studied in isolation for better understanding of their earnings management behaviour. In addition, the association of the operations of these companies with scandalous financial activities such as the case of African Petroleum (Now Forte Oil) PLC, where a credit facility of 24 billion naira was not disclosed in the financial statements (Samaila, 2014) raises concerns about the possibility of serious earnings manipulation in the companies. This calls for empirical investigation into the earnings management behaviour of oil and gas marketing companies in Nigeria and the extent of its association with audit quality. It is against this background that the present study is set to fill the gaps identified in the audit quality and earnings management literature by extending its analysis to cover audit firm size, auditor industry specialization, auditor tenure, audit committee financial expertise and the interaction between audit committee financial expertise and auditor industry specialization by focusing on oil and gas marketing companies in Nigeria in view of their strategic importance to the nation's economy. From the foregoing therefore, the following hypotheses are formulated:

$H0_1$: Audit firm size, Auditor industry specialization,Auditor tenure, and Audit committee financial expertise have no significant effects on earnings management of listed oil and gas marketing companies in Nigeria.

LITERATURE REVIEW

Conceptual Framework

Concept of Audit Quality

Setyaningrum, Gani, Martani and Kuntadi (2013) say that audit quality is extracted from the principal component analysis techniques and outcomes indicate three major factors such as education, experience and training. The greater the auditor monitoring strength, the more closely financial report will reflect the true economic circumstances of the client and the higher information quality. Kaklar, Kangarlouei and Motavassel (2012) view audit quality as an auditor who will detect and correct or reveal any material omission or misstatements in the financial statements in order to give high quality report. There are two major drivers of audit quality such as litigation costs and reputation loss which considers large investment on building their brand name, the big audit firms have an incentive to lower litigation risk and protect their reputational capital by providing more credible financial reports to the users of the accounting or financial information. It is expected that high audit quality lead to high financial reporting quality which in turn is a tool to prevent financial crises globally. In other to maintain the quality of audit report presented to the users of the financial information from companies, the professional bodies made the most critical decision that all auditors and members of professional bodies must show high level of integrity because they are the builders of societies, the organizers of economies, the transformers of social systems and those who make the political system. In the opinion of Al-Matari, Al-Swidi and Fadzil (2014), audit quality is internal audit which determines the reliability, reality, and integrity of financial and operational information that comes from different organizational units, on which appropriate business decisions at all levels of management are based. Ahmad, Suhara and Ilyas (2016) add that audit quality is related to the quality and effort of the auditor to identify material misstatement in the financial statements. It also concerned with the auditor willingness to disclose an unbiased audit report based on the audit result.

Sayyar, Basiruddin, Rasid and Elhabib (2016) view audit quality as those technics the auditors use to recognize misstatements in clients accounting system or information and report the misstatements to the appropriate person. The quality of audit reports is a basic requirement to enhance the credibility of financial statements within the stakeholders to reduce investors risk in the organization. Therefore, it is a basic ingredient in enhancing the credibility of financial statements to users of accounting information by providing an independent verification of financial reports presented by management. Okolie, Izedonmi and Enofe (2013) identify audit quality as the assessment of the financial statement by an auditor in order to discover any breach in the clients accounting data and report the breach to the general public. It will further influence the financial reporting and strongly impact on investors' confidence in the audited financial reports. In my own view, audit quality is a measure of professional training, competence, skill and experience that was brought to bear on an audit assignment. It is a mirror through which total personality of an auditor or audit firm is assessed. Both professional bodies and the public can, to a large extent, rely on it for an unbiased evaluation. The aforementioned definitions clearly suggest that accountants are yet to agree on a single definition for audit quality that suits all purposes. Consequently, and following DeAngelo‟s initial definition, this study views audit quality as the joint probability that a given auditor both detects and reports a violation of GAAP in the accounting system of the client. This study adopts DeAngelo's definition of audit quality in view of the fact that it captures the fundamental elements of quality audit which are competence and independence of the auditor. Competence is associated with the ability of the auditor to detect violation of GAAP in the accounting system of a client while independence is what makes the auditor to report the said violation of GAAP.

Earnings Management

The accounting literature is yet to provide a universally accepted definition of the term "earnings management". Earnings management is called by several names such as accounting numbers game (Mulford & Comiskey, 2002), creative accounting (Balaciu, Bogdan & Vladu, 2009), income smoothing (Tucker & Zarowin, 2006), and so on. The concept of earnings management is defined differently by different researchers, depending on how they perceive it. Healy and Wahlen (1999) associated earnings management with the altering of financial statements through the use of judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers. According to Schipper (1989), earnings management involves „disclosure management‟ in the sense of a purposeful intervention in the external financial reporting process, with a view to obtain private gain for shareholders or managers. To Fields, Lys and Vincent (2001), earnings management arises when managers exercise discretion over accounting numbers, with or without restrictions. The discretion is exercised to either maximize firm value (shareholders wealth) or to maximize the selfish interest of managers (opportunistic earnings management). The definition of Fields, Lys and Vincent (2001) unlike the first two definitions suggests that earnings management could either be within or outside GAAP.

Generally, earnings management involves different activities ranging from legitimate to outright fraudulent financial reporting. These activities can be broadly classified into four major types (Bauwhede & Willekens, 2003; Zhao, 2012). The first type of earnings management arises from the exploitation of flexibilities in accounting principles (GAAP), commonly called within- GAAP earnings management. GAAP allows flexibilities to enable firms prepare financial statements that reflect underlying economic reality. However, some managers abuse these accounting flexibilities through earnings manipulation. Examples of flexibilities in GAAP include choosing between various inventory valuation techniques and depreciation methods. This type of earnings management is perceived by some scholars as legitimate and beneficial to shareholders particularly, when it is well disclosed in the financial statements. The second group of earnings management activities involves violation of accounting principles (GAAP). It is called "with-out GAAP" earnings management. Earnings management of this nature involves outright management fraud and is mostly associated with firms that have exhausted flexibilities in accounting principles to manage earnings. Dechow and Skinner (2000), call this form of earnings management fraudulent financial reporting. Fraud is defined as " the intentional, deliberate misstatement or omission of material facts, or accounting data, which is misleading and, when considered with all other information made available would cause the reader to change or alter his or her judgment or decision" (The National Association of Certified Fraud Examiners, 1993). Unlike "within GAAP" earnings management, this type of earnings management lacks legitimacy and is not disclosed in the financial statements. This is the type of earnings management activities that normally attract auditors and regulatory sanctions. The third classification of earnings management activities is called real activities manipulation. This is also a within-GAAP earnings manipulation but is different from earnings management through accounting choices and is hardly subjected to auditor scrutiny. Earnings management through real activities manipulation involves "management actions that deviate from normal business practices, undertaken with the primary objective of meeting certain earnings thresholds (Roychowdhury, 2006). Examples of real activities manipulation include but not limited to earlier spending on maintenance or research and development (R & D) when reported earnings are higher than expected to reduce earnings number to desired level. The fourth group of earnings management activities is called classification shifting. Classification shifting is another form of within-GAAP earnings manipulation which entails "misclassifying line items within the income statement to inflate core earnings (Zhao, 2012). An example of classification shifting is the shift of core expenses such as selling, administrative and general expenses to special items such as restructuring charges.

Empirical Review

Omoregie and Dibia (2020), explored the impact of audit firm attributes and audit quality in Nigeria. For the study objective to be accomplished, the study fundamentally embrace the survey of panel data in other to properly scrutinize the concept of audit firm attributes as it relate to audit quality in Nigeria for the period of 5-years (2014-2018). Fifteen (15) companies from the banking industries were used in total. Due to the cross-sectional nature of the study, the panel multiple regression was employed with the aid of E-view 8.0 econometric packages for the analysis of data. The result of the findings appears that the variable of Audit Independence (AUDI) and Audit Fees (AUDF) were observed to be significant and positively related with Audit Quality (AUDQ), Audit Firm Rotation (AUFR) was positively and insignificantly related with Audit Quality (AUDQ) while Audit Delay (AUDY) indicated a negative and a relationship that is insignificant with Audit Quality (AUDQ). In view of the findings, the study therefore strongly recommends that audit independence and audit fees should be given more attention in the course of considering the attributes of audit firm as well as the quality of audit in Nigeria. Udeh, Chinedu and Okwo (2020), investigated the influence of attributes of audit quality on return on assets of selected quoted manufacturing firms in Nigeria from 2006 to 2016. Its specific objectives were to examine the effect of audit firm size and auditor's tenure on return on assets of quoted manufacturing firms. Ex-post facto research design was employed. Secondary data from published financial statements of 24 out of the 80 quoted manufacturing firms on the Nigerian Stock Exchange were used. Stratified purposive random sampling technique was utilized to select the sample size. Ordinary Least Square statistical method was the analytical tool. It was discovered that audit firm size had a positive and significant effect on return on assets of quoted manufacturing firms in Nigeria, among others. It was therefore, concluded that attributes of audit quality influence return on assets of quoted manufacturing firms in Nigeria. The study recommended, in addition to others, that auditors should be given subsequent opportunities for any audit assignment as this will enable them to discover inadvertent errors thereby improving the quality of the audit.

Nwoye, Anichebe and Osegbue (2020), undertook a study to determine the effect of audit quality on earnings management in insurance companies in Nigeria with special consideration on accruals and performance measures of earning manipulations using insurance companies in Nigeria. Preliminary analyses were conducted, such as descriptive statistics and correlation matrix. In analyzing the data, the study adopted panel multiple regression to identify the possible effects of audit quality on earnings management of financial institutions in Nigeria We interpreted fixed effect analysis after using Hausman test. The result shows that audit quality had a significant effect on earnings management. The conclude that longer stay of auditors in financial institutions increases accrual and performance manipulation. However, financial institutions audited by the Big 4 auditing firms are associated with less accrual and performance earnings manipulation while financial institutions that have executive and non-executive directors as members of audit committee have greater accrual and performance earnings manipulations. Higher number of financial experts in audit committee increases accrual manipulation while higher number of experts with accounting background in audit committee reduces performance manipulating. Finally, increase in auditors' fee leads to choices of using accounting methods to manipulate both accrual and performance earnings. Therefore, the study recommends that, financial institutions should have maximum number of years for auditors to stay. They should focus more on increasing the number of experts with accounting background in audit committees. Accounting bodies should regulate auditors' fee in line with the size of the financial institution. Mustapha, Rashid, Abdullahi and Ademola (2019), examined the effect of Audit Quality on Accruals Earnings Management in Nigerian Listed Firms. Audit Quality is one of the tool academicians' use in measuring the level of earning practices in the organizations. However, this study investigated the possible effect of audit quality towards the change of earnings management level among the Nigerian listed firms. The study used all the public listed firms in the main flow of the Nigerian Stock Exchange (NSE) as a population from the year 2012 until 2017. Sixty-three selected companies were selected as a sample based on the filtration criteria of the study. The financial data was obtained from the Thompson Reuters DataStream, and the corporate governance data was from the annual reports and accounts of the companies. Audit quality and accrual model was used to test the relationship between the study variable. The study applied multiple regression to test the model. It was revealed from the regression that audit quality is negatively significant with accrual earnings management. This finding is indicating that any increases in the unit of audit fees will decrease the earnings management of the selected firms. Thus, the finding is supporting agency theory and is contrary to the assumption of creative accounting theory. The result of this study will assist the relevant authorities in decision making and policy setting towards the best practices of the Nigerian listed firms. Therefore, this study is recommending for further research on this area to employ more measures of audit quality and also to apply the use of other earnings management indicators in order to have the robustness of the study. Asiriuwa, Aronmwan, Uwuigbe and Olubukola (2018). Examined audit committee attributes and audit quality with emphasis on the specific requirements of the 2011 SEC code. The study applied the deductive approach via the ex-post facto research design and the Binary probit regression model in analyzing the various hypotheses put forward in study. Data used for the study were gathered for 150 firm-year observations from the annual reports of quoted companies on the floor of the Nigerian Stock Exchange. Findings from the study revealed that audit committee size, frequency of meetings, number of expertise and overall effectiveness all have a positive relationship with audit quality. However, only size and overall effectiveness was significant in their relationship. The study recommends that since the significant positive nature of audit committee effectiveness show that four attributes jointly account for effectiveness, firms are encouraged to establish audit committees that have all these attributes. Furthermore, the requirement of having a 6-member audit committee is sound and empirically proven to aid audit quality. Therefore, firms yet to subscribe to these should hasten up, while sanctions should be made for firms that do not.

Theoretical Framework

Stewardship Theory

Stewardship theory was introduced by Donaldson and Davis (1994). The stewardship theory which has its roots in psychology and sociology maintains that the interests of managers (stewards) are aligned with those of the organization and the owners (Albrecht, Albrecht & Albrecht, 2004). The theory focuses on mechanisms that empower and facilitate the functioning of stewards rather than structures that monitor and control agents. Stewardship theory rejects the policeman attitude of the agency theory which assumes that the interests of principal and the agent are different, and sees agents as self-serving and self-centered (Habbash, 2010). The stewardship theory suggests that managers as representatives of shareholders are trustworthy and good stewards of resources entrusted to them and therefore need no monitoring (Donaldson, 1990; Donaldson & Davis, 1994). The theory posits that since managers are not opportunistic and act in the best interest of the owners, they should be given autonomy based on trust as this will reduce the cost of monitoring and controlling their behavior. Stewardship theory views monitoring of agents by the owners, and their representative as unnecessary, since managers are not opportunistic and will always act in the best interest of shareholders. Stewardship theory further argues that corporate executives are not only concerned with financial gains but by nonfinancial motives such as recognition from peers and bosses, and satisfaction from performing challenging tasks (Donaldson &

Davis, 1994). Consequently, the stewardship theory attracted several criticisms by those who believe that the interests of managers cannot be aligned with the interest of shareholders. Critics argue that monitoring mechanisms such as high-quality external auditors are necessary in cutting information asymmetry between shareholders and managers, in order to reduce agency costs such as earnings management. Heralding this argument is Albrecht *et al*. (2004) who contend that relying on the relationship between owners and stewards based on stewardship theory could rather provide opportunities for management to commit fraud. This theory therefore fails to sufficiently explain and analyze the relationship between audit quality and earnings management of firms.

Agency Theory

Agency theory was developed by Jensen and Meckling (1976). The agency theory is based on the relationship between the principal (owners) and the agent (Managers). Though the stakeholder theory has more theoretical and practical appeal than agency theory, and stewardship theory, it is also heavily criticized because of the difficulty to treat equally and satisfy the competing demands of the multiple stakeholders in the firm as proposed by the stakeholder theory. The theory therefore, fails to adequately explain the association between audit quality and earnings management practices. The agency theory is based on the relationship between the principal (shareholder) and the agent (managers). The separation of ownership from management and control in modern day business corporations provides the basis for the function of agency theory. This separation provides the opportunity for an agent (manager) to be appointed to manage the daily operations of the company. This relationship however, creates the potentials for conflicts of interests between the agent and principal, and requires monitoring costs associated with resolving these conflicts (Jensen & Meckling, 1976).

Agency theory assumes that managers are motivated by their personal gains and work to exploit their personal interest and not the interest of the shareholders. Managers for instance may be interested in buying lavish offices, company cars and other extravagant items, since the cost of these items is not borne by them (managers) but the owners (shareholders). The main problem of agency theory is how to align the conflicting interests of the managers with the interests of shareholders. Consequently, when managers have incentives to manage earnings such as to meet or beat earnings target and performance-based compensation, they manipulate the company's reported earnings. This manipulation reduces the relevance and reliability of reported accounting earnings and financial statements generally. Agency theory therefore suggests monitoring mechanisms such as high quality audit to reduce these conflicts and align the interests of managers with the shareholders interests. From the foregoing, agency theory explains better and clearer unethical practices in accounting and financial issues such as earnings management (EM). This study therefore draws on agency theory to test the relationship between audit quality and the incidence of earnings management in listed oil marketing companies in Nigeria. Agency theory is chosen because it better explains the motivation for earnings management and the association between audit quality as a monitoring mechanism, and earnings management than the other theories.

METHODOLOGY

The longitudinal panel research design was adopted for this study based on positivist approach. The population of the study is all the fourteen (14) oil and gas companies quoted on the Nigerian Stock Exchange before 1st January, 2011 and had been trading till 31st December, 2020. The period covered by the study is twelve (10) years from 2011-2020. The sample size of the study comprises the entire population of fourteen (14) oil and gas companies. The data for this study were obtained from secondary source. Secondary data were extracted from the published annual reports and accounts of the companies and the NSE fact book for the relevant years. Descriptive statistics will be used to compute summary statistics for both the dependent and independent variables of the study. The study also used panel multiple regression analysis to show the nature, direction and extent of the relationship between and among the dependent and independent variables. The model in this study was adopted and modified from the studies of Molik *et al.* (2013) and Okolie *et al.* (2013). The model is expressed as follows:

$DAC_{it} = \beta_0 + \beta_1 AFS_{it} + \beta_2 AIS_{it} + \beta_3 ADT_{it} + \beta_4 CLI_{it} + \beta_5 AFE_{it} + \beta_6 AFE*AIS + \varepsilon_{it}$ - - - - (i)

Where:

DAC = Discretionary accruals
AFS = Audit firm size
AIS = Auditor industry specialization
ADT = Auditor tenure
AFE = Audit committee financial expertise
β_0 = constant of the model
$\beta_1 - \beta_6$ = coefficients of the study model
ε = error term

RESULTS AND DISCUSSION

Descriptive Statistics

The descriptive statistics of the dataset from the sampled oil and gas marketing companies are presented in Table 1 where the mean, standard deviation, minimum and maximum values of the data for the variables used in the study are described.

Table 1 Descriptive Statistics

VARIABLE	N	MEAN	STD. DEV	MIN.	MAX.
DAC	140	.1004662	.0544201	.00017	.278911
AFS	140	.6851852	.4688031	0	1
AIS	140	.5185185	.5043487	0	1
ADT	140	.5740741	.4991257	0	1
AFE	140	.1450617	.1038882	0	.3333333
AFE*AIS	140	.0648148	.0966779	0	.3333333

Source: STATA Output Result (2021)

Table 1 presented the descriptive statistics for the dependent and independent variables (DAC = Discretionary accruals, AFS = Audit Firm Size, AIS = Auditor Industry Specialization, ADT = Auditor Tenure, AFE = Audit Committee Financial Expertise andAFE*AIS = Interaction between Audit Committee Financial Expertise and Auditor Industry Specialization). The standard deviation of the variables ranges from 0.05 to 0.50. Discretionary accruals have the lowest standard deviation of 0.05 followed by the interaction between audit committee financial expertise and auditor industry specialization 0.09, audit committee financial expertise 0.10, audit firm size 0.46, auditor tenure 0.49 and auditor industry specialization 0.50. The relatively low standard deviation for all the study variables may be an indication that the sampled data for the study is normally distributed. The Table also indicated an average value of 0.10 for discretionary accruals. Since earnings management is measured by absolute value of discretionary accruals in this study, the value of 0.10 is an indication that sampled companies were involved in minimal earnings manipulations during the study period. The minimum and maximum values of discretionary accruals during the study period are zero (0) and 0.28 respectively. These values imply that some sampled companies were actually not involved in earnings manipulations during the study period while the highest manipulation of earnings by the sampled companies during the study period stood at 0.28. This further corroborates the inference of minimal manipulation of earnings earlier revealed by the mean of DAC.

The Table further revealed an average value of 0.6851852 for audit firm size. The value implies that sixty-nine (69) percent of the sampled oil marketing companies was audited by the big 4 audit firms in Nigeria (KPMG, PWC, Ernst and Young, Akintola Williams Delloitte) during the study period. The mean value of sixty nine percent further suggests that only thirty one percent of the sampled oil and gas marketing companies were audited by non-big 4 audit firms in Nigeria during the period of investigation. This shows that the audit market in the sector is dominated by the big 4 audit firms in Nigeria and just a few non- big 4 audit firms audited listed oil and gas marketing companies in Nigeria. The minimum and maximum values of audit firm size during the study period were zero (0) and one (1) respectively. The minimum and maximum values of audit firm size indicate that auditor size is measured by a dummy variable which takes the value of one if the company is audited by a big 4 audit firm and zero if otherwise. Similarly, the Table shows that auditor industry specialization had a mean value of 0.5185185 during the study period. This value implies that fifty-two (52) percent of the sampled companies were audited by industry specialist auditors during the period of the study. The value further reveals that only forty-eight (48) percent of the sampled oil marketing companies were audited by non-industry specialist auditors during the period of study. The mean value of industry specialist auditors during the study period is slightly higher than the mean value of non-industry specialist auditors. The minimum and maximum values of auditor industry specialization stood at zero (0) and one (1) respectively because the variable was measured by dichotomous numbers of one if the sampled oil marketing company is audited by an industry specialist auditor and zero if otherwise.

The Table also indicated that auditor tenure had a mean value of 0.5740741 during the study period. This value indicates that fifty-seven (57) percent of the sampled oil and gas marketing companies retained their auditors for a period of three years and above. This shows that more than fifty percent of the audit firms in the sector enjoy long tenure which enables them to acquire client's specific knowledge and its financial reporting practices necessary for a more effective audit. The mean further implies that only forty three percent of the sampled companies may have retained their auditors for a period of less than three years during the study period. The minimum and maximum values of auditor tenure during the study period are zero and one respectively in view of the fact that auditor tenure was measured by a dummy variable which takes a value of one for companies which retained their auditors for a period of three years plus and zero if otherwise.

Moreover, the Table indicated a mean value of 0.1450617 for audit committee financial expertise. This value shows that only fifteen (15) percent of the sampled companies had their audit committee made of members who have accounting and finance experience. This further suggests that eighty five (85) percent of the sampled companies had audit committee members without accounting and financial expertise. The minimum and maximum values of audit committee financial expertise during the study period were zero (0) and 0.333 respectively. These figures indicate that some of the companies had no members with accounting and finance experience in their audit committee membership while some had over thirty-three (33) percent of the membership of their audit committee during the same period made of members with accounting and finance experience. Finally, the Table revealed a mean value of 0.0648148 for the interaction between audit committee financial expertise and auditor industry specialization. The mean value implies that the interaction between audit committee financial expertise and auditor industry specialization during the study period is an average of six (6) percent. The minimum and maximum values of the interaction between audit committee financial expertise and auditor industry specialization during the study period were zero (0) and 0.33 respectively.

Table 2: Summary of Regression Results from Different Models

Variable	OLS	FIXED

			RANDOM
AFS	-.0030536	.1561452***	.0034529
AIS	.0562648*	.0925595**	.0709208**
ADT	-.0393105***	-.0273476**	-.0381286***
AFE	.1694277	.3054097**	.1835667
AFE*AIS	-.2852075*	-.4013709**	-.3449638**
CONS	.0544501*	-.1081198*	.0413093
Chi^2			17.12
R^2	.2633	.4389	.2907

Source: STATA Output Result (2021)

Table 2 revealed that pooled- OLS regression has an R^2 of 0.26 which implies that 26% of variation in discretionary accruals of the firms is jointly explained by the independent variables. Under OLS regression result, auditor tenure and the interaction between audit committee financial expertise and auditor industry specialization had a significant negative relationship with discretionary accruals of sampled companies at 1% and 10% respectively. Auditor industry specialization had a significant positive relationship with discretionary accruals of the sampled firms at 5% and 10% respectively. Except audit committee financial expertise that has insignificant positive relationship, audit firm size had insignificant negative relationship with discretionary accruals of the sampled companies. The F- statistics of the OLS regression model was significant at 5%. This means, from the pooled- OLS regression result, only auditor tenure, auditor industry specialization and interaction between audit committee financial expertise and auditor industry specialization have statistically significant relationship with discretionary accruals of the sampled companies. The Table also revealed that the random effect result respectively returned coefficient values of 0.038 and 0.063 for auditor tenure. The coefficients are statistically significant at 1% and 5% respectively. Auditor industry specialization and interaction between audit committee financial expertise and auditor industry specialization had coefficient values of 0.07 and -0.34 significant at 5% respectively. In terms of coefficient of determination, the random effect result showed an R^2 value of 0.29. This shows that in so far as the random effect model is concerned, only 29% of the variation in discretionary accruals of sampled companies is explained by the combined effect of the independent variables.

On comparison of the results from the three models, fixed effect model appeared to have given a clearer picture of the relationship between the outcome and explanatory variables. This can be seen both in terms of number of independent variables that have significant relationship with discretionary accruals (audit firm size, auditor industry specialization, auditor tenure, client, audit committee financial expertise and interaction between audit committee financial expertise and auditor industry specialization) and coefficient of determination (R^2). Interestingly, the direction of association between auditor tenure, interaction between audit committee financial expertise and auditor industry specialization and discretionary accruals of the sampled companies is negative in all the three models. Also, the direction of association with respect to auditor industry specialization, audit committee financial expertise and discretionary accruals is positive in all the three models. This indicates the consistency of the estimates in all the three cases.

Discussion of Findings

Based on the empirical evidence on the audit firm size has no significant effect on earnings management of listed oil and gas marketing companies in Nigeria is rejected. The present finding is consistent with those of Yasar (2013), Pouraghajan, Tabari, Emamgholipour and Mansourinia (2013) and Molik, Mir, Mclver and Bepari (2013) who found a positive association between audit firm size and earnings management of firms. The result however, contradicts the findings of Chen, Wu and Zhou (2006), Gerayli, Yanesari and Ma‟atoofi (2011), Inaam, Khmoussi and Fatma (2012), Okolie, Izedonmi and Enofe (2013), Zhou and Guan (2014), Tyokoso and Tsegba (2015), Aliyu, Musa and Zachariah (2015) and Ching, Teh and San (2015) who documented a negative relationship between audit firm size and earnings management of firms. The result supports the finding of Zhou and Guan (2014) and Hegazy (2015) who found a positive relationship between auditor industry specialization and earnings management of firms. The result however, contradicts the finding of Habbash (2010), Gerayli, Yanesari and Ma‟atoofi (2011), Inaam, Khmoussi and Fatma (2012), Ahmadzade, Hassanzadeh, Pooryegane and Ebrahimi (2012), Karimi and Gerayli (2014), Tyokoso and Tsegba (2015) and He (2015) who documented a negative association between industry specialist auditors and earnings management of firms. The result is inconsistent with findings in developed and some developing economies where auditor industry specialisation has significant negative relationship with earnings management of firms. Based on the empirical evidence, the second hypothesis of the study which states that auditor industry specialization has no significant effect on earnings management of listed oil marketing companies in Nigeria is rejected.

Based on the empirical evidence in respect of auditor tenure, which states that auditor tenure has no significant effect on earnings management of listed oil and marketing companies in Nigeria is rejected. The present result is consistent with the finding of Ebrahim (2001), Ahmadzade, Hassanzadeh, Pooryegane and Ebrahimi (2012), Inaam, Khmoussi and Fatma (2012), Okolie, Izedonmi and Enofe (2013), Okolie (2014), Karimi and Gerayli (2014), Tyokoso and Tsegba (2015) and Bamahros and Wan-Hussin (2015) who documented a negative relationship between auditor tenure and earnings management of firms. The result is however, inconsistent with those of Gul, Fung and Bikki (2009) and Ching, Teh and San (2015) who documented evidence of a positive association between auditor tenure and earnings management of firms. The present finding lends support to the study of Rohaida (2011) and Molik, Mir, Mclver and Bepari (2013) who found a positive relationship between audit committee financial expertise and earnings management of firms. The result is however, inconsistent with the studies of Piot and Janin (2005) and Bamahros and Wan- Hussin (2015) who found a negative relationship between audit committee financial expertise and earnings management of firms. Based on the result, the study rejects the fifth hypothesis which states that audit committee financial expertise has no significant effect on earnings management of listed oil marketing companies in Nigeria.

CONCLUSIONS AND RECOMMENDATIONS

Based on the result of data analysis and discussion in this study, the study has reached the following conclusions. The study provided empirical evidence on the association between audit quality (proxy by audit firm size, auditor industry specialization, auditor tenure, audit committee financial expertise and the interaction between audit committee financial expertise and auditor industry specialization) and earnings management (proxy by discretionary accruals) of listed oil and gas marketing companies in Nigeria. Specifically, the study concluded that audit firm size has a positive and significant effect on discretionary accruals of listed oil and gas marketing companies in Nigeria indicating that audit firm size does not constrain but increases earnings management of the sampled firms. The study also concluded that there is a positive and significant association between auditor industry specialization and discretionary accruals of listed oil and gas marketing companies in Nigeria suggesting that industry specialist auditors do not constrain but rather increases earnings management of sampled firms. Moreover, the study concluded that auditor tenure has a negative and significant effect on discretionary accruals of listed oil marketing companies in Nigeria suggesting that auditor tenure constrains earnings management of sampled firms. Finally, the study concluded that there is a positive and significant association between audit committee financial expertise and discretionary accruals of listed oil and gas marketing companies in Nigeria which implies that audit committee financial expertise does not mitigate earnings management of sampled firms in Nigeria.

Based on the findings of this study, the following recommendations are suggested to different parties that are directly or indirectly involved in financial reporting process in Nigeria:

i. Regulatory authorities in Nigeria such as SEC should come out with a policy that encourages audit firms in Nigeria to create departments within their firms that specialize along industry lines of companies listed on the Nigerian Stock Exchange (NSE). This is necessary despite the fact that there are relatively few companies listed on the NSE and irrespective of the significant positive relationship between auditor industry specialization and earnings management of sampled firms. Auditor industry specialization should be encouraged because the interaction between audit committee financial expertise and auditor industry specialization had a significant negative effect on earnings management of sampled firms in Nigeria. This is in view of the fact that corporate governance mechanisms do not work as substitutes but complement each other to effectively constrain earnings management of firms.

ii. The study recommends auditor tenure of three years and above for external auditors of public companies in Nigeria. This reinforces SEC (2011) code of corporate governance which states that Nigerian public companies can retain external auditors for a period of ten years consecutively, while disengaged auditors can only be reappointed after a period of seven years. Auditor tenure of at least three years would enable the auditor acquire client specific experience that could make him detect questionable financial reporting practices of the firm more easily than he was at the beginning of his audit engagement while an auditor tenure of less than three years could deny the auditor firm specific experience, thus resulting to increase in earnings management of firms.

iii. Audit committee with accounting and financial members should encourage their companies to hire industry specialist auditors. This is because good knowledge of the business environment by the auditor coupled with the accounting and financial experience of the audit committee members is likely to make each of them more effective in mitigating earnings management of firms especially in industries with complex business environment such as the oil industry.

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