Effects of Audit Firm Size on Earning Management of Listed Consumer Goods Companies in Nigeria

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Abstract

Earnings management is a problem reported in many different backgrounds. many studies on audit quality highlighted that there is a connection between the audit quality and earnings management. The prior study's findings revealed that discretionary accruals decrease when the auditor is independent or if the audit firm is among the big 4, and advocate that big audit firms have advantage of enormous resources that enhances higher audit quality than the non-big 4 audit firms. This study examined the effect of audit firm size on earnings management proxied by discretionary accruals of listed consumer goods companies in Nigeria for a period of thirteen years from 2006-2018. Expost facto research design was adopted for the study.The result of the random effect regression analysis revealed thataudit firm size has positive association and significant effect on earnings management. In view of the results, the study concludedand recommendedthatconsumer goods companies who are interested should judge external audit firms on the basis of effectiveness,efficiency and output and not just the size of the audit firm as to whether they are among the big 4 or not. This is because audit firm size is not associated with less earnings management of consumer goods companies in Nigerian. Those who hire audit services in Nigeria should consider competence and experience of the audit firms rather than size that are likely to be associated with less earnings management of firms.

Keywords: Audit Firm Size, Earnings Management, Discretionary accruals, Consumer Goods Companies

INTRODUCTION

Poor external audit quality has been linked to corporate scandals, failures and earnings management in Nigeria and other parts of the world. This has necessitated reforms by different countries and institutions to improve audit quality. Some of the recent events that have contributed to the demand for high external audit quality of financial statements among others are the collapse of banks in Nigeria and other corporate failures around the globe such as Enron, WorldCom, Parmalat. This elicited interest of government, regulators, accounting profession and the public in the audit quality of companies. The consequences of weak external audit reporting in Enron led to the company's failure and the demise of its external audit firm Arthur Andersen one of the largest accounting firm in United States (Bryce, 2003). The uncertainty that arose from the global financial crisis which started in US in 2007 and spread to other countries was another catalyst that led to high demand for transparency in financial reporting and audit quality (Zureigat, 2011). With the emergence of financial scandals from a number of companies, such as Global Crossing, Xerox and WorldCom in the United States and Parmalat in Europe, the independence of the auditor, the role of the external audit companies and consequently the quality of the audit were called into

question (Bekiris & Doukakis; 2011). Generally, the demand for external audit is occasioned by the role audit plays. External audit enhances the credibility and reliability of financial statements. Stakeholders place more confidence on such statements if they have been examined by an independent auditor. External audit reduces the principal – agent conflict by ensuring that the financial statements are free from material errors and fraud (Wallace, 1980, & Imhoff, 2003). The higher the external audit quality, the greater the accuracy of information supplied by the audited statements (Davidson & Neu, 1993). Regulatory agencies have also intensified their watch over companies to possibly improve audit quality through monitoring activities of the board of directors.

The need for external audit may be seen as a response to the agency problem and the audit functions as a mechanism to attest to the accountability and stewardship of company management to reduce the possibility of innocent mistakes and deliberate misstatements such as fraud and management manipulation (Anderson, Francis & Stokes; 1993). This implies that, external audit plays crucial role in providing reasonable assurance to the quality of financial information presented to stockholders and other users of financial statements. It is believed that quality of financial statements is more credible when audit service is performed with high quality. However, provision of a high-quality audit is not a simple task and is affected by audit firm specific as well as client related factors. In a capital market where, financial reports are a key feature of communication with respect to public firms' performance and financial position, external audit is perceived as an effective tool which helps mitigate information asymmetry and conflict of interests between management and investors. Mansi, Maxwell and Miller (2004) identified two roles of an auditor namely the information role and the insurance role. As an information intermediary, an auditor is a person who independently and effectively verifies the correctness of company's financial statements before they are published. As an insurance provider, on the other hand, an auditor is a person who is legally accountable for damages to financial statement users. Auditors therefore carry out primary responsibility for promoting transparency in financial reporting processes that in turn generate high quality financial statements. In other words, auditors are one of the key drivers that help promote the transparency of the stock markets. The consequence of poor external audit in most cases manifest in financial scandals and failure of companies. The quality of reported earnings and the ability of external audit to effectively constrain earnings management (EM) of companies across the world and Nigeria in particular, have become considerably questionable due to recent accounting scandals (Badawi, 2008, & Enofe, 2010).

The recent financial scandals pose a great challenge to the veracity, credibility, utility or value relevance of the audit function. Badawi (2008) reported a list of companies involved in cases of accounting scandals related to poor external audit quality and earnings manipulations in the United States in the past decade. In Nigeria, corporate scandals such as the cases of Cadbury Nigeria Plc, African Petroleum plc, Savannah Bank plc. African International Bank plc. Wema Bank plc, Fin Bank plc and Spring Bank plc and more recently Intercontinental Bank Plc; Bank PHB; Oceanic Bank Plc. and Afri Bank Plc are well known publicly reported cases that resulted in misleading financial reports (Okolie & Aggoma 2008, Odia, 2015, Adeyemi & Fagbemi, 2010). There is therefore a concern about the quality of accounting reports and its relationship with the audit firm size. The issue is whether these corporate collapses as a result of earnings manipulation are as a result of the size of the audit firm. The conflicting results of prior studies such as Wijaya (2020),Lopes (2018), Affes and Smii (2016), Tyokoso and Tsegba (2016) who found positive relationship between Audit firm size and earnings management and those of Tyokoso and Tsegba (2015), Aliyu, Musa, and Zachariah (2015), Nawraiseh (2016), Tyokoso, Sabari, Dogarawa and Ibrahim (2016) who found a negative relationship between Audit quality and earnings management require that further studies be done to confirm or refute aspects of extant literature relating to audit quality and earnings management especially in developing economies like Nigeria. More also the studies mentioned above have some methodological limitations because they adopted ordinary least square regression as the method of data analysis to test the data collected. OLS has been critiqued for being simplistic and failing to adjust for unobserved time–in variant confirms that are largely industry/firm-specific (Woodridge, 2016). More also the above-mentioned studies did not test for normality multi-collinearity and heteroskedasticity properties of the data. However, when panel data are used for a study, regression is not adequate to analyze the data because it does not

account for the time and firm theabove-mentioned studies did not conduct Hausman test to determine between fixed or random effect regressions which is more appropriate. Due to the lapses in methodology this study intends to fill the above-mentioned gap by adopting a robust methodology that will take care of the gap mentioned above. The main objective of the study is to examine the effect of Audit firm size on earnings management of consumer goods companies in Nigeria. In line with the objective stated above the following hypothesis was formulated and subsequently tested. The hypothesis is stated thus:

Ho_1: Audit firm size has no significant effect on earnings management of consumer goods firms in Nigeria.

LITERATURE REVIEW

Conceptual Framework

Concept of Audit firm size

Arens, Elder, and Beasley (2012), define audit firm size as, "Certified Public Accountants (CPA) firms' is a distinction of an audit firm based total revenues, number of partners, number of staff professionals, and number of offices. The four classifications based on such categories, are as follows: Big 4 international firms, national firms, regional and large local firms, and small local firms". Colbert, Gary and Dennis, Murray (1999) state that audit firm size is, "a distinction of firm size based on number of CPA's, number of partners, the total number of professional staff, and the total number of clients served by the firm". CPA firms provide audit services, as well as other attestation and assurance services. Additional services provided by CPA firms include accounting and bookkeeping services, tax services, and management consulting services (Arens, et.al., 2012). Furthermore, Arens et.al. (2012) categorizes the size used to describe a public accountant office in the United States, namely:

i. The Big Four International firms in which these firms have branches throughout the United States and around the world. The big four conducts audit services and other assurance services to mostly big companies in the United States and around the world.
ii. National firms where the firm is large but much smaller than the big four. This firm has an affiliation with another firm in another country and has international capability.
iii. Regional and large local firms where the firms have more than 100 professional staff. Some have only one office and serve clients primarily within commuting distances.
iv. Small local firms have fewer than 25 professionals in a single-office firm. They perform audits and related services primarily for smaller businesses and not for profit entities.

Evidence suggests that many researchers including; DeAngelo, (1981), Palmorose (1988), Adeyemi and Fagbemi (2010) and Zureiget, (2011) use audit firm seize as surrogate for audit quality. They assert that larger audit firms provide higher audit quality and command higher audit fees than smaller firms. Size is dichotomy classified; the larger audit firms are represented by big international audit firms. The international audit firms were the big 8 firms which as a result of mergers are now big 4 (Know, Lin and Tan, 2007). The big 8 firms existed in the 1980s and they were Arthur Andersen, Arthur Yong, Coopers and Leybrand, Eenest and Whinney, Deloitte, Haskins and Sells, KPMG, Peat Marwick, Price water house and Touche Ross. By 1989 the became big 6 when Ernest and Whinney merged with Arthur Yong to become Ernest and Yong and Deloitte Haskins and Sell merged with Touche Ross to form Deloitte and Touche. The big 6 became big 5 when in 1998 Coopers and Lebrand and Price water house merged to form Price water house Coopers. They became the big 4 after the demise of Arthur Andersen in 2001. The big 4 firms currently refer to Ernest and Yong, Deloitte and Touche, KPMG and Price water house Coopers, depends on the time period under consideration. Several reasons account for higher quality audit services provided by larger audit firms. First, no single client is too important to them, so they are less likely to compromise their independence (DeAngelo, 1981). Secondly, they have greater monitoring ability than smaller firms (Watts &Zimmerman, 1981). Thirdly, larger audit firms have greater valuable reputation to protect (DeAngelo, 1981). Fourthly, the have resources to provide robust training for their staff and with 'deeper pockets' they can withstand greater shocks from litigation (Dye, 1993). Fifthly, they invest more in audit technology as a differentiation strategy to provide high quality audit, whereas smaller firms provide more personalized services due to limited client portfolios and are expected to succumb to management requirements (Mahdi & Ali; 2009). Therefore, the size of audit firm is an important characteristic that reflects auditor independence. Thus, the issue of maintaining auditor

independence is more crucial for smaller firms than larger firms. A large body of research examines the relationship between audit firm size and audit earnings management

Concept of Earnings Management

According to Omoye and Eriki (2014) earnings management is recognized as attempts by management to influence or manipulate reported earnings by using specific accounting methods or accelerating expense or revenue transactions, or using other methods designed to influence short-term earnings. Earnings management according to them occurs when managers use of judgment 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 information. According to Healy and Wahlen (1999) as cited in Algharaballi (2013) earnings management can be defined as managers use judgment in the financial reporting and in structuring transactions to alter financial reports to either mislead stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers. According to Algharaballi (2013) these definitions represent two common views of company management. The first view holds that management needs to exercise judgment in business operations and financial reporting since GAAP clearly requires management to make wise estimates and judgments. The second view is known as that of opportunistic earnings management, managers base their judgments and decisions on whether it will result in personal private gain (Healy &Wahlen, 1999, Jiraporn, Miller, Yoon, & Kim, 2008).

Earnings management may take different forms. But Matsuura (2008) identified two broad categories of earnings management namely, accruals earnings management and real earnings management. Accruals may be non-discretionary (normal), that is, accruals that derive from an entity's normal business activities,recognized within proper period but not paid or received for example, unpaid taxes and others bills. These are not subject to earnings management. Abnormal or discretionary accruals derive from adoption of accounting practices that are outside the rules in the preparationand presentation of financial information to achieve a desired objective. Accruals earning management is thus, the discretionary portion of accruals (Omar, Rahman, Danbatta and Suleiman (2014). Real earnings management is equated to discretionary cash flow from operations derived from the variance between actual cash flow and normal cash flow. Real earnings management is described by Roychowdhury (2006) as normal operational practices with the primary objective of meeting short-term earnings goals. Through accounting choices and intentional misapplication of accounting, managers may decrease earnings when earning are relatively high and increase earning when earnings are relatively low. This form of earning management is regarded as income smoothing, described by Rone and Yaari (2008) as "the dampening of fluctuations in reported earnings over time"

Empirical Literature

Wijaya (2020), examined the effect of audit quality on firm value in manufacturing companies listed on the Indonesian Stock Exchange in 2013 to 2017. Audit quality which is proxied by Big 4 and non-big 4 auditors has been proven to have a positive influence on firm value in manufacturing companies on the Indonesia Stock Exchange. Population of the study were all manufacturing companies listed on the Indonesian Stock Exchange. Sampling was carried out using a purposive sampling method. Research data were tested using multiple regression analysis.The results from the study show that audit quality has a positive effect on firm value in manufacturing companies on the Indonesian Stock Exchange. Lopes (2018), examined if there is a relationship between the manipulation of results and the quality of the audit, based on the study of the behavior of discretionary accruals in Portuguese non-listed companies. Collected on the SABI (Iberian Balance sheet Analysis System) database, the sample is composed of 4723 companies from 2013 to 2015. The empirical model of this study consists of a multiple linear regression in order to explain the relationship between the discretionary accruals and the audit firm size, debt, volume of business and profitability, based on the Modified Jones Model. The results suggest that

there is a relationship between audit quality and earnings manipulation. The level of earnings management is significantly lower among companies contracting a Big 4 audit firm, as compared to companies using a non-Big 4 audit firm.

Afeez and Smill (2016) investigated the impact of audit quality (proxy with audit firm size, auditor's reputation, and auditor's expertise) on earnings management (proxy with accounting earnings) of listed firms in Tunisia for a period of 5 years from 2005 – 2009. A sample of 20 companies listed on the Tunis stock exchange (TSE) belonging to the non-financial sector was selected for the study. Secondary data was collected from the financial reports of the selected companies for the five-year period under review. The data were analyzed using panel multiple regression. The findings revealed that audit quality has significant impact on earnings management. Specifically, the findings revealed that audit firm size, auditor's reputation, and auditor's expertise improve the quality of accounting earnings. Nawraiseh (2016) examined the effect of Audit quality (proxy with Audit fees, Audit tenure and affiliation with international big auditing firms) on earnings management (proxy with discretionary accruals) for the period of 5 years from 2006 to 2010. The study adopted expost facto research design.Secondary data were collected from a sample of 13 commercial banks listed on the Amman stock exchange (ASE) that had filed audit accounts and had had the external auditor for a five-year period were selected. The data were analyzed using the descriptive statistics and panel ordinary least square regression analysis via the help of E views 7 version. Hausman test and other pre and post diagnostic test were conducted on the panel data. The result showed that audit fees, audit tenure, and international big auditing firms have significance negative effect on earnings management.

Tyokoso, Sabari, Dogarawa and Ibrahim (2016) Examined the effect of Audit quality on earnings management of listed oil marketing companies in Nigeria for the period of 6 years from 2009-2014. The study adopted correlational research design based on positivist approach the design of the study composed of 10 oil and gas marketing companies listed on the Nigerian stock exchange out of which a sample of 9 were used based on availability of complete data. Secondary data were collected from annual reports and accounts of the sampled companies. The data were analyzed using panel multiple regression technique the result of Hausman specification test suggest that the fixed effect regression model is most appropriate for the data set. The result of the fixed effect regression model showed that audit firm size, auditor industrial specialization, client importance and audit committee financial expertise are positively associated with earnings management, while auditor tenure and auditor industry specialization are negatively associated with earnings management. Tyokoso and Tsegba (2015) investigated the effect of audit quality on earnings management of listed oil marketing companies in Nigeria for the period of 2004- 2013. The dependent variable earnings management was represented with discretionary accruals which were estimated using the modified jones model, while the independent variable audit quality was represented by audit firm size, auditor's industrial specialization and auditor tenure. The population and sample of the study consist of 10 oil marketing companies listed on the Nigerian Stock Exchange. Secondary data were collected from the annual reports and accounts of the sampled oil marketing companies listed on the Nigerian Stock Exchange. The data were analyzed using ordinary least square regression. The findings of the study indicated that both audit firm size and auditor's industrial specialization have insignificant negative effect on discretionary accruals, while auditor's tenure had a significant negative effect on discretionary accruals of the sampled oil marketing companies.

Aliyu, Musa and Zachariah (2015) examine the impact of audit quality proxy with (audit firm size, joint audit and auditor's financial independence) on earnings management of listed money deposit banks in Nigeria for a period of 8 years from 2006 to 2013 using secondary data and sample of 10 listed deposit money banks. The study used ordinary least square method of data analysis and adopted correlational research design. They found that audit quality has significant impact on earnings management. Also audit firm size and joint audit services have significant negative impact on earnings management, while a positive relationship exists between auditor financial independence and earnings management.

Theoretical Frame work

Signaling Theory

Michael Spence in 1973 propounded the theory, signalling theory isbeneficial when relating to attitudeas soon as two parties (individuals or organisations) have access to different information. Naturally, one party the sender, must indicate how to communicate (signal) that information and the second party the receiver, must choose how to analyse the signal. The theory postulate that companies with good performance use financial information disclosure through the help of quality audit to send signals to the market. A high-quality audit sends a signal to the market that the financial statements are credible and reliable and this reduces information irregularity and increase company value. The signal of transparency, reliability and credibility gives assurance about the quality of company disclosure in financial statements to the stakeholders of safety of their investment and maximization of wealth.And this absolutely highlights the quality of the audit.

Theory of Inspired Confidence

Limperg, (1932) advocate both demand for and supply of audit services. The demand for audit services is primarily the need of interested parties of the company (that is shareholders and other stakeholders). These shareholders and stakeholders demand accountability from the management, in return for their investment to the company, because of a possible divergence between the interests of management and outside stakeholders, hence, audit of this information is necessary. However, the level of audit assurance that the auditor provide, depends on the ability of the auditor to act in such a way that he does not disappoint the expectations of outsider stakeholders, while, on the other hand, he should not arouse greater expectations in his report than his examination justifies. This theory links the stakeholders need for credible and reliable financial reports and the competence of the auditor to meet such need. According to Okolie (2014), the theory confers on the auditor high level of confidence as the only saviour that can give stakeholders all relevant information that will reduce information irregularity.

Agency Theory

According to Jansen and Meckling, (1976) the agency theory is very important in explaining the behavior when the principal (shareholders) delegate work to agent (manager) with expectation that the agent will make decision which are of the best interest to the principal. Agency theory explains the earnings management since managers are motivated to manage earnings in order to increase their bonus, compensations and commissions which are closely tied to the earnings of the firm (Booth & Schulz 2004, Shapiro, 2005). 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).

From the foregoing, agency theory explains better and clearer unethical practices in accounting and financial issues such as earning management (EM). This study therefore draws on agency theory to test the relationship between audit quality and the incidence of earning management in listed consumer goods 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 study adopts ex-post facto research design because the researchers do not have control over the variables mainly since the event have already occurred and cannot be changed by the researcher. The population of the study consist of 21 consumer goods firms listed on the Nigerian Stock Exchange as at 31st December 2018 out of which a sample of 17 firms were selected based on availability of data using

purposive sampling technique. The study relied on historical data collected from annual reports and accounts of the sampled consumer goods firm for a period of 13 years, from 2006-2018. The period was selected to enable the study analyze the effect of audit firm size on earnings management over a long period of time as other studies mostly rely on three or five years. The data was analyzed using panel regression via the help of STATA 13 software.

Model Specification

Prior to estimating discretionary accruals, total accruals (TACC) were calculated as:

$TACC_{it} = EARN_{it} - NCFO_{it}$ .....(1)

$DACC = TACC_{it-1}/TA_{it-1} = (1/TA_{it-1} + \Delta REV_{it} - \Delta REC/TA_{it-1}) + (PPE_{it}/TA_{it-1})$ ……(2)

Where:

DACC= discretionary accruals,

$TACC_{it}$ = Total Accruals of Firm i, For Period t,

TA_{It-1}= the book value of the total assets of firm i for previous year,

ΔREV_{it} = firm i's change in revenues in year t,

ΔREC_{it} = firm i's change in receivables in year t,

PPE_{it} = firm i's gross value of property, plant, and equipment in year t,

$NCFO_{it}$ = net cash flow from operating activities for firm i in period t;

EARNit = earnings for firm i, period t.

The study employed panel regression, and the model used for the study is presented in equation below:

$DCA_{it} = \alpha_0 + \beta_1 AFS_{it} + \beta_5 FSIZE_i + \epsilon_{it}$ …….(3)

Where:

DCA_{it}= Discretionary Accruals for firm i in year t

AFS_{it} = Audit firm size for firm i in year t

$FSIZE_{it}$ = Size of consumer goods for firm i in year t

α_0 = constant or intercept

β_1-β_5= regression coefficients.

ε_{it} = error term

Variable measurement and definition

The study analyzed the effects of audit firm size on the earnings management of listed consumer goods firms on the NSE. Therefore, Audit firm size was dichotomized with 1 for big four audit firm and 0 for non-big four audit firm while earnings management was proxy using Discretionary Accruals. In addition to the key explanatory variables, firm size was included as a control variable that may affect earnings management. The definitions and computation of these variables as listed in Table1 were adapted from literature reviewed to allow for meaningful comparison of the empirical results with those of prior empirical studies.

Table1: Definition of Variables

Variable	Definition
DependentVariables	
Discretionary Accruals	(DCA) Total accruals less non- discretionary accruals

ExplanatoryVariables	
Audit firm size (AFS)	1 if the company audited by Big 4 audit firm, otherwise, 0.
Control Variable	
Firm Size (FSIZE)	NaturalLogarithmofAssets

Source: ***Researchers Compilation from literature reviewed (2020)***

RESULTS AND DISCUSSION

Descriptive Statistics

The descriptive statistics of the dataset from the sampled consumer goods companies are presented in Table 2 where the mean, standard deviation, minimum and maximum values of the data for the variables used in the study are described.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Discretionary Accruals	207	6.9338	10.7353	-44.16	42.85
Audit firm size	207	0.7632	0.4261	0	1
Firm size	207	7.39189	0.7730	5.25	8.68

Source: *Stata 13 Output Results based on study data (2020)*

Table 2 presented the descriptive statistics for the dependent and independent variables (DAC = Discretionary accruals, AFS = Audit Firm Size, FSIZE = Firm Size). The standard deviation of the variables ranges from 0.4261 to 10.7353. Audit firm size has the lowest standard deviation of 0.4261 followed by firm size with a standard deviation of 0.7730, The Table also showed an average value of 6.9338 for discretionary accruals. Since earnings management is measured by absolute value of discretionary accruals in this study, the value of 6.9338 is an indication that sampled companies were involved in earnings manipulations during the study period. The minimum and maximum values of discretionary accruals during the study period are -44.16 and 42.85 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 42.85. This further corroborates the inference of manipulation of earnings earlier revealed by the mean of DAC.

The Table further revealed an average value of 0.7632 for audit firm size. The value implies that seventy-six (76) percent of the sampled consumer goods 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 seventy six percent further suggests that only twenty four percent of the consumer goods 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 consumer goods companies in Nigeria. The minimum and maximum values of audit firm size during the study period were zero (0) and (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.

CorrelationAnalysis

Table 3 presents correlation values between dependent and independent variables and the correlation among the independent variables themselves. These values are generated from Pearson Correlation

output. The Table contains correlation matrix showing the Pearson correlation coefficients between the dependent and independent variables and among the independent variables of the study.

Table 3: Result of CorrelationMatrix ofDependent andIndependent Variables

Variable	DCA	AFS	FIRMSIZE
Discretionary Accruals	1.0000		
Audit firm size	0.2950	1.0000	
Firm size	0.2656	0.4998	1.0000

Source:*Stata 13 Output Results based on study data (2020)*

The correlation results in table 3 showed that correlation coefficients between the predictor variables were generally low. The highest coefficients of correlation of 0.4998 representing relationships between variables were between firm size and audit firm size followed by 0.2950. audit firm size and discretionary. The Table revealed a positive correlation coefficient between audit firm size and discretionary accruals 0.2950 of listed consumer goods companies in Nigeria during the period of investigation. The weak coefficient between audit firm size and discretionary accruals of the sampled companies is an indication that audit firm size is associated with increase in earnings management of listed consumer goods companies during the study period. This relationship is surprising and against expectation because big 4 audit firms have the resources and capacity to perform high quality audit that is capable of mitigating earnings management of firms. In addition, big 4 audit firms have a reputation to protect more than small audit firms which serves as incentive to provide high quality audit services to their clients. Also, the high risk of litigation costs associated with big 4 audit firms upon discovery of fraudulent financial reporting is an incentive for big 4 audit firms to detect and report manipulation of earnings.

Collinearity Test

Variance inflation factor (VIF) is employed to detect the presence or otherwise of collinearity among the explanatory variables. The existence of high correlation among the independent variables may be termed as multi-collinearity. The presence of multi-collinearity in a model has the potential of biasing the regression results. The VIFs for AFS and FSIZE are 1.33 respectively. As pointed out by Myers (1990), VIF of less than 10, is an indication of absence of multi-collinearity. This implied that there is no multi-collinearity problem in our model since the VIFs is less than 10.

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Variable	VIF	1/VIF
afs	1.33	0.750165
fsize	1.33	0.750165
Mean VIF	1.33	

Source: *Reseacher's Computation from STATA 13 Output (2020)*

Table 4: Selection ofmodel toexamineeffectofaudit firm size on earnings management

Fixed Effect Model		Random Effect Model		Hausman test	
F-test	**P-value**	**F-test**	**P-value**	**F-test**	**P-value**
5.35	0.0055*	11.84	0.0027*	1.13	0.5585

Source:*Stata 13 Output Results based on study data (2020)*

The Hausman test statistic of 1.13 with a corresponding p value of 0.5585 used to compare FE and RE models was not significant (χ^2<0.05), indicating that the random effect estimation results were more reliable.

Table 5: Pooled OLS, Fixed effect and Random effect RegressionResults

	POOLED OLS				FIXED EFFECT				RANDOM EFFECT			
Variable	**Coef**	**Std error**	**t-values**	**Prob.>t**	**Coef**	**Std error**	**t-values**	**Prob.>t**	**Coef**	**Std. error**	**t-value**	**Prob.**
AFS	5.45	1.93	2.83	0.005	8.78	3.59	2.44	0.016	6.82	2.93	2.33	0.020
FSIZE	2.19	1.06	2.05	0.041	3.75	1.81	2.07	0.040	2.97	1.53	1.95	0.052
CONS	-13.39	7.26	-1.84	0.067	-27.47	13.56	-2.03	0.044	20.38	11.12	1.83	0.067
R^2	0.1056											
ADJ R^2	0.0959											
F-value	12.05											
Prob.>F	**0.000**											

Random effects (RE) regressions were employed to analyze the effect of audit firm size (AFS) on earnings management measured by (DCA) while controlling for firm size (FSIZE). OLS has been critiqued for being simplistic and failing to adjust for unobserved time- invariant confounders that are largely industry/firm-specific (Woodridge, 2016). In this study, the FE and RE estimation techniques are used to control for all time-invariant differences between the industries such that the estimated coefficients of the FE and RE models cannot be biased due to such omitted time-invariant and industry/firm specific variables (Baltagi, 2005). Thus, the effects of audit firm size on earnings management measure were also through FE and RE modelling.

Hypothesis Testing

H_0: Audit firm size has no significant effect on discretionary accruals of listed consumer goods firms in Nigeria

Contrary to priori expectations, table 4 reported a positive relationship between audit firm size and earnings management that is significant at 5% based on coefficient and t- values of 6.82 and 2.33 respectively and p- value of 0.0020. The result implied that audit firm size is not able to constrain earnings management practices of listed consumer companies in Nigeria. According to a priori expectations, audit firm size is negatively associated with earnings management because large audit firms have more resources to conduct high quality audits than small audit firms. Also, big audit firms have a large client base which makes them less dependent on any one client that could make them compromise their audit quality. Big audit firms also have more investment in reputation capital which is at stake if they are found to have compromise audit quality than small audit firms. Based on the result, the null hypothesis of the study which states that audit firm size has no significant effect on earnings management of listed consumer goods companies in Nigeria is rejected and the alternative hypothesis is accepted that audit firm size has significant effect on earnings management of listed consumer goods in Nigeria.

Discussion of Findings

From the aforementioned findings that big audit firms have greater monitoring ability and invest more in audit technology than smaller audit firms this gives big audit firms edge over the smaller audit firms in terms of providing high audit quality this finding tends to follow the assertion by DeAngelo (1981) that large audit firms have less incentive to behave opportunistically and because they have more wealth and more valuable reputation which they are assumed to guard, hence ensuring audit quality. Stakeholders believe that big audit firms perform better and therefore assuring higher audit quality.The present finding is consistent with those of Wijaya, A.L. (2020), AP Lopes (2018), Tyokoso, Sabari, Dogarawa and Ibrahim (2016), Afeez and Smill (2016) who found a positive association between audit firm size and earnings management of firms. The result however, contradicts the findings of Tyokoso and Tsegba

(2015), Aliyu, Musa and Zachariah (2015) who documented a negative relationship between audit firm size and earnings management of firms.

CONCLUSION AND RECOMMENDATION

Based on the result of data analysis and discussion, the following conclusions were reached.The study provided empirical evidence on the association between audit firm size and earnings management (proxy by discretionary accruals) of listed consumer goods companies in Nigeria. Specifically, the study concluded that audit firm size has a positive and significant effect on discretionary accruals of listed consumers companies in Nigeria indicating that an increase in audit firm size does not constrain but increases earnings management of the sampled firms. Consequently, given the foregoing the study recommends that consumer goods companies who are interested in the services of external audit firms in Nigeria should judge audit firms on the basis of effectiveness efficiency and output and not just the size of the audit firm as to whether they are among the big 4 or not. This is because audit firm size is not associated with less earnings management of consumer goods companies in Nigerian. Those who hire audit services in Nigeria should consider competence and experience of the audit firms rather than size that are likely to be associated with less earnings management of firms.

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