

**AUDIT QUALITY AND EARNINGS MANAGEMENT OF PHARMACEUTICAL COMPANIES LISTED IN NIGERIA**

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ABSTRACT:

This study focused on audit quality on earnings management of listed Nigerian pharmaceutical companies with the following objectives: To examine the effect of audit firm size on discretionary accrual of listed Pharmaceutical companies in Nigeria; to assess the effect of audit tenure on discretionary accrual of listed Pharmaceutical companies in Nigeria; to ascertain the effect of audit fee on discretionary accrual of listed Pharmaceutical companies in Nigeria; to evaluate the effect of audit firm specialization on discretionary accrual of listed Pharmaceutical companies in Nigeria.. A total of seven pharmaceutical companies listed on the floor of the Nigerian Exchange (NGX) Group as at 31st December 2021 were sampled. The data were sourced from publications of the Nigerian stock exchange (NSE), fact books and the annual report and accounts of the sampled pharmaceutical companies. Pearson correlation coefficient and panel least square (PLS) regression were used for analysis of the pharmaceutical companies for the years 2010 – 2021. Based on the analyzed results, the following summary of findings was provided: audit firm tenure has a significant but positive effect on discretionary accrual of listed pharmaceutical companies in Nigeria at 5% level of significance while audit firm size, audit fee and audit firm specialization has a significant but negative effect on discretionary accrual of listed pharmaceutical companies in Nigeria at 5% level of significance. This study concluded that; Audit Firm Size has a significant but negative effect on Discretionary Accrual; Audit Tenure has a significant and positive effect on Discretionary Accrual; Audit Fee has a significant but negative effect on Discretionary Accrual; Audit Firm Specialization has a significant but negative effect on Discretionary Accrual of listed Pharmaceutical companies in Nigeria at 5% level of significance. The following recommendations were made: that firms should always consider competence and experience of the audit firms rather than size that are likely to be associated with less earnings management of firms; accounting professional bodies should strictly ensure that their members who audit for their clients do not audit for more than three years at a spring to sphere the independence of the auditor and his/her objectivity; firms should find ways to lower audit cost by negotiating the audit services to be assessed in rates and hours, not just total fee level; that Auditors should have knowledge not only in auditing and accounting but also on clients' industry to deliver higher quality audit services than one audited by non-specialized auditor..



1. INTRODUCTION

The quest to develop the market coupled these intense market competition always push managers to use accounting manipulation strategies to manipulate accounting results and provide a round picture of a company's economic and financial status (Afifa, Saleh, & Haniah, 2021; Alzoubi, 2019). Earnings management are performed through the use of accounting standards flexibility or by non-compliance to accounting standards by manipulating financial statements (Saleh, Afifa & Haniah, 2020a). Earnings management are deviant behaviours by managers leading to accounting fraud which affect the company and its investors (Alqirem, Abu, Afifa, Saleh & Haniah, 2020). Almarayeh, Aibar_and Abdullatif (2020) noted that, earnings management affects the consistency, objectivity and integrity of accounting information. It reduces the quality of information provided to users thereby misinforming the end users. Saleh, Abu, Afifa and Alsufy, (2020b) observed that, audit quality improves investors' confidence on the quality of financial reporting and assist them in making informed decisions. (Alabdullah, & Ahmed, 2020), the significance of auditing revolves around how the earnings are disclosed in the company. Chartered Institute of Internal Auditors (2017) stated that, the main reason for the emergence of audit, is the separation of ownership of institutions from their managers, so that audit includes the examination and control process to report the auditors view on the quality and reliability of the financial statements.

Ahmad, Suhara and Ilyas (2016) added that, audit quality is related to the quality and effort of the auditor to identify material misstatement in the financial statements and auditor's willingness to disclose an unbiased audit report based on the audit results. Big 4 audit firms have more customers to offer their services, big-firm auditors have strong incentives to develop and maintain a high-quality audit scope and they have huge resources for auditing to protect their clients' image, reduce earnings management and prevent litigation risk from their clients (Wijaya, 2020). Ronen and Yaari (2011), defined earnings management as being in contrast to fraud, legal and within the GAAP regulations and that; earnings management occurs when managers use 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. Lo, Ramos and Rogo (2017) stated that, earnings management is not lying, although it violates comparability, making it hard to present the desired picture in a readable manner. Badertscher (2011) claims that, accruals management would be a preferred selection for managers as it seems less to destroy the financial base of firms in long term. Smii (2016) stated that, an audit fee is audit remuneration received by the auditors in discharge of their duties for the company or client. (Alzoubi, 2019) stated that, when an auditor receives huge amount as bribe for audit service,



the independence of the auditor is compromised as he would not want to provide negative reports against the client for it is believed that he had created economic bond with the client. (Butar-Butar & Indarto, 2018) observed that, industry-specialized auditor is measured as the auditor who enjoys at least 15 % of the audit market share. In other words, an audit firm is considered a specialist if it audits up to 15 % of the firms in the industry.

El-Guindy and Basuony (2019), found in their study that, the longer the audit firm tenure with a client firm, the lower the level of earnings management practice. In contrast, (Affess & Smii, 2016), stated that, longer auditor tenure aggravates earnings management practice. This might have a negative influence on the company's performance. Zang (2011) showed that, firms prefer different earnings management strategies in a predictive manner, depending on their operational environment, accounting environment and political costs. This study will define earnings management as a tactics employed in an organization by the management to purposefully misstate the earnings of the company in order to meet a prearranged target. Though earnings management is a complicated issue, the researcher wishes to trigger awareness and interest about it, more so in listed Nigerian pharmaceutical companies. The effectiveness of auditing and its ability to constrain the management of earnings is expected to vary with the quality of audit (Myers, Myers & Omer, 2003). The above premise necessitated the need to carry out a research work on the audit quality and its effect on earnings management of listed pharmaceutical companies in Nigeria.

1.1 Objectives of the Study

In the light of the growing interests and controversy surrounding earnings management, the study sought to determine the effect of audit quality on earnings management of listed Pharmaceutical companies in Nigeria. To this end, the following specific objectives guided this study:

- i. To examine the effect of audit firm size on discretionary accrual of listed Pharmaceutical companies in Nigeria.
- ii. Assess the effect of audit tenure on discretionary accrual of listed Pharmaceutical companies in Nigeria.
- iii. To ascertain the effect of audit fee on discretionary accrual of listed Pharmaceutical companies in Nigeria.
- iv. To evaluate the effect of audit firm specialization on discretionary accrual of listed Pharmaceutical companies in Nigeria.



1.2 Hypotheses

The following hypotheses were formulated for the study in their null form only:

- H₀₁: Audit firm size has no significant effect on discretionary accrual of listed Pharmaceutical companies in Nigeria.
- H₀₂: Audit firm tenure has no significant effect on discretionary accrual of listed Pharmaceutical companies in Nigeria.
- H₀₃: Audit fee has no significant effect on discretionary accrual of listed Pharmaceutical companies in Nigeria.
- H₀₄: Audit firm specialization has no significant effect on discretionary accrual of listed Pharmaceutical companies in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual review

2.1.1 Audit Quality

Audit quality is one of the most important issues in audit practice today (Okoye, Okaro & Okafor, 2015). Recent studies viewed audit quality as a reason for switching between earnings management practices (Mnif & Hamouda, 2020). (Nwoye, Anichebe & Osegbue, 2020), a company governance mechanism lies in the involvement of the auditor who evaluates their briefs and overall performance to know whether or not the economic records and income introduced are actual or manipulative. Corporate fraud poses significant threat to organization's integrity, respect, responsibility, truthfulness, accountability, fairness, transparency and loyalty (Gottschalk, 2016). Corruption leading to corporate scandals made the investors, regulators, general public and the academia to pay close attention as they take cognizance of audit quality, weak quality audit and seek for improvement in audit quality (Al-sraheen, 2014).

2.1.2 Audit Firm Size

DeAngelo (1981) theorizes that, larger firms perform better audits because they have a greater reputation at stake. The difference in audit quality of Big N firms and non-Big N firms has been reported mainly, due to their worldwide client base, big audit firms have greater motivation to maintain audit quality and avoid reputational risks (Krishnan, 2003). The large economy of scale and scope may offer such companies extensive benefits, lessening the pressure to dress up the firm's financial performance (Zamri, Rahman & Isa, 2013). However, research of (Kim, Liu & Rhee, 2003), showed that internal control systems in large-sized firms are likely to be more effectively designed and implemented comparing to small-sized, which mitigates earnings management behaviours. Large



firms are also exposed to higher pressure and scrutiny of the market, leading to reputation cost if, they engage in manipulation activities. Kim, Liu and Rhee (2003). Reiterated that, large firms are usually audited by high quality audit firms which have more competent auditors to prevent and detect earnings manipulations. Kim et al (2003). Stated that, because larger firms have more resources at their disposal, they can attract more highly skilled employees. Others have theorized that large auditors attract a fee premium because their greater wealth reduces clients' exposures in litigation. Others have theorized that there is no real audit quality difference, but the perception exists because large firms are well known and have gained a reputation for high quality. De Angelo's (1981) reports that, many other studies use auditor size (specifically Big8, Big6, Big5or Big4 Vs non-Big8, non-Big6, non-Big5 or non-Big4) to differentiate audit quality levels.

2.1.3 Auditor Tenure

Auditor tenure is viewed as the length of time between auditor-client relationship (Okolie, 2014). A lengthy engagement may bring about less effort to signal the failings of internal control and risk sources (Okolie, 2014). The objectiveness and willingness of an auditor in detecting anomalies increases in the first years of engagement but wanes with time, reaching its weakest level after 20 years of service (Okolie, 2014). There has been considerable decrease in number of years for auditor tenure. In the United States (US), auditor tenure was reduced from seven to five years; the European Commission recommended a rotation of engagement partners every seven years; in France, auditors are chosen for six financial years, while in Nigeria audit engagement should not exceed three years (Okolie, 2014).

2.1.4 Audit Fee

Onaolapo, Ajulo and Onifade (2017) defined audit fee as the amount charged by the auditor for an audit assignment carried out, that is, amount charged by the auditor for any work done in order to express opinions on the true and fair state of affairs or position of the client's enterprise,

Recently, the demand from auditors for business expert services has increased and expanded in different range of services which include: training, risk management advice, mergers and acquisition, taxation, portfolio monitoring, recruitment, human resources and corporate governance. Auditee size is the most significant variable in explaining audit fees. Also that, in those client industries with specialists, specialist Big audit firms charge higher fees than Non-Big audit firms because of their reputation in the audit market and/or their specialization in client-industries. According to Okolie (2014) higher audit fees are reflected in higher costs resulting from greater audit quality.



2.1.5 Audit Firm Specialization

Industry specialist auditors are familiar with the business operations of the industry of their specialization and also possess industry relevant experience and knowledge that enables them to audit such companies and its subsidiaries in the industry more effectively than their counterparts (Minutti-Meza, 2013; Sarwoko & Agoes, 2014). According to Arens, Best, Shailer, Fidler, Elder and Beasley (2011), a specialist auditor is an auditor who has a deep understanding (knowledge) and long experience of the client's specific business and industry, knows the operations of the company, and knows the specific rules on accounting and auditing for that specific industry because the business and industry conditions of the client can affect the client's business risk and the risk of misrepresentation of financial statements. Specialization auditor can be measured using two ways. First, Yuan, Cheng and Ye (2016) categorized one as industry specialists, if the firm or partner has the largest market share in a particular industry. Secondly, categorize as specialization auditor, if the firm or the partner is in charge of the particular market share. Setiawan and Fitriany (2011) categorize a specialist if the firm controls 10% of market share.

2.1.6 Earnings Management

The prevalence of information asymmetry creates difficulty for owners of the business (shareholders) to detect earnings management as it significantly heightens the unhindered means of accomplishing the practice of earnings management in organizations (Okolie, 2014). There are generally two views of earnings management. Firstly, earnings management is seen as a management tool used for fulfilling their responsibility of wealth maximization. Secondly, earnings management is considered as an alteration of economic events in order to mislead the users of financial statements. These two different perspectives have led to various definitions of earnings management in prior literatures. On the aspect of earnings management having a positive effect, earnings management was defined as a way for managers to disclose their private expectations about the firm's future cash flows to investors. This was also affirmed by (McKee, 2005) who defined earnings management as reasonable, management decision making and reporting, intended to achieve stable and predictable financial results. On the perspective of earnings management having a negative effect, the following definition was put forth by Ronen and Yaari (2011), which stated that, earnings management is in contrast to fraud, legal and within the GAAP regulations and that; earnings management occurs when managers use 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. Companies use earnings management to present the appearance of consistent profits and to smooth earnings fluctuations.

2.2 Theoretical Review

2.2.1 Agency theory

This study will be guided by the assumption of the agency theory. Agency theory was first propounded by Mitnick in 1973. He defined agency theory to be the study of the agency relationship and the issues that arise from this, particularly the dilemma by the principal and the agent, while working towards the same goal, may not always share the same interests. Jensen and Meckling (1976) explained further that the agency relationship is one in which one or more persons (the principals) engage another person (the agent) to perform some services on their behalf which involves delegating some decision making authority to the agent. Information asymmetries between managers and shareholders gave rise to agency conflicts since managers have incentives to keep excess cash in order to obtain personal benefits (Jensen & Meckling, 1976). In this perspective. Agency theory explains the agency problem, which is due to the agent (management) acting in their own benefit and in an opportunistic manner at the expense of the principal (owners/shareholders) (Jensen & Meckling 1976). An information asymmetry in a company emerges as a consequence of managers having a competitive advantage in the company's information over the stakeholders (Zogning, 2017). Therefore, agency theory solves the issue of information asymmetry which leads to conflicts and dissimilar interests between the principals (shareholders) and the agent (manager) which makes managers to take opportunistic behavior of manipulating the financial statement. Agency theory posits that, to prevent the managers from manipulating the accounting figures in order to mislead the stakeholders, there is need for an independent party to attest to the financial statement prepared by the management. To achieve this, high quality of audit service is required. The agency theory perceives that audit firm size, audit fee, audit firm specialization and auditor tenure are associated with higher audit quality.

3. MATERIAL AND METHOD

This study utilized *Ex-Post Facto* research design in conducting the research. *Ex-Post Facto* seeks to find out the factors that are associated with certain occurrences, conditions, events or behavior by analyzing past events or already existing data for possible casual factors (Brooks, 2019). The population of this study comprised of the seven (7) pharmaceutical companies listed on the floor of the Nigerian Exchange (NGX) Group as at 31st December 2021. The pharmaceutical companies include: Fidson Healthcare Plc; Glaxo SmithKline Consumer Plc; May & Baker Nigeria Plc; Morison



Industries Plc; Neimeth International Pharmaceutical Plc; Pharma-Decko Plc; PZ Cussons Nigeria Plc. Consequent upon the fact that the entire seven (7) pharmaceutical companies were sampled, hence, no need for sampling technique.

Basically, this study made use of secondary data. The data were sourced from publications of the Nigerian stock exchange (NSE), fact books and the annual report and accounts of the sampled pharmaceutical companies.

Table 1 Variables Definition and Measurement Units

Variable Type	Indicators	Variable Symbols	Definition and Measurement
Dependent Variable (Earnings Management)			
	Discretionary Accruals	DAC	Measured by absolute values of the residuals (discretionary accruals) using Modified Jones model by Dechow, Sloan and Sweeney, (1995)
Independent Variable (Audit Quality)			
	Audit Firm Size	AUDFSZ	Dichotomous: ‘1’ if company is audited by a Big4, ‘0’ otherwise. (The big four are PricewaterhouseCoopers (PWC), Deloitte, KPMG and Ernst & Young).
	Audit Tenure	AUDT	was measured in terms of number of years spent as auditor for sample company. If greater than 3, we assign 1 else 0
	Audit Fee	AUDF	natural log of Audit fee by the client firm
	Audit firm specialization	AUDFSP	defined by Auditor Industry Share and Auditor 10% Industry Share. Auditor Industry Share is the percentage of sales the client’s audit firm audits in the client’s industry. Auditor 10% industry share equals one (1) if the client’s audit firm audits at least 10% of the sales in the client’s industry for sampled firms otherwise “0”. Source : Setiawan and Fitriany (2011)



This study applied the quantitative approaches and ratio analysis to ascertain the effect of audit quality on earnings management of listed Pharmaceutical companies in Nigeria during the period 2010-2021 and it includes the ratio analysis of the study variables using the panel data obtained from Nigeria Exchange (NGX) Group of the sampled firms. This study adopted the cross-sectional modified Jones model to estimate earnings management. In employing the modified Jones model, total accruals (*TAC*) are decomposed into non-discretionary accruals (*NDAC*) and discretionary accruals (*DAC*), as shown in equation (1). *NDAC* are estimates that represent changes in the underlying economic performance of the company, while *DAC* are open to managers' discretion and hence are operationalized as a proxy for earnings management.

$$TAC_{i,j,t} = NDAC_{i,j,t} + DAC_{i,j,t} \quad \text{Eqn 1}$$

where $TAC_{i,j,t}$ is the total accruals for company i in industry j in year t ; $NDAC_{i,j,t}$ and $DAC_{i,j,t}$ are the non-discretionary accruals and the discretionary accruals respectively for company i in industry j in year t . $TAC_{i,j,t}$ is computed using the cash flow approach, instead of the balance sheet approach. The cash flow approach provides more accurate accruals' estimates, because measurement errors in accruals estimates introduced by the balance sheet approach can be substantial when non-operating activities like mergers and acquisitions, divestitures and foreign currency translations are present (Hribar & Collins, 2002). The cash flow approach involves deducting the operating cash flows ($OCF_{i,j,t}$) from the net income ($NI_{i,j,t}$).

$$TAC_{i,j,t} = NI_{i,j,t} - OCF_{i,j,t} \dots \dots \dots \text{Eqn 2}$$

Then, DAC_{it} is computed as the difference between TAC_{it} and $NDAC_{it}$, using the modified Jones model equation (3):

$$DAC_{it} = \frac{TAC_{it}}{TA_{i,t-1}} - \left\{ \alpha_i \left(\frac{1}{TA_{i,t-1}} \right) + \beta_{1t} \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{i,t-1}} \right) + \beta_{2t} \left(\frac{PPE_{it}}{TA_{i,t-1}} \right) \right\} \quad (3)$$

where:

$TA_{i,t-1}$ is the total assets for company i at the end of the prior year;

ΔREV_{it} is the change in revenue for company i between year t (current year) and $t-1$ (prior year);

ΔREC_{it} is the change in receivables for company i between year t (current year) and $t-1$ (prior year);

PPE_{it} is the gross property, plant and equipment for company i in year t ;

α_i is constant

β_{1t} and β_{2t} are the company-specific estimates of coefficients

Inferential statistics was also utilized in this study with the aid of E-Views 10.0, using:



Coefficient of correlation: which is a good measure of relationship between two variables that tell us about the strength of relationship and the direction of the relationship as well.

Panel Least Square (PLS) regression analysis: was used to predicts the value of the dependent variable based on the value of the independent variable

This study adapted and modified the Ndulue, Okoye and Amahalu (2021):

$$EPS = \beta_0 + \beta_1 DAC_{it} + \mu_{it} \dots\dots Eqn 3$$

$$CVA = \beta_0 + \beta_1 DAC_{it} + \mu_{it} \dots\dots Eqn 4$$

$$CFROI = \beta_0 + \beta_1 DAC_{it} + \mu_{it} \dots\dots Eqn 5$$

Where :

EPS_{it} = Earnings per Share

CVA_{it} = Cash Value Added

CFROI_{it} = Cash Flow Return on Investment

Following the adapted model, the specific constructs for this study’s model are:

$$DAC_{it} = \beta_0 + \beta_1 AUDFSZ_{it} + \beta_2 AUDT_{it} + \beta_3 AUDF_{it} + \beta_4 AUDFSP_{it} + \mu_{it} \dots\dots Eqn 6$$

Where:

β_0 = Constant term (intercept)

β_{it} = Coefficients of Audit Quality for company *i* in period *t*

μ_{it} = Error term/unexplained variable(s) of company *i* in period *t*

DAC_{it} = Discretionary Accruals of company *i* in period *t*

AUDFSZ_{it} = Audit Firm Size of company *i* in period *t*

AUDT_{it} = Audit Tenure of company *i* in period *t*

AUDF_{it} = Audit Fee of company *i* in period *t*

AUDFSP_{it} = Audit Firm Specialization of company *i* in period *t*

3.1 Decision Rule

Accept the null hypothesis (H₀) if the p-value of the test is greater than 0.05, otherwise reject.



4. RESULT AND DISCUSSIONS

4.1 Descriptive Statistics

The data set obtained from the sampled pharmaceutical companies’ financial statements and reports for the twelve-year period (2010 – 2021) were presented in Appendix 1 as Table 2.

4.2 Test of Hypotheses

Table 3: Pearson Correlation Matrix

	DAC	AUDFSZ	AUDT	AUDF	AUDFSP
DAC	1.0000				
AUDFSZ	0.0637	1.0000			
AUDT	0.2177	-0.0976	1.0000		
AUDF	-0.1379	-0.5079	0.1961	1.0000	
AUDFSP	0.0753	0.7143	0.0976	-0.5079	1.0000

[[Source: Researcher’s computation (2022) using E-Views 10.0

Table 4: Panel Least Square (PLS) regression analysis showing the effect of audit quality on earnings management:

Dependent Variable: DAC

Method: Panel Least Squares

Date: 08/25/22 Time: 13:18

Sample: 2010 2021

Periods included: 12

Cross-sections included: 7

Total panel (balanced) observations: 84

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.110201	0.010001	11.01851	0.0000
AUDFSZ	-0.310559	0.112343	-2.764379	0.0071
AUDT	0.613366	0.084750	7.237316	0.0000
AUDF	-0.238053	0.085985	-2.768556	0.0070
AUDFSP	-0.320084	0.141537	-2.261485	0.0264
R-squared	0.578436	Mean dependent var		0.106149
Adjusted R-squared	0.562628	S.D. dependent var		0.025761



S.E. of regression	0.025739	Akaike info criterion	-4.423961
Sum squared resid	0.052336	Schwarz criterion	-4.279269
Log likelihood	-23.50434	Hannan-Quinn criter.	-4.365796
F-statistic	36.58990	Durbin-Watson stat	1.700556
Prob(F-statistic)	0.000000		

Source: Researcher's computation (2022) using E-Views 10.0

4.2.1 Hypothesis One

Ho₁: Audit firm size has no significant effect on discretionary accrual of listed Pharmaceutical companies in Nigeria:

From Table 4 above, it could be seen that AUDESZ has a negative (-2.7643) relationship with discretionary accrual. This was further confirmed by the p-value 0.0071 which is less than 0.05, thus indicating that audit firm size has a negative but significant effect on discretionary accrual of listed Pharmaceutical companies in Nigeria.

4.2.2 Hypothesis Two

Ho₂: Audit firm tenure has no significant effect on discretionary accrual of listed Pharmaceutical companies in Nigeria.

From Table 4, it could be observed that a positive and significant relationship exists between AUDT (β_2) = 0.613366, p-value = 0.0000 and DAC. Since p-value (0.0000) is less than 0.05, we accept the alternate hypothesis, and this implies that Audit firm tenure has a positive and significant effect on discretionary accrual of listed Pharmaceutical companies in Nigeria.

4.2.3 Hypothesis Three

Ho₃: Audit fee has no significant effect on discretionary accrual of listed Pharmaceutical Companies in Nigeria

Table 4 above indicates that there is a negative and significant relationship between AUDF (β_3) = -0.238053, p-value = 0.0070 and DAC. Since p-value (0.0070) is less than 0.05, we accept the alternate hypothesis, and this implies that Audit fee has a positive and significant effect on discretionary accrual of listed Pharmaceutical Companies in Nigeria.



4.2.4 Hypothesis Four

H₄: Audit firm specialization has no significant effect on discretionary accrual of listed Pharmaceutical companies in Nigeria.

From Table 4 above, it was observed that there is a negative and significant relationship between AUDFSP (β_4) = -0.320084, p-value = 0.0264 and DAC. Since p-value (0.0264) is less than 0.05, we accept the alternate hypothesis, and this implies that Audit firm specialization has a positive and significant effect on discretionary accrual of listed Pharmaceutical companies in Nigeria.

CONCLUSION AND RECOMMENDATIONS

This study assessed the effect of audit quality on earnings management of listed Pharmaceutical companies in Nigeria. This study obtained data from annual reports and account and publications from the Nigerian Exchange (NGX) Group for the Pharmaceutical companies that operated during 2010-2021. To determine the relationship that exists amongst the study variables and the effect thereof, Pearson correlation coefficient and panel least square regression technique were employed. This study revealed that Audit Firm Size has a significant but negative effect on Discretionary Accrual; Audit Tenure has a significant and positive effect on Discretionary Accrual; Audit Fee has a significant but negative effect on Discretionary Accrual; Audit Firm Specialization has a significant but negative effect on Discretionary Accrual of listed Pharmaceutical companies in Nigeria at 5% level of significance. Based on the study findings and conclusion, we made the following recommendations:

- i. Considering the negative relationship between audit firm size and earnings management, it is suggested that firms should always consider competence and experience of the audit firms rather than size that are likely to be associated with less earnings management of firms.
- ii. Since audit tenure impacts positively on the quality of the auditor's report. Professional bodies such as the Association of National Accountants of Nigeria (ANAN), Institute of Chartered Accountants of Nigeria (ICAN) and others should strictly ensure that their members who audit for their clients do not audit for more than three years at a spring to sphere the independence of the auditor and his/her objectivity.
- iii. In order to reverse the negative relationship between audit fees and earnings management, firms should find ways to lower audit cost by negotiating the audit services to be assessed in rates and hours, not just total fee level.
- iv. In an attempt to address the inverse relationship between Audit Firm Specialization and earnings management, it is thereby suggested that Auditors should have knowledge not only in auditing and accounting but also on clients' industry. This is necessary because a



company audited by a specialized auditor will provide a higher certainty level, giving some added value to its clients, and is capable of delivering higher quality audit services than one audited by non-specialized auditor.

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Appendix I

Table 2: Operational Processed Data of Variables

FIRM	YEAR	DAC	AUDFSZ	AUDT	AUDF	AUDFSP
Fidson	2010	0.11	0.00	1.00	1.42	0.00
Fidson	2011	0.11	0.00	1.00	1.22	0.00
Fidson	2012	0.08	0.00	1.00	1.34	0.00
Fidson	2013	0.08	1.00	0.00	0.45	1.00
Fidson	2014	0.06	1.00	1.00	0.49	1.00
Fidson	2015	0.13	1.00	1.00	0.53	1.00
Fidson	2016	0.11	1.00	1.00	0.46	1.00
Fidson	2017	0.10	1.00	0.00	0.98	0.00
Fidson	2018	0.11	0.00	0.00	0.34	0.00
Fidson	2019	0.11	1.00	1.00	0.46	0.00
Fidson	2020	0.11	0.00	1.00	0.43	0.00
Fidson	2021	0.16	1.00	1.00	0.52	1.00
GSK	2010	0.13	1.00	1.00	0.73	1.00
GSK	2011	0.06	0.00	1.00	0.75	1.00
GSK	2012	0.08	1.00	1.00	0.81	0.00
GSK	2013	0.10	1.00	0.00	0.17	0.00
GSK	2014	0.12	1.00	0.00	0.34	0.00
GSK	2015	0.10	0.00	0.00	0.37	0.00
GSK	2016	0.12	0.00	1.00	0.53	1.00
GSK	2017	0.09	0.00	1.00	0.56	1.00
GSK	2018	0.16	1.00	1.00	0.74	1.00
GSK	2019	0.16	1.00	1.00	0.62	1.00
GSK	2020	0.12	1.00	0.00	0.71	1.00
GSK	2021	0.12	1.00	0.00	0.48	0.00
M&B	2010	0.12	1.00	1.00	0.87	0.00
M&B	2011	0.11	1.00	1.00	0.73	0.00
M&B	2012	0.08	0.00	1.00	0.97	0.00
M&B	2013	0.10	0.00	0.00	1.22	1.00
M&B	2014	0.13	1.00	1.00	1.21	1.00
M&B	2015	0.22	1.00	1.00	0.93	1.00
M&B	2016	0.86	1.00	1.00	0.31	0.00



M&B	2017	1.39	0.00	0.00	0.37	0.00
M&B	2018	0.10	1.00	0.00	0.58	1.00
M&B	2019	0.09	1.00	1.00	0.05	1.00
M&B	2020	0.11	1.00	1.00	0.13	1.00
M&B	2021	0.14	1.00	1.00	0.08	1.00
Morrison	2010	0.11	0.00	1.00	0.41	0.00
Morrison	2011	0.13	0.00	1.00	0.80	0.00
Morrison	2012	0.13	1.00	1.00	0.38	1.00
Morrison	2013	0.81	1.00	0.00	0.56	1.00
Morrison	2014	0.05	1.00	1.00	0.43	1.00
Morrison	2015	0.13	1.00	1.00	0.63	1.00
Morrison	2016	0.12	1.00	1.00	0.10	0.00
Morrison	2017	0.10	0.00	0.00	0.81	0.00
Morrison	2018	0.11	0.00	0.00	0.05	1.00
Morrison	2019	0.10	1.00	0.00	4.73	1.00
Morrison	2020	0.11	1.00	1.00	5.62	1.00
Morrison	2021	0.10	1.00	1.00	0.41	0.00
Neimeth	2010	0.11	0.00	1.00	0.89	0.00
Neimeth	2011	0.13	0.00	1.00	0.47	0.00
Neimeth	2012	0.12	1.00	1.00	0.79	0.00
Neimeth	2013	0.11	1.00	1.00	0.45	0.00
Neimeth	2014	0.11	1.00	1.00	0.79	1.00
Neimeth	2015	0.13	1.00	0.00	0.70	1.00
Neimeth	2016	0.12	1.00	0.00	0.79	1.00
Neimeth	2017	0.11	0.00	1.00	0.81	0.00
Neimeth	2018	0.14	0.00	1.00	0.14	0.00
Neimeth	2019	0.14	1.00	1.00	0.74	1.00
Neimeth	2020	0.16	1.00	0.00	0.78	1.00
Neimeth	2021	0.14	1.00	1.00	0.76	1.00
Pharma	2010	0.14	1.00	1.00	1.85	0.00
Pharma	2011	0.13	0.00	1.00	1.70	0.00
Pharma	2012	0.11	0.00	0.00	2.35	1.00
Pharma	2013	0.10	1.00	1.00	1.80	1.00
Pharma	2014	0.11	1.00	1.00	1.17	1.00



Pharma	2015	0.11	1.00	1.00	1.11	0.00
Pharma	2016	0.11	0.00	0.00	1.04	0.00
Pharma	2017	0.11	1.00	0.00	1.03	1.00
Pharma	2018	0.12	1.00	1.00	0.38	1.00
Pharma	2019	0.13	0.00	1.00	0.53	0.00
Pharma	2020	0.13	0.00	1.00	0.61	0.00
Pharma	2021	0.22	1.00	1.00	0.74	1.00
PZ	2010	0.17	1.00	1.00	0.86	1.00
PZ	2011	0.18	1.00	1.00	0.94	1.00
PZ	2012	0.19	1.00	1.00	0.98	1.00
PZ	2013	0.15	0.00	0.00	1.69	1.00
PZ	2014	0.14	0.00	0.00	1.74	0.00
PZ	2015	0.10	1.00	1.00	1.37	0.00
PZ	2016	0.10	1.00	1.00	1.66	1.00
PZ	2017	0.10	1.00	1.00	1.55	0.00
PZ	2018	0.15	0.00	0.00	1.14	1.00
PZ	2019	0.12	1.00	0.00	1.19	1.00
PZ	2020	0.11	1.00	1.00	0.99	0.00
PZ	2021	0.10	1.00	1.00	0.46	1.00

Source: Annual Reports and Accounts, Fact Books (various issues), 2022.