

EFFECT OF AUDIT QUALITY ATTRIBUTES AND IFRS ADOPTION ON FINANCIAL REPORTING QUALITY OF LISTED MANUFACTURING FIRMS IN NIGERIA

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Abstract

The accounting and auditing profession in the last two decades have been in the limelight after the fall of many multinational companies. The fall of these companies were examined by many researchers and were linked to audit quality deficiencies and inadequacies of financial reporting standards. To forestall future occurrences the international financial reporting standard (IFRS) adoption gained global momentum as it is expected to enhance all the proxies of financial reporting quality. Similarly, the International Auditing and Assurance Standards Board (IAASB) promulgated new set of auditing standards in an attempt to regain public confidence. This is because audit quality is an essential element in achieving global financial stability and high-quality financial reporting. This study examined the effect of audit quality attributes (proxy by audit report timeliness, audit fees and audit firm size) and IFRS adoption on financial reporting quality (proxy by accrual and real earnings management) of 40 listed manufacturing firms on the Nigerian Exchange Group (NGX). The study adopted a Correlational research design using secondary data for the period 2007 to 2021. Panel data technique was employed, while fixed and random effects model were used for estimation. Descriptive Statistics, Pearson correlation coefficient and multiple regression analysis were used for analysis to determine possible link between the variables identified. The accrual earnings management (AEM) was measured by the Yoon, Miller & Jiraporn (2006) model and the real earnings management (REM) measured by the Roychowdhury (2006). The regression results reveal a R^2 of 39% and 41% which suggests AEM and REM are close substitutes. Audit report timeliness (0.0012 and 0.0003) positive and statistically significant. This suggests a positive impact on financial reporting quality and the length of time from a company's accounting year end to the date of the auditor report can determine the FRQ of listed manufacturing firms in Nigeria. Audit fee (-0.0604 and - 0.0418) and Audit firm size (-0.9163 and -0.0096) have negative correlation and are also statistically not significant to financial reporting quality. The adoption of IFRS for AEM and REM (-0.5436 and 0.0091) however, they have P- values which are positive and significant at 0.05 suggesting significant association of manufacturing firms listed in NGX negatively affects AEM but positively affects REM. Hence, the study recommends the enhancing the implementation and oversight of IFRS standards and ensuring that the regulations are not only adhered to but also comprehensively understood, and any unintended consequences are mitigated.

Keywords: Financial reporting quality, IFRS adoption, audit quality attributes

1. Introduction

The importance of qualitative financial report cannot be over emphasized in accounting and auditing profession as they serve as the foundation of financial accounting. The main objective of financial reporting is to offer information about a company's position, typically through measures of earnings and its components (Alareeni & Aljuidi, 2020). Several accounting scandals (such as; the KPMG in the case of Silicon valley bank and Signature bank in 2023 the Carillion case which is the biggest corporate collapse in British history, the Ernst & Young, Deloitte and KPMG in the Malaysian development in 2020 and Arthur Anderson in the case of the collapse of world com, one of the largest telecommunication companies in the United states) have surfaced as a result of distortions of financial information reported in the financial statements.

Managers are saddled with the decision to choose accounting methods, policies and estimates in the reporting process which are guided by accounting standard setting bodies to attain some specific objective. This responsibility many a times serves as flexibilities to distort financial information in order to maximize their interests (Shehu, 2013). This distortion of financial information is called earnings management and it is a key pointer of financial reporting quality. Similarly, the agency theory saddles the manager with the responsibility of acting in a manner that is in line with the value maximization goal of the firm. However practically, their positions put them in a spot that prompts information asymmetry which allows them to put their selves first ahead of the goals of the firms they manage and, in a bid, to cover their selfishness the managers distort financial information.

As a consequence, investors, shareholders, regulators, and every other person who has interest in the accounting information lost trust in financial reporting (Emmanuel & Emem, 2020). The persuasive need for transparent, qualitative financial report and reliable audits in order to regain public trust and confidence of these stakeholders became apparent. In this bid the International Accounting Standard Board (IASB) provided the IFRS, a uniform set of high quality accounting standards that will promote transparency, accountability and efficiency in financial reporting (IFRS Foundation, 2022).

The IAASB in a similar bid also promulgated new set of auditing standards in an attempt to regain public confidence on auditing and audit quality attributes According to the IAASB (2013), audit quality is also critical for achieving global financial stability and high-quality financial reporting because it fosters trust in reporting quality. The role of auditing has also been acknowledged by Levitt (1998), to provide qualitative financial report and boost investors' confidence. Similarly, Ahmed and Ahmed, (2016) assert that the credibility of financial reporting can be achieved through the statutory work of the auditor; qualitative audit will also suppress opportunistic earnings by managers.

Typically, auditor related attributes have been debated as part of the composition that curbs a managers' penchant for manipulation and are potential mechanisms to reduce agency problem (DeAngelo, 1981; DeFond & Zhang 2014; Knapp, 1991 & Chen et al., 2005). The agency problem associated with the separation of ownership and control also creates the demand for external audit (Gerayli, Yanesari & Ma'atoofi, 2011). This is because the auditor plays an important role in validating that financial reporting is fairly stated in conformity with the accounting standards and that it reflects the true economic situation and operations of a company. This however, is subjected to numerous guidelines and measures such as the commitment of auditing standards; independence, competence, and exercise of due professional care (Habbash & Alghamdi, 2017). This opened up a debate questioning the ability of auditors to effectively constrain the choice of accounting practices by managers, especially in developing countries (Yasser & Soliman 2018).

The quality of audit is defined by IAASB (2013) as auditors applying a rigorous audit process and quality control procedures that comply with laws, regulations and applicable standards. It comprises the key that creates an environment which maximizes the likelihood that quality audits are performed on a consistent basis. Audit quality can be measured by input-based proxies, this include; the auditor's independence, auditor's engagement performance, audit committee quality and audit fee. It can also be measured by indirect measures which include; audit firm's brand

name, auditor's industry expertise, audit fees, auditor's reporting timeliness, economic dependence, reputation and cost of capital. Researches have sprung up to examine the association between audit attributes and the quality of financial reporting and have produced mixed results.

One part of this literature supports the view that financial reporting quality is negatively associated with audit attributes while others find positive correlation. However, most of these studies use discretionary accruals from modified Jones model which recent studies (such as; Mohammed, Yahaya & Zakariya, 2022.; Alareeni & Alghamdi, 2017; Roychowdhury, 2006) have shown that REM is a superior alternative to traditional earnings management techniques due to its detrimental effects on future cash flows and potential negative effects on a company's value over time.

In addition, Alareeni and Aljuidi (2014) examined the Modified Jones (1995) and Yoon *et al.*, (2006) models effectiveness in detecting earnings management in Palestine an emerging economy similar to Nigeria. The study also compared the Modified Jones (1995) model with the Yoon *et al.*, (2006) model and the results gave an overview of the best model in detecting earnings management practiced by listed companies in the PEX. The results revealed that the Yoon *et al.*, (2006) model is better than the Modified Jones (1995) model in detecting earnings management in the Palestinian's context. The results are in line with Yoon & Miller, 2006; Yoon *et al.*, 2006; Islam *et al.*, 2011) were the findings demonstrated that the Jones model is inadequate in detecting earnings management in developing companies. Hence, this study examined the impact audit attributes using both accrual earnings management measured by an extended Jones model Yoon *et al* (2006) and the real earnings management measured by the Roychowdhury (2006) model.

The adoption of IFRS also opened up the extant streams of literatures that have revealed two divergent views on the effect of audit quality attributes on financial reporting quality after the adoption of IFRS. While one part of the literature are of the opinion the adoption of IFRS led to a decrease in AEM (Dinuka (2019) others are of the opinion it increased REM (Susanto 2017; Sellami & Fakhfakh 2014). The debate is also ongoing on whether or not the information contained in audit reports created by reputable auditors (i.e the Big 4 Deloitte, PwC, Ernst & Young, or KPMG) is considered more reliable and credible than the information included in audit reports provided by non-Big 4 audit companies.

Literatures (such as; Isaku *et al* 2020, Olorundare, *et al* 2019; Abdulrahman *et al*, 2018) are of the view that the size of the audit firm as a proxy is visibly related to the quality of the audit, that is larger audit firms provide higher audit quality. They assert that an auditor who represents one of the four large audit firms, Big 4 (Deloitte Touche Tohmatsu, Ernst & Young, KPMG and PricewaterhouseCoopers), is able to provide greater audits compared to smaller audit firms. This study thus examined the audit firm size to see the impact on financial reporting quality in listed manufacturing firms.

However, Cameran & Pietro, (2014) reveal that if IFRS improves the quality of financial reporting, a decrease in liability costs will be seen, and lower audit fees will be demanded. This is because higher fees are likely to be charged if greater effort is required from auditors. Nonetheless, an increase in auditing cost was evident in a report by the Institute of Chartered

Accountants in England and Wales after the adoption of IFRS. Hence, this study examined audit fee as a proxy of audit attribute on the quality of FRQ.

The timeliness of financial reporting is also considered as a key proxy of the quality of financial reporting quality. Hence, the auditor must take precautions to make it timely as an audit report gap jeopardizes the financial report that will be provided to owners and potential investors. Though, it is expected that IFRS adoption would enhance all the proxies of financial reporting quality (FRQ), contending views argue that IFRS elongate timeliness as it extend the scope of the audit work (Akhor, Obaretin & Monye-Emina, 2020). In spite of the volume of research in this area, cases of FRQ problems are still prevalent which therefore necessitate a study on audit quality attributes and FRQ in Nigeria. Also, audit quality literatures have been more particularized in developed countries than in emerging countries like Nigeria (Soyemi, Olufemi & Adeyemi, 2020).

However, because of variations in data, sample sizes, and even methodological approaches of legal and operating frameworks in developed countries results of these studies will yield different results in developing countries. As a result, this study differs significantly from previous research in two areas. The manipulation of real earnings is used to measure earnings management in addition to the accruals earnings method because real earnings management directly affects the company's operations cash flow while accruals earnings management has no direct impact on it. Hence, this study examined the extent of audit quality attributes effect on the financial reporting quality of listed companies in Nigeria with particular focus on firms operating within the manufacturing industry during the financial year period of 2007 to 2021 using the Yoon *et al* (2006) and Roychowdhury (2006) model. The choice of manufacturing firm is premised on the fact that it a public entity which is required to separate the ownership and management to ensure transparency. The separation of these powers is responsible for the conflict of interest among different stakeholders of the company.

Specifically, this study assessed the impact to audit attributes proxy by; audit report timeliness, audit fee, audit firm size and IFRS adoption on the financial reporting quality proxy by real and accruals earnings management for listed manufacturing firms in Nigeria. The world is at the end of convergence towards IFRS, the extensive acceptance and adoption of IFRS over 130 economies have increased the debate and research interests on its impact on several structural outcomes as well as financial reporting quality dimensions (Akhor, Obaretin & Monye-Emina, 2020). Many studies thereafter examined the adoption of IFRS and how its mandatory adoption operates in developed and emerging countries. Hence, this study sought to achieve these objectives;

- i. Assess the effect of audit report timeliness on financial reporting quality of listed manufacturing firms in Nigeria.
- ii. Assess the effect of auditor's fee on financial reporting quality of listed manufacturing firms in Nigeria.
- iii. Examine the effect of audit firm size on financial reporting quality of listed manufacturing firms in Nigeria.
- iv. Examine the effect of IFRS adoption on financial reporting quality of listed manufacturing firms in Nigeria.

The remaining part of the paper consists of four sections including; section 2; literature review, section 3; methodology, section 4; results and discussions and section 5 provides for summary, conclusions and recommendation.

2. Literature Review

Several audit quality studies indicate that there is a relationship between the audit quality attributes, IFRS adoption and financial reporting quality. Financial reporting quality is defined as financial statements that give true and fair information about the financial situation and daily operations of an entity by a number of accounting standard boards, including the International Accounting Standards Board (IASB), the Accounting Standards Board (FASB), the Australia Accounting Standard Board (AASB), and the Accounting Standard Board in the United Kingdom (ASBUK). Soderstorm and Sun (2007) defined the quality of accounting information as the relevance of value and the quality of profits. Earnings are the most noteworthy accounting item in a financial report as it serves as a guide for investment and decision-making (Egolum & Ikebudu, 2023).

Ronen and Yaari (2008) validate earnings management as an aftermath of managerial decisions that occur when managers do not report in the true short-term the value-maximizing earnings as known to management. These results can be in three forms; beneficial: signals long-term value; pernicious: conceals short or long term value; or neutral: reveals the short-term true performance. The usually occur when earnings result from taking production or investment actions before earnings are realized, or making accounting choices that affect the earnings numbers and their interpretation after the true earnings are realized. Prior literatures in the field of earnings management have assumed two types of earnings management exist: "Accruals Earning Management"(AEM) and "Real Earnings Management" (REM) which this study adopts. Accruals earnings management (AEM) is earnings management through accounting decisions or accruals, while real earnings management (REM) is earnings management through real business decisions or real activity manipulation.

Audit quality is defined by Ndubuisi *et al* (2017) as the proficiency of auditor in determining and reporting any errors in a financial statement which include; aggressive income or discretionary accruals. Discretionary accruals here are defined as accruals that could be manipulated by management and usually intended to achieve a desired profitability or income. An auditor is therefore under obligation to disclose non-fair discretionary accruals to prevent misstatement of financial statement.

The definition of DeAngelo (1981) which is one of the most widely accepted definitions of audit quality stated that, the quality of audit services is a combination of market probabilities that a given auditor will both realize a breach in the client's accounting system and the auditor will report the breach there after. This definition is based on the duo characteristic of competency and independence of the external auditor. Competency here is associated with the auditor's ability to detect violations of accounting principles in the accounting system of a client in this study competency is proxy by audit firm size. While independence on the other hand involves the ability of the auditor to report observed breaches in the accounting system of a client. The ability to ensure profession diligence and due care which is proxy by audit report timeliness and audit fees. Hence this study adopts this definition of audit quality and examines the effect of these audit quality attributes and IFRS adoption on financial reporting quality.

Empirical Studies

Lopes (2018) examined the relationship between the manipulation of results and the quality of the audit, based on the discretionary accruals in Portuguese non-listed companies. A total of 4723 companies from 2013 to 2015 were analyzed using multiple linear regressions, 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.

Dinuka (2019), examined AEM and REM in the period pre and post IFRS implementation in manufacturing companies in Indonesia. Where AEM is measured by absolute value of discretionary accrual, while REM is measured by three ways, they are abnormal cash flow operation, abnormal production and abnormal discretionary expenses for the period 2009-2011 and 2013-2015. Regression analysis and Paired t-test were utilized to compare the presence of AEM and REM after the adoption of IFRS. The findings reveal that IFRS adoption has significantly negative effect towards AEM and REM. It indicates that the following IFRS adoption, AEM and REM decreased. Hence, the conclusion IFRS adoption is able to reduce earnings management practices in manufacturing companies in Indonesia both for AEM and REM.

Susanto (2017), examined the influence of AEM and REM on firm value using a sample of 162 non-financial companies listed in Indonesia Stock Exchange for the period 2012 - 2015. AEM is measured using the following modified Jones model while REM regression model as measured by Sun and Lan (2014) residual value of 3 regression models derived from the research Susanto and Pradipta (2016). Data were analyzed using multiple regression method and the results showed AEM has a positive and significant influence on firm value while, REM had negative but significant influence on firm value.

In Nigeria, researches have produced mixed result; Tyokoso *et al* (2016) examined the effect of audit quality attributes on earnings management of listed oil marketing companies in Nigeria. Secondary data were extracted from nine companies listed on the Nigerian Stock Exchange (NSE) from 2009 to 2014 and analyzed using panels multiple regression technique. The results revealed that audit quality has significant effect on earnings management of listed oil marketing companies in Nigeria as audit firm size, auditor industry specialization, client importance and audit committee financial expertise are positively associated with earnings management while auditor tenure and the interaction between audit committee financial expertise and auditor industry specialization were negatively and significantly associated with earnings management.

While on the other hand Olorundare *et al* (2019) examined the effect of audit quality on earnings management of quoted commercial banks in Nigeria using four quoted commercial banks for the time period 2011-2018. Multiple regressions were used and the results revealed that the size of Audit firm is not significant in the earnings management model. Hence, the study thus recommended that Auditor tenure of at least three years would enable the auditor acquire accurate experience about the goings-on in a firm to enable possibly more accurate detection of controversial financial reporting practices in the firm. All these studies used the discretionary accruals, this study examined an alternative to accrual-based earnings management to test if the auditor' size has any significant impact

on earnings management.

Sellami and Fakhfakh (2014), investigated the effect of the mandatory adoption of IFRS on real and accruals-based earnings management. Panel data of a sample of 124 firms drawn from the 250 French-listed companies during the period from 1999 to 2011 was used. The FGLS estimator method is conducted on the regression models were the results revealed that discretionary accruals significantly reduced six years after the mandatory adoption of IFRS and a negative association between the real earnings management and the mandatory adoption of IFRS. They concluded that earnings quality has improved in the post-IFRS period in the French context.

In Nigeria, many studies have examined the diverse sectors of the NGX after they had fully adopted IFRS which is believed to play an effective role in reducing earnings management by limiting opportunistic management discretions (Lopes, 2018). However, the studies failed to examine the effect of the new accounting regulatory reform, these studies include; Abdulrahman, Ahmed and koholga (2018) examined financial reporting quality and audit firm characteristics proxy by auditor's independence, auditor type, audit firm tenure, Audit firm size of listed insurance companies in Nigeria for the period 2008 – 2016. The results of the multiple regression revealed audit firm size and auditor's independence as positive and significant, audit firm tenure as positive and insignificant and auditors type as negative but significant relationship with financial reporting quality.

Usman (2014) investigated the impact of audit attributes on the financial reporting quality of quoted food and beverages firms in Nigeria. A sample of fifteen (15) firms for a period of six years (2008-2013) and the regression analysis revealed a significant positive relationship between audit attributes and financial reporting. Specifically, the study found that auditor size, audit delay and auditor remuneration have a significant positive impact on the quality of financial report of the sample firms while auditor rotation has no significant impact on the financial reporting quality of the sample firms. The study recommended that the regulators (SEC) of the listed companies in Nigeria should emphasize and encourage the use of audit quality attributes; especially the auditor's size, audit delay and auditor remunerations.

Ahmed *et al* (2018) examined audit quality and earnings manipulation using a sample of 10 listed deposit money banks in Nigeria for the period 2012 to 2016. Earnings management was proxy by total accruals and loan loss provision while the independent variable audit quality was proxy by audit fee, non-audit fee, joint audit fee, audit firm tenure which showed a positive but not significant relationship while audit partner rotation and board independence revealed a negative and not significant relationship. The studies also failed to address the earnings management proxy real earning management which studies (such as; Mohammed, Yahaya & Zakariya, 2022, Alareeni & Alghamdi, 2017; Roychowdhury, 2006; and Ali and Karmardin 2018) have shown its preference by many mangers.

Mohammed, Yahaya and Zakariya (2022), examined the relationship between audit big4 and audit tenure on REM of 76 listed non-financial firms in Nigeria using a 10-year data for the period 2010 to 2019. The modified Roychowdhury (2006) models were used to measure REM. The results indicated that audit big4 shows significant positive effects on

real earnings management. However, audit tenure shows in significant adverse effects on real earnings management. Hence, the study concluded that Audit Big4 is important in moderating real earnings management in the non-financial companies in Nigeria.

Ishaku, Musa and Garba (2020), examined the impact of audit quality on the firm value of listed insurance companies in Nigeria, the results revealed: Audit firm size (AFS) has a negative relationship with firm value, and the relationship is not statistically significant. Audit firm tenure (AFT) has a negative relationship with firm value, and the relationship is not statistically significant. Audit fees (AFEES) have a positive and statistically significant effect on firm value. However, firm size has a positive and significant relationship with firm value, firm age has a negative but not statistically significant effect on firm. The study recommended that Insurance companies should employ the services of the BIG four auditors to enhance their financial report credibility.

Agency theory

The principal-agent relationship, in which the principals (shareholders) act on behalf of the agent (management), is explained by the agency theory. Jensen and Meckling (1976) state that the information asymmetry created by agents possessing more information than principals can have a negative effect on the principals, as the agent may provide information that could mislead the principal. It describes the bonus hypothesis school of thought of the agency theory.

The separation of ownership and management is a requirement for public firms such as listed manufacturing firms in Nigeria, this is to ensure transparency. This is also responsible for the conflict of interest among different stakeholders of the company. An audit can be used to monitor whether the agents are acting in the shareholders' best interests or to try to protect them. Hence, it becomes crucial to understand how the role of an auditor may impact the quality of financial reporting quality.

Agency theory has been widely used to underpin previous studies in the field of earnings management, this is because the moral risk (audit firm size, audit report timeliness and audit fees) creates a situation whereby to maximize their benefits, agents may face the dilemma of working against their principals' interests. Hence, investors or other stakeholders for evaluation purposes require that financial reports be made following certain procedures which provide information about management stewardship of resources. Among the requirements is abiding by the IFRS. Hence, this study is in line with previous studies the relationship between audit quality attributes and financial reporting quality is underpinned by the agency theory.

3. Methodology

The study adopted correlational research design as it is the design that best explain research on effect of two or more historical data. The population of the study consists of all 74 listed manufacturing firms in the Nigerian Exchange Group (NGX) as of 31 December 2021 for a period of Fourteen (14) years from 2008-2021. A filter, all firms must be in existence for the entire 14 years was used to arrive at a sample of 40 firms. This cuts across all the five (6) subsectors namely; construction & real estate, consumer goods, healthcare, industrial goods, natural resources and conglomerates firms. Secondary source of data was obtained via the yearly reports of the listed sampled firms.

Previous empirical studies have recognized that managers use dual ways while the earlier researches employed the modified Jones model which was more efficient in comparison to other models for determination of discretionary accruals. More recent studies found shortcomings in it and conclude that the model did not suit emerging countries. A research conducted for Korean firms by Yoon and Miller (2002) proved this, hence an extended new edition of this model known as the extended modified Jones model which has more explanatory power in comparison to other models for the estimation of discretionary accruals was deduced. This model determined the discretionary accruals after deducting non-discretionary accruals (NDA) from total accruals, where NDA is measured from the difference between operating cash flow and accounting income.

On the other hand researchers also found that financial reporting were not only incurred by accounting estimations but also in real activities management (Cohen & Zarowin, 2010; Zang, 2011). Here, real activity management is described as a deviation from normal operational practices which is motivated by managers' desire to mislead the users of financial information i.e. in the normal course of business, managers applied discretion to attain their expected outcome (Roychowdhury, 2006).

Table1: Presents the variables names, acronym, measurement and the various sources were used in prior studies

VARIABLE NAME	VARIABLE ACRONYM	VARIABLE MEASUREMENT	SOURCE
Real Earnings Management	REM	Roychowdhury (2006) model	Mohammed, Yahaya, & Zakariya (2022)
Accruals Earnings Management	AEM	Yoon et al (2006)	Alareeni and Aljuidi (2014)
Auditor's Size	AFS	Large audit firm, measured by dichotomous variable (1 and 0)	Darmawaen et al (2016)
Auditor's fee	ADF	Amount paid to auditor	Darmawan et al (2019)
Auditor's report timeliness	ART	The length of time from a company's accounting year end to the date of the auditor report.	Usman, (2014)
IFRS adoption	IFRS	A dummy variable of 0 for pre adoption and 1 for post adoption	Onalo et al (2014)

Source: Author's Compilation 2023.

Model Specification for the Study

The Roychowdhury (2006) approach will be modified using a panel regression as the initial regression in order to evaluate real earnings management. Real earnings management is measured by splitting its magnitude into three categories: abnormal operating cash flow, abnormal production costs, and abnormal discretionary expenses. This division is done in accordance with the Rowchowdhury (2006) model. The following are the measurements for each real earnings management-metric:

The following model is used to estimate operating cash flow:

$$\frac{CFO_t}{A_{t-1}} = \alpha_0 + \alpha_1 \left[\frac{1}{A_{t-1}} \right] + \beta_1 \left[\frac{S_t}{A_{t-1}} \right] + \beta_2 \left[\frac{\Delta S_t}{A_{t-1}} \right] + \varepsilon_t \quad \dots \dots \dots (a)$$

Production costs are the sum of cost of goods sold with changes in inventory period t. Production costs are estimated using the following model;

$$\frac{PROD_t}{A_{t-1}} = \alpha_0 + \alpha_1 \left[\frac{1}{A_{t-1}} \right] + \beta_1 \left[\frac{S_t}{A_{t-1}} \right] + \beta_2 \left[\frac{\Delta S_t}{A_{t-1}} \right] + \beta_3 \left[\frac{\Delta S_{t-1}}{A_{t-1}} \right] + \varepsilon_t \quad \dots \dots \dots (b)$$

Discretionary expenses are estimated using the following model;

$$\frac{DISEXP_t}{A_{t-1}} = \alpha_0 + \alpha_1 \left[\frac{1}{A_{t-1}} \right] + \beta \left[\frac{S_t}{A_{t-1}} \right] + \varepsilon_t \quad \dots \dots \dots (c)$$

Where; A_{t-1} = Total assets of the firm i in year t less total asset in year t-1.

S_t = Total sales of firm i in year t

ΔS_t = Changes in sales of firm i in year t.

ΔS_{t-1} = Changes in firm sales from i in year t less net sales in year t-1.

ε_t = Error.

The coefficients obtained in each model are re-entered into the model to obtain the normal amount of operating cash flow, production costs, and discretionary expenses. Then the actual value of the operating cash flow, production costs, and discretionary expenses are subtracted by the normal value to obtain the abnormal value of each measurement used as a proxy for real earnings management. Each value is summed according to the Cohen et al., (2008) model, then abnormal operating cash flows and abnormal discretionary costs are multiplied by -1 to equalize the relationship with real earnings management. The real earnings management model is estimated using the following model;

$$REM = (ACFO * -1) + APROD + (ADISEXP * -1)$$

Where; CFO_t = Cash flow from operation firm i in year t.

$PROD_t$ = Production cost of firm i in year t.

$DISEXP_t$ = Discretionary expenses of firm i in year t.

$ACFO$ = Abnormal cash flow from operation (a)

$APROD$ = Abnormal production cost (b)

$ADISEXP$ = Abnormal discretionary expenses (c)

REM = A combined measure of real earnings management (a+b+c).

REM is represented by the production cost model residuals of Roychowdhury (2006) after the data from the sampled firm is included. The degree of manipulation is determined by the residual; the greater the residuals, the more manipulations there are, and vice versa. Thus, all of the audit quality attributes and IFRS adoption will be included in a second regression model that has been established for the study.

Model for Accruals Earnings Management

The Yoon, Miller & Jirapon (2006) model will be used to estimate discretionary accruals in line with studies such as; Al areeni & Aljuidi (2014) and El Madbouly, (2021). It is also known as extended modified Jones model and is expressed in the equation;

$$TAiREV = \beta_0 + \frac{\beta_1 REV\Delta - \Delta RECi}{REVit} + \frac{\beta_2 - (\Delta EXPi - \Delta PAYi)}{REVit} + \frac{\beta_3 - (\Delta DEPi - \Delta PENi)}{REVit} \dots\dots\dots(a)$$

Where;

TA (Total accruals) = Accounting earnings – CFO
 ΔREV = changes in net sales revenue in of firm I in year t
 ΔREC = changes in trade receivables in of firm I in year t
 ΔEXP = changes in sum of cost of goods sold and selling & general administrative expenses excluding non-cash expenses of firm I in year t.
 ΔPAY = changes in trade payables in of firm I in year t
 DEP = depreciation expenses in of firm I in year t
 PEN = retirement benefits expenses of firm I in year t
 Δ = change operator

$$DAi = TAi/REVn - [\beta_0 + \frac{\beta_1 REV\Delta - \Delta RECi}{REVit} + \frac{\beta_2 - (\Delta EXPi - \Delta PAYi)}{REVit} + \frac{\beta_3 - (\Delta DEPi - \Delta PENi)}{REVit}] \dots\dots(b)$$

Here β_0 (5) represents the estimated coefficient of β_k . The DA obtained represents the differences between actual total accruals and the expected including depreciation and retirement benefits. Where β_0 represents the change in cash revenue after subtracting changes in receivables from the change in revenue. Which explains the firm's position on either to increase income by increasing credit sales at the end of the year or not.

The variable β_i stand for the changes in cash expenses, it implies that the managers may use expenses to manage the reported earnings. The Last β_3 and third β_2 associates non-cash expenses with non-current accruals where non discretionary level of noncash expenses is characterized by depreciation and retirement benefit. Thus, AEM is measured by the DA obtained in the equation above. Hence, two multiple regressions for the models are deduced;

$$REM = ART_{it} + AFS_{it} + ADF_{it} + IFRS_{it} + \epsilon \dots\dots\dots(1)$$

$$AEM_{it} = ART_{it} + AFS_{it} + ADF_{it} + IFRS_{it} + \epsilon \dots\dots\dots(2)$$

Where:

REM= Real earnings management from firm i in year t
AEM = accrual earning management from firm i in year t
ART = Audit report timeliness from firm i in year t
AFS = Audit fees from firm i in year t
ADF = Audit firm size from firm i in year t
IFRS= IFRS adoption from firm i in year t

4. Results and Discussion

Table 2 Descriptive Analysis

Variables	REM	AEM	ART	AFS	ADF	IFRS
MEAN	.06440	.6024	122.2879	.6627	4.0948	.6724
MIN	.0000	.01	46	0	2.3	0
MAX	3.0303	6.87	357	1	6.84	1
STD DEV	.1943	.6508	62.2588	.4732	.6226	.4698
SKEWNESS	11.46307	4.8113	1.5343	-.6882	.08660	-.7344
KURTOSIS	160.4056	37.1089	4.8903	1.4736	3.1821	1.6394

Source: Stata output (2023).

Table 2 also shows that the sample of listed manufacturing firms where REM as a measure of earnings management had a minimum value of N800,000 and maximum of N3,038,300, the average of real earnings manipulation of listed manufacturing is N644,000. On the other hand, AEM as a measure of earnings management had a minimum value of N100,000 and maximum of N1,089,000 with an average of N582.400 for accruals earnings management.

Audit report timeliness (ART) of an average of 122 days. This indicates that it takes an average 122 days for a sampled firm to publish an audited report, the minimum of 46 days while the maximum was 357 days. The standard deviation is 62.2588, skewness is 11.463 while kurtosis 4.8903 which indicated non normality of data. ADF (Audit Fee) with mean of 4.09 indicates that average fee paid to auditors of the sampled firms is ₦4,090,000; minimum of 2.3 indicates that the middle value paid by all the sampled firms to the auditors is ₦2,300,000 this in turn supports the average paid by the sampled firms, maximum value of 6.84 indicates that the highest amount paid across all firms is ₦6,840,000. Standard deviation of 0.6226 shows that there were variations in the fee paid to auditors. Skewness of fee is 0.8660 indicates that the data is positively skewed. This is also supported by the coefficient of kurtosis 3.1821 of which implies that the Gaussian distribution assumption of normal data is not been met.

Table 2 also shows that the sample of listed manufacturing firms have employed the services of large global audit firms (big 4 as a measure of audit firm size (AFS) up to 66% of the total period of the study, from the mean of 0.6627 with standard deviation of 0.4732, and the minimum and maximum value of 0 and 1 respectively while the kurtosis is 1.4736.

Table 3 correlation matrix

Variables	REM	AEM	ART	AFS	ADF	IFRS
REM	1.0000					
AEM	1.0000*	1.0000				
ART	0.0089	0.0089	1.0000			
AFS	-0.0120	-0.0120	0.0023	1.0000		
ADF	-0.0474	-0.0474	-0.1372*	0.6056*	1.0000	
IFRS	0.2514	0.0667	0.0899*	-0.0221	0.0669	1.0000

-0.0667	-0.0899	0.0299	0.5936	0.1058
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Source: Stata output (2023) P-Values in Parentheses, *(0.05) significance.

The correlation matrix from Table 3 shows the relationships between the audit quality attributes and the financial reporting quality of the listed manufacturing firms in Nigeria. The table on the other hand indicates a positive relationship between financial reporting quality (FRQ) and audit report timeliness (ART), from the correlation coefficient of 0.0089 for both REM and AEM which is not statistically significant (p-value of 0.8301). This implies that the financial statements delay in the listed manufacturing firms in Nigeria is significantly related with their financial reporting quality.

The table shows a non-significant negative correlation between financial reporting quality (FRQ) and the size of the audit firm (AFS) as measured by the big 4 auditors, from the correlation coefficient of -0.0120 (p-value of 0.7714). The table shows a significant negative association between financial reporting quality (FRQ) and auditor fees (AF), from the correlation coefficient of -0.0474 for both AEM and REM which is negative statistically insignificant the p-value of 0.2514 and 0.0009. The result also reveals the adoption of IFRS have a positive correlation with financial reporting for both AEM 0.2514 and REM is 0.0667 but with a negative p-value of -0.0667 and 0.0899.

Normality Distribution of the Data

The error term in a regression equation represents largely the unexplained part of the model. For the estimators of a regression model to be meaningful, the error term or residual should be normally distributed with zero mean. To allay this in this study, the Shapiro-Wilk normality test was conducted on the model's residuals. Hence the result ;

Table 4 Normality Test

Table 4

Shapiro-Wilk-W-Test-for-Normal-Data

Variable	W	V	Z	Prob>z
Residual	0.996	1.263	0.566	0.28586
Residual	0.996	1.191	1.191	0.33763

Source: Stata Output (2023).

The p-values of the models are 0.28586 and 0.33763 and are greater than the 5% (0.05) level of significance, this show that the data is normally distributed and the null hypothesis is rejected (see Table 4 above). Consequently, it may be concluded that the model's residual is regularly distributed.

In additional other tests are conducted the include; multicollinearity test, normality test, linearity test, auto and serial correlation test and heteroskedasticity test. They are performed to determine whether the models should be retained. If auto/serial correlation and heteroskedasticity exists in the models, which is likely, then another option must be used to either go for further analysis or change to an appropriate model that will correct or accommodate the auto/serial correlation and heteroskedasticity of which PCSE could as well be used (Hausman & Kuersteiner, 2008).

Test for Multicollinearity

The non-correlation between the independent variables is another fundamental tenet of the linear regression model. Multicollinearity is present because of the independent variables'

interdependence. The variance inflation factor (VIF) values of the model were analyzed to see whether the data's tolerance level is within bounds and to test for multicollinearity in the data. The test's outcome is recorded in Table 5.

Table 5:
Collinearity Test

	VIF	1/VIF
ADF	1.01	.987
ART	1.01	.991
AFS	1.00	.996
IFRS	1.00	.999
Mean VIF	1.01	.

Source: Stata Output (2023).

There is no multicollinearity issue, as demonstrated by Table 5's evidence, where all variable VIF values are less than 10 and tolerance values are all more than 0.10 (the rule of thumb).

Heteroscedasticity Test and Autocorrelation Test

Two additional tests were performed to ascertain the homoscedasticity (consistency of the variance of the error terms across all levels of the independent variables) and the autocorrelation (interdependence of the error terms). Breusch-Pagan's test was used to determine the heteroskedasticity of this investigation.

Table 6:
Heteroskedasticity Test

	Model1	Model2
Chi square	5.4e+06	187.81
P-value	0.0000	0.0000

Source: Stata Output (2023).

When testing for heteroskedasticity using the Breusch-Pagan test, the result has a 0.000 p-value and a Chi-Square of 187.81 and 5.4e+06. This suggests accepting a heteroskedastic model and rejecting the null hypothesis, which is a need for homoscedasticity.

Autocorrelation Test
Table 7: Autocorrelation Test

	Model 1	Model 2
Chi square	38.927	168.628
P-value	0.0000	0.0000

Source: Stata Output (2023).

The presence of auto/serial correlation violates one of the basic assumptions of the OLS which is necessary for the stability of time series data. Using the Wooldridge test for autocorrelation, the result in Table 7 shows presence of serial correlation in the Model as the P-values (0.0000) is greater than 5%.

Regression model specification

The data set of this study is measured by STATA 13.0 software, which is considered as the best econometric software to deal with the panel data in earlier literature (Sekaran & Bougie, 2016).

There are different ways to select the appropriate regression model for panel data analysis. STATA offers three statistical models for panel data estimation, which are Pooled ordinary least square (OLS), fixed effect (FE) and Random effect model. All of these models have underlying assumptions which need to be satisfied for reliable and impartial estimation. In this study the hausman specification test is used to determine the best fit model.

Hausman Specification Test

The Hausman test is used to identify which of the two options fixed effect or random effect is the best estimation approach for the panel data under examination. The Hausman test result is displayed in Table 8 below.

Table 8 Hausman Test

	Model 1	Model 2
Chi2	11.06	14.95
P-value	0.024	0.001

Source: Stata Output (2023).

The setting of the null hypothesis is that the fixed effect estimate is appropriate for two models. The result of the Hausman test in Table 8 less than 5% level of significance implies that the null hypothesis should not be rejected. This means that fixed effect estimation is appropriate for the study. Due to the presence of auto/serial correlation and heteroskedasticity, Panel Corrected Standard Error (PCSE) was found suitable in adjusting for heteroscedasticity.

Table 9: Regression Results

Variables	AEM			REM		
	Coefficient	T	P-value	Coefficient	T	P-value
ART	0.0012	2.16	0.037	0.0003	3.34	0.002
AFS	-0.0604	-0.82	0.417	-0.0418	-1.56	0.126
ADF	-0.9163	-0.39	0.677	-0.0096	-0.81	0.421
IFRS	-0.5436	-3.56	0.001	0.0091	-3.82	0.000
_cons	3.8429	32.67	0.000	0.0198	11.61	0.000
F-stat	4.51			11.39		
P-value			0.0043			0.0000
F-Stat						
R-squared	0.39			0.41		
Adj R-sq	0.3884			0.4029		

Source: Stata output 2023, * Sig at 0.05

The R-square value for both the models is (0.39) and (0.41), which means that the independent variables of the model are able to explain the change in dependent variables by 39% and 41% respectively. The result of the regression in table indicates that the coefficient of IFRS is negative for AEM but positive for REM this is in contrast with Sellami and Fakhfakh (2014) where AEM is positive while REM is negative. This means, IFRS has significant negative relationship with absolute value of the discretionary accruals but positive with real earnings management.

The regression coefficients of all the independent variables; Audit Report Timeliness (0.0012 and 0.000) which is positive and statistically significant is interpreted as having a positive impact on financial reporting quality. This means that the length of time from a company's accounting year end to the date of the auditor report can determine the FRQ of listed manufacturing firms in Nigeria. This can be interpreted to mean the longer it takes to get a firm's audit report the higher the chances of earnings manipulation. Hence, the policy implication is regulators should peg a short time frame for audit reports to curb excessive earnings management and improve FRQ.

Audit Firm size i.e ADF (-0.0577 and -0.04184), this is both negative and statistically insignificant, interpreted as Large audit firm, measured by dichotomous variable (1 and 0); 1 if a firm is audited by a BIG4 audit firm (Deloitte and Touch, Ernst and Young, KPMG, PricewaterhouseCoopers), and 0 otherwise do not affect FRQ. This is in line with Isaku *et al* (2020), Olorundare, *et al* (2019) and Abdulrahman *et al* (2018) but in contrast with Mohammed *et al* (2022). This infers that the size of the audit firm is significant in uncovering material errors and misstatements in the financial statements. The result is consistent with the proposition that big 4 audit firms have higher chances of detecting and preventing earnings management.

The Audit Fees is also negative and statistically insignificant for both AEM and REM (-0.5347 and -0.0009). This means that the audit remuneration does not affect the FRQ; this is in contrast to Isaku *et al* (2020). The study infers that auditor remuneration in the manufacturing firms in Nigeria does not improve the quality of financial reporting during the period covered by the study.

The adoption of IFRS also shows a negative association for AEM (-0.5436) which is interpreted to mean the adoption of IFRS has an inverse relationship with accruals earnings manipulation. However, the positive association for REM (0.0091) which is statistically significant shows managers shifted to real earnings manipulation after the adoption of IFRS. The study infers that the adoption of IFRS in the manufacturing firms in Nigeria does not improve the quality of financial reporting using accruals earnings management but it improved the real earnings management during the period covered by the study.

5.0 Conclusions and Recommendations

The findings from the regression analysis of Nigerian manufacturing firms' financial reporting quality (FRQ) carry important implications. The relatively modest R-squared values, indicating that the included independent variables account for only 39% and 41% of the variance in accrual earnings management (AEM) and real earnings management (REM), underscore the influence of unexamined factors on FRQ. The nuanced relationship between IFRS adoption and financial reporting quality, where IFRS negatively affects AEM but positively affects REM, highlights the complexity of regulatory compliance and the potential for unintended consequences.

The positive and statistically significant impact of audit report timeliness on FRQ underscores the importance of prompt auditing, yet the causality of this relationship warrants further investigation. Contrary to prior research, the insignificance of audit firm size (ADF) and audit fees in influencing FRQ in this context raises questions about the presumed superiority of big 4 audit firms and the significance of audit fees. The adverse effects of IFRS adoption on AEM, along with the significant P-values, call into question the efficacy of IFRS implementation in enhancing reporting quality within Nigerian manufacturing firms.

These findings collectively suggest the need for a more comprehensive exploration of the multifaceted factors influencing FRQ in this specific context, ultimately guiding policymakers, auditors, and firms in their efforts to enhance financial reporting quality in Nigeria. Based on the findings, the study recommends that, enhancing the implementation and oversight of IFRS standards is crucial, ensuring that these regulations are not only adhered to but also comprehensively understood, and any unintended consequences are mitigated.

Regulators of the listed companies in Nigeria should emphasize and encourage the use of audit quality attributes examined in this study; especially the audit firm size, audit report timeliness and auditor fees. This is with a view to improve the quality of the reports by mitigating earnings management and other unethical corporate practices, which affect the quality of reporting and going-concern of an entity. Encouraging timely audit reporting reinforces the importance of detecting and rectifying errors promptly, thereby bolstering the integrity of financial reports.

Transparent discussions about audit fee structures are vital, aligning the fees with the scope of services to ensure that auditors have the necessary resources to perform comprehensive and high-quality audits. Government, partnership, businesses, shareholders, and individuals who engage the services of external auditors should ensure that the auditors have the capability and experience and that they are well paid. This is because audit fees are associated with fewer earnings management of listed manufacturing companies in Nigerian. The fees of auditor's should be adequate enough to allow them to acquire enough materials to conduct a thorough audit capable of detecting material misstatements and errors in the financial statements, thus providing highly qualitative audit reports.

Continued research and monitoring provide a mechanism for adapting to evolving standards and identifying previously overlooked factors impacting financial reporting quality. Strengthening education and training is the foundation for building a cadre of professionals well-versed in financial reporting standards, audit procedures, and ethical considerations.

Although the study's three independent variables may not cover all factors influencing earnings management, particularly given the limited prior research in Nigeria, its findings can still provide a foundation for future investigations. The generalization of the findings of this study is limited to listed manufacturing firms on the floor of Nigerian stock exchange market. This is because other firms have their own peculiarities that may render the findings from the listed manufacturing firms not relevant to them. Hence. Future researches can dwell on the tradeoff between AEM and REM and other audit quality attributes not included in this study.

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