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EXTERNAL AUDITOR, BOARD ATTRIBUTES, ACCRUAL AND REAL EARNINGS MANAGEMENT LINKAGE: NEW EVIDENCE FROM EMERGING ECONOMY

This paper further examines the influence of external auditor and board attributes on incidence of discretionary accruals and real earnings management in Nigeria. The sample size comprises fifty (50) purposively selected quoted non-financial firms for a 7 year period (2014–2020), culminating into a 350 dataset. The descriptive statistics depict absence of both discretionary accruals and real earnings management with either classifications dependent upon the auditor-type, board independence and profitability among quoted non-financial firms in Nigeria. The regression results indicate reduction in discretionary accruals owing to concerted audit efforts and lower board size while large profitable firms still possess the tendencies to use discretionary accruals in manipulating earnings. On real manipulative propensities by management, audit fees contribute greatly while auditor-type and presence of female directors on corporate boards exhibit negative and statistically significant association with real earnings management.

Keywords: Audit Fees, Big4, Board of Directors, External Audit, Earnings Management.

1. INTRODUCTION

Earnings management has been in the accounting and audit literature till date. The renewed interest is consequent upon its effect, especially on going concern of entities. Earnings management is adjudged an opportunistic behaviour by managers entrusted with resources of the firm. Managers and those charged with governance know more about operations about entities. They have relied upon this information asymmetric propensities,

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as a result of massive information at their disposal, in undertaking manipulative tendencies, either through accrual or real earnings management. It is a widely held belief that managers of firms possess propensities to undertake over reporting or underreporting of earnings for particular purposes. This singular act of tampering with actual financials of firms is known as earnings management. It could be through the use of discretionary accruals or real manipulation of accounting transactions, account balances or inaccurate disclosure in the financial statements. While Beneish (2001) cited in Soyemi (2020) opines that manipulative behaviour by managers could as well be for beneficial purposes, most widely held beliefs regarding earnings management are deemed unethical. Consequently, concerted efforts are pointed at reducing the incidence of earnings management. Of the many ways of constraining managers' manipulative tendencies, certain attributes of corporate boards have been suggested which enhance their effectiveness and efficiency. The board is the highest organ of management where governance resides. It is composed of directors, executives and non-executives, as well as independent non-executives directors with no ownership shares in the firm. Aside from board characteristics, an internal corporate governance mechanism (Soyemi, 2020), a widely held belief is that this ugly incidence may be curtailed through a transparent financial reporting processes, guaranteed by audit/auditors, who must deliver on quality audit. Audit is an assurance engagement where auditors conduct tests and procedures, through systematic, objective gathering and evaluation of sufficient appropriate evidence about transactions, account balances and disclosures for the purpose of giving an opinion on whether the accounts are fairly presented in compliance with applicable financial framework. It is based on this background that this study seeks to examine the influence of auditor and board attributes on earnings management in an emerging economy, such as Nigeria, which is characterised by weak corporate governance structure, low investors' protection (especially minority investors) and relatively low litigation risk by auditors. Besides, the audit industry is also been dominated by the Big4 professional accounting firms. The remaining part of this paper is divided as follows: section two provides literature review, section three describes methodology adopted in this study. While section four presents results of descriptive statistics, alongside model estimation, section five provides summary, conclusion and recommendations emanating therefrom.

2. LITERATURE REVIEW

2.1. Conceptual Review: Earnings Management

There are various definitions of earnings management given by different scholars who have studied the phenomenon at different times. One common trait of all these definitions is that the objective of earnings management is to misrepresent the performance of a firm to shareholders and external stakeholders. Schipper (1998) cited in Yasser and Soliman (2018) describes earnings management as the deliberate and purposeful involvement in the preparation of financial reports to gain private benefit. Another widely accepted definition is that of Healy and Whalen (1999) as cited in Soyemi, Olufemi, Adeyemi (2020) which states that earnings management is the use of judgement by managers in reporting, valuation, and structuring financial transactions to mislead some stakeholders "about the underlying economic performance of the company or to influence" contractual agreements that relied on reported accounting figures. Obviously, the definitions given above have given negative meaning to the term earnings management. It highlights the intention of a manager to deliberately deceive and mislead stakeholders. Secondly, it brings to the fore

the managerial opportunism to obtain private gain(s). However, some researchers have pinpointed the informational and beneficial aspects of earnings management. Notable among them is Beneish (2001) cited in Idris (2012) who asserts that:

> There are two perspectives on earnings management: the opportunistic perspective holds that managers seek to mislead investors, and the information aspect..Under which managerial discretion is a means for managers to reveal to investors the private expectation about the firm's future cash flow.

In the same vein, Fields, Lys, and Vincent (2001) cited in Idris (2012) describes earnings management as the use of discretion by managers in the recording and treatment of accounting transactions with the intent to improve the firm value or for their opportunistic gains. The point reflected in these definitions is that earnings management has some beneficial aspects. Managers use earnings management practices to convey relevant and necessary insider information, which may not be apparent in the published financial reports, to shareholders and other stakeholders to assist them when making investment decisions. However, Ronen and Yarri (2008) cited in Sharma (2014) look at earnings management from three different perspectives and classify it using three different colours: white, gray and black. White is the use of flexibility and latitude provided in the accounting standards or in the Generally Accepted Accounting Standards (GAAP) in reported earnings to inform the stakeholders about the firm's potentials and future cash flow. This relates to earnings management that is of benefit to all stakeholders as contained in the definitions of Beneish (2001) and Fields et al. (2001). Gray, which is, choosing favourable accounting treatment for the benefit of management only. This is likened to tax avoidance whereby management exploits the loopholes in tax laws to reduce taxes payable. Black is described as misrepresentation of financial information in financial reports with intent to deceive. This is fraud.

2.2. Audit and Audit Attributes

Modern-day corporations provide for separation of ownership from management. To protect interests of shareholders, reduce information asymmetry and most importantly protect the integrity and reliability of the financial statements, external audits of entities, especially public liability companies are mandated. The objective of an audit is to increase the level of confidence of users of financial information. The intended users' degree of confidence will be enhanced if an opinion expressed on the prepared statements conforms to audit evidence. It is very crucial that auditors exercise due care, professionalism and put on the garment of professional scepticisms during planning and performance of audit engagements. The importance of external audits cannot be overemphasized. Prior studies have used a variety of attributes to proxy audit features. These include auditor independence, audit tenure, audit fee, audit size and auditors' specialty industry.

2.3. The Board and Board Attributes

The Board of directors is the highest decision-making organ of a company. It is responsible for providing effective and purposeful leadership for a firm towards fulfilling its mission and vision statements and it is "regarded as the most significant corporate governance structure" (Kurawa, Mohammed, 2020) in an organization. The Board is responsible for setting the tone at the top and serves as a link between stakeholders and the

company. The Code states that it is the responsibility of the board to exercise control of the company to ensure that the interests of shareholders and other stakeholders are well protected. The Board of directors is headed by the Chairman who provides overall leadership for the Board and the company as a whole. For effective functioning of the Board, executive directors, non-executive directors, and independent non-executive directors should possess different skills, experience, and knowledge. Empirical evidence suggests that several attributes of a board have a direct impact on their performances and effectiveness which in turn determine the extent to which management may engage in earnings management. In other words, possession of certain characteristics by the board may constrain or encourage earnings manipulation practices by the managers. These include but are not limited to board independence, board size, board meeting, possession of financial knowledge, and gender diversity.

2.4. Empirical Review

This section reviews scholarly works previously conducted in the area under study. It is divided into reviews from developed and developing economies and Nigeria.

2.4.1. Evidence from Developed Economies

Saona, Muro, Alvarado (2020) investigate the influence of ownership structure and board features on discretionary accruals among Spanish-listed firms for eight years covering 2006 to 2014. A sample of 120 non-financial firms was selected cutting across five sectors, totalling 877 firm-year observations. Using the Generalized Method of Moment (GMM) to analyze secondary data sourced from Thomson Reuters EIKON and Spanish Stock Exchange Commission, the findings reveal that board independence (higher number of independent directors), gender diversity, and board size exhibit negative and significant relationship with earnings management, which implies that the three independent variables constrain the level of earnings manipulation by the managers in listed firms in Spain. However, the CEO duality has a positive and significant relationship with discretionary accruals. Similarly, Luo, Jeyaraj (2019) examine the relationship between boards' characteristics and the level of earnings management of non-financial companies listed in Financial Times and Stock Exchange (FTSE) 350 in the United Kingdom for 5 years for the period 2012 to 2016. A sample size of 203 firms were selected out of a total population of 351 which translates to 1015 firm-year observations. The findings reveal that board size has an inverse and significant relationship with abnormal accrual. However, female directors and CEO with duality roles increase the practice of earning manipulation because both variables have a positive and significant relationship with earnings management.

Gull, Nekhili, Nagati, Chtioui (2018) focus on the statutory and demographic attributes of women directors and its impact on earnings management among French firms, with trading volume in excess of 5% of its share capital, listed on Euronext Paris CAC All-Shares Index for ten years spanning 2001 to 2010. A sample of 394 firms was selected, governance and annual reports data were collected from annual reports of sampled firms while the Thomson One database was used to retrieve information relating to the ownership structure. The findings reveal that board size has a negative and significant relationship with abnormal accruals while the female director and CEO duality have a positive and significant relationship with earnings management. Similarly, the presence of women on the audit committee and earnings management exhibits a negative and significant relationship. Contrary to expectation, however, there is a positive and significant relationship between

abnormal accrual and women occupying the top position in the board on one hand and the presence of experienced women, on the other.

Panzer, Muller (2015) examine the influence of gender diversity on the supervisory boards of German companies on earnings quality. In conducting the study, 64 companies listed in DAX 30, MDAX, and SDAX were sampled for six years covering 2006 to 2011. Data were analyzed using the panel regression method with a fixed-effects model. The findings reveal that the presence of women on the Supervisory board of German companies constrains earnings manipulation. Also, the female head and deputy female head of Supervisory boards have a negative and significant influence on the quality of earnings. Similarly, Lakhal et al. (2015) investigate the impact of women's representation on boards and in top management positions on earnings management of French non-financial firms listed on the CACALL shares index for the periods 2008 to 2011. The study measures earnings management proxied by discretionary accruals using Jones' Modified model (1995), Kothari et al. model (2005), and Raman, Shahrur model (2008). Using the regression approach in analyzing the data from 170 firms, the findings reveal that increasing the number of women's representation on board constrains the practices of earnings manipulation by managers. In the same vein, there exists a negative and significant relationship between the women as a chairman of the board and discretionary accruals. However, the results show a negative but insignificant relationship between women CFO and CEO and earnings management.

2.4.2. Evidence from Developing Economies

Mantonti, Luliano, Palazzi, Tucker (2021) examine the motivating factors that drive accrual and real earnings management among Italian unlisted firms. The study analyzed 75,312 firm-year observations translating to 9,414 firms for eight years spanning 2011 to 2018. Using the least-squares regression method, the results indicate that accrual earnings management has a positive and significant association with ownership concentration and a negative but significant relationship with leverage, Big4, and firm size. This implies that accrual earnings management is prevalent in firms with higher ownership concentration and lesser with highly geared firms, big-sized firms, and firms that engage one of the Big4 audit firms. Real earnings management, on the other hand, exhibits a positive relationship with ownership concentration and leverage and a negative relationship with Big4 and firm size. Mollik et al. (2020) investigate the effect of audit quality and audit committee attributes on earnings management of listed Australian firms during the global financial crisis. 503 firm-year observations from eight industries were studied from 2006 to 2009. Using multivariate fixed effect regression, the findings reveal that appointment of Big4 audit firms does not constrain the practices of discretionary accruals during the global financial crisis of 2008-2009. Similarly, possession of financial knowledge by audit committee members is found to have a positive and insignificant relationship with earnings management. Using Roychowdhury's (2006) models to estimate real earnings management, Rajeevan, Ajward (2020) seek to explore the impact of corporate governance attributes on real activities-based earnings management in listed firms in Sri Lankan. Seventy quoted firms in Colombo Stock Exchange (CSE) were selected spreading across six sectors for three years spanning 2015 to 2017. Ordinary least squares and panel least squares methods were adopted in analyzing the data. The findings reveal that number of independent directors on the board attenuates the degree of earning manipulation. However, CEO duality, unseparated CEO, and Chairman roles have a significant and positive association with earnings management.

Darmawan et al. (2019) investigate the effects of accrual and real earnings management on firm value in 54 out of 123 listed firms on the Indonesia Stock Exchange (IDX) from 2013 to 2017. The data obtained from the Indonesian Stock Exchange and Yahoo Finance websites were analyzed using a multiple linear regression approach. The firm value was gauged using Tobin Q ratio while independent variables of accrual earnings management and real earnings management were proxied by Modified Jones' Model and Rowchowdhury's (2006) model respectively. The study found that accrual and real earnings management, firm size, leverage, return on asset, and audit quality can explain a 30.6% variation in firm value. Furthermore, the result shows that discretionary accrual earnings management does not influence earnings figures. However, real earnings show a negative and significant relationship with a firm value which indicates that real earnings manipulation opportunistically executed by the managers through manipulation of sales figures, excess production, and transaction in discretionary expenses have a negative influence on firm value.

In a study conducted by Hoang, Phung (2019) effects of leverage on accrual-based and real activities-based earnings management of firms listed in Vietnam Stock Markets (HAX and HOSE) for seven years covering 2010 to 2016 was investigated. Accrual earnings management was estimated using both the Kothari et al. (2005) Model and Raman & Shahrur (2008) Model and the two models were used separately in the analysis. Furthermore, real earnings management was calculated with the aid of the popular Roychowdhury (2006) Model. Secondary data was sourced from Thomson Reuters EIKON websites. Using the Generalized Method of Moment (GMM), the findings reveal that leverage has a positive and significant association with accrual-based earnings management. On the other hand, it shows a negative and significant relationship with real earnings management. Furthermore, leverage has a positive and negative relationship with accrual-based earnings management and real activity-based earnings management in highly levered firms respectively. Similarly, Al-Absy, Ismail, Chandren (2019) investigate the impact of corporate governance mechanisms in firms that have a well-established whistle-blowing policy on real earnings management of listed firms in Malaysian firms for three years covering 2013 to 2015. Out of a total population of 300 firms, a sample of 288 firms with positive reported earnings were selected for the study. The samples were classified into two: firms with established whistle-blowing policies and those without. Real earning was estimated using the Roychowdhury Model. Using feasible generalized least squares, the findings reveal that board independence has a positive association with real earnings in firms that have not instituted the whistle-blowing policy, while audit committee size, audit committee meeting, audit committee independence, and Big4 have an inverse and significant relationship with low earnings in firms that have a whistle-blowing policy.

2.4.3. Evidence from Nigeria

Yusuf (2021) investigates the influence of audit quality on earnings management of consumer goods companies quoted on the Nigerian Stock Exchange for the period 2006 to 2018. Like most studies of this nature, earnings management was represented by discretionary accruals and measured using modified Jones' model while audit quality was proxied by audit fees, audit firm size, audit tenure, and firm size. Secondary data was sourced from the annual reports of seventeen selected firms. Analysis of the data reveals that the higher the audit fees the lower the earnings manipulation by the management. However, audit firm size, audit tenure, and joint audit have a direct and significant

relationship with earnings management. The trio of Adewale, Olowookere, Bankole (2021) investigate the impact of board composition on earnings management among quoted non-financial firms in Nigeria for a period of ten years spanning from 2009 to 2018. Multiple regression techniques were adopted to analyze the secondary data obtained from the financial reports of selected firms. A total of 20 firms were selected, using the judgemental sampling method, out of a total population of 117. The findings show that board composition has a positive significant relationship with earnings management, proxied by discretional accrual. Furthermore, board independence and board size exhibit a negative and significant relationship with earnings management. However, the inclusion of women in the board and board meetings do not exhibit a significant relationship with discretionary earnings management. The study, therefore, recommends that the appointment of independent directors with proficiency in finance into the board should be encouraged and enhanced because it tends to reduce the opportunistic behaviour of managers. Similarly, Oladejo, Akintude, Yinus, Akanbi, Olowokere (2021) study the influence of board and external audit attributes on the quality of earnings of listed firms in the foods and beverages industry in Nigeria. The researchers selected eight firms out of a total population of twenty--three companies in the sector. Using panel regression techniques on secondary data collected from annual reports of selected firms, the results indicate that auditor independence has a negative and significant relationship with earnings quality, while board size and company size exhibit a significant but negative association with earnings quality. Furthermore, the relationship between board independence and discretionary accruals was found to be positive and significant.

Soyemi et al. (2020) explored the nexus between audit quality and earnings management among non-financial firms listed on the Nigerian Stock Exchange for eleven years from 2008 to 2018. Out of 105 total population, the study sampled 30 non-financial firms using a stratified sampling method. Based on the results from the panel effects model, audit quality variables of firm size, audit tenure, auditor's independence, return on assets and total assets jointly explain 49% (adjusted R^2) variations in the earnings management. Specifically, audit tenure and auditor's independence display a positive and significant relationship with earnings management, represented by discretionary accrual measured using modified Jones's model. Total assets, on the other hand, show a negative and significant relationship with earnings management. A study of corporate board attributes and earnings management in Nigerian banks for ten years covering 2009 to 2018 was conducted by Kajola et al (2020). A total of 10 deposit money banks were sampled out of a total population of 15. Using random-effects generalized least squares regression on the selected data, the findings show that board independence and size mitigate real activities earnings manipulation. Furthermore, gender diversity and board meetings show a negative and insignificant relationship with earnings management. Similarly, Manukaji (2018) studies the impact of corporate governance on earnings management among deposit money banks in Nigeria. Out of a total population of 22 banks comprising of "old" and "new" generation banks, 4 banks were selected for the study: two each from old and new generation banks. As a result of the multiple regression method used to analyze the sampled data, the findings show that ownership concentration and board size have a positive and insignificant influence on income smoothing. However, the duo of CEO duality and audit committee exhibit a negative and significant association with the dependent variable.

2.5. Theoretical Framework

Agency theory by Jensen & Meckling (1976) refers to a contract or relationship that subsists between two parties. One party called the principal appoints another party called the agent to execute certain tasks on his behalf. This implies that the agent performs the assigned tasks using the resources of the principal and decisions taken by the agent will directly have an impact on the principal as well. The agency theory is based on two fundamental assumptions: human beings are egoists, always considering their self-interests above any others [Esenhardt (1989) cited in Darmawan et al. (2019)] and agents, by their vantage positions, have more information than the principal. The self-egoistic behaviour of individuals and information asymmetry between the principal and the agents create disputes, disagreements and conflicts called agency problems. The theory suggests that to solve the problem, the principal's interests should be adequately taken care of while the agents too should be well compensated. The shareholders (principal) enter into a contract with managers (agents) to run the affairs of the company on their behalf. Owing to the egocentric nature of human beings, managers will involve themselves in some activities to show to the shareholders their managerial prowess to retain their positions and signal to investors the viability of the company. These activities include the manipulation of earnings. Earnings, being one of the important indices that the market use to judge the profitability of a firm (Darmawan et al., 2019), the emphasis of the managers will be on it to meet/beat the expectation of investors and financial analysts' forecast.

3. METHODOLOGY

The correlational quantitative design is adopted as research design. Secondary data was sourced from the websites of the sample firms and also from African Financial websites. The population of this study comprised of 116 non-financial firms quoted on the Nigerian Stock Exchange. The sample size was 50 companies cut across 10 sectors for a period of seven years covering 2017 to 2020. A stratified probability sampling technique was adopted in selecting the 50 firms that make up the sample size.

Table 1. Break down of Industrial Sectors, Population and Sample Size

S/N	Sectors	Population	Sample
1	Consumer goods	28	11
2	Healthcare	11	5
3	Technology	10	4
4	Industrial Goods	24	10
5	Basic Materials	6	4
6	Oil and Gas	12	6
7	Consumer Services	25	10
	Total	116	50

Source: Authors' compilation (2022).

3.1. Description and Measurement of Variables

(a) Dependent Variables

Earnings management is the dependent variable. It is decomposed into discretionary accruals and real activities based earnings management. Dechow et al. (1995) Model

popularly known as Modified Jones Model was adopted as proxy for discretionary accruals. Previous studies that have adopted this model include Soyemi et al. (2020), Kajola et al. (2020) and Lopes (2018) among others. Discretionary accruals using Modified Jones Model are estimated using the equation below:

$$TA_{it}/A_{it-1} = \beta_o(1/A_{it-1}) + \beta_1(\Delta REV_{it} - \Delta REC_{it}/A_{it-1}) + \beta_2(PPE_{it}/A_{it-1}) + \varepsilon_{it} \qquad (1)$$

Where: TA_{it} = Total accruals of company i in period t
A_{it-1} = Total assets of company i in period t_{-1}
ΔREV_{it} = Changes in company's i income in period t
ΔREC_{it} = Changes in company's i receivables in period t
PPE_{it} = company's i tangible assets (Property, plant and equipment)
ε_{it} = Error term
β_o- $_{\beta 2}$ = Company's specific parameters.

Real activities-based earnings management was measured using Roychowdhury (2006) model. This model is popular among researchers studying real earnings manipulation. Rajeevan, Ajward (2020) and Darmawan et al. (2019) measured real earnings using this model. The model uses three regressions in calculating abnormal real earnings, namely cash flow from operating activities, production costs and discretionary expenditures. The cash flow from operating activities was estimated from equation 2.

$$CFOAt/At-1 = \beta_0 + \beta_1(1/A_{t-1}) + \beta_2(S_t/A_{t-1}) + \beta_3(\Delta S_t/_{At-1}) + \varepsilon_{it} \qquad (2)$$

The second regression is the addition of change in stocks or inventories and cost of goods sold in estimating production costs. This produces equations 3 and 4 below:

$$COGS_t/A_{t-1} = \beta_0 + \beta_1(1/A_{t-1}) + \beta_1(S_t/A_{t-1}) + \varepsilon_{it} \qquad (3)$$

$$\Delta INV_t/A_{t-1} = \beta_0 + \beta_1(1/A_{t-1}) + \beta_2(S_t/A_{t-1}) + \beta_3(\Delta S_t/A_{t-1}) + \beta_4(\Delta S_{t-1}/A_{t-1}) + \varepsilon_{it} \qquad (4)$$

Combination of equations 3 and 4 give equation 5 thus:

$$PROD_t/A_{t-1} = \beta_0 + \beta_1(1/A_{t-1}) + \beta_2(S_t/A_{t-1}) + \beta_3(\Delta S_t/A_{t-1}) + \beta_4(\Delta S_{t-1}/A_{t-1}) + \varepsilon_{it} \qquad (5)$$

The third regression is on discretionary expenditures. This produces equation 6 thus:

$$DEXP_t/A_{t-1} = \beta_0 + \beta_1(1/A_{t-1}) + \beta_2(S_{t-1}/A_{t-1}) + \varepsilon_{it} \qquad (6)$$

From the regressions above, the coefficients β_0 to β_4 obtained in each of the model are used to estimate the normal operating cash flow, production costs and discretionary expenditures by re-entering the coefficients back into the models. The normal figures obtained for the three models are subtracted from the actual values for operating cash flows, production costs, and discretionary expenses. The addition of the results gives abnormal values which are then used as proxy for real earnings management. Absolute values of all the abnormal operating cash flows, production costs, and discretionary expenditures are used. The real earnings management is then expressed as in equation 7 as follows:

$$REEM_{it} = ACFOA_{it} + APROD_{it} + ADEXP_{it} \qquad\qquad (7)$$

Where: REEM = Real earnings management
ACFOA = Abnormal cash flow from operating activities
APROD = Abnormal production cost
ADEXP = Abnormal Discretionary expenditures

(b) Independent Variables

The study has five independent variables. These include audit fees, auditor type, board size, board independence and board gender diversity. Table 2 describes these variables and their measurements.

(c) Control Variables

Extant literature reveals that there are other variables that have tendency of impacting on earnings management that are not included in the independent variables mentioned above. To ensure that these control variables do not affect the overall results, this study incorporates firm size, measured as total assets and profitability, proxied with Returns on Assets (ROA) in the model.

Table 2. Description and Measurement of Variables

Variables	Symbols	Description/Measurement	Source(s)
Dependent Variables			
Earnings Management	(a) DACC	Discretionary accruals is used as proxy for accrual based earnings management. Modified Jones model (1995) shall be used to estimate abnormal accruals.	Kurawa, Ahmed (2021), Soyemi et al. (2020), Mollik et al. (2020), Gull et al. (2017), Idris et al. (2018).
	(b) REEM	Three proxies are used. Abnormal cash flows from operating activities, Abnormal production costs, and abnormal discretionary expenditures. These proxies are based on Roychowdhury model (2006).	Darmawan et al. (2019), Rajeevan, Ajward (2019).
Independent Variables			
Audit Fees	AFES	Natural logarithm of total audit fees	Yusuf (2021), Soyemi et al. (2020), Tyokoso, Tsegba (2015).
Auditor-Type	ATYP	'1' if audited by any of Big4, otherwise '0'	Yusuf (2021), Rajeevan, Ajward (2019), Tyokoso et al. (2016), Idris et al. (2018).
Board Size	BSIZ	Total number of directors on the board	Kurawa, Ahmed (2021), Luo, Jeyaraj (2019), Rajeevan, Ajward (2019).
Board Independence	BIND	the ratio of independent non-executive directors on the board to the total number of directors	Kurawa, Ahmed (2021), Idris et al. (2018), Gull et al. (2017).

Table 2 (cont.). Description and Measurement of Variables

Variables	Symbols	Description/Measurement	Source(s)
		Independent Variables	
Board Gender Diversity	GDIV	The ratio of women directors on the board to the total number of directors	Kurawa, Ahmed (2021), Saona et al. (2019).
		Control Variables	
Firm Size	FSIZ	Natural logarithm of total assets	Yusuf (2021), Luo, Jeyaraj (2019), Rajeevan, Ajward (2019).
Profitability	ROA	Net income divided by total assets	Soyemi et al. (2020), Lopes (2018), Abubakar, Rokiah, Chandren (2017).

Source: Authors' compilation (2022).

3.2. Model Specification and Estimation Techniques

The model for the study is as specified below:

$$EM_{it} = \beta_0 + \beta_1 AFES_{it} + \beta_2 ATYP_{it} + \beta_3 BSIZ_{it} + \beta_4 BIND_{it} + \beta_5 GDIV_{it} + \beta_6 FSIZ_{it} + \beta_7 PROF_{it} + \mu_{it} \qquad (8)$$

Where: EM_{it} is decomposed into discretionary accruals and real earnings management. Equations 9 and 10 evolve thus:

$$DACC_{it} = \beta_0 + \beta_1 AFES_{it} + \beta_2 ATYP_{it} + \beta_3 ATEN_{it} + \beta_4 BSIZ_{it} + \beta_5 BIND_{it} + \beta_6 GDIV_{it} + \beta_7 PROF_{it} + \mu_{it} \qquad (9)$$

$$REEM_{it} = \beta_0 + \beta_1 AFES_{it} + \beta_2 ATYP_{it} + \beta_3 ATEN_{it} + \beta_4 BSIZ_{it} + \beta_5 BIND_{it} + \beta_6 GDIV_{it} + \beta_7 PROF_{it} + \mu_{it} \qquad (10)$$

The Pooled Ordinary Least Square (POLS) method is adopted as analytical technique to estimate models specified for the study. The choice of fixed effects or random effects is dependent upon outcome of Hausman Test and Lagrange Multiplier Test.

4. RESULTS AND DISCUSSION OF FINDINGS

4.1. Descriptive Statistics

While table 3a depicts descriptive statistics for both dependent and independent (including control) variables covered in this study that were continuous, table 3b presents frequency table for the only binary variable in this study. These descriptive statistics include mean, minimum, maximum, standard deviation, skewness, kurtosis, Jacque-Bera alongside their probability values.

From table 3a, audit fees and proxy for firm size, that is total assets have the highest yearly means and discretionary accruals have the lowest mean. The standard deviation of audit fees and total assets are very high, implying that they deviated from their means with high discrepancies. For these reasons, the natural logs of audit fees and total assets are taken.

Besides, the remaining variables fall within their minimum and maximum values. Every variables have positive skewness values implying that they are all skewed to the right and their means are greater than the median and mode. This is an indication that all the variables are normally distributed. Furthermore, kurtosis was also used to test normality and kurtosis describes the degree to which scores cluster in the tails or the peak of a frequency distribution. The peak is tallest part of the distribution, and the tails are ends of the distribution. There are three types of Kurtosis which are mesokurtic, leptokurtic, and platykurtic. Mesokurtic occurs when the value is equal to 3 (=3) and it is platykurtic when it is less than 3 (<3) while greater than 3 (>3) is leptokurtic. Variable like is discretionary accruals, real earning management and audit fees are platykurtic while variables like board size, board independence, board gender, diversity, firm size and profitability are leptokurtic.

Table 3a. Descriptive Statistics for Continuous Variables

Variables	Mean	Std. dev	Min.	Max.	Skew.	Kurt.	JB (p-value)
DACC	-0.000	0.148	-1.011	0.972	0.813	0.000	61.63 (0.00)
REEM	0.000	0.019	-0.784	0.994	0.337	0.000	30.51 (0.00)
AFES	41254.37	85713.07	900	695000	0.000	0.000	-
BSIZ	9.903	2.942	4	19	0.000	18.260	18.26 (0.00)
BIND	4.70	3.011	0	14	0.000	15.44	15.44 (0.00)
GDIV	0.173	0.124	0	0.667	0.000	26.45	26.45 (0.00)
FSIZ	110000000	260000000	564583	2,020,000,000	0.012	37.48	37.48 (0.00)
PROF	0.33	0.109	-0.544	0.539	0.00	68.68	68.68 (0.00)

Source: Stata output of data input by authors (2022).

Table 3b. Frequency Count for Binary Variable

AUTY	Frequency	Percentage (%)	Cumulative %
0	146	41.71	41.71
1	204	58.29	100.00
Total	350	100.00	

Source: Stata output of data input by authors (2022).

Table 3b shows frequency count for the only categorical variable in this study, that is, auditor type of either Big4 or non-Big4 auditor. Of the 350 total audit engagements sampled used for this study, the Big4 auditors were engaged 204 times (or 58%) while non-Big4 audit firms were engaged for 146 time (or 42%).

Further, table 4 shows the results for t-test of mean difference between each of the independent variables and the earnings management classifications, that is increasing income (positive) and decreasing income (negative) earnings management tendencies. This test allows a comparison of studied auditor and board attributes across signed earnings management practices usually encountered.

The outcome of the result shows that there is a significant difference between the mean of decreasing and increasing earning management with auditor-type, board independence and profitability. For other independent variables of audit fees, board size, gender diversity as well as control variable firm size, there were no significant difference between their means of decreasing and increasing earnings management. Impliedly, while auditor-type, board independence and profitability differ significantly between decreasing and increasing

earning management, it does not differ significantly along audit fees, board size, gender diversity and firm size.

Table 4. Test of Mean Difference along Earnings Management Classification

Independent Variables	EM	Obs.	Mean	t-test values (*p*-value)
AFES	Decreasing (-)	183	39319.89	-0.4415 [0.6591]
	Increasing (+)	167	43374.19	
	Mean Difference		-4054.30	
ATYP	Decreasing (-)	183	0.539	-2.104 [0.0361]**
	Increasing (+)	167	0.641	
	Difference		-0.102	
BSIZ	Decreasing (-)	183	10.082	1.193 [0.2337]
	Increasing (+)	167	9.707	
	Difference		0.375	
BIND	Decreasing (-)	183	5.153	2.979 [0.0031]***
	Increasing (+)	167	4.204	
	Difference		0.949	
GDIV	Decreasing (-)	183	0.168	-0.876 [0.382]
	Increasing (+)	167	0.179	
	Difference		-0.011	
FSIZ	Decreasing (-)	183	7.398	1.608 [0.1088]
	Increasing (+)	167	7.259	
	Difference		0.139	
PROF	Decreasing (-)	183	0.008	-4.602 [0.0000]***
	Increasing (+)	167	0.060	
	Difference		-0.052	
*** *p*<0.01, ** *p*<0.05, * *p*<0.1				

Source: Stata output of data input by authors (2022).

4.2. Test of Ordinary Least Squares (OLS) Assumptions

This section displays output of selected tests of basic assumptions underlying OLS. This is necessary prior to estimating the study models using OLS.

4.2.1 Normality Test of Distribution of Dependent Variables

The histogram for proxies of earnings management, namely discretionary accruals and real earnings management are as presented in figures 1 and 2.

From figure 1, it can be deduced that the histogram chart for discretionary accruals approximately mirror a normal curve. The histogram chart for real earnings management is as shown in figure 2.

Similar to discretionary accruals, figure 2 which depicts the distribution curve for real earnings management also reveals that the image mirror that of a normal distribution. By implication, these histogram charts further provide evidence in support of the normality of values of dependent variables as shown in descriptive statistics in table 3a.
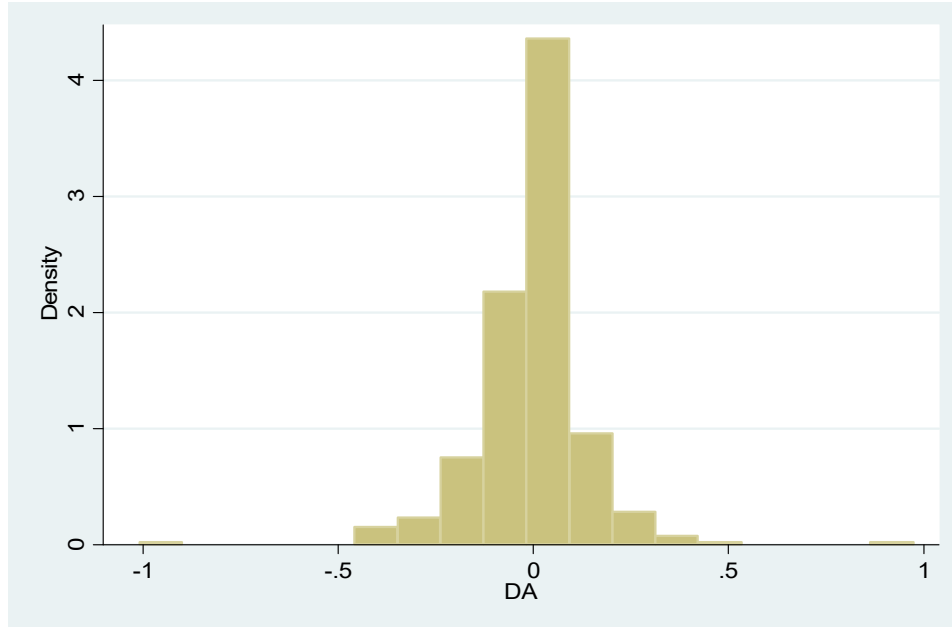
Figure 1. Histogram for Values of Discretionary Accruals

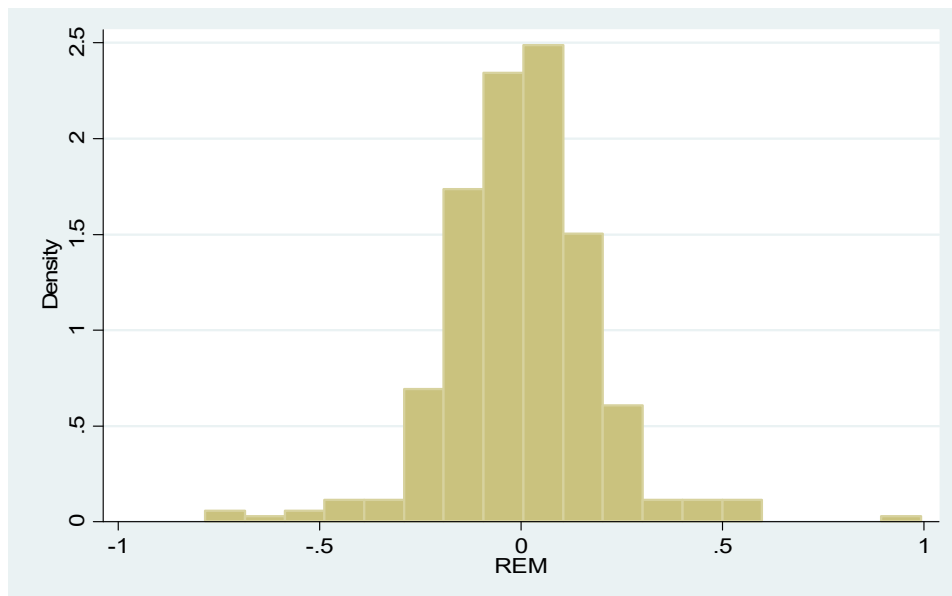Source: Stata output of data input by authors (2022).

Figure 2. Histogram for Values of Real Earnings Management

Source: Stata output of data input by authors (2022).

4.2.2. Multi-collinearity Test

Table 5 presents the result of Pearson correlation alongside Variance Inflation Factor (VIF) and 1/VIF.

Table 5. Pearson Correlations with VIF and 1/VIF

Variables	DACC	REEM	AFES	ATYP	BSIZ	BIND	GDIV	FSIZ	PROF
DACC	1								
REEM	-0.644	1							
AFES	-0.014	0.013	1						
ATYP	0.032	0.062	0.263	1					
BSIZ	0.023	-0.126	0.468	0.187	1				
BIND	-0.017	-0.144	0.220	0.263	0.582	1			
GDIV	0.049	0.088	-0.094	0.208	-0.099	-0.072	1		
FSIZ	0.018	-0.145	0.630	0.420	0.544	0.489	-0.062	1	
PROF	0.317	0.047	0.126	0.184	-0.184	0.013	0.001	0.154	1
VIF			2.37	1.93	1.84	1.74	1.35	1.09	1.06
1/VIF			0.422	0.518	0.542	0.573	0.742	0.918	0.942

Source: Stata output of data input by authors (2022).

Correlation is used to show the degree of linear association among the variables as well as, to detect the presence of multicollinearity. The correlation between discretionary accruals with pairs of auditor-type, board size, board gender diversity, firm size and profitability show a positive relationship while the correlation between discretionary accruals with pairs of real earning management, audit fees and board independence show a negative relationship. Further, the correlation between real earning management with pairs of audit fees, auditor-type, board gender diversity and profitability show a positive relationship while the correlation between real earning management with pairs of board size, board independence and firm size shows a negative relationship. The correlation analysis reveals that there is no presence of multicollinearity in the model. To further confirm the absence of multicollinearity, variance inflation factor (VIF) and 1/VIF were computed. The VIF is a measure of the amount of multicollinearity in a set of multiple regression variables. Multicollinearity exists when there is a linear relationship, or correlation, between one or more of the independent variables or inputs. Multicollinearity creates a problem in the multiple regression because the inputs are all influencing each other. A VIF of 1 indicates two variables are not correlated, a VIF between 1 and 5 indicates moderate correlation, and a VIF above 5 indicates high correlation. The result of VIF shows a moderate correlation among the variables.

4.2.3. Heteroskedasticity Test

(a) Heteroskedasticity Test for Discretionary Accruals

Tables 6a and 6b display results of White test for heteroskedasticity for discretionary accruals (DACC) and real earnings management (REEM) respectively, the null the null hypothesis (Ho) being homoscedasticity and alternate (Ho) being unrestricted hetero-scedasticity.

Table 6a. White test for Heteroskedasticity (DACC)

Chi^2 (34)	36.33		
Prob > Chi^2	0.3606		
Cameron & Trivedi's Decomposition of IM- Test			
Source	Chi^2	df	p-values
Heteroskedasticity	36.33	34	0.3606
Skewnesss	4.81	7	0.6834
Kurtosisi	2.24	1	0.1344
Total	43.38	42	0.4124

Source: Stata output of data input by authors (2022).

There is absence of heteroscedasticity as the p-value (0.3606) is less than 5% (p<0.05) thereby not rejecting the null hypothesis and concluding homoscedasticity.

(b) Heteroskedasticity Test for Real Earnings Management

Similarly, table 5b depicts the results for heteroskedasticity test for real earnings management (REEM).

Table 6b. White test for Heteroskedasticity (REEM)

Chi^2 (34)	23.88		
Prob > Chi2	0.9018		
Cameron & Trivedi's Decomposition of IM- Test			
Source	Chi^2	Df	p-values
Heteroskedasticity	23.88	34	0.9018
Skewnesss	5.97	7	0.5436
Kurtosis	3.49	1	0.0616
Total	33.35	42	0.8275

Source: Stata output of data input by authors (2022).

The p-value (0.9018) is not significant being less than 5% (p<0.05), thereby not rejecting the null hypothesis of homoscedasticity

4.3. Regression Results

Tables 7 and 8 present the results of the panel regression analysis. There are two models, model one is on discretionary accruals and two on real earning management. There are three (3) regressions for each of these models, namely pooled, fixed and random effects. The results of Hausman, Breusch & Pagan Lagrangian multiplier tests would assist in selecting the appropriate estimates upon which the study is hinged upon. The Hausman test is used to compare estimates of fixed and random effects, where it is significant, interpret the fixed effect and if otherwise, the random effect is appropriate. The Breusch & Pagan Lagrangian multiplier test compares estimates of pooled and random, such that where it is significant, interpret the random effect and if otherwise, the pooled estimate is considered appropriate.

For model one which is on discretionary accruals, the random effect is appropriate, as both Hausman (p=0.2742) and BP Lagrangian multiplier (p=1.000) tests are not significant (p>0.05). The outcome of the random effect revealed that audit fees, board size, firm size and profitability are statistically significant in determining discretionary accruals. While both audit fees and board size exert a negative significant impact, firm size and profitability

exert a positive significant impact on discretionary accruals. The F-statistics of the model was 47.48 with a probability value of 0.000 indicating that the overall model is statistically significant at 5% level of significance. Furthermore, the aggregate of explanatory variables account for 25% variations in discretionary accruals.

Table 7. Panel Regression Analysis (DACC)

Variables	Pooled	Random	Fixed
ln_AFES	-0.079	-0.079	-0.182
	[-2.21]**	[-2.21**	[-2.03]**
ATYP	0.011	0.011	0.074
	[0.58]	[0.58]	[1.80]*
BSIZ	0.005	0.005	0.013
	[1.49]*	[1.49]*	[1.69]*
BIND	-0.003	-0.003	-0.009
	[-1.03]	[-1.03]	[-1.32]
GDIV	0.0058	0.006	0.011
	[0.85]	[0.85]	[0.95]
LnTA	0.033	0.033	0.003
	[1.47]*	[1.47]*	[0.04]
PROF	0.453	0.453	0.533
	[6.38]***	[6.38]***	[5.24]***
Cons	0.025	0.025	0.583
Adj. R^2	0.1039	0.2539	0.1255
F-statistics/ Wald chi^2	6.78 (0.000)	47.48 (0.000)	6.01 (0.000)
Hausman test		8.71 (0.2742)	
B & P Lagrangian Multiplier test	0.00 (1.000)		

*** significant at 10%; ** significant at 5%; * significant at 1%

Source: Stata output of data input by authors (2022).

Table 8. Panel Regression Analysis (REEM)

Variables	Pooled	Random	Fixed
Ln_AFES	0.144	0.165	0.155
	[3.12]***	[2.60]**	[1.69]*
ATYP	0.019	-0.043	-0.124
	[0.77]	[-1.32]	[-2.95]***
BSIZ	-0.005	-0.006	-0.006
	[-1.08]	[-0.93]	[-0.73]
BIND	-0.004	-0.001	0.002
	[0.91]	[-0.03]	[0.32]
GDIV	0.007	-0.007	-0.18
	[0.82]	[0.66]	[-1.54]*

Table 8 (cont.). Panel Regression Analysis (REEM)

Variables	Pooled	Random	Fixed
LnTA	-0.111	-0.108	-0.097
	[-3.88]***	[-2.63]**	[-1.13]
PROF	0.081	-0.027	-0.106
	[0.88]	[-0.29]	[-1.02]
Cons	0.250	0.186	0.204
Adj. R^2	0.0581	0.0581	0.049
F-statistics/ Wald chi^2	4.08 (0.0003)	11.33 (0.1247)	2.17 (0.0372)
Hausman test		15.93 (0.0258)	
B & P Lagrangian Multiplier test	106.46 (0.0000)		

*** significant at 10%; ** significant at 5%; * significant at 1%

Source: Stata output of data input by authors (2022).

In model two which is on real earning management, the fixed effect is appropriate, as both Hausman (p=0.0258) and BP Lagrangian multiplier (p=0.000) tests are significant (p<0.05). The result of the fixed effect showed that audit fees, auditor-type and board gender are statistically significant in influencing real earning management. While audit fees displays positive impact, auditor-type and board gender exert negative significant effect on real earning management. In addition, F-statistics of the model was 2.17 with a probability value of 0.0372 indicating that the overall model is statistically significant at 5% level of significance. However, 5% variations in real earnings management were only accounted for by combination of independent variables studied.

4.4. Discussion of Findings

The findings from these study appear consistent with previous empirical literature. However there are noticeable inconsistencies. On audit characteristics, this study provides empirical evidence to support a negative and statistical significant influence of audit fees on discretionary accruals. This implies that the higher the fees charged by external auditors, perhaps owing to huge audit efforts, the lower the incidence of discretionary accruals. However, auditor-type maintains a positive but non-significant effect. These are common measures typically found and adopted as auditor quality in audit literatures. Studies by Mantonti, Luliano, Palazzi, Tucker (2021) in Italy, Yusuf (2021) in Nigeria, Thuan (2020) in Vietnam and Zandi et al. (2019) in Pakistan have also found a negative association between audit fees and discretionary accruals. On the contrary, the following studies have also shown evidence of a direct relationship between audit fees and discretionary accruals. These among others are Khalil (2022) in Pakistan, Ozili (2021) in UK and within African continent, Mollik et al. (2020) in Australia, Abid et al. (2018) in Pakistan, and Soyemi et al. (2020) and Tyokoso et al. (2016) in Nigeria. Unlike findings on discretionary accruals, while audit fees display a positive and statistical influence on real earnings management, auditor-type exhibits a negative and statistical impact on real manipulative tendencies of managers. Impliedly, this study provides empirical evidence as to possibilities of a positive and negative significant influence of audit quality on real earnings management. Studies by Chowdhury, Eliwa (2021) in the United Kingdom, Soyemi et al. (2020) in Nigeria have reported a direct association between audit quality and real earnings management.

However, Al-Absy, Ismail, Chandren (2019) in Malaysia, Orazalin, Akhmetzhanov (2019) in Kazakhstan and Sitanggang, Karbhari, Matemilola, Ariff (2019) in the UK have also provided empirical evidences to prove an inverse relationship between audit quality and real earnings management.

Besides a few audit attributes that were selected for investigation, board characteristics, namely board size, board independence and board diversity also feature as part of explanatory variables which may affect earnings management. Findings from this study indicate that board size exhibits a negative but significant influence on discretionary accruals. This indicates the prominent role played by board size in mitigating the incidence of discretionary accruals among firms. This was also reported by Adeoye et al. (2021) and Kajola et al (2020) in Nigeria, Luo, Jeyaraj (2019) in the United Kingdom, Saona, Muro, Alvarado (2020) in Spain, Rajeevan, Ajward (2019) in Sri Lanka and Gull, Nekhili, Nagati, Chtioui (2018) in France. Similarly, female representation on board also displays a negative but significant influence on real earnings management. No doubt, this position provides evidence to support the recruitment of more female directors on corporate boards. Studies that were found to be consistent with this findings among others include Saona, Muro, Alvarado (2020) in Spain, Abubakar, Rokiah, Chandren (2017) in Nigeria and Panzer, Muller (2015) in Germany. However, studies by Luo, Jeyaraj (2019), Gull, Nekhili, Nagati, Chtioui (2018) and Zalata, Tauringana, Tingbani (2018) have also been documented with findings negating the influence of female representation on real earnings manipulations by managers.

Further, while returning a positive and statistically significant effect of both size of clients and profitability on discretionary accruals. This implies that managers of profitable large firms possess tendencies to engage in discretionary accruals type of earnings management. Additionally, there is also evidence emanating from findings from this study indicating a negative and non-significant relationship between the duo of clients' size and profitability and real earnings management by managers. Extant studies that have lent credence to direct relationship between firm size and discretionary accruals include Yusuf (2021) and Yasser, Soliman (2018) as well as, actual earnings management (Majid, Latif, Musa, 2022), while studies by Mantonti, Luliano, Palazzi, Tucker (2021), Oladejo, Akintude, Yinus, Akanbi, Olowokere (2021) and Soyemi et al. (2020) have documented contrary results. Similarly, with respect to positive association between profitability and discretionary accruals, the following studies, namely Almarayeh, Aibar-Guzmán, Abdullatif (2020), Agyei-Mensah, Yeboah (2019) and Lopes (2018) have also acknowledged similar findings, while studies by Firnanti, Pirzada (2019) and Khanh, Nguyen (2018) have reported contrary results.

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This study examines influence of auditor and board characteristics on two major categories of earnings management, namely discretionary accruals and real earnings management thereby providing further empirical evidence using latest data on emerging nation, such as Nigeria. There are diverse opinions as to whether Anglo-Saxon institutional settings of developed economies of Western European countries are applicable to developing nations. This present study has concludes that external auditor and board attributes are effective determinants of incidence of earnings management. As expected, audit efforts, proxied with audit fees and board size contribute to reduction of discretionary

accruals, with clear evidence of large and profitable firms retaining high predispositions towards undertaking discretionary accruals. Similarly, actual manipulation of earnings is drastically reduced by engagement of Big4 who may detect such practices, as well as presence of female directors on corporate boards. Nevertheless, audit fees as charged by external auditors, denoting audit efforts, further reinforces incidence of real earnings management.

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