Effect of Board and Audit Committee Attributes on Earnings Management: Evidence from Listed Non-Financial Firms in Nigeria

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Abstract
This study examines the effect of board and audit committee attributes on earnings management. The study adopts purposive sampling technique. The study carries out robust regression statistical model with a 10-year panel data among 36 listed firms in Nigeria. The data used were sourced from the published annual account and reports of sampled firms listed on the Nigeria Exchange Group. The findings from the study reveal that board size, board independence and financial expertise of women on the board and audit committee diminish earnings management while board expertise show mixed finding as board expertise promotes non-discretionary accrual, its equally diminishes discretionary accruals. The findings of this study imply that board and audit committee attributes are important in dealing with earnings management. From our key findings, the study recommends the inclusion of women with financial expertise on the board and audit committee beyond gender diversity. In contrasts to the present practice, the study recommends the inclusion of more independent directors to the board as against the current practice of non-executive directors as independent directors reduce earnings management.

Keywords: Audit Committee, Board Expertise, Boards’ Size, Earnings Management and Financial Expertise.

1.0 Introduction
In modern-day business, ownership is separated from management, which places managers in a vintage position to manage the firm on behalf of owners. The pressure from owners (principals) on managers to meet earnings estimates and opportunistic behaviour on the part of managers (agents) compel managers to resort to earnings management. The flexibility of accounting concepts and convention avails managers the right of choice in choosing accounting principles which places them in positions to exhibit opportunistic tendencies in managing earnings according to Momenzadeh and Abbaszadeh (2013). Therefore, the discretion in the choice of accounting principles avails managers the opportunity to manipulate earnings to suit their predetermined self-seeking objective.

In addressing these manipulative and opportunistic habits, the board and audit committee have roles to play as espoused by agency theory. The committee reviews the firm’s annual report, with relevant guidelines and standards. Thus, this study investigates the interaction of certain board and audit committee attributes on earnings management. The shareholders’ power of involvement in the management of firm is minimal as such power is delegated to the managers, the delegation of this power of creates agency problem as managers interest seem not in alignment with that of the owners. To address these challenges, there is a need for a third force to oversee the interest of the owners and managers, hence the need for board, this lays a logical foundation for the relationship between board attributes and earnings management. These attributes are board size, board independence, board meeting, and financial expertise of feminine directors on the board and the audit committee. Earnings management has resulted in the demise of many huge firms such as Enron in 2001, WorldCom in 2002 and in most...
recent times cases of corporal scandal in Oando and Arik in 2017 (Abubakar, Abubakar, Anuforo, & Baba, 2021; Olowokudejo & Oladimeji, 2019). The scandal in Oando involves manipulation of earnings to accommodate dividend from unrealized profit. Thus, to avoid such manipulative scandals in future, corporate governance mechanisms such as board and audit committee attributes are key in dealing with earnings manipulation as the oversight function of the audit committee puts the committee in vintage position to review the financial report with a view to addressing earnings management, account misstatement and other related issues.

From an agency theory perspective, board size, independence and expertise play important roles in reducing the opportunistic nature managers tend to exhibit. The study by Sae-lim and Jermsittiparsert (2019) validates this theoretical position but the study did not examine board independence from the position of independent directors and board meeting from the position of actual meeting attendance. Thus, this study examines board independence from the position of independent directors, actual board meeting attendance and expertise of women on the board and audit committee as against mere gender inclusion. Examining board independence from the point of the independent director as against non-executive directors, actual board meeting attendance as against frequency of board meeting, and the expertise of women on the board and audit committee as against mere gender balance are our major contributions to literature. Examining board independence from the viewpoint of independent director is superior to the viewpoint of non-executive directors as independent directors are more independent than non-executive directors. In addition, actual meeting attendance measures the commitment of board members to meeting than frequency of meeting with poor attendance. The expertise of women on the audit committee is an important metric than mere gender as the function of audit committee requires expertise rather than gender sensitivity.

While studies such as Githaiga, Muturi Kabete and Caroline Bonareri (2022); Orazalin (2020); Othmani (2021); Saona, Muro, San Martin and Baier-Fuentes (2019) examine board gender diversity, none of these studies examines the expertise of the female gender on the board and audit committee. In addition, studies on audit committee and earnings management such as Abbas (2020); Allam (2020); Hala (2019); Marzuki (2022); Salleh and Haat (2014) ignored the expertise of feminine gender serving on the statutory audit committee beyond mere inclusion of women on the committee. This study argues that the audit committee is a technical committee that requires expertise hence the need to examine the financial expertise of women serving on the audit committee beyond mere gender inclusion on the committee.

2.0 Literature Review and Hypotheses Development

Conceptual Review

Earnings management is the manipulation of earnings far above accounting standards (Thoppan, Nathan, & Victor, 2021). Often times earnings management thrive on information asymmetry where managers have more information without divulging it to owners with the intent of being opportunistic with the information (Amin, Lukviarman, Suhardjnato, & Setiany 2018). Accordingly, Hamdan, Mushtaha and Al-Sartawi (2013) posits that earnings management is manipulating accruals with intent to increase earnings without reasonable underlying economic transaction, thereby diminishing the relevance of accounting information (Sae-lim and Jermsittiparsert 2019: Simamora 2019).

In this study, board and audit committee attributes include board size, independence, meeting, and financial expertise of female directors on the board and on the audit committee. Board size is the number of members on the corporate board; this includes executive and non-executive directors who are saddled with responsibilities of supervision and monitoring (Rajeevan and Ajward 2019). Board independence
according to Lippolis and Grimaldi (2020) is independent non-executive directors on the board. Non-executive directors are outside directors who are not part of the management thus, their membership of the board guarantees independence and sound judgment, this study however disagrees with this, this study is of the opinion that independent directors are more independent than non-executive directors. Board meetings on the other hand are the number of times the board meets to deliberate on issues of interest to the board. Board meeting is central to agency theory as meeting avails the board the opportunity to carry out its functions in line with the study of Obigbemi, Omolehinwa, Mukoro, Ben-Caleb and Olusanmi (2016). This study however conceptualizes board meetings as the actual attendance of board meetings as against frequency of meetings. The financial expertise of women on the board is the accounting and finance knowledge of the female gender on the board. The studies of Ngo and Le (2021); Şener and Karaye (2014) define audit committee expertise as committee members with accounting and finance background therefore the accounting and finance background of women on the audit committee is the technical know-how of women on the committee beyond mere gender inclusion.

**Empirical Review**

**Board Size and Earnings Management**

The findings of past studies with respect to board size and earnings management reveal mixed findings. For example, findings by Amran, Ishak and Abdul Manaf (2016); Aygun, Suleyman and Sayim, (2014); Hemathilake, Ruparatne and Meegaswatte (2019); Iraya, Mwangi and Muchoki (2015); Khuong et al. (2022): Abu-Dawleh, Lybaert, Steijvers and Jans (2021); Saona, Muro and Alvarado (2020) reveal significant negative interaction between board size and earnings management. The finding implies that board size lowers earnings manipulation, discretionary accruals and all forms of earnings management practices. The most significant finding of the above studies is that the fewer the number of directors on the board the lower the earnings manipulation practices. The above finding aligns with agency theory postulation but contradicts the finding of Adamu, Ishak and Chandren (2017) which posits that a small board size may not have the required number of expertise to detect earnings management. Thus, a small board size does not have the required number of directors to effectively monitor, review and examine financial reports. Further investigations from the findings of Obigbemi, Omolehinwa, Mukoro, Ben-caleb and Olusanmi (2016): Dakhlallah, Norfadzilah, Abdullah and AL Shehab (2021) show a strong association between board size and earnings management. The studies reviewed above revealed that board size reduces the opportunistic tendencies of managers to manipulate earnings in a desired opportunistic self-seeking direction.

On the contrary, however findings by Adamu et al., (2017); Kharashgah, Amran and Ishak (2019); Mwenda (2017); Shahwan and Almubaydeen (2020) show significant positive interaction between board size and earnings management. These findings attest to the fact that board size increases opportunistic behaviour to manipulate earnings in a way that is detrimental to the firm and investing public. This simply means board size promotes opportunistic and unethical act of earnings manipulation, which may affect the credibility of financial reports with its negative consequences on investors and the public at large as earnings management may deter intending investors and the investing public at large. In the light of the above arguments, this study puts forward this hypothesis:

Ho: Board size has negative impact on earnings management.

**Board Independence and Earnings Management**

The inclusion of non-executive directors guarantees the independence of the board; thus, a non-executive director brings independence to the board as their appointments are devoid of management’s influence.
Empirical evidence from the findings of Lippolis and Grimaldi (2020); Saona, Muro and Alvarado (2020); Al-Sraheen and Al Daoud, (2018); Kankanamage (2015) reveal a significant negative relationship which indicates that board independence reduces earnings management practices. Further findings from the studies of Aleqab and Ighnaim (2021); Mardessi and Fourati (2020); Abu-Dawleh et al. (2021); Akpomadeaye and Williamson (2021) which are contrary to the finding of Tran, Kabir and Huang (2020) indicate that board independence diminishes opportunistic behaviour associated with manipulation of earnings. The findings above show a significant negative association as regards the relationship between independence of the corporate board and earnings manipulation, which appears logical as independent directors bring independent judgment to financial reports. The independence associated with non-executive directors avails them the opportunity to carry out the review of financial reporting without undue influence from the management.

This study however disagrees with literature that explains board independence as a function of non-executive directors. An independent director within the context of section 4.3 of the Nigerian Corporate Governance Code (2018) is a director who holds no substantial equity interests in the company. Independent directors are not representatives of any stakeholder and hold no interests in the company. Section 5.5 of the Nigerian Corporate Governance Code (2018) states the qualifications for appointment as independent directors. The independent director is not expected to represent the interest of any shareholder or have familial relationship with employees or the company. All these qualifications secure the independence of independent directors far and above the independence of non-executive directors, which has been a major source of concern to industry observers and academics alike. Thus, this study defines board independence as the presence of independent directors as against non-executive directors in literature. Therefore, this study measures board independence as the number of independent directors on the board thus this hypothesis:

Ho: Board independence has negative impact on earnings management.

**Board Meeting and Earnings Management**

Board meeting provides an avenue for other forms of board mechanism, for example, expertise is displayed in a meeting, and independence of mind and expression expected of independent directors are exhibited in meetings. Thus, meeting provides avenue to express other forms of board attributes. However, not all these opportunities the meeting avails can be taken advantage of if the attendance of the meeting is poor. A robust meeting with robust argument and discourse is possible when board meeting attendance is good. Therefore, this study is of the opinion that board meeting attendance is superior to the frequency of board meetings held. Thus, we are contributing to literature by examining actual board attendance as against the frequency of board meetings in past studies. The studies by Binashour, Albairaq, Sulaiman, Hayek and Hazarika (2021); DeBoskey, Luo and Zhou (2019); Mangala and Isha (2019); Nazir and Talat (2018) lend credence to the above assertion on the frequency of board meeting but not the actual attendance of board meetings. The empirical findings from the studies show a significant negative association in relation to board meetings and earnings management. The implication of this finding is that the frequency of the board meetings diminish earnings manipulation, lowers discretionary and non-discretionary accruals. Thus, the frequency of board meetings deals with opportunistic tendencies by managers in charge of a firm. Further empirical finding by Luo and Jeyara (2019) indicates that board meetings are of significant negative association with earnings management, this suggests that board meeting promotes earnings quality through a significant reduction in opportunistic self-driven manipulation of earnings by managers. Our study disagrees with the above findings as we are of the opinion that number of times board meetings are held do not guarantee quality
and robust meeting but the actual board meeting attendance does. Actual board meeting attendance gives room for quality and robust arguments and decisions. On the contrary, findings by Florencea and Susanto (2019); Aleqab and Ighnaim (2021); Evbuomwan (2021); Kjærland, Haugdal, Søndergaard and Vågslid (2020) provide empirical evidence that contradicts the above findings as the study reveals an insignificant association between board meeting and earnings management. In view of the above arguments, our study proposes this hypothesis:

**H}_0^3: Board meeting has negative impact on earnings management**

**Financial Expertise of Female Directors on the Board and Earnings Management**

Findings from studies in literature suggest that female gender on the corporate board have superior monitoring prowess as their presence on the board assures earnings management drastically; however, it remains unclear as to which skill of female director drives such monitoring ability. Thus, in our study, we focus on the finance and accounting expertise of women on the board an area which is largely unexplored in literature. Extant literature in accounting, for example, Adams and Ferreira (2009); Saona, Muro, San Martín and Baier-Fuentes (2019); Zalata, Ntim, Alsohagy and Malagila (2022) supports the idea of female directors having excellent supervision and intelligent monitoring prowess than their male counterparts. Nevertheless, there is a dearth of literature on financial expertise of female gender on the board in relation to earnings management. While the finding of Papangkorn, Chatjuthamard, Jiraporn and Cheu ykamhang (2021) suggests the inclusion of women on the corporate board improves financial performance especially during economic downturn, the finding by Lara, Osma, Mora and Scapin (2017) on the other hand submits that the inclusion of female gender on the board mitigates earnings manipulation. The findings of the study of Zalata, Ntim, Choudhry, Hassanein and Elzahar (2019) explain that female directors with monitoring responsibilities mitigate earnings management. That implies that the finding of Zalata et al. (2019) sheds light on the findings of Lara et al. (2017). Within the context of accounting and stock market fraud, Cumming, Leung and Rui (2015) provide empirical evidence to support the fact that the inclusion of women on the board reduces the chances of stock market-related fraud. These studies reviewed above show that female directors assuage earnings management and improve the quality of earnings. We disagree with the findings of most of these studies. We are of the opinion that beyond the mere inclusion of women on the board to fulfil gender quota, other unobserved factors such as the expertise of female directors may be an important factor in examining the interaction between the female gender and earnings management. In the light of the above arguments, our study presents this hypothesis:

**H}_0^4: Financial expertise of female director on the board has negative impact on earnings management.**

**Financial Expertise of Female Director on Audit Committee and Earnings Management**

Preponderant majority of studies in literature examine the association between audit committee gender diversity and earnings management, these studies include Farouk and Isah (2018); Isaiah, Abdulmalik and Shaibu (2022); Ismail and Abdullah (2013); Kazemi Olum, Imani Barandagh and Abdi (2019); Sudarman and Hidayat (2020). All these studies however examine gender diversity but none of the studies examines the financial expertise of women on the audit committee. However, (Sheidu et al. (2023) investigated how female director financial expertise affects audit delay. According to studies in gender literature women are meek in nature Al-Dhamari and Chandren (2018), with high degree of ethical standards Ho, Yuansha, Li and Zhang (2015), and obedient to rules and statues Saona, Muro, San Martín and Baier-Fuentes (2019). To address certain challenges associated with earnings forecasts, opportunistic and self-seeking behaviour of managers, the audit committee has an important role to play. In other
words, the committee oversees and monitors the financial reporting process as a whole while resolving issues of interest between the managers and the principals (Al-Absy, Ismail, & Chandren, 2018b; Kazemi Olum et al., 2019).

As regards the influence of female directors on the audit committee, Salehi, Tahervafaei and Tarighi, (2018) opine that the inclusion of female gender on the committee mitigates earnings management as most women are risk averse. A few studies such as Al-Absy, Ismail and Chandren (2018a); Kharashgah et al. (2019a); Lisic, Myers, Seidel and Zhou (2019) examine accounting expertise of audit committee members but none of the studies examines the expertise in relation to gender an area largely unexplored in literature. Thus, our study bridges this gap by examining the financial expertise of feminine directors on audit committee beyond mere gender inclusion. In the light of the above arguments, our study presents this hypothesis:

Ho: Financial expertise of female director on the audit committee has negative impact on earnings management.

**Board Expertise and Earnings Management**

Measuring board expertise as a function of directors with degrees and professional qualifications in accounting and finance, Kankanamage (2015) reveals a significant negative interaction as regards board expertise and earnings management. This implies that a director with expertise in accounting and finance brings to bear his/her technical knowledge in reducing earnings management. In addition, study by Abu-Dawleh et al. (2021) emphasises the need for directors with expertise in financial skills in dealing with earnings manipulation. In similar vein, studies by Aleqab and Ighnaim, (2021); Mardessi and Fourati (2020); Suprianto, Suwarno, Murtini, Rahmawati and Sawitri (2017); Zalata, Taurigana and Tingbani (2018) suggest that board expertise with particular reference to accounting and finance reduces earnings manipulation significantly. These studies above suggest that the appointment of directors with degree and professional expertise in accounting and finance contribute in fighting managers’ opportunistic behaviour, which is a recipe for earnings management. This study is of the opinion that the training and ethical behaviour expected of an accountant are responsible for the above findings. Accountants are by ethical standards expected to live above board. In the light of the above argument, this study puts forward this hypothesis:

Ho: Board expertise has negative impact on earnings management.

**Theoretical Literature**

Agency theory explains the relationship between the principal and the agent. Within the context of this study, principals are the shareholders who are the owners of the firm while agents are the managers employed by the principals to manage the affairs of the company on their behalf. In practice, the principal and the agent seem to be at variance as lack of goal congruence leads to agency problems according to Jensen and Meckling (1976). Thus, while the principals are interested in maximizing their investments, the agents are interested in increasing their compensation plan, which leads to earnings management and manipulation to suit their respective interests. The divergent interests lead to opportunistic behaviour from managers (agents) at the expense of the owners (principals).

The managers appear to have information advantage over the owners; thus, the managers tend to take undue opportunistic advantage of this information to the detriment of the principal according to Cardoso, Martinez and Teixeira (2014). In most cases, agents take undue advantage of information gaps to manipulate accounting numbers in a bid to achieve a desired earnings level which lacks economic substance according to Jessica, Djaja and Christiawan (2021). Against the spirit of goal congruence, an
agent may take some opportunistic decisions that would be favourable to him but of a long-term grave consequence to the firm. Agency theory expects an agent to act faithfully to the principal but lack of goal congruence tends to defeat this expectation, which gives rise to agency cost.

3.0 Methodology

Research Design.

The study adopts historical and descriptive research design, the study focused on firms listed on the Nigerian Exchange Group. The study selected 55 firms out of 65 non-financial firms, which represents 84.6% of the target population. The study used a purposive sampling technique and 19 firms from our initial sample size of 55 was filtered due to incomplete data and non-availability of data, thus, our actual sample size is 36 firms with complete data. The study collected data from audited annual reports submitted to the Nigerian Exchange Group for 10 consecutive years from 2012 to 2021. The period from 2012 to 2021 is a period of renewed effort in repositioning the corporate governance mechanism in Nigeria.

Measurement of Earnings Management.

Detecting earnings management is a herculean task that involves a great deal of expertise. In this regard, researchers have come up with many models to detect earnings management. In most cases, researchers prefer the Modified Jones Model (1995) as the model of interest when measuring earnings management when compared to other models. In line with literature, our study measures earnings management by adopting the Modified Jones Model (1995). Our study adopts non-discretionary and discretionary accruals to measure earnings management.

\[
NDA = \alpha_1 \frac{I}{TAT_{t-1}} + \alpha_2 \frac{\Delta Rev - \Delta REC}{TAT_{t-1}} + \alpha_3 \frac{PPE}{TAT_{t-1}} \quad \text{------------------------------------------} 1
\]

\[
DA = \frac{TAC}{TAT_{t-1}} - \{\alpha_1 \frac{I}{TAT_{t-1}} + \alpha_2 \frac{\Delta Rev - \Delta REC}{TAT_{t-1}} + \alpha_3 \frac{PPE}{TAT_{t-1}} \} \quad \text{------------------------------------------} 2
\]

Where TACC\ j,t\ = total accruals of a particular firm (represented as j) in a particular year (represented as t); TAT\ t\ = total assets for a particular firm in a year t – 1; \Delta Rev\ t\ = net revenue for a particular firm in year t minus net revenue in year t – 1. \Delta REC\ j,t\ = the changes in receivables for a particular year t – 1 to year t. PPE\ j,t\ = property, plant and equipment for year t.

Measurement of Independent Variables:

The studies of Orozco, Vargas and Galindo-Dorado (2018) and Vaidya (2019) measure board size as the total number of directors on the board which includes executive and non-executive directors, our study adopts the above measurement. Board independence according to Zattoni, Witt, Judge, Talaubicar and Chen (2017): Ayodeji and Okunade, (2019); Pan, Huang and Gopal (2018) are the number of the non-executive directors on the board. Our study disagrees with the above measurement, we are of the view that independent directors are more independent than non-executive directors, therefore, we measure board independence as the number of independent directors on the board as against non-executive directors in past studies. Board meetings according to the studies of Eluyela et al. (2018); Yakob and Hasan (2021); Al-Daoud, Saidin and Abidin (2016); Hanh, Ting, Kweh and Hoanh (2018) are the frequency of meetings held in a year. Our study however measures board meeting attendance as a percentage of attendance at meetings. We measure financial expertise of feminine directors on the board as the number of female genders on the board with accounting and finance qualification. For the purpose of measurement, accounting and finance qualification is any director with either a degree or professional qualification in accounting and finance. Similarly, we measured financial expertise of female directors

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serving on the audit committee as number of female directors with accounting/finance expertise serving on the audit committee. For the sake of measurement, accounting/finance expert is any director with either a degree or professional qualification in accounting/finance while board expertise is the number of directors with accounting and finance expertise serving on the board. This measurement is similar to the studies of Adamu et al.(2017); Bala and Kumai (2015). Table 3 below summarizes the measurement of variables.

Table 3: Variable Measurement Tables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Types</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings management</td>
<td>Dependent</td>
<td>This study measures earnings management as a function of discretionary and non-discretionary accrual from the modified Jones model of 1995 as used by past studies such as Duong, Evans and Truong (2020); Gounopoulos and Pham (2018); Mark and Daniel (2021)</td>
</tr>
<tr>
<td>Board size</td>
<td>Independent</td>
<td>This study measures board size as the total number of board members in line with past studies such as Altass (2022); Kapkiyai, Cheboi and Komen (2020); Saona, Muro, San Martin and Baier-Fuentes (2019)</td>
</tr>
<tr>
<td>Board independence</td>
<td>Independent</td>
<td>Past studies such as Hemathilake, Ruparatne and Meegaswatte (2019); Oladejo, Akintunde, Yinus, Akanbi and Olowokere (2021); Onuoha, Okpanachi, Jim-Suleiman and Agbi (2021) measure board independence as the number of non-executive directors, but in contrast to past study, this study measures board independence as the number of independent directors.</td>
</tr>
<tr>
<td>Board meeting</td>
<td>Independent</td>
<td>Past studies such as Kontesa, Lako and Wendy (2020); Mustafa, Norfadzilah, Wan Abdullah and Shehab (2021); Oyebamiji (2020); Yakob and Hasan (2021) measured board meeting as the number of board meetings for the year but our study measures board meeting as a percentage of actual attendance of the meeting.</td>
</tr>
<tr>
<td>Financial expertise of female directors on the board.</td>
<td>Independent</td>
<td>This study measures financial expertise of feminine gender on the corporate board as the number of feminine genders with accounting and finance expertise on the corporate board (Obeitoh, Bulusson, &amp; Yusuf, 2023; Ojali, Adamu, &amp; Shawai, 2023).</td>
</tr>
<tr>
<td>Financial expertise of female directors on the audit committee.</td>
<td>Independent</td>
<td>This study measures financial expertise of female on the audit committee as the number of women with accounting and finance expertise on the audit committee (Obeitoh, Bulusson, et al., 2023; Obeitoh, Yusuf Ismail, &amp; Abdulateef, 2023).</td>
</tr>
<tr>
<td>Board expertise</td>
<td>Independent</td>
<td>This study measures board expertise by the number of directors with accounting/finance expertise (Obeitoh, Bulusson, et al., 2023; Obeitoh, Yusuf Ismail, et al., 2023).</td>
</tr>
<tr>
<td>Firm size</td>
<td>Control</td>
<td>The study measures firm size as the log of total assets in line with the study of Ettredge, Johnstone, Stone and Wang (2011)</td>
</tr>
<tr>
<td>Leverage</td>
<td>Control</td>
<td>Total debt/total assets as used by (Mark &amp; Daniel, 2021).</td>
</tr>
</tbody>
</table>

Source: The authors (2023).

Regression Model Specification

In a bid to establish the association between board and audit committee attributes and earnings management, the study develops a regression model as stated below:

\[ NDA = a_1 + \beta_1 BS + \beta_2 BI + \beta_3 BM + \beta_4 FEFD + \beta_5 FFDA + \beta_6 BE + Size + Lev + e \] ................................................................. 1

\[ DAC = a_1 + \beta_1 BS + \beta_2 BI + \beta_3 BM + \beta_4 FEFD + \beta_5 FFDA + \beta_6 BE + Size + Lev + e \] ................................................................. 2
4.0 Results and Discussion

Descriptive Statistics

The table below is the result of descriptive statistics showing average mean values, standard deviation, minimum and maximum values of variables. The average board size is 12.81389 with a maximum board size of 19, which implies a relatively large board size. The average mean of 1.4667 being the mean of independent directors with a maximum of two independent directors suggesting that most firms have few independent directors. Most of the firms meet frequently with minimum and maximum meeting attendance of 70% and 100% respectively with average meeting attendance of 85.433% in a year. The average number of women with accounting and finance background on the board is 2.6667 with a minimum of 1 and maximum of 5 while a minimum of 1 and maximum of 3 of such women serve on the audit committee. The two measures of earnings management namely NDA and DAC indicate a minimum of -2.16 and -0.98 respectively.

Table 4.1: Descriptive Table

<table>
<thead>
<tr>
<th>Variables</th>
<th>Obs.</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDA</td>
<td>360</td>
<td>-0.1101</td>
<td>0.3085</td>
<td>-2.16</td>
<td>1.06</td>
</tr>
<tr>
<td>DAC</td>
<td>360</td>
<td>0.06253</td>
<td>0.3727</td>
<td>-0.98</td>
<td>3.66</td>
</tr>
<tr>
<td>BS</td>
<td>360</td>
<td>12.8139</td>
<td>2.9265</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>BI</td>
<td>360</td>
<td>1.4667</td>
<td>0.4996</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>BM (%)</td>
<td>360</td>
<td>85.433</td>
<td>0.5970</td>
<td>70</td>
<td>100</td>
</tr>
<tr>
<td>FEFD</td>
<td>360</td>
<td>2.6667</td>
<td>1.1121</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>FFDA</td>
<td>360</td>
<td>2.3875</td>
<td>0.5081</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>BE</td>
<td>360</td>
<td>7.8056</td>
<td>1.9767</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>LFS</td>
<td>360</td>
<td>1.2109</td>
<td>0.1543</td>
<td>.8766</td>
<td>1.4305</td>
</tr>
<tr>
<td>LEV</td>
<td>360</td>
<td>1.5625</td>
<td>4.1626</td>
<td>0.1936</td>
<td>36.6942</td>
</tr>
</tbody>
</table>

Source: The authors (2023).

Test of Multicollinearity

Multicollinearity explains the extent to which one independent variable predicts another. The VIF remains the most acceptable measure of multicollinearity thus the rule of thumb is that multicollinearity occurs when tolerance value is greater than 1 and VIF value is greater than 10. The empirical result of the multicollinearity test as depicted in table 4.2 shows that the predictive relationship between independent variables falls within the acceptable range thus no case of multicollinearity.

Table 4.2: Result of multicollinearity

<table>
<thead>
<tr>
<th>Variables</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>2.65</td>
<td>0.377468</td>
</tr>
<tr>
<td>BI</td>
<td>1.14</td>
<td>0.873548</td>
</tr>
<tr>
<td>BM</td>
<td>1.02</td>
<td>0.980456</td>
</tr>
<tr>
<td>FEFD</td>
<td>1.16</td>
<td>0.862316</td>
</tr>
<tr>
<td>FFDA</td>
<td>1.07</td>
<td>0.935793</td>
</tr>
<tr>
<td>BE</td>
<td>2.65</td>
<td>0.377877</td>
</tr>
<tr>
<td>Mean</td>
<td>1.50</td>
<td></td>
</tr>
</tbody>
</table>

Source: The authors (2023).
Test of Correlation

The result of our correlation analysis presented in table 4.3 below indicates no multicollinearity problem in our data, as our highest correlation matrix among independent variables is 67.45% (less than 80%) which is the correlation between board expertise and board size. Thus, our data is free from multicollinearity challenges.

Table 4.3: Result of correlation

<table>
<thead>
<tr>
<th>Variables</th>
<th>NDA</th>
<th>DAC</th>
<th>BS</th>
<th>BI</th>
<th>BM</th>
<th>FEFD</th>
<th>FFDA</th>
<th>BE</th>
<th>LFS</th>
<th>LFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDA</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAC</td>
<td>-0.6724</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>-0.2003</td>
<td>0.2093</td>
<td>1.0000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI</td>
<td>-0.1103</td>
<td>0.1135</td>
<td>0.2863</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BM</td>
<td>-0.0071</td>
<td>0.0347</td>
<td>0.0751</td>
<td>-0.0437</td>
<td>1.0000</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>FEFD</td>
<td>0.1090</td>
<td>0.1014</td>
<td>0.1101</td>
<td>0.1504</td>
<td>0.0197</td>
<td>1.0000</td>
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<tr>
<td>FFDA</td>
<td>0.0140</td>
<td>0.0311</td>
<td>0.1760</td>
<td>0.0154</td>
<td>0.0354</td>
<td>-0.0222</td>
<td>1.0000</td>
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</tr>
<tr>
<td>BE</td>
<td>0.2011</td>
<td>0.1768</td>
<td>0.6745</td>
<td>0.3003</td>
<td>0.1011</td>
<td>0.0693</td>
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<td>1.0000</td>
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<td></td>
</tr>
<tr>
<td>LFS</td>
<td>0.0737</td>
<td>0.0983</td>
<td>-0.2451</td>
<td>-0.0801</td>
<td>-0.0244</td>
<td>-0.3479</td>
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<td>-0.1377</td>
<td>1.0000</td>
<td></td>
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<tr>
<td>Leverage</td>
<td>-0.0005</td>
<td>-0.0068</td>
<td>-0.0212</td>
<td>-0.0720</td>
<td>-0.0058</td>
<td>-0.0723</td>
<td>0.0525</td>
<td>0.0318</td>
<td>0.1667</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Source: The authors (2023).

Discussions

The empirical findings from our study show a significant negative association between board size and the two dimensions of earnings management which implies that the board size reduces the opportunistic behaviour of managers, which diminishes earnings management. Thus, the size of the board provides an avenue for financial and non-financial experts to get to the board, which provides an opportunity to deal with earnings management. The findings of this study is consistent with the findings of Adamu et al. (2017); Agyeman (2020); Kharashgah et al. (2019b); Mwenda, (2017); Shahwan and Almubaydeen (2020) but disagree with the findings of Abu-Dawleh et al. (2021); Amran et al. (2016); Hemathilake et al. (2019); Khuong et al. (2022); Rajeevan and Ajward (2019). The outcome of our study supports the agency theory postulation.

In line with expectation and past studies, the outcome of our study shows a significant negative association between board independence and earnings management. The implication of our findings is that the appointment of independent directors reduces management practices as independent directors are expected to be more independent than other directors hence this outcome. The finding of our study is in line with the studies of Abu-Dawleh, Lybaert, Steijvers and Jans (2021); Akpomedaye and Williamson (2021); Al-Sraheen and Al Daoud (2018); Aleqab and Ighnaim (2021); Kankanamage (2015); Lippolis and Grimaldi (2020); Mardessi and Fourati (2020); Saona, Muro and Alvarado (2020); Tran et al. (2020). The outcome of our findings supports agency theory postulation and Nigerian Corporate Governance Code on board independence as independent directors are supposed to be independent.

The result of our study on board meetings and the two proxies of earnings management shows mixed findings. One hand the relationship between board meeting and NDA shows a significant negative association suggesting that board meeting reduces NDA. The implication of our findings is that the more attendance at a board meeting the lower NDA. This is consistent with the finding of Dinah (2021). Our finding aligns with agency theory. On the other hand, the outcome of board meeting and DAC however reveals a significant positive association suggesting that board meeting promotes DAC. The finding of
our study supports the notion in the literature that meetings are held as reactive measures than proactive measures according to El Idrissi and Alami, (2021). This explains the possible reason why board meetings have significant positive association with DAC as board meets in response to self-driven opportunistic behaviour than being proactive to prevent such behaviour.

The result of our finding shows that financial expertise of female directors mitigates earnings management as our result shows a significant negative association with the two dimensions of earnings management. The implication of our study is that appointment of a woman with financial skills to the board diminishes earnings management practices. Extant literature according to the findings of Adams and Ferreira (2009); Saona, Muro, San Martin and Baier-Fuentes (2019); Zalata, Ntim, Alsohagy and Malagila (2022) supports the claim that women are good at supervision and monitoring responsibilities but our findings provide evidence that such supervising prowess is as a result of their financial expertise and not mere gender inclusion. The finding of the study of Lara, Osma, Mora and Scapin (2017) suggests that the inclusion of women on the board mitigates earnings management but our finding discloses that financial expertise of female directors mitigates earnings suggesting that the financial expertise of the women may have been an unobserved factor in the study of Lara, Osma, Mora and Scapin (2017), a gap this study bridges.

The empirical evidence from our study indicates a significant negative association between the financial expertise of female directors serving on the audit committee and the two proxies of earnings management. The result shows that women on the audit committee bring to the table technical knowledge, which reduces earnings manipulation. The finding of Salehi, Tahervafaei and Tarighi, (2018) provides evidence that the mere inclusion of female gender on the audit committee mitigates earnings management but our finding suggests that financial expertise of female directors on the audit committee mitigates earnings. Thus, our finding suggests that the financial expertise of the women may have been an unobserved factor in the study of Salehi et al. (2018). A few studies in accounting literature such as Al-Absy, Ismail and Chandren (2018a); Kharashgah et al. (2019a); Lisic, Myers, Seidel and Zhou (2019) examine the accounting expertise of audit committee members but none of these studies examine the expertise in relation to gender an area largely unexplored in literature. Thus, our study bridges this gap by examining the financial expertise of feminine directors on audit committee beyond mere gender inclusion.

The empirical evidence from our findings between board expertise and earnings management reveals mixed findings. The outcome of our study reveals a significant negative relationship between board expertise and non-discretionary accrual, which implies that board members with expertise in accounting and finance curtail non-discretionary accruals. The finding shows the importance of accounting and finance experts in curtailing earnings management. Our finding supports the findings of Abu-Dawleh et al. (2021); Aleqab and Ighnaim, (2021); Mardessi and Fourati (2020); Suprianto, Suwarno, Murtini, Rahmawati and Sawitri (2017); Zalata, Tauriringana and Tingbani (2018). On the contrary, however, our finding in relation to board expertise and discretionary accrual shows a significant positive relationship, which suggests that board expertise promote earnings management practices. Our finding supports the finding of Al-Abs, Ismail and Chandren (2018).

5.0 Conclusion and Recommendations
This study contributes to the accounting literature by measuring board independence and board meeting different from past study. The study measures board independence as a function of independent
directors as against non-executive directors while board meeting measures the actual board meeting attendance as against the frequency of board meetings. In addition, we examine the financial expertise of women on the board and audit committee beyond mere gender inclusion. The outcomes of this study reveal that board size, board independence, financial expertise of female directors on the board and audit committee reduce opportunistic tendencies of manager hence reduce earnings management. The outcomes of this study provide evidence to show that independent directors and women with accounting/finance expertise serving on the board and audit committee reduces earnings management. In the light of our findings, we recommend that board size and board independence should be reinforced through the appointment of more independent directors as against the current practice of executive directors. In addition, we recommend that the financial expertise of women be should be a key factor in appointing women into the board or audit committee as against the current practice of gender balance as their financial expertise reduces earnings management practices.

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