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## Article

# Effect of corporate governance board leadership models and attributes on earnings quality of quoted nigerian companies

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## ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

# Effect of corporate governance board leadership models and attributes on earnings quality of quoted nigerian companies

Cosmas Ikechukwu Asogwa<sup>1</sup>, Grace Nyereugwu Ofoegbu<sup>1\*</sup>, Judith Ima Nnam<sup>1</sup> and Onyekachi David Chukwunwike<sup>1</sup>

**Abstract: Purpose:** This study examined the effect of corporate governance leadership models and attributes on firms' earnings quality using evidence from Nigerian quoted firms.

**Design/Methodology/Approach:** This study used an ex-post facto design with a two-stage multiple random and fixed effect regression analyses. A sample of 37 quoted firms in Nigerian Stock Exchange between 2014 and 2018 was selected for the study.

**Findings:** Relative to unitary corporate leadership, dual board leadership model outperformed and significantly improves earnings persistence and value relevance. Earnings persistence and value relevance increased in boards where CEOs and board chairpersons have equal financial expertise. Also the quality of earnings improved significantly with a good mix of financial expertise and legal skills in the board. Thus, the capital market places a premium on such good leadership attribute mix.

### ABOUT THE AUTHORS

Cosmas Ikechukwu Asogwa is a PhD researcher in the Department of Accountancy, University of Nigeria, an ICAN member. He researches on corporate governance, and earnings management.

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Judith Ima Nnam is a Lecturer in the Department of Accountancy, University of Nigeria. She holds a PhD in Accountancy, an ICAN member. She researches on financial reporting and accounting information system.

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### PUBLIC INTEREST STATEMENT

While corporate board leaders like CEOs with good financial knowledge can play a key role in improving the quality of reported earnings, they can apply such expertise for accrual discretion that is hard to detect, which can discount on firms' earnings quality. Hence, a review of the value relevance of board leadership structures and specific combinations become imperative. A review from emerging economies context shows that such research area has been largely understudied, thus creating literature gaps with implications on portfolio choices. In Nigeria, the literature is scarce hence the need to examine and update how the evidence from emerging economies relates to firms in weak investor protection areas for policy effectiveness. This study focuses on the effect of different board leadership models and attributes on firms' earnings quality of listed non-financial firms in Nigeria between 2014 and 2018, and the implications on earnings value relevance to the market participants.

**Research Limitation:** This study concentrated on non-financial firms in Nigeria. Thus, it should not primarily be generalized as it is context-specific and most applicable among the developing economies

**Policy Implication:** The implication is that investors can mitigate adverse portfolio selection if they target firms, where both CEOs and board chairpersons have strong accounting and legal knowledge mix. Investors should consider board leadership structures in assessing the overall firms' earnings quality. Leadership roles separation provides for higher reporting quality.

**Originality:** This study provides the latest evidence of the effect of board leadership models and attributes on firms' earnings quality in Nigeria. It makes original contribution to the effect of corporate governance on earnings persistence and predictability and how the market reacts to certain attribute combinations.

**Subjects:** Economics; Finance; Business, Management and Accounting

**Keywords:** corporate governance; board leadership models; chief executive officer; attributes; earnings quality

## 1. Introduction

Corporate governance can play a vital role in ensuring that firms report quality earnings. However, the effectiveness in achieving this goal could depend on the board leadership models and characteristics of the board leaders in terms of professional skills. To enhance corporate control effectiveness for transparency and reporting quality, governance codes recommend board leadership diversifications. A diversified corporate board leadership attracts board members of different experiences and backgrounds that could impact organizational behaviour differently. There are two main types of corporate leadership structure. There is a model where both the executive and board power are entrenched in one person. If such a double corporate leader is highly versatile in accounting matter, the leader may bring his or her wealth of experience to bear in the board effectiveness. At the same time, such resourceful leaders can cash in on such attribute to tailor financial reports to his or her desire; sometimes to meet a specific performance-linked end if the leader is opportunistic. On the other hand, there is a corporate leadership style where the roles of the chief executive officers (CEOs) and those of the board chairperson are carried out by different individuals. In this kind of leadership model, CEOs focus on executive issues while board chairpersons concentrate on governance issues. Relative to the former corporate leadership style, this model creates a higher opportunity for board diversification that attracts members with a different background. Sometimes, it integrates multiple directorships, which could open room for boards of broader experience that can influence reporting quality.

However, most emphases on the effect of corporate governance and individual firms' control mechanisms are being directed towards the impact on company financial performance (Hasan, Naser & Hijazi, 2016; Okafor & Ibadin, 2011; Sriram, 2018; Vij & Kaur, 2018). Several other studies focused on specific control mechanisms and financial reporting quality (Baatwah, Salleh, & Stewart, 2019; Klai & Omri, 2011). The present increasing attention on firms' governance structures follows from unresolved links between corporate governance leadership models and firms' earnings informativeness (Ewert & Wagenhofer, 2015). Besides, corporate governance has continued to garner attention because it is an evolving field that provokes innovation in sustainability (Muttakin, Khan, & Azim, 2015; Suyono & Al Farooque, 2018). This idiosyncratic nature of corporate governance explains why it is said that corporate governance is not "one size fits all" phenomenon (Yusoff & Idris, 2012). That means it is an organic field, which can be driven by organizational and political policies and technological changes. While some researchers have found evidence that the nexus of corporate governance and reporting quality is significant in terms of its effect on firms' reporting transparency and sustainability; several other scholars report that the link is insignificant (Yasser &

Al Mamun, 2015). As such, interest in corporate governance has continued to grow and is creating a chain of corporate governance models.

One such model that researchers have been concerned is how corporate leadership attributes mix, and board polarizations affect corporations' earnings quality (Baatwah et al., 2019). Higher quality earnings provide more information concerning the features of a firm's financial performance that is relevant to a specific decision by a specific decision-maker (Dechow, Ge, & Schrand, 2010). Thus, financial statements that are of higher quality are regarded as highly informative and can be relied upon for effective investment decision (Davidson, Goodwin-Stewart, & Kent, 2005; Jensen & Meckling, 1976; Martínez- Ferrero, Garcia-Sanchez, & Cuadrado- Ballesteros, 2015; Ramzi, 2009; Riro, Waweru, & Uliana, 2016; Utomo, Pamungkas, & Machmuddah, 2018; Utomo et al., 2018). In well-organized boards, the leaders play a substantial watchdog role (Davidson et al., 2005) in order to protect investors from transitory earnings (Ewert & Wagenhofer, 2015; Sloan, 1996). Unbiased reported earnings could mainly help in mitigating adverse portfolio choices while encouraging precise performance and stock forecasting that can enhance value-adding business acquisitions. But to a large extent, bias-free financial statements depend on the preparers' accrual discretion, the effectiveness of control measures put in place to safeguard potential manipulation and most importantly, the board leadership models, the expertise of board leaders and other essential attributes of corporate leaders such as gender and ethical orientation (Baatwah et al., 2019; Gravious, Segev, & Yosef, 2012). Corporate leaders with active financial expertise play a key role in the management of organizational accounting system (Yo, 2009). Apart from designing the system, they could ensure effective implementation. The accounting system can fall, a victim of the CEO's expertise, if their accounting intelligence is not well directed. Corporate governance leaders' roles permeate every segment of accounting systems and could dictate the tone of accounting informativeness.

However, studies on corporate governance have not mostly targeted the evaluation of the role board leadership models and attributes play in ensuring quality financial reporting. Though scholars have explored the effect of corporate governance mechanisms on ensuring earnings quality and sound financial performance from diverse dimensions (Aref & Nejat, 2012; Botsari & Meek, 2008; Erickson & Wang, 1999; Lehmann, 2016; Louis 2004; Mashayekhi & Bazaz, 2008), only limited studies have focused on the effect of board leadership models and attributes on earnings quality (Mashayekhi & Bazaz, 2008; Yo, 2009). Besides, few of the available studies focused on the developed economies with different investors' protection policies (Ismail, 2011; Joubert & Fakhfakh, 2014). For example, Joubert and Fakhfakh (2014) focused on CEO duality incentive-based compensation corporate governance mechanisms and earnings management and conclude that shareholder protection plays a critical role in ensuring accrual quality. Yo (2009) focused in Korea with emphasis on the relationship between boards of family firms and earnings quality while a more recent study by Lu, Christensen, Hollindale, and Routledge (2018) focused on UK listed firms on whether Stewardship Governance Code has a link with earnings quality of their investee firms in a polarized board leadership. Nakashima & Ziebart (2015) examined post-Sarbanes—Oxley Act (J-SOX) corporate governance of Japanese firms and earnings quality with Japanese evidence, where they found that Japanese results differ from the evidence from the previous USA works. It was not clear in these studies how their findings relate specifically to Nigerian case and most developing economies, where investor protection is deficient and moral lapses are high among managers (Ismail, 2011) though there is partial evidence in Egbunike and Odum (2018).

The research contributes to the literature by examining the effect of board leadership models and attributes on the earnings quality of listed and selected Nigerian firms across key industries. We examine how models of unitary and bi-leadership structures under different professional and innate attributes of board leaders influence the earnings quality of the sampled firms. Our analysis provides evidence whether a mix of financial and legal skills could impact firms differently relative to where such combinations of skills are absent. Furthermore, our study provides additional analysis to test the market-earning value relevance of board leadership attribute mix and

leadership models in order to assess whether the rational market places a premium on firms' stock prices or discounts it for each specific attribute combination. Firms' specific models could signal prospect to market and market could respond positively. Managers understand this rational behaviour of the market. Sometimes, they try to fool the market by signalling bias. However, the market may not always be fooled, and when it realizes such self-interested behaviour, it responds by discounting the firms' stock price as bankruptcy cost signal. In turn, managers tend to undo their manipulations because they would not like to incur the cost of bankruptcy. Thus, corporate governance leadership models and the leadership attribute run by a firm have value relevance though this value depends on the type of unique attribute combination. Understanding, the nature of the value relevance could mitigate the likelihood of corporate bankruptcy. It could also enhance investors' ability to make a value-adding investment decision.

The rest of this paper is divided into three sections, namely section 2, section 3 and section 4. In section 2, we reviewed both theoretical and empirical literature. Section 3 deals with research methodology and design. Finally, in section 4, we discuss the results and draw conclusion and policy implications of findings.

## 2. Review of related literature

### 2.1. Corporate governance and earnings quality

Corporate governance can be defined as the process in which corporate boards oversee and monitor the running of a company by the company's managers (Organization for Economic Cooperation and Development (OECD) (1999)). It specifies the link and sharing of rights and roles among the shareholders, the boards, the agents and several other interest holders including employees, consumers, suppliers, the community and the state. Corporate governance is seen as encompassing interactions between firms' management, their boards, and all their financial stakeholders such as shareholders and debenture holders. When corporate governance is good and well structured, it plays an essential role in underpinning the integrity and efficiency of capital markets and earnings quality. On the other hand, weak corporate governance could reduce a company's potential for sustainability and can permit financial difficulties, including fraudulent practices that undermine firms' earnings quality.

Higher quality earnings generate more information on the attributes of a firm's financial performance that is relevant to a specific decision taken by a particular decision-maker (Dechow et al., 2010). Therefore, earnings quality can be defined as that kind of earnings that generate more information regarding the characteristic of a firm's financial performance that is also relevant to a specific decision made by a particular decision-maker (Dechow et al., 2010). Earnings quality has been one of the most complicated constructs for researchers because it not easily observable. As such, it has been defined based on various characteristics of reported earnings. Researchers have used multiple measures, namely persistence, accruals discretion, smoothness, timeliness, loss avoidance, and investor responsiveness, to indicate earnings quality. For example, earnings persistence is based on the ability of reported earnings to persist and reoccur in the future (Ewert & Wagenhofer, 2015; Richardson, Sloan, Soliman, & Tuna, 2001; Schipper & Vincent, 2003; Sloan, 1996). Lack of persistence suggests that the earnings are transitory, which is an unfortunate characteristic of profits for investment purposes (Sloan, 1996).

#### 2.1.1. Theoretical review

Various theories explain the relationship between corporate governance and earnings quality. In this section, we shall discuss a few of them, including stakeholder theory, agency theory, stewardship theory, hazard moral theory, and resource dependency theory. However, we shall anchor this theory on stakeholder theory because it is holistic as it includes other theories.

One of the early theories that explain the relationship between corporate governance and earnings quality is agency theory. Agency theory first started as the theory firm. This theory is of

the view that where ownership and control are separated that there appears a very high likelihood that the conflict of interests will occur (Jensen & Meckling, 1976). The conflict of interests leads to the principal and the agent trying to maximize contractual benefits at the expense of the other. Usually, managers can achieve this by misleading shareholders through the manipulation of financial statements for their selfish interests, which influences the quality of earnings. Most often, these conflicts reflect on the contractual relationship (Ewert & Wagenhofer, 2015; Lehmann, 2016). In this case, the managers manipulate the accounts to promote and achieve their contractual relationship based on firms' performance. Such actions affect firms' earnings quality. However, effective governance can mitigate the conflict of interest. Despite the contribution of this theory, it is limited to only principal and agents. That means, it overlooked other stakeholders such as communities in the governance-earnings quality relationship.

With the deficiency of agency, stewardship theory emerges. Stewardship theory contends that managers are good stewards that do not need strict monitoring to discharge their contractual roles (Bolea & Achim 2013; Yusoff & Idris, 2012). The theory argues that corporate governance is not essential in ensuring income quality as the managers will always run the firms in the best interest of the shareholders (Yusoff & Idris, 2012) that guarantee earnings quality. That means they are good administrators of the resources committed to their care and trust. Under the stewardship theory, managers work to maximize corporations' value and do not make any decision inconsistent with the interest of the shareholders that will influence earnings quality negatively. Stakeholder theory emerged with the increasing desire for firms to factor all their interests groups. The firms' interests groups are those that the firms are influencing firms influence and. The stakeholder theory argues that firms should pattern their behaviour, including their governance rules to satisfy all parties that have stakes in them. In this context, stakeholder theory believes that presenting qualitative accounting information is a social responsibility of firms that ensures their earnings quality. Despite the contribution of this study, it over assumes that managers would always be faithful. However, managers are always faithful stewards and must be checked through systematic governance.

Hazard moral theory is an off-shoot of agency theory. It addresses the opportunistic behaviour of managers and postulates that guided by their private interests; managers are prone to moral hazards (Hendrik 2003 in Borlea & Achim, 2013). Moral hazards define hidden actions of the managers, which emerge as a result of information asymmetry. The moral hazards can arise based on the contractual performance incentives. Managers based on this theory manipulate accounts in order to maximize the performance-contractual based compensation (Borlea & Achim, 2013; Ramzi., 2009). Such behaviour influences earnings quality. Another relevant theory is the resource dependence theory. The theory states that the firm must be connected to their external environment to succeed; hence, it looks at firms as institutions that need external resources to survive or to forge ahead. The theory highlights that the directors function as a connection between the organizations and external factors by co-opting the resources required to make the firms successful (Yusoff & Idris, 2012). In this perspective, the boards of directors are vital factors in absorbing external risks, which influences firms' earnings quality. This theory is very parochial because it concentrates mainly on the agents, thus ignoring other stakeholders.

Stakeholder theory emerged with the increasing desire for firms to factor all their interests groups against the claim that the only responsibility of the business is to make a profit (Friedman 1970 in Borlea & Achim, 2013). The idea of this statement is that governance is only essential if it enhances shareholders value. The stakeholder theory argues that firms should pattern their behaviour, including their governance rules to satisfy all parties that have stakes in them. In this context, stakeholder theory believes that presenting qualitative accounting information is a social responsibility of firms. So far, the theory has gained a full acceptance and has proved to be the most efficient in the history since it organizes corporate governance in order to maximize all interested parties and such makes firms to gain a solid competitive edge (Borlea & Achim, 2013). Moreover, stakeholder theory has become popular, given that several researchers have found that



the activities of firms produce an influence on the external environment. This impact on the larger society requires firms to be accountable by transparent disclosure. This theory is of the view that the company is no longer the instrument of shareholders. As such, corporate governance should be organised to cater for the interests of both internal and external stakeholders. In so doing, the earnings quality would most likely be increased.

### 2.1.2. Empirical review

Several empirical studies have examined the effect of corporate governance on earnings quality. While some provide direct evidence, some evaluate the effect by examining the effect on earnings management (Man & Wong, 2013; Ramzi., 2009; Xie, Davidson, & DaDalt, 2003; Xie et al., 2003). Empirical evidence shows that that board size limits the ability of the board to monitor managers' practices effectively and then limit their accounting information bias (Man & Wong, 2013; Xie et al., 2003). Specifically, Xie et al. (2003) found that having a larger board is associated with fewer earnings management because diversification of board members brings useful skills and monitoring ideas that could help run the business in a more effective way than when few hands direct the business. Xie et al. (2003) found that big boards are well equipped in terms of knowledge mix, which enhances better monitoring. Mashayekhi and Bazaz (2008) found that a larger board size results in more reduced earnings quality and that higher independent directors and frequency of board meetings improves earnings quality. Moreover, they found that board size negatively affects discretionary accrual. Mashayekhi and Bazaz (2008) found evidence that a larger board size makes monitoring less efficient because corporate communication will be less efficient, which translates into inadequate accounting information. Peasnell, Pope, and Young (2005) found that there was a positive relationship between board size and accrual quality. Klein (2002) found that board size and independent do not influence abnormal accruals positively. Ismail (2011) discovered that board size is positively associated with nonfamily firms and negatively associated with the board size.

Yasser and Al Mamun (2015) provide evidence that unitary or dual leadership structure has no impact on public listed companies' performance and reporting quality. They also found that female CEOs negatively impact on firms' performance and reporting quality in Malaysia and Pakistan consistent with Hili and Affess (2012)'s French evidence that earnings persistence is not enhanced by the presence of women directors on the board. Similarly, Damagum, Oba, Chima, and Ibikunle (2014) found evidence that the presence of women in the board did not lead to financial reporting credibility in Nigeria. However, Gravius et al. (2012) found that earnings management decreases when either CEOs or the Chief financial officers are women and found a positive relationship between the ratio of female to male in the board and firms' value. Consistently, Kreder (2016)'s US evidence shows that the relationship between gender and the quality of earnings is positive and that as the proportion of women in the board increases, the credibility of financial reporting improves.

Baatwah et al. (2019) used a sample of Malaysian firms and found that the audit committee chair with accounting experience is associated with a reduction in audit delay, which could enhance credibility in reporting though the evidence was more pronounced when the chair is a shareholder of the firms. Nelson and Davis (2013) investigation show that the presence of non-accounting experts and accounting experts is significant to minimize accrual manipulations. Hutchinson, Percy, and Erkurtoglu (2008) used the Australian sample and found that board independence and audit committee independence negatively influenced performance-adjusted discretionary accruals. Marziana, Marzuki, Abdul Wahab, and Haron (2016) found that the revised Malaysian Code on Corporate Governance enhances earnings conservatism and that audit committee financial expertise and independence positively influenced earnings conservatism. They also found that the board financial expertise mix affects conservatism. Iyengar, Land, and Zampelli (2010) analysis shows that significant negative association exists between reported earnings quality and the proportion of CEO incentive pay and that board independence does not seem to be associated with earnings quality, thus suggesting that the emphasis on board independence as an effective monitoring device may be misplaced. Suyono and Al Farooque

(2018) found that “institutional ownership, managerial ownership and independent boards have a significant deterrent effect on earnings management, which invariably could translate into reporting quality. Lu et al. (2018) found in the UK that compliance with the code improved investee companies’ earnings quality. Demirkan and Platt (2009) investigation shows that corporate governance affects managers’ decisions to use discretionary accruals and thereby artificially influence company financial reports. They found the effect of governance index on accrual to be positive as strong governance appears to minimize the incidence of mid-range firms engaging in accruals management.

Habib and Azim (2008) Australia evidence shows that firms with strong governance structure exhibit higher value-relevance of accounting information and provide the support that significant regulatory reforms regarding corporate governance around plays a key role in ensuring credible financial reporting. Yasser, & Al Mamun, (2016) found with Asian-Pacific evidence that the relationship between CEO duality attributes and earning management is not significant and is not associated with a firm’s financial reporting quality. They found that a unitary leadership pattern has no significant effect on companies in the Asia-Pacific. Baatour, Othman, and Hussainey (2017) found that the effect of multiple directorships on accrual-based earnings management and real earnings management in Saudi Arabia is positive on earnings quality while the effect is insignificant on discretionary accrual. Joubert and Fakhfakh (2014) used a panel of 1,500 American, Canadian, British, and French firm-year observations found that firms from countries within the Anglo-American corporate governance structure, which provides greater protection of shareholder rights, and enhances strict enforcement of law scores high on board oversight and tend to maintain lower degree of discretion over earnings. Chambers and Payne (2011) found that accrual persistence increased significantly in the post-SOX period and that post-SOX the firms audited by Big-N auditors with lower-independence yielded the greatest improvement in accrual persistence. Alzoubi (2016) sample of 62 companies listed on the Amman Stock Exchange showed that insider managerial ownership, institutional ownership, external block holder, family ownership and foreign ownership yield greater effect on financial reporting quality. Egbunike and Odum (2018) found that board size and board composition positively and significantly affected earnings quality in Nigeria for selected manufacturing firms. They found that the proportion of non-executive directors was negative and significant; while, CEO duality was significantly positive. Siagian and Tresnaningsih (2011) found that both discretionary accrual and earnings response coefficients significantly improve after firms acquire independent directors and independent audit committees in Jakarta. Yo (2009) used a pooled-OLS and found that earnings quality depends on the background of outside directors in Korea. According to the researcher, there is a negative relationship between outside directors having high profile background and earnings quality, for instance, politicians, and lawyers. This relationship also holds for outside directors, who are professors and foreigners. However, his result shows that outside directors, who are finance expert and former employees are positively associated with earnings quality. Liu, Harris, and Omar (2013) found that the separation of the office of CEOs, and the board chairperson positively associates with discretionary accounting.

Overall, there is no clear case of the effect of board leadership models and leadership skills and attributes on earnings quality among the developing countries. Moreover, the effect of board leadership on earnings quality is mixed and depends on the measure being used. As shown, prior studies mostly looked the effect on single or two proxies. Further researches are needed to disentangle the effect in the concurrent analysis by the use of the multivariate model. Also, the value relevance of board leadership models was not substantially discussed, which leads to literature and knowledge gaps. This study fills the gap by providing evidence in those directions.

## **2.2. Development of hypotheses**

### **2.2.1. Corporate governance structures and earnings quality**

Agency theory highlights that conflicts of interests, which lead to earnings bias, can be mitigated by active board structures (Jensen, 1993). Board structures can be made active by sharing role and responsibility among board leaders. In this case, CEOs would be different from board

chairs. The importance of this kind of board structure is that it encourages independence and checks and balances among corporate leaders. Where there is no independence, reported earnings would most likely be biased (Mashayekhi & Bazaz, 2008). The researchers' highlight that a separation of CEO and chairman positions brings about better corporate governance, which invariably leads to improved financial reporting quality. However, evidence, which varies across countries, shows that a unitary board leadership model brings about the undue influence that could lead to ineffectiveness in control, which has implications for earnings quality. Based on the moral hazard theory, CEOs officer can be driven by a hidden agenda, which could lead them to dish out information full of asymmetries (Ramzi, 2009). Thus, this behaviour can be checked through active board structures in terms of duality. Since Nigeria is a developing nation with evolving corporate governance, which has inadequate investor protection, the effect of board structures on earnings quality in terms of persistence and predictability is not yet very clear. Thus, to test this effect, we postulate the following hypotheses.

*Hypothesis 1: Dual corporate board leadership structure significantly improves earnings persistence among the Nigerian quoted firms.*

#### *2.2.2. Board leadership models and attribute mix*

Board leadership structures play a vital role in influencing firms' level of earnings quality. However, this effect is limited by the attributes of board leaders. Resource-dependency theory highlights that, firms can tap societal resources. That brings about diversification in the boards of companies. In this case, the board can be enriched by members with special skills such as accountants, lawyers, religious leaders, engineers and those with innovative minds. These leaders have particular objectives for entering the boards. Sometimes their desire conflicts with the overall goal of firms and the investors, thus increasing agency conflicts. As the board size increases, attributes compositions keep changing. On the one hand, such a change could enhance control mechanisms by increasing the monitoring intensity. On the other hand, such diversification could bring in members with moral lapses and opportunistic tendencies, which could negatively impact on governance effectiveness, thus leading to poor credibility in financial reporting. The authors hypothesize that the effect of board duality on earnings quality is a function of leadership characteristics and professionalism. It is reasonable to argue that if the board chairman is a financial expert and a chartered accountant; duality might influence accrual management negatively, thus improving the overall firms' earnings persistence and predictability. This is because the board chairperson would still be in a position to bridge any likely gap that would arise for not being actively involved in the corporate accounting system. The authors argue that playing an insider role would likely give one insight into firms' accounting processing system. Board chairpersons are not usually insiders and thus, may not have the first-class information on the accounting processes. CEOs usually are experienced, play the insider deals and occupy a privileged position of preparing financial statements. As such, they can use both their position and expertise attributes to manipulate financial documents in their favour (Ramzi, 2009). However, since, the board chairpersons are resource experts in financial reporting; there are high chances of detecting reported accounting abnormalities and manipulations usually associated with opportunistic management. In this case, it might not be surprising that CEO duality could improve firms' earnings quality. Based on this view, we make the following hypotheses.

*Hypothesis 2: Board models where CEOs and board chairs are both financial experts significantly improve earnings persistence*

*Hypothesis 3: Board models where CEOs are financial experts and board chairs are legal experts significantly improve earnings persistence.*

#### *2.2.3. Board leadership models, attributes and earnings value relevance*

Rational expectation theory argues that in equilibrium market can undo managers' accrual manipulation and as such, values firms' stock based on the perception of the stock informativeness (Ewert &

Wagenhofer, 2015; Fischer & Verrecchia, 2000). Managers understand this market behaviour and as such, use a signal approach to attract the market participants. They can increase earnings in the first period and watch the market reaction in the second period to avoid potential bankruptcy. A well-structured board can attract the attention of the market, which can place a premium on the firms' stock. On the other hand, perception of danger in the board following the wrong leadership model and attribute combination can attract a discount on firms' stock price by the investors. Thus, effective corporate governance can have a significant link with earnings value relevance. Empirical research has shown that there is a link between governance and value relevance of earnings (Gravious et al., 2012). However, though this evidence is not consistent across countries, it is also limited by the board leaders' experience and orientations (Nelson & Devis 2013). We, therefore, postulate that;

*Hypothesis 4: Dual board model significantly and positively affects earnings value relevance to the capital market.*

*Hypothesis 5: Board models where CEOs are financial experts and board chairs are legal experts significantly improve earnings persistence.*

To test these hypotheses, we used the adapted model in section three in the methodological section.

### 2.3. Methodology

This study made use of secondary data and as such, used an ex post facto research design and a two-stage regression analysis approach. We followed a firm-year approach to determine the population and purposely selected a four-year period between 2014 and 2018 to provide the latest evidence. There were 170 firms in the Nigerian Stock Exchange (NSE) as of 23 April 2018. However, this study used only 37 quoted firms. Of the 170 firms in the NSE, 82 service firms, which included 57 financial firms, 25 service firms and 51 other firms, were excluded because their operational activities do not fit the model used in this study to derive earnings quality. Besides, there are high regulation and specific disclosure requirements in financial services firms that permit little chance for accrual manipulation. Although most firms filed their account with the SEC between 2014 and 2018, some of their financial statements are not comprehensive. For instance, some were in abridged forms, which left no room for the disclosure of information about a firm's board structure. As such, it cannot be ascertained from the financial report content analysis, whether for example, a CEO of a company is also the chairman of that firm's board. Therefore, the sample size of this study was made up of 37 firms  $\times$  5 firm-years resulting in 185 financial statements. The data used was sourced from NSE database and was analyzed using multiple regressions for first stage analyses. Multivariate regressions were used for the second stage regression analyses, which were done with the aid of SPSS and Eviews statistical software.

#### 2.3.1. Model specifications

We have two key models in this study. The models were we derived earnings quality and the model where we tested corporate governance and earnings relation. The first group of models was adopted from the studies of Fischer and Verrecchia (2000) and Ewert and Wagenhofer (2015). These authors demonstrated in clear ways the earnings quality relation in their models.

#### 2.3.2. Earnings persistence

In the model of persistence, the nature of the gradient of the regression of the first-period earnings on second period earning indicates how persistent earnings are. If we denote  $r_1$  and  $r_2$  as the first and the second-period earnings respectively, we have a general model, thus:

$$r_2 \text{ (Earnings}_t\text{)} = \alpha + \beta(r_1) \text{ (Earnings}_{t-1}\text{)}. \text{ Thus, Persistence (PS) = } E[r_1, r_2] = [r_2] + \frac{\text{Cov}(r_1 r_2)}{\text{var}(r_1)} * (r_1 - E[r_1]) \text{ (1)}$$

$$\text{The above model simplifies to } PS = \frac{\text{Cov}(r_1 r_2)}{\text{var}(r_1)} = \beta - 1 \text{ (2)}$$

**PS** equals persistence,  $\text{Cov}(r_1 r_2)$  = covariance of  $r_1$  with respect to  $r_2$  and  $\text{var}(r_1)$  = the variance of  $r_1$ ,

$E$  = expectation. Is the coefficient of the covariance of  $r_1$  conditioned on  $r_2$

### 2.3.3. Earnings value relevance model

Value relevance follows from rational expectation equilibrium theory of Fischer and Verrecchia (2000) and Ewert and Wagenhofer (2015). We, however, restrict the analysis to linear equilibrium, where price ( $p^*$ ) is linear in  $r$  and bias is linear in  $c$  and  $x$  following Fischer and Verrecchia (2000) and Ewert and Wagenhofer (2015).  $C$  is the intercept and  $x$  is the earnings. This relation is shown in the following equations:

$$P^a(r) = \beta r + \alpha.$$

Therefore, to determine the value relevance of earnings report as could be explained by board leadership attributes, we use a model that estimates the regression coefficient from the regression of market price per share on earnings. The response coefficient is  $\theta$  from the equilibrium. Therefore, value relevance equals  $\theta = \frac{\text{Cov}(x, r_1)}{\text{var}(r_1)}$ , where  $x$  and  $r$  are earnings and equity prices, respectively. This theory shows that at equilibrium, both the market and managers are rational. Markets analyses potential manipulation of reported earnings and would not be a fool to place a premium on biased earnings. Once it detects such behaviour, it would react against it. At this point, managers sense danger and would not like to incur bankruptcy cost. This fear then keeps him or her from irrational behaviour that market could crystallize. We further transform the equation:  $P^a(r) = \theta r + \alpha$  into a full-scale governance random effect model.

## 2.4. Corporate governance-earnings quality equation

Having dealt with the earnings quality models, we linked corporate governance, including the control variables and earnings quality. The authors anchor this study on stakeholder theory (Borlea & Achim, 2013). The study followed a two-stage regression analysis approach as recommended by Dechow, Sloan & Sweeny (1995) and Kothari, Leon, & Wasley (2005). We have described the first regression stage previously, and the second stage regression model takes the base model form below. Despite including different control variables to reduce the impact of omitted variables, this present study could suffer from endogeneity problem notably omitted variables and reverse causality (Cahan, Chen, Chen, & Nguyen, 2015).

### 2.4.1. Endogeneity problem

Researchers have always predicted that an endogenous nexus could occur between corporate-related variables and performance (Cahan et al., 2015; Rahman, Rodríguez-Serrano, & Lambkin, 2017). We follow prior literature, to conduct Durbin-Wu-Hausman test to verify the potential presence of endogeneity. We found the presence of endogeneity to be negative ( $\chi^2_{\text{Durbin-Wu-Hausman test}} = -9.2, p = 0.566$ ). Cahan et al. (2015) predicted that reverse causality could cause a severe problem in the present study environment. A Granger causality test showed that the effect took earnings quality—governance leadership attribute direction ( $F_{\text{Granger test}} = 0.25, p = .2452$ ).

### 2.4.2. Random versus fixed effect panel-data model determination for earnings persistence

To determine which model should be used to analyze the effect of board leadership style and characteristic on persistence, we carried Hausman random versus fixed effect test (Cahan et al., 2015; Gujarati, 2004). Table 5

**2.4.2.1. Null hypothesis: coefficients are consistent with random effect.** Based on the test as shown in table 1, the probability associated with Chi-Square is higher than 0.05 (p-value = 0.444). Therefore, reject the null hypothesis that the coefficient is consistent with the random effect model and conclude that the coefficients are consistent with the fixed effect model. As such, we used a fixed effect in the estimation of the effect of board leadership and characteristics on earnings persistence. Thus, we do believe that all the parameters are stationary across sections in terms of firms and times (2014–2017) (Gujarati, 2004).

**Table 1. Hausman test cross-section random effect**

| Test Summary         | Chi-SQ. Statistic | Chi-Square D.F | Probability |
|----------------------|-------------------|----------------|-------------|
| Cross Section Random | 8.922             | 9              | 0.444       |

**Table 2. Value relevance hausman test for random effect**

| Test Summary         | Chi-SQ. Statistic | Chi-Square D.F | Probability |       |
|----------------------|-------------------|----------------|-------------|-------|
| Cross Section Random | 27.307            | 9              | 0.0012      |       |
| Variables            | Fixed Effect      | Random Effect  | Var. (Diff) | Prob. |
| ACCT                 | 0.218             | 0.406          | 0.004       | 0.003 |
| ACT*LAW              | 0.134             | 0.049          | 0.005       | 0.250 |
| ADCC                 | 0.627             | 0.100          | 0.024       | 0.001 |
| AQ                   | 0.158             | 0.153          | 0.001       | 0.869 |
| BDZ                  | 0.705             | 0.503          | 0.026       | 0.215 |
| CEO                  | 0.160             | 0.110          | 0.004       | 0.436 |
| DEB                  | 0.027             | 0.013          | 0.001       | 0.701 |
| FAM                  | -0.617            | 0.56           | 0.074       | 0.832 |
| FMZ                  | 0.535             | 0.52           | 0.001       | 0.697 |

Source: Eviews; Source: Eviews; CEO = Chief executive Officers; DEB = Debt ratio; ACCT = Accounting/financial knowledge; BDZ = board size; FMZ = firm size; FAM = frequency of audit meeting; ACT\*LAW = mix of accounting and law skill in boards; AQ = audit quality; ADCC = audit committee

**Table 3. Descriptive statistics**

| Variables          | N   | Minimum | Maximum | Mean    | Std. Deviation |
|--------------------|-----|---------|---------|---------|----------------|
| CEO                | 185 | 0.00    | 1.00    | 0.7405  | 0.43953        |
| DEB                | 185 | 0.00    | 7.57    | 0.7448  | 0.87582        |
| ACC                | 185 | 0.00    | 1.00    | 0.2432  | 0.43021        |
| BDZ                | 185 | 0.60    | 1.28    | 0.9579  | 0.14740        |
| FMZ                | 185 | 5.40    | 9.67    | 7.2928  | 0.86499        |
| FAM                | 185 | 0.85    | 1.52    | 1.1831  | 0.12491        |
| ACT*LAW            | 185 | 0.00    | 1.00    | 0.3622  | 0.48193        |
| AQ                 | 185 | 0.00    | 1.00    | 0.5459  | 0.49924        |
| ADCC               | 185 | 0.60    | 1.34    | 0.7876  | 0.12549        |
| PERS               | 185 | 0.21    | 70.36   | 33.8521 | 2.57426        |
| VALREL             | 185 | 0.01    | 3.19    | 1.0936  | 0.76769        |
| Valid N (listwise) | 185 |         |         |         |                |

Source: Eviews; PERS = Persistence; VALREL = value relevance; CEO = Chief executive Officers; DEB = Debt ratio; ACC = Accounting/financial knowledge; BDZ = board size; FMZ = firm size; FAM = frequency of audit meeting; ACT\*LAW = mix of accounting and law skill in boards; AQ = audit quality; ADCC = audit committee

#### 2.4.3. Random versus fixed effect panel-data model determination for earnings value relevance

Though in respect of persistence, the parameters are stationary across firms and times, the effect might be random across a section for earnings value relevance. Thus, we believe that differences across entities have some influence on the dependent variable. To determine which model to be

**Table 4. Correlation matrix**

| Variables | PERS   | VALREL | CEO   | DEB    | ACC    | BDZ    | FMZ  | FAM    | ACT*LAW | AQ   | ADCC |
|-----------|--------|--------|-------|--------|--------|--------|------|--------|---------|------|------|
| PERS      | 1      |        |       |        |        |        |      |        |         |      |      |
| VALREL    | 0.16*  | 1      |       |        |        |        |      |        |         |      |      |
| CEO       | 0.31** | 0.01   | 1     |        |        |        |      |        |         |      |      |
| DEB       | 0.10   | 0.15   | 0.12  | 1      |        |        |      |        |         |      |      |
| ACC       | 0.30** | 0.23** | 0.13  | 0.08   | 1      |        |      |        |         |      |      |
| BDZ       | 0.09   | 0.21** | 0.11  | 0.01   | 0.36** | 1      |      |        |         |      |      |
| FMZ       | 0.04   | 0.60** | 0.17* | 0.21** | 0.02   | 0.39** | 1    |        |         |      |      |
| FAM       | 0.17*  | 0.09   | 0.12  | 0.10   | 0.09   | 0.03   | 0.01 | 1      |         |      |      |
| ACT*LAW   | 0.06   | 0.10   | 0.13  | 0.12   | 0.05   | 0.02   | 0.06 | 0.07   | 1       |      |      |
| AQ        | 0.03   | 0.01   | 0.06  | 0.03   | 0.01   | 0.16*  | 0.08 | 0.22** | 0.03    | 1    |      |
| ADCC      | 0.04   | 0.04   | 0.05  | 0.06   | 0.07   | 0.13   | 0.03 | 0.13   | 0.07    | 0.01 | 1    |

Source: Eviews; \* = Significant at 5%; \*\* = Significant at 1%; PERS = Persistence; VALREL = value relevance; CEO = Chief Executive Officers; DEB = Debt ratio; ACC = Accounting/financial knowledge; BDZ = board size; FMZ = firm size; FAM = frequency of audit meeting; ACT\*LAW = mix of accounting and law skill in boards; AQ = audit quality; ADCC = audit committee.

used, we carried the Hausman Random versus fixed effect test. The outcome of this test is shown in Table 5 below.

2.4.3.1. *Null hypothesis: coefficients are consistent with random effect.* Based on the test as shown in table 2, the probability associated with Chi-Square is less than 0.05. Therefore, we would accept the hypothesis that coefficient is consistent with the random effect model and differences across the entities have some influence on the value relevance. As such, we used random effect in the estimation of the effect of board leadership and characteristics on earnings value relevance.

#### Base Model

$$\text{Earnings Quality} = f\left(\begin{array}{l} \text{Corporate Governance mechanisms, Board Leadership models, Board} \\ \text{Leader Attributes, board – Attribute interaction, Controls} \end{array}\right) \quad (3)$$

To test the hypotheses relating to earnings persistence, we specify the fixed effect model thus;

$$\begin{aligned} ERQ_{it} = & \beta_1 CEO_{it} + \beta_2 ACCT_{it} + \beta_3 ADCC_{it} + \beta_4 ACT* LAW_{it} + \beta_5 AQ_{it} + \beta_6 BDZ_{it} \\ & + \beta_7 FMZ_{it} + \beta_8 FAM_{it} + \beta_9 DEB_{it} + \delta_i + \mu_i + \epsilon_{it} \end{aligned} \quad (4)$$

Where  $\delta$  is the firm effect. It is assumed to be constant for firm  $i$  over time  $t$  for firm-specific effect.  $\mu_i$  is the time effect. It is also assumed to be constant for a given time  $t$  over firm  $i$ . The effect is time-specific.  $\epsilon_{it}$  is the error term.  $ERQ_{it}$  stands for earnings quality proxied by persistence obtained from the first stage regressions. These dependent variables have been previously defined.  $\theta_s$  are the explanatory variables' coefficients.  $CEO$  is a dummy independent variable that takes value 1 if a firms' CEO is different from the chairperson of the board and 0 otherwise.  $ACCT_{it}$  is a CEO Accounting or financial expertise. The value is 1 if the CEO is experienced in accounting, such as being a chartered accountant or has any professional financial qualification. Otherwise, it takes value 0.

$ACT* LAW_{it}$  is an interaction of CEO and board chairperson attribute effect, which takes value 1 for firm  $i$  in year  $t$  where CEO is a financial expert and the board chairperson is a lawyer, and 0 otherwise.  $BDZ_{it}$  stands for board size. This variable is the right choice because it is assumed that as the number of directors in the board increases, earnings quality is likely to be enhanced (Mitton, 2002; Ramzi., 2009). Board size is deflated with total gross assets.  $FAM_{it}$  is a measure of audit committee frequency of meeting. It takes a value if firms' aggregate audit committee for year  $t$  exceeds the mean value and 0 otherwise.  $AQ_{it}$  is a measure of audit quality, which takes value 1 if firm  $i$  was audited by one of the BIG 4 accounting firms and 0 otherwise following Morris, Pham, and Gray (2011).  $DEBT_{it}$  is a control variable that measures the effect of leverage on earnings quality. Firms are assumed to manage earnings upwards to avoid violation of debt covenant (Mitton, 2002; Ramzi., 2009). It is deflated with natural logarithm.

To test the hypotheses relating to earnings value relevance, we specify the random effect model thus;

$$\begin{aligned} ERQ_{it} = & \alpha + \beta_1 CEO_{it} + \beta_2 ACCT_{it} + \beta_3 ADCC_{it} + \beta_4 ACT* LAW_{it} + \beta_5 AQ_{it} + \beta_6 BDZ_{it} \\ & + \beta_7 FMZ_{it} + \beta_8 FAM_{it} + \beta_9 DEB_{it} + \delta_i + \mu_{it} \end{aligned} \quad (5)$$

$\delta_i$  is the individual-specific heterogeneity- the error term component- that is constant over time. It is between the entity errors.  $\mu_{it}$  is the error component that is idiosyncratic and varies both over time and units. It is a between entity error.  $\alpha$  is the dependent variable intercept.  $ERQ_{it}$  stands for earnings quality proxied by value relevance. Other variables are as previously defined in equation 4.

### 3. Results

#### 3.1. Descriptive statistics

The table 3 above shows the description of the variables. The standard deviations of the variables are within the acceptable range. Although some are greater than 1, they did not deviate



significantly from the normal range, which is between 1 and 0. This suggests that the data are fit for analysis and would not lead to bias due to outliers. The columns where the minimum and maximum ranged between 1 and 0 show, for instance, that some firms entrenched the roles of CEOs and board chairperson in the hands of one person., and as well, some separated both roles. Discretionary accrual has both positive and negative values. These values suggest that in some cases, managers managed accrual upwards and downwards to meet their private interests.

### 3.2. Univariate analysis

The table 4 above shows the correlation matrix of some of the independent variables with the earnings quality. The highlight of the table was done below.

The board leadership attributes correlate both positively with earnings quality. The board chairperson with good accounting experience correlates positively with earnings quality. We found that CEOs with financial expertise positively correlates with earnings quality. Legal expertise of CEOs has a negative correlation with earnings quality. Overall, the correlation coefficients were not high to cause multi-collinearity problems.

| Table 5. Unit Root Test Null Hypothesis: ACIT_LE has a unit root Exogenous Constant |             |            |             |           |
|---|-------------|------------|-------------|-----------|
|   | T-Statistic |            |             | Prob*.    |
| Augmented Dickey-Fuller Test  | -3.770034   |            |             | 0.0040    |
| Test Criteria Value   | 1%          |            |             | -3.475184 |
|   | 5%          |            |             | -2.881123 |
|   | 10%         |            |             | -2.577291 |
| *Mackinnon (1996) One-Sided D-Value   |             |            |             |           |
| Augmented Dickey-Fuller Test Equation   |             |            |             |           |
| Dependent Variable D(ACIT_LE)   |             |            |             |           |
| Date: 09/14/19  |             |            |             |           |
| Time: 10.05   |             |            |             |           |
| Included Observations 185 After Observations  |             |            |             |           |
| Variable  | Coefficient | Std. Error | t-Statistic | Prob.     |
| ACIT_LE (-1)  | -0.178542   | 0.047358   | -3.770034   | 0.0002    |
| C   | 0.063158    | 0.070281   | 2.292372    | 0.0265    |

Source: Eviews

The above table 5 tests the presence of unit root to determine if the data is stable over the period. Based on the probability associated with the t-statistic, which equals 0.0040, the null hypothesis is accepted. We concluded that the data is stationary over the period. Thus, since a unit root process characterizes the series, the lagged level of the series provided no relevant information in predicting the change in the dependent variable besides the one obtained in the lagged changes. There the data is fit for analysis, and there is no need for the lagged variables.

### 3.3. Regression results

The above table 6 is used to test hypothesis 1 to 3 that are focused on earnings persistence. Based on the Hausman test, the coefficients are consistent with the fixed-effect model. Thus, we used the statistics associated with the independent variables in the test of the hypotheses. The R-Squared equals 0.397, which shows that the data is very close to the fitted model, and up to 39.7% of the variations in the earnings persistence are explained by the board leadership variables. The Durbin-Watson value obtained

**Table 6. Regression of board leadership and characteristic on earnings persistence**

| Variables                          | Pooled OLS Persistence Model | Random Effect Persistence Model | Fixed Effect Persistence Model | Variance Inflation Factor (VIF) |
|------------------------------------|------------------------------|---------------------------------|--------------------------------|---------------------------------|
| C                                  | 9.570                        | 9.570                           | -                              |                                 |
| (t-Stat).                          | (0.366)                      | (0.366)                         | (0.463)                        |                                 |
| ACCT                               | 20.57**                      | 20.57**                         | 22.993**                       | 1.135                           |
| (t-Stat).                          | (4.784)                      | (4.784)                         | (4.449)                        |                                 |
| ACT*LAW                            | 5.190                        | 5.190*                          | 10.356*                        | 1.163                           |
| (t-Stat).                          | (1.45)                       | (3.105)                         | (2.182)                        |                                 |
| ADCC                               | 20.376                       | 20.376                          | 18.836                         | 1.066                           |
| (t-Stat).                          | (1.528)                      | (1.528)                         | (1.229)                        |                                 |
| AQ                                 | 1.842                        | 1.842                           | 3.012                          | 1.177                           |
| (t-Stat).                          | (0.528)                      | (0.528)                         | (0.762)                        |                                 |
| BDZ                                | 2.627                        | 2.627                           | 12.296                         | 1.128                           |
| (t-Stat).                          | (0.197)                      | (0.197)                         | (0.798)                        |                                 |
| CEO                                | 19.072**                     | 19.072**                        | 22.669**                       | 1.228                           |
| (t-Stat).                          | (4.827)                      | (4.827)                         | (4.694)                        |                                 |
| DEB                                | 1.388                        | 1.388                           | 2.959                          | 1.324                           |
| (t-Stat).                          | (0.717)                      | (0.717)                         | (1.185)                        |                                 |
| FAM                                | 35.756*                      | 35.756*                         | 39.489                         | 1.060                           |
| (t-Stat).                          | (2.509)                      | (2.509)                         | (2.161)                        |                                 |
| FMZ                                | -2.426                       | -2.426                          | -4.509                         | 1.145                           |
| (t-Stat).                          | (-1.043)                     | (-1.043)                        | (-1.593)                       |                                 |
| F-Stat.                            | 5.96                         | 5.96                            | 1.14                           |                                 |
| Prob.(F-Stat)                      | 0.00                         | 0.00                            | 0.049                          |                                 |
| R-Squared                          | 0.28                         | 0.28                            | 0.397                          |                                 |
| Adjusted R-Squared                 | 0.23                         | 0.23                            | 0.132                          |                                 |
| Durbin-Watson stat                 | 1.811                        | 1.811                           | 2.118                          |                                 |
| <i>Cross Section Random Effect</i> |                              |                                 |                                |                                 |
| SD                                 |                              | 0.00                            |                                |                                 |
| Rho                                |                              | 0.00                            |                                |                                 |
| <i>Idiosyncratic Random</i>        |                              |                                 |                                |                                 |
| SD                                 |                              | 21.617                          |                                |                                 |
| Rho                                |                              | 1.00                            |                                |                                 |

Source: Eviews; \* = Significant at 5%; \*\* = Significant at 1%; CEO = Chief Executive Officers; DEB = Debt ratio; ACC = Accounting/financial knowledge; BDZ = board size; FMZ = firm size; FAM = frequency of audit meeting; ACT\*LAW = mix of accounting and law skill in boards; AQ = audit quality; ADCC = audit committee.

equals 2.118. This implies that there is no serial correlation or autocorrelation at the residual. As such, the estimates are unbiased, consistent and reliable for investment decisions and policymaking. The variance inflation factors (VIF) are consistently smaller than 10. These small values indicate that multicollinearity is absent, thus suggesting the appropriateness of fitting the model of the study within the independent variables.

### 3.4. Value relevance of board leadership

Table 7 is used to test hypothesis 4 and 5 that are focused on value relevance. Based on the Hausman test, the coefficients are consistent with the random effect model. Thus, we used the statistics associated with the independent variables in the test of the hypotheses. The

**Table 7. Corporate governance -value relevance regression analysis output**

| Variables            | Random Effect Value<br>Relevance Model | Fixed Effect Value<br>Relevance Model | Variance Inflation<br>Factor (VIF) |
|----------------------|--|---------------------------------------|------------------------------------|
| C                    | -2.196                                 | -2.320                                |                                    |
| (t-Stat).            | (-2.453)                               | (3.132)                               |                                    |
| ACCT                 | 0.218                                  | 0.406**                               | 1.166                              |
| (t-Stat).            | (1.581)                                | (3.33)                                |                                    |
| ACT*LAW              | 0.134*                                 | 0.049                                 | 1.274                              |
| (t-Stat).            | (3.064)                                | (2.484)                               |                                    |
| ADCC                 | 0.627                                  | 0.100                                 | 1.085                              |
| (t-Stat).            | (1.532)                                | (0.264)                               |                                    |
| AQ                   | 0.158                                  | 0.153                                 | 0.564                              |
| (t-Stat).            | (1.506)                                | (1.534)                               |                                    |
| BDZ                  | 0.705*                                 | 0.503                                 | 1.657                              |
| (t-Stat).            | (1.717)                                | (1.336)                               |                                    |
| CEO                  | 0.160*                                 | 0.110                                 | 1.315                              |
| (t-Stat).            | (3.243)                                | (1.986)                               |                                    |
| DEB                  | 0.027                                  | 0.013                                 | 1.329                              |
| (t-Stat).            | (0.412)                                | (0.237)                               |                                    |
| FAM                  | 0.617                                  | 0.560                                 | 1.045                              |
| (t-Stat).            | (1.266)                                | (1.384)                               |                                    |
| FMZ                  | 0.535                                  | 0.520**                               | 1.126                              |
| (t-Stat).            | (7.09)                                 | (7.89)                                |                                    |
| F-Stat.              | 3.34                                   | 11.97                                 |                                    |
| Prob.(F-Stat)        | 0.00                                   | 0.00                                  |                                    |
| R-Squared            | 0.585                                  | 0.438                                 |                                    |
| Adjusted R-Squared   | 0.417                                  | 0.401                                 |                                    |
| Durbin-Watson Stat   | 2.266                                  | 1.716                                 |                                    |
| Cross Section Random |  |                                       |                                    |
| SD                   |  | 0.00                                  |                                    |
| Rho                  |  | 0.00                                  |                                    |
| Idiosyncratic Random |  |                                       |                                    |
| SD                   |  | 0.576                                 |                                    |
| Rho                  |  | 1.000                                 |                                    |

Source: Eviews; \* = Significant at 5%; \*\* = Significant at 1%; CEO = Chief Executive Officers; DEB = Debt ratio; ACC = Accounting/financial knowledge; BDZ = board size; FMZ = firm size; FAM = frequency of audit meeting; ACT\*LAW = mix of accounting and law skill in boards; AQ = audit quality; ADCC = audit committee.

R-Squared equals 0.585, which shows that the data is very close to the fitted model, and up to 58.5% of the variations in the earnings quality are explained by the board leadership model. The Durbin-Watson value obtained equals 2.267. That implies that there is no serial correlation or autocorrelation at the residual. As such, the estimates are unbiased, consistent and reliable for investment decisions and policymaking. The variance inflation factors (VIF) are consistently smaller than ten. These small values indicate that multicollinearity is absence, thus suggesting the appropriateness of fitting the model of the study within the independent variables.

### **3.5. Discussion and general study implication for corporate policies and investment decisions**

The R-values of the three models show that the board leadership characteristics well explained the nature of the quality of earnings management. The moderate values of the R-values also point the absence of variable omission or endogenous issues. The Durbin-Watson values of 2.409, 2.160, and 2.770 all suggest that there is no autocorrelation detected in the study samples. This means that the models are well specified as the null hypotheses of the presence of autocorrelation are rejected. Durbin-Watson of below 1 shows a severe case of autocorrelation. Since the calculated Durbin-Watson statistics are above the benchmark; we can confidently say that the models have mitigated potential type one error usually caused by residual autocorrelation.

#### **3.5.1. Board leadership attributes and earnings persistence**

Hypothesis 1 states that dual corporate board leadership structure significantly improves earnings persistence among the Nigerian quoted firms. We test this hypothesis based on a fixed-effect model. The Hausman statistics indicate that the coefficients are consistent with the fixed effect equation. Thus, we use the fixed effect statistics for the test. The decision is to accept the hypothesis if the coefficient is positive and the P-Value is equal to, or less than 0.05 or t-statistic is greater than 2. Based on the above table, the coefficient associated with the CEO is 19.072, and the P-value is less than 0.05 as t-statistic equals 4.694. This outcome means that the analysis supported the hypothesis and is thus accepted that dual corporate board leadership structure significantly improves earnings persistence among the Nigerian quoted firms. In hypothesis 2, we postulate that board models where CEOs and board chairs are both financial experts significantly improve earnings persistence. Similar to hypothesis 1, we carried out the test based on the fixed-effect model. The decision is to accept the hypothesis if the coefficient is positive and the P-Value is equal to, or less than 0.05 or t-statistic is equal or greater than 2. Based on the fixed-effect model, the coefficient associated with ACCT, which captures this effect is 22.993, and the P-value is less than 0.05. The t-statistic equals 4.444. This result shows that the effect is positive and significant on earnings persistence. The analysis supported the hypothesis and is thus accepted those board models where CEOs and board chairs are both financial experts significantly improve earnings persistence.

Hypothesis 3 stated that board models where CEOs are financial experts and board chairs are legal experts significantly improve earnings persistence. To test this hypothesis, we focused on the fixed effect as captured by the variable ACT\*LAW. The decision rule is to accept the hypothesis if the coefficient is positive and the P-Value is equal to, or less than 0.05 or t-statistic is equal or greater than 2. If based on the fixed-effect model, the coefficient associated with ACT\*LAW, which embodies the effect is 10.356, and the P-value is less than 0.05. The t-statistic equals 2.182. This result reveals that the effect is positive and significant on earnings persistence. Thus, we accept the hypothesis and conclude that board models where CEOs are financial experts and board chairs are legal experts significantly improve earnings persistence.

We have analyzed the effect of CEO duality on earnings quality proxied by persistence. This analysis was carried out in Table 5 based on the fixed-effect model. Qualitative earnings should not be transitory and must persist in the subsequent accounting periods. We found that a board leadership model where CEOs and board chairperson are separated positively and significantly affects the firms' earnings persistence. What this suggests is that as firms polarize their board leadership models, they would report consistent earnings that would be reliable for an investment decision. This has significant implication for managerial policy. CEO duality enhances firms earnings persistence. This finding is consistent with previous findings that revealed that CEOs duality promotes board independence, which ensures high-quality earnings (Gaio & Raposo, 2014; Jensen, 1993; Mashayekhi & Bazaz, 2010). The findings also authenticate Egbunike and Odum (2018)'s work that shows that board leadership structures enhance earnings quality among the manufacturing firms in Nigeria. It was, however, inconsistent with Yasser, & Al Mamun, (2016)'s finding that the board leadership structure was not associated with firm performance and financial reporting

quality in Malaysian, Australia and Philippines. This finding also provides an explanation for the finding of Joubert and Fakhfakh (2014) that the nature of a link between CEO incentive-based compensation and earnings management is positive and that such feature enhances earnings quality of American, Canadian, British, and French firms. As such, polarized firm scores high on board oversight and tend to maintain a lower degree of discretion over earnings. We also found evidence that board size yields a positive effect on earnings quality. Thus, as the board size increases earnings persistence increases. The effect of frequency audit meeting is positive but non-statistically significant.

However, when CEOs experience is taken into consideration, the effect is negative and statistically insignificant, which is consistent with Yasser & AlMamun (2016). This condition is not surprising because except the board leaders are experts in financial analysis, CEOs can exploit their naivety and manipulate earnings despite not being the board leaders. The policy implication is that firms should mark the financial experience of CEOs in two-style board leadership appropriately. They should not assume that the wealth of experience is solely to mitigate accrual management. Our analysis also shows that CEOs with high legal experience constitute a significant obstacle to transitory earnings. Such individual legal attribute improves firms' earnings quality. It implies that although they may not be financial experts, they use their legal positions and experiences to ensure that earnings are persistence. CEOs sexual power does not significantly ensure earnings quality, which is consistent with Yasser, & Al Mamun, (2016), who found that female CEOs negatively affected firm performance and reporting quality in Malaysia. This finding implies that the critical mass theory in terms of gender does not restrict the ability of earnings to be transitory. Thus, female CEOs do not wield any extraordinary power that improves firms' earnings quality. We found that their presence leads to negative earnings quality.

Our analysis shows that board chairperson with strong accounting background improves earnings quality significantly consistent with Marzuki et al. (2016) who that financial expertise and independence positively influenced earnings quality. Similarly, Iyengar et al. (2010) confirm that the board financial expertise mix positively affects earnings quality. It means that board leadership characteristics play a crucial role in accrual reporting quality. Firms that wish to experience high-quality reporting should targets boards with active financial experts. Investors as well should target board structure was there a right mix of financial expertise. Thus the finding that corporate governance improves earnings quality as in Gaio and Pinto (2018) and Lu et al. (2018) could be a function of the board leadership experience. Consistently, we found that board with the correct mix of financial experience for both CEOs and board chairperson yields a positive effect on earnings quality in terms of persistence.

Apart from where the CEOs and board chairs are financial experts, our analysis shows that a mix of boards with both financial and legal expertise improves earnings quality significantly. That means that board members with law background play a mitigating role in terms of earnings management. Thus, they bring their expertise to bear in board leadership meetings. Therefore, we can conclude that boards that have the correct mix of CEOs and board chairpersons with strong accounting and law knowledge improve earnings quality. The active policy implication is that investors who target such boards can mitigate adverse portfolio selection. However, we found that board size has a positive effect on earnings persistence, meaning that such a mix could enhance firms' earnings persistence if the number of boards is relatively high. Moreover, the frequency of audit meeting improves earnings quality though the effect is not statistically significant. Thus, firms with the right mix of board leadership should also make sure that the audit committee meets frequently. Thus, for the investors, they should watch out for firms with both right mixes of leadership experience and high audit committee meeting rate consistent with Baatour et al. (2017) and Ismail (2011) who provided evidence that audit committee composition, independent and frequency of meeting improve earnings quality. However, our analysis shows that this positive effect is likely to hold where there is a correct mix of board leadership attributes. This similar effect would hold relative to the firms' size, board size and leverage. Changes in firms' size

and board composition could improve firms' earnings quality consistent with Xie et al. (2003) and Mashayekhi and Bazaz (2008) that found that larger board size makes monitoring easier. However, this holds if the board has an excellent leadership attribute combination models. Similarly, high leverage can improve earnings. However, as well, the effect is likely to be limited by the firms' leadership model. We also found that the nature of the auditing firms plays a constraining role that improves earnings in all kind of leadership models. In a model, where there is no correct mix of leadership attributes, the variables could increase the quality of earnings. Thus, the Big four auditing firms provide a conducive environment for earnings quality and do not permit the entrenched nature of CEOs to lower their auditing standard. This situation explains why the audit quality yields a positive effect on earnings persistence.

### *3.5.2. Earnings value relevance of board leadership attribute and policy implications*

We begin by testing the hypotheses. Hypothesis 4 stated that dual board model significantly and positively affects earnings value relevance to the capital market. The test was carried out based on the random effect model, as shown in the above table. The decision is to accept the hypothesis if the coefficient is positive and the P-Value is equal to, or less than 0.05 or t-statistic is equal or greater than 2. Based on the random effect model, the coefficient associated with the CEO, which captures this effect equals 0.160, and the P-value is higher than 0.05 since the t-statistic >2. It shows that the effect is positive and significant on earnings value relevance. The analysis, therefore, supported the hypothesis and is thus accepted that dual board model significantly and positively affects earnings value relevance to the capital market. The implication is that market places a premium on the stocks of those firms with a non-unitary board model. In hypothesis 5, we postulated that the board models where CEOs are financial experts and board chairs are legal experts significantly improve earnings persistence. Similar to hypothesis 4, we carried out the test based on the random effect model, as shown in the above table. As usual, the decision is to accept the hypothesis if the coefficient is positive and the P-Value is equal to, or less than 0.05 or t-statistic is equal or greater than 2. Based on the random effect model, the coefficient associated with ACT\*LAW, which measures the effect equals 0.134, and the P-value is higher than 0.05 as the t-statistic >2. This result shows that the effect is significantly positive on the value relevance of earnings. We found support that; board models where CEOs are financial experts and board chairs are legal experts significantly improve earnings persistence which implies that market rewards firms for the right leadership mix.

The market plays a crucial role in driving the prices of stocks in the capital market. We analyzed how board leadership models and leadership attribute mix affect market prices. We found that CEO duality positively and significantly affect firms' stock prices, indicating that market places a premium on the leadership style of corporate firms. Thus, overall, the board leadership attributes and models are significantly valued relevant. The f-statistic and the associated p-value indicate so. Boards with a mix model and attributes of financial and law expertise increase firms' earnings value relevance to the capital market. Thus, market places a higher premium on attribute combination where the board has a mix of law and accounting expertise which is essential and consistent with Nelson and Davis (2013) finding that the presence of non-accounting experts and accounting experts is significant to minimize accrual manipulations, which translate into higher value. The policy implication is that firms should have in their board members with a mix of accounting and law experience to attract capital market clients. As the investors patronize the stock, the value would increase.

### **3.6. Summary, conclusion, policy implications and future research directions**

This study examined the effect of corporate governance mechanisms on firms' earnings quality as measured by earnings persistence, and value relevance. Specifically, we focused the study on the impact of board leadership structures and leaders' attributes on the corporations' income quality. The study identified specific leadership traits, such as financial expertise and legal skills. Thus, the authors analyzed how the mix of the leader attributes work in two key leadership models of corporate organizations. It was found that a model where CEO duality models improve earnings

quality. The effect is positive on persistence, and the effect could depend on the audit committee meeting and the skill mix of the board leaders. When board leadership are separated such that CEOs and board chairpersons have equal accounting and financial skills, the firms' earnings quality significantly improves consistent with Gaio and Pinto (2018) and Lu et al. (2018). We also found that the legal skill of board chairperson plays a significant constraining role in accrual manipulation that negatively impacts earnings quality. Thus, lawyers in the boards mitigate earnings manipulation that could reduce the persistence of earnings. Audit quality, board sizes and the frequency audit committee meeting all positively affect earnings quality. Though our hypotheses were all supported, we found that it is not enough to polarize the board. There must be a right mix of the leaders' expertise. Market relevance of earnings was found to be significant with the right mix of CEOs and board chairpersons with both accounting and law background. The market as well places a higher premium on the mix of technical knowledge and financial expertise.

Our findings have many implications for decision making. Our finding implies that investors should target firms where CEOs and board chairpersons have strong accounting skills. This attribute mix has a high tendency to constrain earnings management that discounts on earnings quality. Where only CEOs have a professional financial background, there is the potential of an accounting manoeuvre that negatively affects earnings quality. Such biased earnings could lead to adverse portfolio selection and poor corporate acquisitions. Asset pricing models rely on the quality of earnings for practical corporate evaluation. The model would fail if firms reported that earnings are false. Another implication of our finding is that where CEOs possess high accounting skills, and the board chairpersons have no such skills, our analysis shows that such boards can constrain the CEOs accounting manoeuvre if the board chairperson has legal skills. Thus, firms with a combination of financial skills and legal skills could help investors reach their goals of good portfolio selection. In this case, wise investors should target such legal-accounting skill leadership model and attributes. If an investors target is to invest in firms with less transitory likelihood, the best attribute is accounting legal skills.

However, it is not clear how another attribute mix could affect earnings quality. For how do CEOs and board chairpersons with strong religious belief see accrual manipulations? Can they see it as transgression and as such places a higher restriction against discretionary accrual? This group of corporate leaders has a stewardship mindset and works to please their creator rather than the owners. One can reason that they can limit accrual, but this remains an empirical question as they can also believe that such an act has no biblical background and can be practised. This constitutes a new direction for further studies on the attributes of board leadership and attributes on earnings quality. There is also the need to examine the role of engineers and Information Communication and Technology (ICT) experts on the boards. In an era of accounting information technology, their presence can limit software adjustment that can undermine the quality earnings report. This study relied on secondary dummy data to capture specific professional attributes, and that constitutes a kind of limitation. Some physical identification can be made through a survey to remove limitations imposed by inadequate disclosure. Thus, we discovered that some firms do not disclose the positions and specific attributes of CEOs and board chairpersons, which could limit the sample size. Studies that use the survey to identify board characteristics could add credence to the conclusion of this paper. Besides, though financial firms are highly monitored, they should be studied because they also manage their earnings. It means that there is a need to study their corporate governance leadership models and attribute mix to have a view of how the attributes interact to drive banking firms' earnings quality. Value relevance of board leadership mix should be examined to understand how the capital market reacts to good leadership model and attribute combination. Such studies could significantly enhance investors' skills in portfolio selection with loss of more significant loss minimization.

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