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## BOARD ATTRIBUTES ON THE RELATIONSHIP BETWEEN EARNINGS MANAGEMENT OF SELECTED QUOTED MANUFACTURING FIRMS IN NIGERIA

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### **Abstract**

*This study investigated the moderating effect of board attributes on the relationship between earnings management of selected quoted manufacturing firms in Nigeria. The study investigated the moderating effect of board independence on the relationship between share price volatility and discretionary accrual and ascertained the moderating effect of CEO duality on the relationship between share price volatility and discretionary accrual. The study was hinged on the 'agency theory'. The study adopted the ex-post facto research design. The population of the study included all manufacturing firms quoted on the Nigerian Stock Exchange (NSE) as at 31<sup>st</sup> December 2019. The multiple regression analysis was employed in validating the hypotheses. The study also found that board independence moderates the relationship between information asymmetry and earnings management. The coefficient of the moderator variable was positive; and, CEO duality moderates the relationship between information asymmetry and earnings management. The study recommended that shareholders should appoint more Independent Non-Executive Directors: Strengthening the function of independent non-executive directors to enhance decision-input on discretionary accrual policies. Boards are encouraged to balance the distribution of and Independent non-executive directors sitting on the board. Independent non-executive directors have shown to demonstrate a stronger commitment to business ethics and shareholders' interests.*

**Keywords:** Board independence, CEO duality and Discretionary accrual.

## Introduction

Corporate governance is not new in the Nigerian corporate environment (Otuya, Donwa, & Egware, 2017) and plays an indispensable role in the way quoted companies are managed (Awaisu, 2014). The Companies and Allied Matters Act, 1990; the Bank and other Financial Institutions Act, 1991 (as amended); the Investment and Securities Act, 1999 (as amended); the CBN Act, 2006; the Securities and Exchange Commission Act, 1988, 2004 and 2008 (as amended); all made provisions for investor protection (Otuya & Ofeimun, 2017; Ejubekpokpo & Esuiké, 2013). They are geared towards protecting market participants from information asymmetry and earnings management. Information asymmetry is a condition where one party has more information than the others (Veronica & Bachtiar, 2005). This condition often results in moral hazard and adverse selection. Financial reporting is meant to reduce information asymmetry between the company and its stakeholders (Veronica & Bachtiar, 2005). The role of financial statements is to disclose information on the financial position, performance and change in financial position of an entity, which is useful to a wide range of users (internal and external) in making economic decisions in a timely and reliable manner (Sun & Rath, 2008; International Accounting Standard Board [IASB], 2001). Financial reporting systems are designed to provide value relevant financial information to all users (Al-Dhamari & Ismail, 2014).

High quality, consistent, comparable and understandable reporting by business enterprises enhances investor confidence and market efficiency (International Chamber of Commerce [ICC], 2005). Managers are free to select accounting and reporting methods in the preparation of financial statements (Algharaballi, 2013). They are often pressured to present to the market the most successful image, by exploiting insufficiencies of accounting rules (Sayari, Omri, Finet, & Harrathi, 2013). One core issue affecting the quality of financial reporting is the degree which managers manipulate reported earnings numbers (Cadbury Report, 1992). Moreover, accrual based accounting contributes to the propensity of earnings management as it does not require the physical evidence of cash in recording transactions (Sulistyanto, 2008). Earnings management may result from key executives striving to protect their interest in a firm, from choosing inputs or outputs at own preferences (Al Farooque, Suyono, & Rosita, 2014; Al-Taleb, 2012; Reyna, 2012 Tsuji, 2011).

Earnings are the most significant accounting item in a financial report (Abata & Migiro, 2016). Its vital position stems from the fact that it could “be used to tell the truth but also could be used in cheating or misleading” (Li, 2009). Earnings is a key factor in determining the dividend policy, and a guideline for investment and decision-making, a core measure of a firm’s performance, an effective criterion in the stock pricing and eventually an instrument utilized to make predictions (Mohammady, 2010). The difference between actual and reported earnings impacts on earnings quality, which is described by market participants as a good indicator of financial reporting quality (Francis, Olsson, & Schipper, 2008; McEwen, 2009).

This study therefore investigates the moderating effect of board attributes such as Board size, Board independence, CEO Duality on the relationship between information asymmetry and earnings management on a sample of selected quoted Manufacturing firms in Nigeria.

Similarly, empirical studies which address ownership characteristics and earnings management are inconclusive. Prior studies in Nigeria, have mainly examined the relationship between corporate governance mechanisms, such as board size, board independence, audit committee, audit quality, among others and earnings management.

Studies have failed to address the relationship between information asymmetry and earnings management. And moreover have not investigated the moderating effect of board attributes on the relationship between information asymmetry and earnings management.

The main objective of the study is to ascertain the moderating effect of board attributes on the relationship between information asymmetry and earnings management of selected quoted manufacturing firms in Nigeria. Specifically, the study intends to:

1. Investigate the moderating effect of board independence on the relationship between share price volatility and discretionary accrual.
2. Ascertain the moderating effect of CEO duality on the relationship between share price volatility and discretionary accrual.

### **Review of related literature**

An important factor that may affect the ability of the board to monitor the firm's managers is its composition and the percentage of independent directors on the board (Fields & Keys, 2003; Beasley, 1996). Board independence refers to the extent to which a board is comprised of non-executive directors who have no relationship with the firm beyond the role of director (Davidson, Goodwin-Stewart, & Kent, 2005). A non-executive director is defined as a director who is not employed in the company's business activities and whose role is to provide an outsider's contribution and oversight to the board of directors (Hanrahan, Ramsay, & Stapledon, 2001). A non-executive director who is entirely independent from management is expected to offer shareholders the greatest protection in monitoring management (Baysinger & Butler, 1985). This can be attributed to the incentive to maintain their reputations in the external labour market (Fama & Jensen, 1983).

Independent monitoring function of non-executive directors reduces earnings management, hence decreases agency problems (Klein, 2002; Peasnell, Pope, & Young, 2000). This is because in the absence of any significant benefits accruing to non-executive directors from earnings management, the associated costs are predicted to provide them with powerful incentives to monitor the financial reporting process (Peasnell, Pope, & Young, 2000). Non-executive directors face potentially significant costs from earnings management, such as loss of reputation as effective monitors (Fama & Jensen, 1983).

The benefits accrue primarily to executive directors in the form of increased current period compensation (Holthausen, Larcker, & Sloan, 1995) and reduced likelihood of dismissal (Weisbach, 1988). This therefore provides an incentive for increased monitoring function by non-executive directors. It is often recommended that the number of external members on the board of directors be greater than the owners, for there to be more oversight of management and to maximize the value of the organization (Zattoni & Cuomo, 2010).

Studies document mixed findings on the relationship between board independence and earnings management. Reyna (2012) hypothesized that independent board members have a positive effect on discretionary accruals. Davidson, Goodwin-Stewart, and Kent (2005) find empirical support for the effective role of independent directors in constraining earnings management in Australian firms. Other studies have shown that board independence is associated with high quality of accounting information (Abdoli & Royae, 2012; Dimitropoulos & Asteriou, 2010; Marra, Mazzola, & Prencipe, 2009; Ahmed & Duellman, 2007; Firth, Fung, & Rui, 2007). Klein (2002) finds that earnings management is less pronounced in firms that have audit committees comprising a majority of independent directors. She also finds a negative association between abnormal accruals and the proportion of independent directors.

Beasley (1996) finds that the proportion of outside directors on the board is lower for firms experiencing financial statement fraud. Dechow, Sloan, and Sweeney (1996) report similar findings when studying the governance structures of firms that are the subject of SEC enforcement actions. They find that firms that violate GAAP and overstate earnings are more likely to have boards with more inside directors and a CEO who serves as the board chair.

Osma (2008) provides evidence suggesting that independent directors have sufficient technical knowledge to identify opportunistic reductions in R&D and efficiently constrain real earnings management. Contrary to this, in Nigeria Egbunike, Ezelibe, and Aroh (2015) showed a non-significant coefficient for independent non-executive directors on earnings management. A meta-analytical study by Lin and Hwang (2010), showed that the independence of the board and its expertise have a negative relationship with earnings management.

CEO duality refers to a situation in which the same person is serving simultaneously two positions: the CEO and the chairperson of the board (Vintila & Duca, 2013; Daily & Schwenk, 1996). Segregation of the two roles can improve efficiency and effectiveness of internal governance systems, and offers the necessary checks and balances of power and authority on management behaviour (Chapra & Ahmed, 2002). When the chairman of the board of directors also takes the role of the CEO, the effectiveness of the board to monitor top management is decreased (Firth, Fung, & Rui, 2007). The occupation of the roles of chairman and executive director by the same person can reduce the independence of the board as well as its ability to control managers effectively (Holtz & Neto, 2014). One effect could be a decreased dissemination of timely and relevant information to external stakeholders (Gul & Leung, 2004).

However, those in favour of duality argue that consolidation of these two positions provides a single focal point for company leadership (Anderson & Anthony, 1986). There is evidence to support that numerous firms which combined the role of chairman and CEO, were successfully, and have the capacity to keep top management in check (Haniffa & Cooke, 2002).

Studies provide mixed findings on the relationship between CEO duality and earnings management. Huafang and Jianguo (2007) found a significant negative association between duality and disclosure. On the other hand, Li, Pike, and Haniffa (2008), Said, HjZainuddin, and Haron (2009) found an insignificant relationship between duality and disclosure.

Bliss (2011) examined whether CEO duality affects the association between board independence and demand for higher quality audits. The study reported that there is a positive association between board independence and audit fees. However, the positive association was only present in firms without CEO duality, suggestive of the fact that CEO duality constrains board independence.

### **Empirical Review**

Pyung-kyung and Tae-nyun (2015) studied the relationship between information asymmetry and earnings management. Information asymmetry was proxied using adjusted trading volume, and earnings management was proxied using unexpected core earnings. They used data for firms traded in NYSE, AMEX, or NASDAQ from 1993 and 2013 fiscal years. The study finds that the level of adjusted trading volume is positively and significantly associated with the magnitude of unexpected core earnings. The robustness test using residual volatility of stock returns as proxy for information asymmetry; also find that unexpected core earnings positively relate to the residual volatility of stock returns. Smit (2015) investigated the impact

of board monitoring role on quality of reported earnings on a sample of firms listed on the Alternative Exchange (AltX). The period of the study is from 2008 – 2011. They used regression to examine the relationship. The study finds no evidence that boards and non-executive directors of small and medium-sized companies are inclined to adopt conservative accounting practices that will result in the asymmetric timeliness of earnings. Also, Sama'ila and Zaharaddeen (2015) examined the impact of board structure on earnings management of listed cement companies in Nigeria. The study period was ten years (2004-2013). Data were extracted from annual reports and accounts of the sampled firms. They used regression to test the hypotheses. The study finds that board size has a positive and significant effect on earnings management, while board independence had a negative and significant effect. However, female directors have a negative but insignificant effect on earnings management. Egbunike, Ezelibe, and Aroh (2015) explored the influence of corporate governance on earnings management practices of Nigerian quoted companies. The corporate governance variables were board size, board independence, and strength of audit committee, while earnings management was measured using the Jones Model. They used regression technique to analyse the data. The study finds a significant coefficient for board size, non-significant coefficient for board independence, and a significant coefficient for audit committee strength. Abdulmalik, Ahmad, and Aliyu (2015) examined the relationship between board monitoring mechanism (proportion of independent directors, grey directors), continuous training programmes, outsourcing of internal audit function and financial reporting quality in Malaysia. They studied a sample of top 100 firms identified by the Malaysia Shareholder Watchdog Group (MSWG) between the periods 2010-2013. Feasible GLS (FGLS) regression estimation method was used to test the relationship. The result revealed that proportion of grey directors is positively and significantly related with both accrual and real earnings management, proportion of independent directors is negative and not significant. Board continuous training and outsourcing of internal audit function were both negatively and significantly related with accrual and real earnings management. Al Farooque, Suyono, and Rosita (2014) investigated the impact of earnings management on market return (by the proxies of discretionary accruals and earnings response coefficient/CAR regarded as accounting and market based earnings quality, respectively) along with a number of moderating (both governance and financial) variables in Indonesia. They used panel data approach, and examine 52 manufacturing firms listed on the Indonesia Stock Exchange from 2007 to 2010. They used the Modified Jones Model to measure earnings management. The study finds that earnings management has a significant negative influence on market return. The moderating variables, board size, leverage and firm size show significant effects on market return, but institutional ownership was not significant. When considered in the regression, the moderator variables were not significant. AL-Dhamari and Ismail (2014) studied the relationship between board characteristics and earnings quality after the amendment of the Malaysian Code on Corporate Governance in 2007. The sample comprised Malaysian firms listed in 2008 and 2009. They used to heteroskedasticity-correct least square regression. They found that earnings quality is higher among firms with independent chairmen than firms with non-independent chairmen. They found inconclusive results as regards board independence. The further reveal that investors do not perceive board size as a good indicator of earnings quality. Ijeoma and Ezejiofor (2013) determined whether corporate governance makes a significant contribution to ensuring accountability and transparency in order to improve an enterprise's performance, as well as the extent to which corporate governance can assist organizations in fulfilling their social responsibilities to the environment. The population for the study was drawn from the management and workers of seven small and medium enterprises (SMEs) in Nigeria's Anambra state. The study's data was gathered from both primary and secondary sources. The Two Way ANOVA for opinion

differences was used to assess and test the hypotheses made for this article. Chaharsoughi and Rahman (2013) examined the relationship among independent boards of directors, board size, managerial share ownership (MSO), and earnings quality. The sample comprised 114 companies listed on the Tehran Stock Exchange (TSE) from 2008 to 2010. The control variable was firm size. The results showed that there was an insignificant positive relationship among independent boards of directors, managerial ownership, and earnings quality. Also, an insignificant negative relationship was found for board size and earnings quality. Ajina, Sougne, and Laouiti (2013) investigated the relationship between corporate governance and information asymmetry on a sample of French firms. The sample comprised 160 companies from 2008-2010. The results revealed a negative relationship between information asymmetry and board size. Proportion of independent directors was negatively related to information asymmetry. Board expertise was negatively related to information asymmetry. Board meetings were negatively related to information asymmetry. Board diligence was negative and significant, while duality was positive but not significant. Abdoli and Royae (2012) examined the effect of board independence on earnings quality of companies listed in the Tehran Stock Exchange (TSE). The sample comprised data from 165 companies quoted in TSE from 2005 to 2010. They used regression to test the hypotheses. The study finds a significant relationship between the proportion of nonexecutive directors on the board and earnings quality. Reyna (2012) analyzed the influence of ownership structure, board and leverage on earnings management, for companies with or without profitable growth opportunities. The sample comprised 90 listed Mexican firms from the period 2005-2009. The results show a positive relationship for leverage and board of directors on earnings management in the presence of profitable investment projects. This relationship is reversed (negative) when firms have no profitable investment projects. Alkdai and Hanefah (2012) investigated the effect of audit committee characteristics such as size of audit committee, number of independent non-executive directors, the number of accounting expertise, and the number of Muslim directors in audit committee on earnings management practice. They used panel data regression on a sample of 270 Malaysian Shariah-compliant companies. The control variables were company's size, company's leverage, company's profitability and size of audit firm (Big4). Earnings management was measured using the Modified-Jones Model (1995). The results showed that audit committee size has no significant relationship with discretionary accruals as proxy for earnings management. A negative significant relationship between independent non-executive directors in audit committee and discretionary accruals was revealed by the study. There is a non-significant relationship for accounting expert's role and number of Muslim directors in audit committee. Davidson, Goodwin-Stewart, and Kent (2005) investigated the role of a firm's internal governance structure in constraining earnings management. The internal governance structure included the board of directors, audit committee, internal audit function and choice of external auditor. Earnings management was measured using the level of discretionary accruals. They used a cross-sectional sample of 434 listed Australian firms, for the financial year ending in 2000. The study finds that non-executive directors and audit committee is significantly associated with a lower likelihood of earnings management. Voluntary establishment of an internal audit function and choice of auditor are not significantly related to a reduction in the level of discretionary accruals. Veronica and Bachtiar (2005) investigated the relationship between corporate governance, information asymmetry and earnings management. The study finds a significant negative correlation between bid ask spread, as a proxy of information asymmetry, and discretionary accruals, as a proxy of earnings management. They also tested whether corporate governance will impact the level of discretionary accruals and market reaction. Corporate governance practice was proxied using the existence of audit committee, quality of audit, independent board member, and institutional ownership. The study finds that only audit

committee has significant relation with discretionary accruals. Discretionary accruals correlate negatively with return, however, the interaction between discretionary accruals and audit committee as well as independent board members, showed a significant positive correlation between accruals and return.

There is a paucity of studies on the roles of board on earnings management in Nigeria and numerous studies have shown mixed findings on the relationship between information asymmetry and earnings management. Studies have shown mixed findings on the relationship between board attributes and earnings management. Also, empirical studies which address ownership characteristics and earnings management are inconclusive.

### **Methodology**

The study made use of *ex post facto* research design. Ex-post facto research is a systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulated (Salkind, 2010; Onwumere, 2009).

### **Population of the Study**

The population of the study is made up of Manufacturing Companies quoted on the Nigerian Stock Exchange as at 1<sup>st</sup> January 2018. Manufacturing sector was chosen because it remains the most powerful engine for economic structure of countries (Jide, 2010). The studied companies are classified under conglomerates, consumer goods, and, industrial goods (NSE, 2018).

### **Sample Size of the Study**

The sample for the study was drawn from quoted conglomerate, consumer goods and industrial goods manufacturing firms on the Nigerian Stock Exchange. The study used the purposive sampling technique to ensure that the firms have homogenous properties.

The study used data that were extracted from the Annual Reports of the selected manufacturing companies.

### **Methods of Data Analysis**

Panel Estimated Generalized Least Square (EGLS) regression will be used to test the moderating effect of board attributes on the relationship between information asymmetry and earnings management. Prior studies have shown that Estimated Generalized Least Square (EGLS) regression is a favourable technique in testing moderating effects (Abdulmalik, Ahmad, and Aliyu 2015; Green, 2008).

### **Model Specification:**

$$DA_{(i,t)} = \alpha + SPV_{(i,t)} + BI_{(i,t)} + SPV_{(i,t)} * BI_{(i,t)} + CFO + Firm\ Size + Leverage + Profitability + Age + Audit\ Quality + \mu \dots \dots \dots 3$$

$$DA_{(i,t)} = \alpha + SPV_{(i,t)} + Duality_{(i,t)} + SPV_{(i,t)} * Duality_{(i,t)} + CFO + Firm\ Size + Leverage + Profitability + Age + Audit\ Quality + \mu \dots \dots \dots 4$$

The composite model is specified below as follows:

The model shows the effect of information asymmetry and board attributes on earnings management. Moreover, it also specifies the moderating effect of board attributes on the relationship between information asymmetry and earnings management;

$$DA_{(i,t)} = \alpha + SPV_{(i,t)} + BS_{(i,t)} + BI_{(i,t)} + Duality_{(i,t)} + SPV_{(i,t)} * BS_{(i,t)} + SPV_{(i,t)} * BI_{(i,t)} + SPV_{(i,t)} * Duality_{(i,t)} + SPV_{(i,t)} + CFO + Firm\ Size + Leverage + Profitability + Age + Audit\ Quality + \mu \dots \dots \dots 5$$

Where:

- DA = Discretionary Accrual
- BI = Board Independence
- Duality = CEO Duality
- $\alpha$  = Constant
- $\mu$  = error term

**The Modified Jones Model:**

The study used the cash-flow method to evaluate total accruals, total accruals (TAC) is defined as the difference between net income before extra items (NI) and cash flow from operating activities (OCF) as stated below in the equation:

$$TA_{ijt} = NI_{ijt} - CFO_{ijt} \dots \dots \dots (i)$$

$$TA/A_{it-1} = \beta_0 + \beta_1 (\Delta REV - \Delta REC)/A_{it-1} + \beta_2 PPE_t / A_{it-1} + e_{it} \dots \dots \dots (ii)$$

Where:

- Ait-1 = total asset of firm i at the beginning of year t.
- $\Delta REV_{it}$  = change in revenues for firm i in the year t
- $\Delta REC_{it}$  = change in revenues for firm i in the year t
- PPEit = level of gross property, plant and equipment for firm i in the year t
- $e_{it}$  = error term for firm i in year t.

Based on the estimates for the regression parameters ( $\beta_0, \beta_1, \beta_2$ ), each firm's non discretionary accruals (NDAC)

$$NDAC_{it} = \beta_0 + \beta_1 (\Delta REV - \Delta REC)/A_{it-1} + \beta_2 PPE_t / A_{it-1} \dots \dots \dots (8)$$

Thereafter DACit is estimated according to the following equation:

$$DAC_{it} = TA/A_{it-1} - NDAC_{it}$$

**Data Analysis**

**Test of Hypothesis One**

H<sub>1</sub>: Board independence moderates the relationship between share price volatility and discretionary accruals.

Table 1: Coefficients of model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-10.68230	9.458234	-1.129418	0.2593
BIND	-14.95912	6.504701	-2.299740	0.0219
IA*BIND	132.5428	5.308370	24.96864	0.0000
CFO	-4.28E-11	1.90E-11	-2.253372	0.0247
FS	0.629642	0.412747	1.525490	0.1279
LEVERAGE	0.007490	0.026387	0.283846	0.7767
ROA	0.996245	0.759450	1.311799	0.1903
FIRM_AGE	0.003727	0.011268	0.330721	0.7410
AUDIT_QUALITY	-1.027805	0.904087	-1.136843	0.2562

Table 2: Model summary for hypothesis three

R-squared	0.368069	Mean dependent var	-7.523561
Adjusted R-squared	0.346329	S.D. dependent var	61.54764
S.E. of regression	49.44043	Sum squared resid	1065739.
F-statistic	16.92994	Durbin-Watson stat	2.141255
Prob(F-statistic)	0.000000		
Unweighted Statistics			
R-squared	0.024799	Mean dependent var	-0.217931
Sum squared resid	1370410.	Durbin-Watson stat	2.277478

Table 1 and 2 showed results of the Estimated Generalized Least Square (EGLS) regression conducted to test if board independence moderates the relationship between share price volatility and discretionary accruals. The results of the EGLS regression indicated the predictor explained 36.8% of the variance ( $R^2=0.368069$ ,  $F(16.92994)$ ). Also, on a 5% level of significance, the result shows a  $p = 0.0000$ ; i.e.  $<.05$ ). Hence, we reject our null hypothesis and accept the alternate hypothesis. Thus, Board independence moderates the relationship between share price volatility and discretionary accruals.

#### Test of Hypothesis Two

$H_1$ : CEO duality moderates the relationship between share price volatility and discretionary accruals.

Table 3: Coefficients of model four

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9.872142	11.91688	-0.828417	0.4079
SPV	0.106061	0.123542	0.858498	0.3911
CEO__DUALITY	2.098904	0.898722	2.335432	0.0200
IA*CEO__DUALITY	-9.731209	1.010612	-9.629024	0.0000
CFO	-3.98E-11	1.87E-11	-2.125318	0.0341
FS	0.486694	0.504323	0.965043	0.3351
LEVERAGE	0.037512	0.028092	1.335365	0.1825
ROA	0.528357	0.980613	0.538803	0.5903
FIRM_AGE	-0.001197	0.011265	-0.106282	0.9154
AUDIT_QUALITY	-1.563710	0.974898	-1.603973	0.1094

Table 4: Model summary for hypothesis four

R-squared	0.269216	Mean dependent var	-6.896473
Adjusted R-squared	0.244074	S.D. dependent var	57.00328
S.E. of regression	49.24686	Sum squared resid	1057410.
F-statistic	10.70797	Durbin-Watson stat	2.107436
Prob(F-statistic)	0.000000		
Unweighted Statistics			
R-squared	0.021709	Mean dependent var	-0.217931
Sum squared resid	1374752.	Durbin-Watson stat	2.272350

Source: E-Views 9

Tables 3 and 4 showed above results of the Estimated Generalized Least Square (EGLS) regression conducted to test if CEO duality moderates the relationship between share price volatility and discretionary accruals. The results of the EGLS regression indicated the predictor explained 26.92% of the variance ( $R^2=0.26922$ ),  $F(10.70797)$ . Also, on a 5% level of

significance, the result shows a  $p = 0.3911$ ; i.e.  $>.05$ ). Hence, we accept our null hypothesis and reject the alternate hypothesis. Thus, CEO duality does not moderate the relationship between share price volatility and discretionary accruals.

### **Discussion of Findings**

Board independence moderates the relationship between share price volatility and discretionary accruals. According to Alves (2014), independent board members improve earnings quality by reducing discretionary accruals. The sign of the moderating variable (IA\*BIND) was positive and significant. This is somewhat consistent with the study by Abata and Migiro (2016) that revealed a positive but insignificant effect of board independence on discretionary accruals. Chaharsoughi and Rahman (2013) in Iran, showed that there was an insignificant positive relationship among independent board of directors and earnings quality. While, Holtz and Neto (2014) in Brazil specifically showed that board independence positively affects the quality of reported accounting information, especially as regards the relevance of equity and earnings informativeness. The study by Veronica and Bachtiar (2005); showed that the interaction between discretionary accruals and independent board members had a significant positive correlation between accruals and return.

Abdoli and Royae (2012) on a sample of firms listed in the Tehran Stock Exchange (TSE) finds a significant relationship for proportion of non-executive and executive directors on the board with earnings quality.

However, Sama'ila and Zaharaddeen (2015) on a sample of listed cement companies in Nigeria found that board independence had a negative and significant effect on discretionary accruals. Dimitropoulos (2011) on a sample of European Union's football clubs showed that clubs with greater board independence mitigated aggressive earnings manipulation by managers. The effect of board independence may become more pronounced following the mandatory adoption of IFRS. The study by Marra, Mazzola, and Prencipe (2011) finds that board independence plays an effective role in constraining discretionary accruals following the mandatory adoption of IFRS. Davidson, Goodwin-Stewart, and Kent (2005) in Australia showed evidence that firms with non-executive directors were significantly associated with a lower likelihood of discretionary accruals.

The sign and direction of the board attribute (board independence) was however, negative and significant. The study by Egbunike, Ezelibe, and Aroh (2015) on a sample of quoted firms in Nigeria reported a non-significant coefficient for board independence. Abdulmalik, Ahmad, and Aliyu (2015) on a sample of top 100 firms in Malaysia found that the proportion of independent directors was negative but not significant. In Greece the study by Dimitropoulos and Asteriou (2010) revealed that informativeness of annual earnings was positively related to the proportion of outside directors; secondly, firms with a greater proportion of outside directors report higher quality earnings compared to firms with lower proportion of outside directors.

The study by Rahman and Ali (2006) in Malaysia showed that board independence had an insignificant relationship with discretionary accruals.

CEO duality moderates the relationship between share price volatility and discretionary accruals. The sign of the moderating variable (IA\*CEO\_\_DUALITY) was negative and significant. The study by AL-Dhamari and Ismail (2014) in Malaysia show that earnings quality was higher in firms with independent chairmen than firms with non-independent chairmen.

Contrary to this, the study by Holtz and Neto (2014) in Brazil finds that separation of the roles of chairman and executive director positively influence quality of reported accounting information, specifically regarding the relevance of equity.

The sign of the board attribute (CEO\_DUALITY) was positive and significant. The study by Abdoli and Royae (2012) in Iran, reported a significant relationship between CEO-duality and earnings quality.

### **Conclusion and Recommendations**

The study sought to examine the effect of board attributes on the relationship between information asymmetry and earnings management of selected quoted manufacturing firms in Nigeria. The study shows that board independence moderates the relationship between share price volatility and discretionary accrual ( $p < .05$ ). The coefficient of the moderator variable was positive; and, CEO duality moderates the relationship between share price volatility and discretionary accrual ( $p < .05$ ). The coefficient of the moderator variable was negative. Both concepts have received increased attention in the business, finance and governance literatures. The concepts were reviewed in the literature and several empirical findings globally and locally also presented.

### **Recommendations**

The study makes the following recommendations:

Shareholders should appoint more Independent Non-Executive Directors: Strengthening the function of independent non-executive directors to enhance decision-input on discretionary accrual policies. Boards are encouraged to balance the distribution of and Independent non-executive directors sitting on the board. Independent non-executive directors have shown to demonstrate a stronger commitment to business ethics and shareholders' interests.

Separation of both positions for improved monitoring: CEO duality moderates the relationship between information asymmetry and earnings management. Hence, the dual role of board chairman and CEO simultaneously must be discouraged, but rather the separation of both positions for improved monitoring.

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