



## Board of Directors' Interest in Share Ownership and Earnings Management

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**Abstract:** In this study, we examine the effect of directors' ownership on earnings management practices. Explicitly, we draw from the agency theory to distinguish between ownership by non-executive directors and ownership by executive directors to investigate reasons for directors and managerial opportunistic behaviour. Utilising data from a sample of 864-firm-year observations ranging from 2009 to 2017 period, we test our hypothesis through OLS regression. We find that non-executive directors' interests in shareholding are significantly associated with higher levels of earnings management. We observed a decrease in abnormal accruals on the overall basis of the combined ownership of both executive and non-executive directors. Overall, ownership by all directors combined significantly reduces managerial opportunism. By contrast, there is no evidence that executive directors' ownership mitigates managerial opportunism. This paper contributes to corporate governance literature, particularly when the independence of board members is essential. This study disaggregates board ownership into executive holdings and non-executive holdings, dimensions which were hitherto rendered as managerial ownership or board ownership. These findings imply firms' corporate governance policy and regulations.

**Keywords:** Earnings Management, Board of Directors, Ownership, Interest, Nigeria

**JEL Classification:** G30

**Paper Type:** Research

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## 1. INTRODUCTION

Corporate boards are statutorily saddled with the responsibility of monitoring the quality of informational content of financial reports. Board monitoring is essential because managers often have conflicting interest with that of shareholders. This same board is composed of executive directors (managers) and to a more significant extent, non-executive directors (to demonstrate independence) who jointly take decisions that appertain financial reporting. Both categories of directors have rights to own shares in the firm, except for a third category within the non-executive directors who are designated explicitly as independent non-executive directors.<sup>1</sup>

The issue of corporate board members' interest in shareholding and its potential opportunism on earnings management continues to be a subject of interest in corporate governance discussion. Prior studies document that managerial ownership and directors' ownership affect the corporate board's opportunistic behaviour towards earnings. For example, Hooghiemstra, Hermes, Oxelheim, and Randøy (2019) assert that the board of directors is a critical mechanism to restrict managers' opportunistic behaviour. These studies have abundant evidence that earnings management stems out of ulterior motive and is counterproductive.

While the literature generally focuses on managerial ownership, there is little evidence examining the opportunism of independent and non-executive directors. In this study, we partition board-shareholding in two: managerial and non-executive, to investigate what ownership exerts the most effect on earnings management. We ran a regression analysis to examine the effect of director ownership on earnings management practices.

Our findings suggest that earnings management, as defined by abnormal accruals proxy, is significantly higher and is associated with non-executive directors' interests in shareholding. However, no evidence that executive directors' ownership mitigates managerial opportunism. These findings are consistent with the notion that if the board of directors have interest in shareholding, they will ensure quality reporting but inconsistent with the idea that managers (executive directors) do engage in earnings management if they are part owners.

Our paper contributes to knowledge by giving more insight into various categories of board members about their shareholdings, and how this might affect their opinions, judgments, and decisions to report earnings. Accounting and corporate governance literature are enhanced. This study might be of interest to corporate boards and policymakers.

The rest of this paper continues with literature review and hypotheses development in Section 2, research design in Section 3, the results in Section 4, and the conclusion in Section 5.

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The agency theory posits that there is a disparity between firm ownership (stockholders) and firm control (managers) (Ran, Fang, Luo, & Chan, 2015). According to Ujunwa, Okoyeuzu, and Nwakoby (2012), the agency theory suggests that where management and ownership are separate, managers tend to act in self-interest which may not necessarily be in the best interest of the shareholders. Hence, there is a need to monitor

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<sup>1</sup> Non-executive directors or outside directors are usually put in place to demonstrate board independence as a requirement to fulfil corporate governance regulations. In Nigeria, it is further required to have at least one designated "independent non-executive director(s)" from among the non-executive directors. This informs the perceived lack of true independence of the non-executive directors.

the activities of management. This need for board monitoring largely depends on the magnitude of the manager's interests' divergence from that of the shareholders (Peasnell, Pope, & Young, 2005). It is expected that managerial shareholding should lead to a greater alignment of interests.

Proponents of board-shareholding argue that insider (directors) ownership is associated with higher earnings quality, thus significant in mitigating earnings management (Vafeas, 2005). Similarly, managerial ownership reduces the level of earnings management (Alves, 2012). Further, there is evidence that firms having low managerial ownership tend to engage in earnings management (O'Callaghan, Ashton, & Hodgkinson, 2018). Again, Francis, Hasan, Park, and Wu (2015) pointed out that increase in separation between managerial ownership and control will likely lead to agency problem, hence affecting managers reporting incentives (Sharon, 2009).

Contrariwise, those who argue against this view argue that managerial ownership is related to lower earnings quality (Dechow, Ge, & Schrand, 2010). To buttress this point of view, a study shows that the outside non-executive directors' ownership is associated with a higher quality of financial reporting (Klein, 2002). While managers are likely to manage earnings to avoid reporting losses, outside (non-executive) directors are more likely to reduce earnings (Peasnell et al., 2005).

Teshima and Shuto (2008) assumed that there are two types of motivations for managerial shareholding. First is that if managers own shares, they will work to enhance its value. Second, if managers expect re-appointment, they will try to impress shareholders. These incentives provide an opportunity for managers to present quality financial reports that are free from opportunism. Based on the preceding arguments, we hypothesized that:

- H<sub>1</sub>: Directors' interest in share ownership is negatively associated with earnings management
- H<sub>2</sub>: Non-executive directors' interest in share ownership is negatively associated with earnings management
- H<sub>3</sub>: Executive directors' interest in share ownership is negatively associated with earnings management.

### **3. RESEARCH DESIGN**

#### **3.1 Data and Sample**

The sample is comprised of firms listed on the Nigerian Stock Exchange (NSE) as of 2017, excluding financial institutions because of its peculiar accounting and regulatory framework on corporate governance. Corporate governance data were extracted from listed firms' annual reports downloaded from the website of the NSE, covering 2009 to 2017 period. Financial data were obtained from Thomson Reuters Eikon database.

#### **3.2 Dependent Variable**

Many authors have used various earnings management models and proxies: abnormal (discretionary) accruals, fraud, misstatement, and so on. To analyse the relationship between the board of directors' interest in shareholding and earnings management, we utilised the accruals-based measure. The discretionary accruals are easier to manage but difficult to detect by investors. So, it offers the managers the opportunity to choose between methods that potentially favour the presentation of their performance even if it could turn otherwise. Consistent with extant accounting and corporate control literature,

we utilise the abnormal accruals as earnings management proxy (Abbott, Daugherty, Parker, & Peters, 2016; Hooghiemstra et al., 2019; Kothari, Leone, & Wasley, 2005; Waweru & Prot, 2018). This measure is the Kothari et al. (2005) performance-matched model. We employed this proxy because firm performance might be a key reason for boards decision when their interests are at stake.

$$\frac{\Delta A_{it}}{A_{it-1}} = \alpha_1 + \alpha_2 \left( \frac{1}{A_{it-1}} \right) + \alpha^2 \left[ \left( \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} \right) \right] + \alpha^3 \left( \frac{PPE_{it}}{A_{it-1}} \right) + \alpha^4 \left( \frac{ROA_{it}}{A_{it-1}} \right) + \varepsilon_{it} \quad (1)$$

where,

- $A_{it}$  = lagged total assets
- $\Delta REV_{it}$  = change in revenues in year  $t$
- $\Delta REC_{it}$  = change in receivables in year  $t$
- $PPE_{it}$  = gross property, plant and equipment in year  $t$
- $ROA_{it}$  = return on assets in year  $t$
- $\varepsilon$  = error term.

### 3.3 The Model

This study utilises the regression in equation (2) to test whether corporate board-shareholding substantially constrain the incidence of earnings management.

$$EM = \beta_0 + \beta_1 \text{DOWN}_{it} + \beta_2 \text{NEDOWN}_{it} + \beta_3 \text{EDOWN}_{it} + \beta_4 \text{CTEN}_{it} + \beta_5 \text{BSIZE}_{it} + \beta_6 \text{NEXD}_{it} + \beta_7 \text{NLFSIZE}_{it} + \beta_8 \text{LEV}_{it} + \beta_9 \text{ROA}_{it} + \beta_{10} \text{FAGE}_{it} + \varepsilon_{it} \quad (2)$$

All the variables are as defined in Table 1.

### 3.4 Explanatory Variables

In Nigeria, corporate governance laws require a listed firm to disclose its ownership structure, and to disclose the shareholding interests of all the directors specifically. In some of the firms, directors' ownership could be quite substantial. As it is the responsibility of the directors to prepare financial statements, conflict of interest might set in subject to what class of director and the extent of shareholding. To analyse whether board-shareholding constrains accruals earnings management, we utilise three classes of ownership variables: all directors' ownership, non-executive directors' ownership and executive directors' ownership. *DOWN* is the proportion of shares owned by all the directors. *NEDOWN* is the fraction of shares owned by the non-executive directors. *EDOWN* is the proportion of shares owned by the executive directors.

### 3.5 Control variables

As in other studies, we include a number of control variables that are associated with earnings management: CEO tenure (CTEN), board size (BSIZE), non-executive directors (NEXD), firm size (NLFSIZE), leverage (LEV), return on assets (ROA), and firm age (FAGE) (Tessema, Kim, & Dandu, 2018; Waweru & Prot, 2018).

### 3.6 Variable definitions

**Table 1.** Variable measurements

Variable name	Measurement	Source
EM	The Kothari et al. (2005) measurement model	Waweru and Prot (2018)
DOWN	The proportion of shares held by all directors	Waweru and Prot (2018); Teshima and Shuto (2008)
NEDOWN	The proportion of share ownership by non-executive directors	Vafeas (2005)
EDOWN	The proportion of share ownership by executive directors	Alzoubi (2014)
CTEN	The number of years CEO was in office	Ebrahim (2007)
BSIZE	The number of board members of a firm in a year	Alves (2012)
NEXD	The number of non-executive (outside) directors scaled by board size	Waweru and Prot (2018)
NLFSIZE	The natural log of total assets	Tessema et al. (2018)
LEV	The ratio of total debt to total assets	Tessema et al. (2018)
ROA	Profit or loss after tax divided by total assets	(O'Callaghan et al., 2018)
FAGE	The number of years firm was incorporated	Tessema et al. (2018)

*EM* represents earnings management; *DOWN* represents directors' ownership; *NEDOWN* represents non-executive directors' ownership; *EDOWN* represents executive directors' ownership; *CTEN* represents CEO tenure; *BSIZE* represents board size; *NEXD* represents the proportion of non-executive directors on board; *NLFSIZE* represents the natural log of firm size; *LEV* represents leverage; *ROA* represents return on assets; *FAGE* represents firm age.

## 4. RESULTS

### 4.1 Descriptive statistics

Table 2 presents the summary statistics. Concerning the test variables, we notice that the mean value of all the directors' shareholding *DOWN*, is 21%. The non-executive directors *NEDOWN* have a mean value of 11%, and the executive directors have a mean value of 2%. Overall, this suggests that directors on corporate boards in Nigeria have controlling interests in their firms' ownership.

Further, the average CEO, *CTEN* has been with the board for 5 years, indicating some lots of experience. The average board size *BSIZE* is 9, with values that range from 4 to 15. Out of this, 70% of the sampled boards members are non-executive directors, which suggest higher board independence.

**Table 2.** Descriptive Statistics

Variable	N	Min	Max	Mean	SD	Skewness	Kurtosis
EM	864	.0011	.2520	.0819	.0421	.2522	2.486
DOWN	864	.0030	.8000	.2089	.2302	.9757	2.587
NEDOWN	864	.0017	.6435	.1147	.1100	1.485	5.414
EDOWN	864	0	.1555	.0195	.0284	2.308	8.721
CTEN	864	1	16	4.609	2.981	.9093	3.423
BSIZE	864	4	15	8.661	2.268	.3157	2.584
NEXD	864	.333	.923	.7042	.1294	-.4853	2.626
NLFSIZE	864	4.488	14.24	9.276	1.832	.06056	2.649
LEV	864	.0234	.9803	.5270	.2046	-.3054	2.601
ROA	864	-.891	.7927	.1362	.2363	-.1625	3.983
FAGE	864	3	94	38.44	19.32	.1422	2.353

*EM* represents earnings management; *DOWN* represents directors' ownership; *NEDOWN* represents non-executive directors' ownership; *EDOWN* represents executive directors' ownership; *CTEN* represents CEO tenure; *BSIZE* represents board size; *NEXD* represents the proportion of non-executive directors on board; *NLFSIZE* represents the natural log of firm size; *LEV* represents leverage; *ROA* represents return on assets; *FAGE* represents firm age.

## 4.2 Correlation Matrix

Table 3 presents the correlations of the variables. The correlation pattern shows no multicollinearity issue. The average variance inflation factor is 1.21 and ranges from 1.03 to 1.43. The analysis shows a negative correlation and significance between EM and DOWN, which suggests that earnings management is significantly lower for firms more director ownership. The analysis also shows quite several significances between and among the variables, but overall, no problem of multicollinearity.

**Table 3.** Correlations

	EM	DOWN	NEDOWN	EDOWN	CTEN	BSIZE	BCNEX	FSIZE	LEV	ROA	FAGE
EM	1.000										
DOWN	-0.116*	1.000									
NEDOWN	0.086*	0.145*	1.000								
EDOWN	0.007	-0.018	0.129*	1.000							
CTEN	-0.110*	-0.015	0.091*	0.070*	1.000						
BSIZE	-0.088*	-0.110*	0.044	-0.113*	-0.005	1.000					
NEXD	-0.056	-0.165*	-0.043	-0.104*	0.001	0.275*	1.000				
NLFSIZE	-0.070*	-0.263*	-0.091*	-0.099*	0.015	0.388*	-0.014	1.000			
LEV	0.015	-0.121*	0.025	0.115*	0.074*	-0.031	-0.031	0.209*	1.000		
ROA	0.048	-0.120*	0.238*	0.040	-0.006	0.040	0.027	0.122*	-0.12*	1.000	
FAGE	0.033	-0.327*	-0.019	0.098*	0.125*	0.001	-0.009	0.093*	0.280*	0.097*	1.000

Significance \* is 5% or better. *EM* represents earnings management; *DOWN* represents directors' ownership; *NEDOWN* represents non-executive directors' ownership; *EDOWN* represents executive directors' ownership; *CTEN* represents CEO tenure; *BSIZE* represents board size; *NEXD* represents the proportion of non-executive directors on board; *NLFSIZE* represents the natural log of firm size; *LEV* represents leverage; *ROA* represents return on assets; *FAGE* represents firm age.

## 4.3 Regression Analysis

Table 4 presents the regression results. We find that the proportion of shares owned by all directors *DOWN* is negatively associated with earnings management, -0.036, significant at 5% level. This finding is consistent with prior studies and indicates a context wherein all board of directors could effectively restrain earnings management, hence lending support to hypothesis 1 ( $H_1$ ). We do not find evidence of curbing abnormal accruals when non-executive directors' ownership *NEDOWN* is concerned, though significant by encouraging bold choices. Hence,  $H_2$  is not supported. This is contrary to expectation. The non-executive directors are expected to bring independence of opinion and objectivity of perspectives. A plausible explanation for this might be the low average interest of the non-executive directors in shareholding. The non-executive directors, like the shareholders, might act aggressively if their investments are at risk, or if their ownership increases. The coefficient for the executive directors *EDOWN* is not significant, so  $H_3$  is not supported.

All the explanatory variables are not significant, except CEO tenure (*CTEN*) that shows significance at the 10% level.

**Table 4.** Regression analysis between earnings management (DV) and the explanatory variables (IVs)

VARIABLES	Fixed Effect	Random Effect	Random Effect (Robust)
DOWN	-0.036** (0.016)	-0.036*** (0.011)	-0.036** (0.017)
NEDOWN	0.056*** (0.015)	0.053*** (0.014)	0.053** (0.021)
EDOWN	-0.034 (0.060)	-0.031 (0.056)	-0.031 (0.121)
CTEN	-0.001 (0.001)	-0.001*** (0.0004)	-0.001* (0.001)
BSIZE	0.0009 (0.001)	-0.0002 (0.001)	-0.0002 (0.001)
NEXD	0.028 (0.019)	0.008 (0.016)	0.008 (0.018)
NLFSIZE	-0.002 (0.004)	-0.003 (0.002)	-0.003 (0.002)
LEV	-0.007 (0.009)	-0.003 (0.009)	-0.003 (0.013)
ROA	0.007 (0.007)	0.005 (0.007)	0.005 (0.010)
FAGE	-0.001** (0.001)	-0.0001 (0.0002)	-0.0001 (0.0001)
Constant	0.122*** (0.032)	0.115*** (0.019)	0.115*** (0.027)
Observations	864	864	864
R-squared	0.053	0.044	0.044
P-value	0.000	0.000	0.000

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*EM* represents earnings management; *DOWN* represents directors' ownership; *NEDOWN* represents non-executive directors' ownership; *EDOWN* represents executive directors' ownership; *CTEN* represents CEO tenure; *BSIZE* represents board size; *NEXD* represents the proportion of non-executive directors on board; *NLFSIZE* represents the natural log of firm size; *LEV* represents leverage; *ROA* represents return on assets; *FAGE* represents firm age.

## 5. CONCLUSION

This study examines the association between the board of directors' interest in shareholding and earnings management. Recent cases of financial reporting scandals have lent credence to the concern that the people whose responsibility is to prepare financial reports might get engaged in managing earnings. As prior studies have shown that a critical determinant of earnings management practice is corporate governance, we specifically examine corporate board shareholding as explained by the agency phenomenon. We partition between executive directors' ownership and non-executive directors' ownership to investigate which class of ownership exerts the most influence on earnings management. We find that non-executive directors' interests in shareholding are significantly associated with higher levels of earnings management. This implies that an increase in directors' shareholding is an incentive for aggressive opinion towards earnings, probably if the investment is at risk. We find no significance on executive directors' ownership. Overall, ownership by all directors combined significantly reduces managerial opportunism.

As in any study, this research is without some limitations. The study is drawn from the Nigerian regulatory context. So, the generalization of our findings should be taken with caution. Future studies could consider looking into whether the directors' shareholding is direct or indirect. An investigation into this specific might yield better insight on board dynamics.

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