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BOARD CHARACTERISTICS AND REAL EARNINGS MANAGEMENT AMONG LISTED NON-FINANCIAL FIRMS IN NIGERIA

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Abstract
High expectations for earnings are put on companies, yet earnings management distorts how well those companies perform. Hence, this study examined the impact of board characteristics on real earnings management among listed non-financial companies in Nigeria. The study used a sample of 72 listed non-financial companies in Nigeria, covering the period of 2008-2020 on an unbalanced basis. The study was conducted over four (4) samples, vis-à-vis, the pre- and post-review of code of corporate governance and pre- and post-adoption of IFRS. The study employed the generalized method of moment (GMM) to estimate its empirical models. The findings from the estimation exercise revealed that board size reduces abnormal cash flows and abnormal production costs real earnings management after the review of code of corporate governance and adoption of IFRS but CEO duality promote real earnings management. Board independence was also found to reduce real earnings management while the number of meetings held by the board is ineffective in reduce earnings management. The study concluded that board characteristics are vital corporate governance mechanisms for reducing earnings management in Nigeria. It therefore recommended that an optimal size of board members as well as their independence should be emphasized for effective reduction in earnings management.

INTRODUCTION
Companies still control their earnings in spite of the body of laws and regulations. Earnings management, according to Healy and Wahlen (1999), takes place when managers use discretion in financial reporting and in transaction structuring to alter financial reports in order to either deceive some stakeholders about the company's true economic performance or to influence the outcomes of contracts that depend on reported accounting numbers. Earnings management, according to Scott (1997), refers to the management decision regarding accounting policy or a real activity that has an impact on earnings in order to achieve various goals of the particular earnings reporting. When a company's management has the chance to alter reported income through accounting decisions and takes advantage of those chances, earnings management happens (Roman, 2009). Earnings management, according to Kadir (2020), is the practice of managers of businesses misrepresenting accounting data and treating it unfairly in order to further their own interests or the values

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of their companies. Accrual-based earnings management (AM) and real-activities-based earnings management are the two methods used to manage earnings (Roychowdhury, 2006).

Because Generally Accepted Accounting Principles (GAAP) permits different representations of accounting events, accrual-based earnings management is feasible (Park & Shin, 2004). The flexibility granted to enterprises in the selection of accounting systems, the use of accounting procedures, and the timing of asset acquisitions and disposal are clear indications of the alternative representations permitted. Typically, management modifies the reported results by selecting an accounting technique that accelerates or defers the recognition of sales and expenses (Mnif & Cherif, 2021). The use of many permitted discretions in the measurement of specific financial statement items also affects earnings. Earnings management is also made possible by adjusting when assets are acquired and sold. However, in actual earnings management, businesses actively seek to reduce losses by cutting back on discretionary spending, overproducing goods to drive down costs, and offering price reductions to temporarily boost sales (Roychowdhury, 2006).

Previous research has shown that corporate governance measures have an impact on accounting quality. The two main categories of corporate governance procedures are internal and external. The board of directors is an internal mechanism, while audit is an external one (Zeghal, et al., 2011). Zeghal, et al. (2011) add that the board of directors is frequently regarded as one of the most crucial and critical control mechanisms and that its performance depends on qualities like independence and size. The board of directors is typically in charge of resolving agency issues that major firms encounter as a result of the separation of ownership and control.

There have been claims that the adoption of a high-quality accounting standard-International Financial Reporting Standards (IFRS) reduces the management of earnings as it is principle based and it eliminates accounting alternatives (Barth *et al.*, 2008; Marra, Mazzola and Prencipe, 2011; Rajeevan & Ajward, 2020). Thus, a shift from a national standard to IFRS is expected to bring about higher earnings quality. A number of authors have, however, noted that a high-quality accounting standard's effectiveness is affected by a host of macro-level, legal and political factors. Strong investor protection, strong legal enforcement and a developed stock market contribute to a better reporting with a high-quality accounting standard (Ball, Kothari and Robin, 2000; 2003; Daske et al 2008; Leuz et al 2003; Hoque, Zijl, Dunstan and Karim, 2012).

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The arguments of the above authors, therefore, suggest that the adoption of IFRS is expected to not only enhance quantity or quality of disclosure but also increase the reliability of financial information as it emphasizes more information disclosures, which in turns reduce information asymmetry between internal and external users of financial statements.

LITERATURE REVIEW

Theoretical Framework

There are several articles in the existing literature that discuss whether or not excellent corporate governance measures have an influence on the agency theory problem. When decision managers who originate and implement critical choices are not the principal residual claimants and do not carry a significant portion of the wealth implications of their actions, the agency problem in the decision process becomes more severe. Without appropriate control processes in place, such decision makers are more prone to adopt acts that are contrary to the interests of residual claimants (Haitao, 2010). Recognizing this issue, the principal may wish to align his interests with the agents by providing incentives and/or paying monitoring fees in order to minimize the agent's opportunistic conduct (Leung & Ilsever, 2013). However, according to the existing evidence, earnings management is either opportunistic or advantageous. When profits are managed to fulfil managers' desired objectives or personal incentives, it is referred to as opportunistic earnings management; when earnings are managed to achieve stockholders' incentives, it is referred to as beneficial earnings management. However, if earnings management is opportunistic, in which investors are misled by managers manipulating results to pursue personal gain, it will comprise possible agency cost (Yousef, Nur & Khairil, 2014). As a result, both IFRS adoption and corporate governance measures have been suggested to be capable of limiting managers' opportunistic behaviour.

According to agency theory, corporate governance is primarily concerned with ensuring that the agents, or managers, act in the best interests of the principals, or shareholders (Shleifer & Vishny, 1997). The board of directors, for example, is a common and prominent structure of corporate governance. The board is entrusted with the commercial enterprise's resources by its owners (the shareholders) and is required to account to the shareholders through yearly financial statements. As a result, the board is required to monitor the managers who have the most relevant knowledge about the organization because they are involved in all of the company's daily activities. Thus, it is suggested that for the board to undertake this monitoring duty and support shareholders in reducing opportunistic earnings management behaviour, it must be appropriate in size, large enough,

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meet regularly, be independent, and the board chairman must be distinct from the CEO/MD.

Empirical Review

Several research have looked into how board characteristics affect managing earnings. In an effort to investigate how corporate governance in Nigeria has impacted earnings management, Okougbo and Okike (2015) discovered a favorable relationship between board size and earnings management. In their 2015 study, Bala and Kumai look at how listed Nigerian food and beverage companies' boards and earnings are managed. The Nigerian Stock Exchange's listed beverage companies between 2009 and 2014 comprised the sample. Multiple regression analysis showed that the size of the board, the frequency of board meetings, the financial knowledge of the board, and the management of earnings all have a negative correlation.

In their 2016 study, Daghsni, Zouhayer, and Mbarek looked at how the board's size, independence, CEO duality, and board participation impacted the management of profitability in companies listed on the French stock exchange. As a stand-in for earnings management, the study uses discretionary accruals (DA), which were calculated using both the modified Jones model (Dechow et al. 1995) and performance-matched discretionary accruals calculated using the modified Jones model (Kothari et al. 2005). The study discovers that the board size is inversely correlated with the profitability management based on a sample of 70 French listed businesses during a 4-year period, from 2008 to 2012. Additionally, the study discovered a positive relationship between CEO dualism and earnings management. The study concludes that the board's independence has no impact on the earnings management.

Bajra (2017) examined how the board and internal audit committee are impacted by earnings management techniques while concentrating on cross-listed European companies in the US. The study gathered data over a significant amount of time, including both the pre- and post-Sarbanes-Oxley Act and 8th Company Law Directive periods in the US and the EU, respectively. The study, which combined an innovative approach with a thorough measuring approach, discovered that the board and internal audit committee have detrimental effects on profits management methods. However, the combination of the two mechanisms has a beneficial impact on earnings management techniques. A longitudinal review of the study's findings showed that both mechanisms had greatly increased following changes in policy.

The association between board characteristics and real earnings management of listed Nigerian financial institutions was studied by Abubakar, Ishak, and Chandren (2017). The Roychowdhury model (2006) residuals were employed as a stand-in for actual earnings management. From 2011 to 2016, information was gathered from 45 financial organizations listed on the Nigerian Stock Exchange (NSE). The Panel Corrected Standard Errors (PCSEs) regression was used for analysis. According to the regression analysis, board meetings and board competence significantly improve real earnings management. The study also discovered that female directors have a considerable detrimental impact on managing real earnings. Using the modified Jones model to evaluate discretionary accruals, Kamarulzaman (2017) also examined the influence of the board of directors' characteristics on earnings management in Malaysian family enterprises. The study found that, compared to the number of board meetings and CEO duality, the independence of the board members and their compensation had a statistically significant favorable influence.

In a study on the impact of corporate governance on earnings management, Alareeni (2018) found that while board independence has a favorable impact on earnings management, board size has a negative impact. Using actual business operations, Chouaibi et al. (2018) examined the effect of board features on earnings management for Tunisian enterprises. According to the study, board meetings, board independence, and board size all have a detrimental impact on earnings management.

Al-Azeez, Sukoharsono, Roekhudin, and Andayani (2019) looked into how board composition impacts how international oil and gas businesses manage their earnings. According to the research, CEO duality improves earnings management. Aleqab and Ighnaim (2021) investigated the impact of board features on the management of earnings for listed non-financial enterprises on the Amman Stock Exchange in Jordan. The study's conclusions showed that the independence and financial experience of board members have a detrimental impact on the management of earnings.

The present study therefore contributes to the existing body of literature by examining the how board characteristics affect earnings management in four periods – the pre- and post-code of corporate governance review periods and the pre- and post-IFRS adoption periods. This study also focused on the real earnings management, which has hitherto received les attention, in a way to provide additional information on how the emergence of this reforms reshape the effect of the board characteristics on earnings management.

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METHODOLOGY

Research Design

The longitudinal research design was adopted because it follows observations of the same sample over time and makes repeated observations. With this design, the same listed non-financial firms were observed at a regular annual basis (through their annual financial reports), which would enable the study to track the changes in earnings management over time and relate them to changes in corporate governance factors that might explain why the changes occur.

Model Specification

As argued in the study by Roychowdhury (2006), this study considers abnormal levels of cash flows from operations, discretionary expenses and production costs as proxies for real earnings management. This is evident from the argument that real earnings management would take place through: acceleration of the timing of sales through increased price discounts or more lenient credit terms; reporting of the lower cost of goods sold through increased production; and decreases in discretionary expenses which include advertising expense, research and development.

The study therefore, first determined the normal levels for the cash flows from operations, discretionary expenses and production cost for every industry-year using Dechow *et al.* (1998) models and then use the coefficients ascertained to determine the abnormal levels. The study employed abnormal production costs as well as abnormal cash flows from operations as proxies of real earnings management. The combination of these two proxies was used in this study as an aggregate proxy of real earnings management. Abnormal discretionary expenditure was left out in this study as a proxy for real earnings management because the components that make up the discretionary expenditure are very scanty in the financial reports of most Nigerian listed firms.

In line with Dechow *et al.* (1998) and Roychowdhury (2006), this study models cash flow from operations (CFO) and expresses it as a linear function of sales and changes in sales in the current year as:

$$\frac{CFO_{it}}{Assets_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{Assets_{it-1}} + \alpha_2 \frac{Sales_{it}}{Assets_{it-1}} + \alpha_3 \frac{\Delta Sales_{it}}{Assets_{it-1}} + \varepsilon_{it} \quad (1)$$

where: CFO_{it} is the cash flow from operations for firm i during year t; $Asset_{i,t-1}$ represents total assets at the end of year $t-1$; S_{it} is the sales of firm i during year t; ΔS_{it} is the change in sales for company i in time t which is the difference between sales in year t and year t−1; εit is the error term.

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Lagged total assets deflate the regression equation to reduce heteroskedasticity. Abnormal cash flow is the residual of the model in equation (1).

The addition of both the inventory growth (change in inventory) and cost of goods sold (COGS) during the year, defines what the production costs is. The cost of goods sold and inventory growth models, according to Dechow*et al.* (1998) are given as:

Cost of Goods Sold:

$$\frac{COGS_{it}}{Assets_{it-1}} = \alpha_1 \frac{1}{Assets_{it-1}} + \alpha_2 \frac{Sales_{it}}{Assets_{it-1}} + \varepsilon_{it} \quad (2)$$

Inventory Growth:

$$\frac{\Delta INV_{it}}{Assets_{it-1}} = \alpha_1 \frac{1}{Assets_{it-1}} + \alpha_2 \frac{\Delta Sa\ \ it}{Assets_{it-1}} + \alpha_3 \frac{\Delta Sales_{it}}{Assets_{it-1}} \varepsilon_{it} \quad (3)$$

The normal level of production (the sum of normal level of cost of goods sold and the normal level of inventory growth) is therefore modelled as follows:

$$\frac{PROD_{it}}{Assets_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{Assets_{it-1}} + \alpha_2 \frac{Sales_{it}}{Assets_{it-1}} + \alpha_3 \frac{\Delta Sales_{it}}{Assets_{it-1}} + \alpha_3 \frac{\Delta Sales_{it-1}}{Assets_{it-1}} + \varepsilon_{it} \quad (4)$$

where: $PROD_{it}$ is the production costs for firm i during year t, which equals the sum of the costs of goods sold plus changes in inventory; $Asset_{i,t-1}$ represents total assets at the end of year $t - 1$; $Sales_{it}$ is the sales of firm i during year t; $Sales_{it}$ is the change in sales for company i in year t which represents excess of sales in year t over year t−1;$Sasles_{i,t-1}$ is the change in sales for company i in year t-1 which is the difference between sales in year t-1 and year t−2.

In line with Cohen and Zarowin (2010) and Zang (2012), this study constructs the aggregate real earnings management proxies. This is done by adding together the individual proxies of real earnings management i.e. the abnormal cash flow from operations and the abnormal production costs.

The aggregate real management combines the abnormal cash flow from operations and the abnormal production costs as follows:

RM = -abnormal cash flow from operations + abnormal production costs (5)

The regression multiplies abnormal cash flow from operations by -1 and then adds abnormal production costs. As a consequence, a higher level of RM indicates higher levels of real earning management activities. Abnormal production costs was not multiplied by -1, since a larger value of abnormal production costs already implies a higher level of real activities.

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To examine the impact of board characteristics on earnings management, the generalized method of moments (GMM) was applied to estimate equation (6) as shown below.

$$RM_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMEET_{it} + \beta_4 DUAL_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 SIZE_{it} + \varepsilon_{it} \quad (6)$$

where: the dependent variable is RM which is real earnings management; the independent variables are BSIZE (board size); BMEET (board meeting); BIND (board independence); DUAL (CEO duality); and the control variables are LEV (leverage); ROA (return on assets); and SIZE (firm size).

To demonstrate the robustness of the overall real earnings management to its two components, which are abnormal production costs and abnormal cash flows, an estimation was done for separate models for each of these components as specified below:

$$RMpro_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMEET_{it} + \beta_4 DUAL_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 SIZE_{it} + \varepsilon_{it} \quad (7)$$

$$RMcflo_{it} = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BMEET_{it} + \beta_4 DUAL_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 SIZE_{it} + \varepsilon_{it} \quad (8)$$

where: RMpro is abnormal production costs component of real earnings management and RMcflo is abnormal cash flows components of real earnings management. Further definitions of variables are given in Table 1.

Table 1: Definition of Variables

Variable	Definition
Dependent Variable	
Real Earnings Management (RM)	The aggregate real earnings management was constructed following Cohen and Zarowin (2008) and Zang (2012). Both the abnormal production costs and abnormal cash flows components were added together to form the aggregate real earnings management.
Independent Variables	
Board Size (BSIZE)	Total number of directors on the board.
Board Independence (BIND)	A dummy variable given the value 1 if the board comprises 51% and above non-executive directors and at least one of them is an independent director(as contained in the Nigerian code of corporate governance), 0 otherwise.
Board Meeting (BMEET)	The total number of meeting held by the board of directors in a given year.

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CEO Duality (DUAL)	A dummy variable given value of 1 if CEO and Chairman of Board positions were not conducted by the same person, 0 otherwise.
Control Variables	
Leverage (LEV)	Total liability divided by total assets.
Return on Assets (ROA)	Net income divided by total assets.
Firm size (SIZE)	The natural logarithm of total assets.

Sample Selection

The study collected secondary data for 72 listed non-financial enterprises in Nigeria for the time period between 2008 and 2020 on an unbalanced panel basis. Financial data was taken from these 72 listed companies' annual reports in order to estimate discretionary accruals (the proxy for accrual-based earnings management) as well as abnormal cash flow from operations and abnormal production costs (the proxies for actual earnings management).

RESULTS AND DISCUSSION

Descriptive Statistics

The description of all the variables (aside board independence and CEO duality which a dichotomous) employed in the estimation is reported in Table 2. The finding from the real earnings management point of view also shows that listed companies in Nigeria engaged in income decreasing earnings management as the descriptive result reported a mean value of -0.144 for real earnings management. This finding conforms to the argument of Capkun *et al.* (2013) that greater flexibility in accounting choices and lack of clarity of the IFRS's may have led to an increase in EM.

The result reported mean values of 0.589 percent and 0.734 percent for production cost and cash flow components of real earnings management, which indicates that these firms engaged in increasing earnings management in both of them. Production cost real earnings management ranges between a minimum of -1.07 percent and a maximum of 26.60 percent while cash flow real earnings management ranges between a minimum of -36.21 percent and a maximum of 66.27 percent.

Table 2: Results of Descriptive Analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
RM	804	-0.144	11.70	-66.31	36.60
RMPro	804	0.589	3.912	-1.07	26.4
RMCflow	804	0.734	12.88	-36.21	66.27

BSIZE	804	9.305	2.302	5	17
BMEET	802	4.769	1.400	1	10
FLVE	804	1.082	2.648	-18.97	18.982
ROA	804	0.063	0.111	-0.374	0.651
FSIZE	804	96.7bn	4.90bn	68.9bn	7,060bn

Source: Author's Computations, 2021.

Average board size was approximately nine (9) directors, suggesting a relatively large board, which ranges from five (5) directors at the minimum to 17 directors at the maximum. Board meeting averaged approximately five (5) times and ranges between one (1) to ten (10) times. Leverage has a mean value of 1.082 percent and ranges between a minimum of -18.97 percent and a maximum of 18.982 percent. Return on assets ranges from a minimum of -0.374, indicating a negative profitability, and a maximum of 0.651 percent which indicates a positive profitability. This has a mean of 0.0063 percent. Total assets of listed firms which represents their size has a mean value of 96.7 billion naira and ranges between a minimum of 68.9 billion naira and a maximum of 7,060 billion naira.

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Table 3: Results of Correlation Analysis

Variable	RM	RMPro	RMCflow	BSIZE	BIND	BMEET	FLVE	ROA	FSIZE
RM	1								
RMPro	-0.1504	1							
RMCflow	-0.9539	0.4403	1						
BSIZE	0.1067	-0.1224	-0.1341	1					
BIND	-0.0419	-0.0828	0.0129	0.0746	1				
BMEET	0.1174	-0.165	-0.1567	0.2699	0.3072	1			
FLVE	-0.0192	0.0714	0.0391	-0.0043	-0.0214	-0.0422	1		
ROA	0.0058	-0.0522	-0.0211	-0.0206	0.063	0.1105	0.0207	1	
FSIZE	-0.0072	-0.0261	-0.0014	0.1171	-0.1078	-0.0154	-0.1435	-0.0328	1

Source: Author's Computations, 2021.

Table 3 shows the results of the pairwise correlation analysis conducted for all variables of this study, aside board independence and CEO duality which a dichotomous.As seen from the results, particularly, for the relationships that exist among the explanatory variables, none of the correlation coefficients is greater than 0.7, which suggests that there is no problem of multicollinearity in the data employed (Gujarati and Porter, 2009).

Estimation Results

As for the results from the estimation of the impact of board characteristics on real earnings management which are presented in Table 4, the four results respectively indicate that the models are statistically significance with Wald Chi-squared values of 71.4, 114.1, 18.2 and 117.1 with all p-values less than 0.01. As for the performance of the explanatory variables, the results indicate that there is a significant positive impact of board independence on real earnings management in the post-CCG review, and pre- and post-IFRS adoption periods (with a coefficient of 19.88, 25.95 and 15.70 with p-values less than 0.05). This finding does not conform to the a priori expectation of a negative sign and is also inconsistent with the agency theory prediction. The finding is however, consistent with the findings of Muhammed *et al.* (2016) and Waweru and Prot (2018), but inconsistent with those of Waweru and Riro (2013) and Alzoubi (2016). The finding supports the notion that the presence of independent directors in the board does not reduce real earnings management of listed firms in Nigeria. This might also imply that the present independent directors are only independent in structure and not in substance such that their presence reduces earnings management.

This study also found a significant positive impact of CEO duality on real earnings management only in the pre-IFRS adoption period (with a coefficient of 34.98 and p-value less than 0.05). This finding does not conform to the a priori expectation of a negative sign and is also inconsistent with the agency theory prediction. The finding is however, consistent with the findings of Waweru and Prot (2018), but inconsistent with those of Waweru and Riro (2013) and Alzoubi (2016). The finding support the notion that different individuals serving the role of CEO and board chairman does not reduce accrual earnings management of listed firms in Nigeria. Return on assets as a control variable was revealed to have significant negative impact on real earnings management only in the post-CCG review and post-IFRS adoption periods, signifying that increase in profitability led to a fall in real earnings management in listed firms in Nigeria.

Other independent variables like board size and board meetings, as well as control variables like leverage and firm size do not have significant impact on real earnings management in listed firms in Nigeria. This finding is consistent with the findings of Koh (2003) and Rahman and Ali (2006) who found an insignificant relationship between board size and earnings management.

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Table 4: System GMM Regression Resultsfor Real Earnings Management

	Before CCG Review		After CCG Review		Before IFRS Adoption		After IFRS Adoption	
Variable	Coefficient	z	Coefficient	z	Coefficient	z	Coefficient	z
RM(-1)	0.485	0.79	0.261***	6.52	0.498***	3.2	0.342***	7.87
BSIZE	0.053	0.04	0.248	0.51	0.024	0.02	0.345	0.71
BIND	-5.784	-0.55	19.88***	7.71	25.95**	2.25	15.70***	6.1
BMEET	-0.017	-0.01	-0.068	-0.11	0.772	0.53	-0.896	-1.48
CEODUAL	203.4	0.62	-2.203	-0.46	34.98**	2.13	-3.587	-0.82
FLVE	2.383	0.98	-0.059	-0.16	-0.146	-0.07	0.095	0.27
ROA	1.839	0.11	-18.79***	-2.68	-9.057	-0.59	-19.17***	-2.72
logFSIZE	1.181	0.37	0.405	0.75	1.128	0.43	0.462	0.91
Constant	-48.32	-0.71	-21.10*	-1.87	-46.69	-0.99	-15.95	-1.5
Chi^2	71.4***		114.1***		18.2***		117.1***	
Observations	157		578		213		522	
Groups	53		65		59		65	
Instruments	18		27		19		26	

Source: Author's Computations

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Table 5: System GMM Regression Resultsfor Abnormal Production Costs Component of Real Earnings Management

	Before CCG Review		After CCG Review		Before IFRS Adoption		After IFRS Adoption	
Variable	Coefficient	Z	Coefficient	z	Coefficient	z	Coefficient	z
RMPro(-1)	1.222**	2.44	0.374***	8.61	-0.059	-0.61	0.375***	8.17
BSIZE	-0.001	-0.02	-0.293*	-1.7	0.020	0.72	-0.329*	-1.69
BIND	-1.213***	-3.65	-1.564*	-1.79	-0.692***	-3.35	-1.740*	-1.75
BMEET	-0.059	-1.28	0.387*	1.82	-0.012	-0.41	0.508**	2.07
CEODUAL	6.872	1.4	0.321	0.21	-0.277	-0.87	0.074	0.04
FLVE	-0.197**	-2.56	0.045	0.34	-0.067*	-1.65	0.050	0.34
ROA	-0.139	-0.27	2.439	1.02	0.281	0.88	3.410	1.22
logFSIZE	0.060	0.59	-0.196	-1.09	0.020	0.48	-0.191	-0.99
Constant	-0.600	-0.28	5.533	1.49	0.119	0.14	5.436	1.37
Chi^2	43.6***		102.0***		17.1**		95.1***	
Observations	157		578		213		522	
Groups	53		65		59		65	
Instruments	18		27		19		26	

Source: Author's Computations

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Table 6: System GMM Regression Results for Abnormal Cash Flows Component of Real Earnings Management

	Before CCG Review		After CCG Review		Before IFRS Adoption		After IFRS Adoption	
Variable	Coefficient	Z	Coefficient	z	Coefficient	z	Coefficient	z
RMCflow(-1)	0.489	0.81	0.294***	7.28	0.492***	3.25	0.376***	8.4
BSIZE	-0.054	-0.04	-0.972*	-1.76	0.019	0.01	-1.227**	-2.16
BIND	4.572	0.44	-22.67***	-7.83	-26.65**	-2.32	-17.90***	-5.93
BMEET	-0.041	-0.03	0.350	0.52	-0.795	-0.55	1.385**	1.96
CEODUAL	-200.7	-0.64	1.330	0.25	-35.12**	-2.15	3.064	0.59
FLVE	-2.578	-1.06	0.092	0.22	0.029	0.01	-0.088	-0.22
ROA	-1.975	-0.12	18.82**	2.4	9.404	0.62	18.96**	2.31
logFSIZE	-1.117	-0.35	-0.695	-1.14	-1.173	-0.46	-0.706	-1.18
Constant	48.16	0.72	34.32***	2.74	47.76	1.02	28.39**	2.32
Chi^2	71.7***		133.6***		18.3**		132.3***	
Observations	157		578		213		522	
Groups	53		65		59		65	
Instruments	18		27		19		26	

Source: Author's Computations

Robustness of the Results for Real Earnings Management

As a robustness check, this study carried out some estimations for the two components of real earnings management considered in the study – the abnormal production costs and abnormal cash flows components. This is relevant to check if the results obtained for the overall real earnings management are obtainable for its different components. These are presented in Tables 5 and 6 respectively.

As for the abnormal production costs component, the results revealed that board size now has a significant negative impact on real earnings management as opposed to its insignificant impact on the overall real earnings management. Board independence also has a significant negative impact as opposed to the initial positive impact and board meeting now has a positive impact but was insignificant on the overall real earnings management. Similarly for abnormal cash flows component, board size, board independence and CEO duality have negative impact on abnormal cash flows component of earnings management which is different from their initial results under overall real earnings management. All these indicate that the results obtained for real earnings management are not robust to the different components of real earning management and the different corporate governance mechanisms responds differently to the emergence of CCG review and IFRS adoption.

CONCLUSION AND RECOMMENDATION

The study attempted to address a vacuum in existing studies about the measurement of earnings management in developing economies such as Nigeria, as previous studies mainly looked at earnings management from the accrual viewpoints, neglecting the real earnings management. The study therefore, considered the real earnings management in the measurement of earnings management for Nigerian listed non-financial firms. The size of board directors was found to be effective in reducing both the production costs and cash flows versions of real earnings management after the review of code of corporate governance and adoption of IFRS. The independence of board of directors was also found effective in reducing both the two components of real earnings management. The number meetings held by board members was revealed to be ineffective in reducing any of the components of real earnings management while CEO duality was revealed to promote earnings management except in the case of abnormal cash flows real earnings management.

It is recommended that an optimal size of board members as well as their independence should be emphasized for effective reduction in earnings management. Also, subsequent studies should address how other corporate governance mechanisms affect earnings

management in order to reveal through which other corporate governance channels the earnings management practices can be reduced.

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