OWNERSHIP STRUCTURE AND REAL EARNINGS MANAGEMENT: EVIDENCE FROM NIGERIA

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Abstract

This study examines the effect of ownership structure on Real Earnings Management (REM) of non-financial listed firms in Nigeria. Seventy-six (76) non-financial listed firms were selected across ten (10) sectors for eleven years (11) from year 2010 to 2020. Ownership structure is represented with institutional, managerial and ownership concentration, while REM was measured using Rowchowdhury (2006) model. Generalized Method of Moments (GMM) estimator was used to analyze data gathered from annual reports of selected firms. The findings shows that ownership concentration and institutional ownership ($\beta=-5.41$; -3.52; $P>|t|=0.000$; $0.000<0.05$ respectively) have negative and significant effects on REM. However, managerial ownership ($\beta=0.97$; $P>|t|=0.335>0.05$) do not have such significant in the period observed but shows positive effect on REM. Hence, the study recommends that firms should be encouraged to maintain high number of institutional and concentrated ownership as indeed powerful and most reliable ownership structure in preventing the management's tendencies for opportunistic behaviour.

Keywords: Institutional Ownership, Managerial Ownership, Real Earnings Management.

1. Introduction

Financial statement of corporate organization is basically prepared to give information about the financial performance, position and change in financial position of the corporations that is beneficial to both internal and external users in a timely and reliable manner in order to make economic decisions. Organizations are expected to present financial report, some organizations operate in a profoundly cutthroat business environment with the assumption for capacity to accomplish a specific benefit level and keep up with financial solvency. Whenever a firm loses the skill to keep up with earnings and financial solvency, it could prompt business failure and complete extinction. Earnings are considered the main sources of information and would alter any economic decisions of the users. This raised the need to set rules to guide and control the performance by enhancing the quality of the financial reporting and to ensure the transparency of the financial information.

Accounting earnings information is relevant when it influences user`s decisions by helping them to form forecasts about the future of an organization and confirm or correct past judgement. The value of accounting earnings is influenced by some factors, most of which trunk from the demand for such information for use in contractual arrangements and from the enticements and

opportunities of management to manage the reported earnings (Houque *et al.,* 2012; Aygun *et al.,* 2014; Zgarni *et al.,* 2016).

Ownership structure has been recognized by previous researchers to be useful mechanisms through which management excessiveness on reported earnings can be checked (Parveen *et al.,* 2016; Farouk & Bashir, 2017). Wang (2006) submitted that ownership structure has significant influences on reported earnings.

The ownership structure differs from one organization to another due to differences in either the legal or environmental stability, regulations as well as economy of scale among others. According to Kole (1995 cited in Osemene *et al.,* 2018), the ownership structure of different sizes will influence earnings management in different ways. In Nigeria, the ownership structure can be in the private (family), institutional, block, free float, managerial and foreign forms. The aim of the study is to assess the influence of ownership concentration, institutional and managerial ownership on Real Earnings Management (REM) among non-financial listed firms in Nigeria. Most of the past studies on ownership structure and REM were done in Asia especially in Malaysia and India while in Africa, the few studies were in Tunisia, Ghana and Nigeria but most of the studies in Africa and Nigeria in particular are majorly focus on accrual-based earnings management and use less than ten-year observations (Hassan, 2013; Farouk, 2014; Saidu *et al.,* 2017; Farouk & Bashir, 2017; Osemene *et al.,* 2018). In addition, most of these past studies were based on financial institutions or a particular sector and ignored REM which is crucial technique by which firm earnings can be manipulated as stated by Siraj and Nazar (2021) in a study carried out among non-financial listed firms in Sri Lanka. This study therefore addressed these research gaps by assessing the effect of ownership structure on REM among non-financial listed firms in Nigeria. More so, by ensuring a large observation of firms over ten years is used and across ten sectors unlike previous studies that use short period and small firm observation.

1.2 Research Hypotheses
$H_{01:}$ Institutional ownership has no significant influence on the real earnings management.
$H_{02:}$ Managerial ownership does not significantly drive real earnings management.
$H_{03:}$ The relationship between ownership concentration and real earnings management is not significant.

2. Literature Review

2.1 Earnings Management and Ownership Structure
The ownership structure is a proportion of the shares held by different parties in the equity (ordinary shares) of the firm. These parties are known as the owners of the corporation, ranging from promoters, private and public corporations, individual and institutional investors and foreign ownership. According to Jense (2007), Earnings management can be described as the managers' intentional act to manipulate the reported earnings by relying on specific accounting methods in order to make changes that favoured their respective interest. Previous studies on earnings management and ownership structure showed that the quality of financial reporting

deteriorated as institutional ownership of equity increases (Bradbury *et al.,* 2006; Pizzaro *et al.,* 2007). Ownership concentration is observed to be associated with better monitoring, thus expected to reduce the private benefits of control. Managerial ownership is the second key factor in ownership structure of the company. It is significant expedient in aligning manager's interests with those of shareholders, and consequently, enhanced reported earnings of the firms. According to Farouk and Bashir (2017), if management owns a large proportion of its ownership, its market value should increase which invariably means that if management ownership increases as a firm stock, they will be more likely to align their strategic goals with shareholders' goals gradually.

2.2   Theoretical Review

This study anchored based on Agency theory, the theory is one of the most popular and often referenced theory in management science. Agency theory was introduced by Ross (1973) and later developed by Jensen and Meckling (1976). There are two types of ownership structures. First, insiders or managers (Agents) of a company can also be shareholders if they own some of the company's shares. Second, outsiders (Principal) who own a lot of the company's shares have more power and reason to keep an eye on management, especially the financial reporting process. This makes it less likely that earnings will be manipulated and improves the quality of earnings. This supposition of self-interest destines agency theory to unavoidable inherent contentions. Thus, assuming the two parties are spurred by self-interest, agents are probably going to seek after self-interested targets that veer off and even struggle with the objectives of the principal, thereby, resulting to agency cost management. As such, ownership structure is expected to have a positive relationship with earnings management practices.

2.3   Empirical Review

Obasi *et al.* (2014) observed a positive and effect of institutional ownership and earnings management in a study investigated equity ownership structure and earnings management in Nigerian quoted companies using ordinary least square as estimated techniques to evaluate the variables. However, studies carried out by (Aygun *et al.,* 2014; Alzoubi, 2016; Osemene *et al.,* 2018) revealed negative and significant effect of institutional ownership on earnings management. In addition, Koh (2007) stated that active institutional investors are more likely to effectively constrain the unethical behaviour of earnings management. Similarly, negative and significant influence of institutional ownership was observed on earnings management in a study carried out by Hassan and Ahmed (2012) among 15 listed food and beverages companies in Nigeria from 2006-2010. In the same vain, Liu and Tsai (2015) observed a negative and significant effect of institutional ownership in real earnings manipulation.

Farouk and Bashir (2017) in a study carried out among listed conglomerates firms in Nigeria observed negative and significant effect of managerial ownership on earnings management. Similarly, Amel and Anis (2014) revealed a negative and significant effect of ownership

structure on earnings management in a study conducted among industrial sector firms in Tunisian using regression analysis. However, Aygun *et al.* (2014) and (Ogboneya *et al.,* 2016; Obigbemi, 2017) observed that managerial ownership has positive and significant effect on earnings management in a study carried out among selected firms in Turkey and Nigeria respectively. Similarly, Omoye (2018) observed negative and significant effect of managerial ownership on earnings management in a study carried out among selected firms in Nigeria. Previous studies on ownership concentration and earnings management (Choi *et al.,* 2004; Zhong *et al.,* 2007; Kim & Yoon, 2008; Ayadi, 2014) revealed positive and significant effect of ownership concentration on earnings management. However, negative and significant relationship was revealed between block ownership and earnings management in a study carried by Obigbemi (2017) among selected companies in Nigeria.

3. Methodology

3.1 Research Design and Data collection

This study employed *ex-post facto* research design as it permits the examination of explanatory variables in retrospect for their possible relationship with explained variable. The study's population comprised one hundred and thirteen non-financial listed firms in Nigerian Stock Exchange as at 31st December 2020. Purposive sampling was used to select Seventy six (76) non-financial listed firms with secondary data needed for the study for eleven years (2010-2020) as shown in Table 1 below. Data collected were analyzed using Generalized Method of Moments (GMM) estimator.

Table 1. Selected Non-Financial Listed Firms for the Study

Sectors	Population	Sample
Natural Resources	4	4
Conglomerates	5	5
Agriculture	5	4
ICT	9	4
Construction & Real Estate	9	2
Healthcare	10	6
Oil & gas	11	8
Industrial goods	15	10
Consumer goods	20	16
Services	25	17
Total	**113**	**76**

Source: Authors compilation, (2022).

3.2 Measurement of Variables

3.2.1 Dependent Variable

The study employed Rowchowdhury (2006) model for measurement as follows;

$$REM = (ACFO*-1) + APROD + (ADISEXP*-1) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (3.1)$$

Where: **REM** = Real Earning Management, **ACFOt** =Abnormal cash flow from operation firm i in year t., **APRODt** = Abnormal production cost of firm i in year t., **ADISEXP**t = Abnormal discretionary expenses of firm i in year t.,

3.2.2 Independent and Control Variables

Table 2. Measurement of Explanatory Variables

Variable	Symbol	Measurement	Source
Independent Variables			
Institutional Ownership	INSTO	Percentage of total shares held by Institutions	(Koh, 2003)
Managerial Ownership	MGRO	Percentage of total shares held by Directors	(Karthanssis & (Drakos, 2004)
Ownership Concentration	OWCONS	Percentage of total shares held by Directors	(Farouk, 2014)
Control Variables			
Firm Size	FZ	Natural log of total asset	Farouk and Bashir (2017)
Growth Opportunity	GO	Annual sales growth	Reyna (2018)

Source: Authors compilation, (2022)

3.3 Model Specification

The model for this study was adapted from the work of Farouk and Bashir (2017).

$$REM = \beta_0 + \beta_1\,INSTO_{it} + \beta_2\,MGRO_{it} + \beta_3 OWCONS_{it} + \beta_4\,FZ_{it} + \beta_5\,GO_{it} + YEAR_{it} + \varepsilon \quad\text{......(3.2)}$$

Where: **REM**= Real Earnings Management, β_0 = Constant, β_1, β_2, β_3, β_4, β_5= Slope Coefficient, **INSTO**= Institutional Ownership, **MGRO**= Managerial Ownership, **OWCONS**= Ownership Concentration, **FS**= Firm Size, **GO**=Growth Opportunity, **YEAR**= Dummy variable of the time under study, **Ɛ**= Error Term.

4. Results and Discussion

4.1 Descriptive Statistics

As shown in Table 3, the institutional ownership has a mean value of 48%, managerial ownership has an average of 18% and ownership concentration has a mean value of 56%. This suggests that only ownership concentration has ownership above 50% while Institutional and Managerial ownership are less than 50%. Institutional and managerial ownership have minimum values of zero (0) while Ownership concentration minimum value is 8% with maximum values of 98%, 28% and 98% respectively. This implies that there is a particular year that the firm does not have institutional and managerial investors. The Institutional ownership has the lowest standard deviation value of 0.0657 among the study variables show its higher contribution in constraining REM in non-financial listed firms in Nigeria. Managerial ownership has the highest standard deviation value of 0.5462 indicate its low contribution in restraining REM in non-financial listed firms in Nigeria. The results as shown in Table 3 indicated that all the study variables have mean values that it is higher than their respective standard deviation, except for REM which is our dependent variable and growth opportunity used as control variable indicating higher than normal peak. Except ownership concentration and firm size, other study variables were positively skewed. The values of kurtosis show that study variables were highly picked.

Table 3. Descriptive Statistics

Variables	REM	INSTO	MGRO	OWCONS	GO	FZ

Minimum	1.17667	0.0000	0.0000	0.0000	2.7511	1.2523
Maximum	3.11487	0.9800	0.2817	0.9800	6.8099	6.6309
Mean	0.24201	0.4828	0.1864	0.5593	4.7527	4.5743
Std. Dev.	16.4442	0.0657	0.5462	0.2963	21.355	.94625
Kurtosis	12.9865	2.0422	3.8869	2.7228	2.5273	2.9375
Skewness	.763569	0.2997	1.3433	-0.441	0.1764	-.1734
Sum	202.328	40802	15528.	46559	3973.3	3824.2
Observation	836	836	836	836	836	836

Source: Authors computation, (2022)

Where: **REM** = Real Earnings Management, **INSTO**= Institutional Ownership, **MGRO**= Managerial Ownership, **OWCONS**= Ownership Concentration, **FS**= Firm Size, **GO**=Growth Opportunity

4.2   Correlation Analysis

Table 4 shows that there is positive relationship between REM and independent variables except ownership concentration that shown negative relationship with REM. Similarly, one of the control variables (growth opportunity) has a negative relationship with REM of non-financial listed firms in Nigeria. This suggests that ownership structures proxies are contributing positively and negatively to the REM of non-financial listed firms in Nigeria.

Table 4. Pearson correlation coefficient matrix

	REM	INSTO	MGRO	OWCONS	GO	FZ
REM	1.0000					
INSTO	0.0761	1.0000				
MGRO	0.1247	0.0708	1.0000			
OWCONS	-0.044	-0.026	0.0165	1.0000		
GO	-0.019	-0.017	0.0178	0.0104	1.0000	
FZ	0.1247	0.0215	0.0554	0.0169	0.0209	1.0000

Source: Authors computation, (2022).

Where: **REM** = Real Earnings Management, **INSTO** = Institutional Ownership, **MGRO**= Managerial Ownership, **OWCONS** = Ownership Concentration, **FS**= Firm Size, **GO** = Growth Opportunity.

4.3   Multicollinearity Diagnostic of the Variables

Table 5 shows the results of multicollinearity test conducted to make better validity of all statistical inferences drawn in the study. The highest Variance Inflation Factor (VIF) is 3.28 for ownership concentration while the mean value for all the variables is 1.94 which is lower than threshold indicating the absence of multicollinearity.

Table 5. Variance Inflation Factor

Variables	VIF	Tolerance
REM	1.14	0.876906

INSTO	1.26	0.793063
MGRO	1.09	0.915762
OWCONS	3.28	0.304706
GO	1.25	0.802432
FZ	3.62	0.276426
MEAN	1.94	

Source: Authors computation, (2022).

Where: **REM** = Real Earnings Management, **INSTO**= Institutional Ownership, **MGRO**= Managerial Ownership, **OWCONS**= Ownership Concentration, **FS**= Firm Size, **GO**=Growth Opportunity

4.4 GMM Estimation of the effect of ownership structure on Real Earnings Management

Table 6 shows the results of estimating the effect of the ownership structure on REM using dynamic model. Institutional ownership shows a co-efficient value of -0.0068, a t-statistic of -3.52 and a p-value of 0.000 which indicates a statistical significance at the 5% level. This implies that institutional ownership has a negative and significant effect on REM of non-financial listed firms in Nigeria. It means that when there is 1% increase in institutional ownership, REM of non-financial listed firms in Nigeria will decrease by 3.52. The result provides evidence to reject null hypothesis which stated that institutional ownership has no significant influence on REM. The findings agree with those of earlier studies carried out by Bao and Lewellyn (2017) across sectors in emerging markets, Reyna (2018) among non-financial firms in Mexico and Saona *et al.* (2020) among non-financial firms in Spanish. However, the findings did not tally with the work of Mouna *et al.* (2017) carried out in MENA region and a study conducted in Nigeria by Abubakar *et al.* (2020). With respect to managerial ownership, it shows a co-efficient value of 0.00067, a t-statistic of 0.97 and a p-value of 0.335. This signifies that managerial ownership has no significant influence on REM of non-financial listed firms in Nigeria. This implies that the null hypothesis that managerial ownership does not significantly drive REM needs to be accepted. The results are in line with the outcome of previous studies such as (Korczak, 2004; Velury & Jenkins, 2006; Liu, 2007; Chang & Sun, 2008), but differ from (Farouk & Bashir, 2017; Siraji & Nazar, 2021).

Table 6 revealed that the ownership concentration co-efficient value is -0.1681 with a t-statistic of -5.41 and a p-value of 0.000 which indicates a statistical significance at 5% level. This suggests that ownership concentration has a negative and significant influence on REM of non-financial listed firms in Nigeria. It implies that when there is 1% increase in ownership concentration, REM of non-financial listed firms in Nigeria will decrease by 5.41. This means the null hypothesis that the relationship between ownership concentration and REM is not significant should be rejected. These results are consistent with the findings of (Iturriaga &

Hoffmann, 2005; Farouk & Bashir, 2017), while in contrast with the outcome of (Jaggi & Tsui, 2007; Kim & Yoon, 2008; Bao & Lewellyn, 2017). In the case of control variables, growth opportunity shows co-efficient value of 0.0027 with a t-statistic of 2.23 and a p-value of 0.026 which indicates a statistical significance at 5% level. This indicates that growth opportunity is significant, positively and strongly influencing REM of non-financial listed firms in Nigeria. It implies that when there is an increase in a growth opportunity of the firm, REM of non-financial listed firms in Nigeria will increase. This may be as a result of the fact that growth firms would like to continue report higher earnings in order to retain current investors and attract potential investors. However, firm size shows co-efficient value of -0.0006 with a t-statistic of -0.04 and a p-value of 0.964. This shows that firm size has no significant influence on REM of non-financial listed firms in Nigeria.

The Wald chi2 statistic of 37.39 with probability value 0.000 indicates that the model has a good fit. The Sargan test statistic is 41.82 with probability value 0.5657. This means the instruments are valid. The first and second order autocorrelation test AR (1) and AR (2) were -2.9963 and -0.11198 with probability values of 0.0027 and 0.9109 respectively. Hence, there is no problem of autocorrelation in the model. The diagnostic statistics therefore means that the result is valid for policy inference.

Table 6. Estimation results of the dynamic GMM model for the effect of ownership structure on real earnings management in Nigeria

Variable	Coefficient	Std. Error	t-Statistic	Prob.
REM_{t-1}	0.00014	0.00013	1.10	0.273
INSTO	-0.0068	0.00195	-3.52	0.000**
MGRO	0.00067	0.00069	0.97	0.335
OWCONS	-0.1681	0.03110	-5.41	0.000**
GO	0.00274	0.00123	2.23	0.026**
FZ	-0.0006	0.00126	-0.04	0.964
Wald chi2 Statistic		37.39 (0.000)		
Sargan Test		41.81509 (0.5657)		
First order autocorrelation test		-2.9963 (0.0027)		
Second order autocorrelation test		-.11189 (0.9109)		

Source: Author's computation, (2022)
Note: **, means significant at 5%. P-values are in parenthesis
Where **REM_{t-1}** =Lagged Return on Assets, **REM**= Real Earnings Management, Where **INSTO**= Institutional Ownership, **MGRO**= Managerial Ownership, **OWCONS**= Ownership Concentration, **FS**= Firm Size, **GO**=Growth Opportunity.

5. Summary and Conclusion

The study concludes that ownership structure influences REM apart from managerial ownership found to have no significant effect on REM. The study improves the understanding of the role of ownership structure in curtailing REM and potentially significant for policy makers. Thus, the study recommends that firms should be encouraged to maintain high number of institutional and concentrated ownership as indeed powerful and most reliable ownership structure in preventing the management's tendencies for opportunistic behaviour as the negative sign is an indication of that both institutional and concentrated investors could help in mitigating REM.

The study has contributed to the literature of accounting by establishing the effectiveness of GMM estimator form of panel data analysis in the earnings management practices analysis.

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Appendix

Table-2:   Environmental Sustainability Disclosure Score

Dimension	Evaluation Content	Optimal Disclo. Score
Clarity	The environmental information disclosure is independent and professional corporate annual report	1
	The environmental information disclosure is independent and professional corporate social responsibility report	1
Environ. Mgt	Disclosure of important environmental event	1
Environ. Liab.	The company presents level of pollutant emission	2
Environ. Cost	The company presents level of resources consumption	2
	The company presents level of environmental investment	2
Environ. Invest	The company presents level of Research & Development	2
	The company presents level of reduction of pollutant emission	2
	The company presents level of energy savings	2
Environ. Perform	The company presents level of achieving green projects	2
	Gaining environmental certification	1
	Gaining environmental honour	1
Reliability	Receiving Government subsidy	1
	Implementing environmental policy	1
Pdt. Accountab.	Disclosure of petroleum inventory movements	3
		24

Table-4: Environmental Sustainability Disclosure Scores of Oil & Gas Companies in Nigeria

Dimension	Evaluation Content	Optimal Dis. Score	Actual Dis. Score	%
Clarity	The environmental information disclosure is independent and professional corporate annual report	18	1	0.2
	The environmental information disclosure is independent and professional corporate social responsibility report	18	0	0.0
Environmental Management	Disclosure of important environmental event	18	8	1.9
Environmental Liabilities	The company presents level of pollutant emission	36	0	0.0
Environmental Cost	The company presents level of resources consumption	36	8	1.9
	The company presents level of environmental investment	36	8	1.9
Environmental Investment	The company presents level of Research & Development	36	6	1.4
	The company presents level of reduction of pollutant emission	36	22	5.1
Environmental Performance	The company presents level of energy savings	36	20	4.6
	The company presents level of achieving green projects	36	4	0.9
	Gaining environmental certification	18	0	0.0
Reliability	Gaining environmental honour	18	0	0.0
	Receiving Government subsidy	18	0	0.0
	Implementing environmental policy	18	14	3.2
Product Accountability	Disclosure of petroleum inventory movements	54	6	1.4
		432	97	22.45