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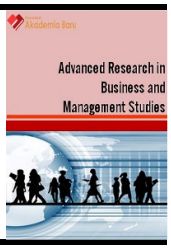

Risk Management Committee and Real Earnings Management Through Sales: Evidence from Nigeria

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ABSTRACT

This study examines the impact of risk management committee on real earnings management through sales manipulation of listed companies in Nigeria. The analysis is based on a sample of 80 listed non-financial firms for the period of five years (2012-2016), making up 400 firm-year observation. The data was extracted from the annual report of the sample firms and Thompson Reuters database. Panel corrected standard error regression (PCSE) was employed. The results show that risk management committee (RMC) and independence directors reduce the management desire to manipulate the reported earnings. The study informs the regulators on the needs for firms to set up an independent RMC to restrain management from manipulating the real earnings activities through sales.

1. Introduction

In recent years, corporate organizations are faced with so much competition due to demand by shareholders to derive a higher return without recourse to the risk and consequence on the future value of the firms [1]. The firm's profitability has become a major yardstick and precedent by many stakeholders to either invest or disinvest in their course to maximize a higher return on their investment. This and many other demands compel the corporate managers to shoot up their performance in order to withstand incessant competition and technological changes [10]. It is also suggested that managers may choose to accelerate their sales to meet performance benchmarks, analyst forecast or avoid credit downgrade [2].

Accelerating sales or revenue to achieve the pre-set objective is regarded as a form of real activities manipulation. In this regard, Roychowdhury [3] point out that managers achieved their aims by temporarily engaging in over production and offering a price discount to accelerate the level of sales, such practice is more likely to post severe consequence on the future cash flow and firm value in the long-run. It is also established that the consequence of earnings management and the

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collapsed of bigger companies such as Enron, WorldCom in the United State and Cadbury in Nigeria will be less severe if the risk management aspect has been properly regulated [4]. Learning from that lesson, the Securities and Exchange Commission [5] recommends all listed companies in Nigeria to set up an independent risk management committee (RMC) to assists the board on the risk management oversight. Prior to this, risk management has been jointly performed by the audit committee. However, evidence from Ng *et al*., [6] document that the dual role placed on the audit committee (AC) is what caused many corporate failures and scandal across the globe.

Scholars such as Abdullah and Ismail [7] and Yatim [8] point out that establishing the RMC improves the transparency of derivatives of listed firms in Malaysia. Nevertheless, there is still limited studies that examine the relationship between RMC and real earnings management through sale manipulation. In addition to the risk management committee, the task of mitigating real earnings activities requires a proactive and effective independent board to strengthen the control process of the firm [8]. Independent directors are tasked with overseeing the behaviours of corporate managers and are expected to improve the reporting quality of the firm. Some scholars advocate that independent board members increase the board activeness and reduce the possibilities of earnings manipulations [8,10]. Therefore, this research examines the effect of RMC on the real earnings manipulations in Nigeria. The remaining part of the paper is as follows. Section two reviews the literature and hypotheses development, section three dealt with the research methodology and finally section four present the results and conclusion of the main findings.

2. Literature Review and Hypothesis Development

2.1 Risk Management Committee and Real Earnings Management

Risk management committee (RMC) is a sub-committee of the board that performs the oversight of risk management [5]. The NSEC requires every listed company to have a risk management committee separate from the audit committee. Prior to this guideline, the burden of risk management is carried out by the audit committee. Therefore, the risk management committee is expected to facilitate a significant role in risk management monitoring and thus enhance the performance and market value of the firms [9]. Likewise, Sanusi *et al*., [11] highlight that risk management committee increase the awareness of risk enterprise management within the firms, which will invariably enhance the firms market value. This is on the idea that poor risk management may affect the resources of the firm and resulted to loss of shareholders fund.

Empirically, Kallamu [12] provides evidence that RMC has a significant positive influence on the market value and accounting return. Hines *et al*., [13] also summit that RMC helps firms to reduce the applicable audit fees and thus enhance its performance. Supportedly, [7] conclude that RMC involves the reduction of hedges activities based on the sample of listed companies in Malaysia. The view of [9] demonstrates that RMC would help in integrating and strengthening the effectiveness of corporate governance. Coherently, Kakanda *et al*., [1] study corporate governance, risk management and financial performance of sample listed financial firms in Nigeria, the authors urge that risk management committee attributes enhance the financial performance. Furthermore, Kakanda *et al*., [15] highlight that risk management committee (RMC) reduce the monitoring cost and therefore mitigate the agency cost and information asymmetric. In Nigeria, Kakanda *et al*., [10] examine the corporate governance and risk management disclosure of listed financial firms spanning a period of 2012-2015. The finding indicates a significant improvement in the disclosure relating to the risk management committee and their responsibilities of providing risk management policies.

Despite the significance role played by the RMC, Bates and Leclerc [16] suggest that the role of risk management committee is difficult to quantify, and as such, there is no guarantee that RMC can

improve the firm's financial performance. Likewise, evidence document by Brown *et al.*, [14] conclude that a risk management committee (RMC) has a negative relationship with performance. Lending this argument, evidence by Bates and Leclerc [16] and Zemzem and Kacem [17] point out that (RMC) has significance negative influence on the financial performance of listed financial institutions in Tunisian. Based on the above, the study hypothesizes as follows.
H2: Risk management committee is negatively related to real earnings management

2.2 Board Independent and Real Earnings Management

Board independence refers to the proportion of non-executive directors to the total members on the board [18,19]. Based on the agency theory, independent directors are expected to exercise strong monitoring and protection. Likewise, extent studies maintain that independent board members play a significant role in reducing the tendency of earnings management [18,22]. Presence of independent directors enhances the level of earnings quality and invariably lower earnings management [18,22]. Realizing the importance of board independence, the Nigerian Securities and Exchange Commission requires listed companies to set up their board with the majority of non-executive directors [5]

On the other hand, some studies established that independent directors have a positive or insignificant effect on earnings management [24-26]. In line with the agency theory, this study hypothesizes that:
H_2: The proportion of independent directors is negatively related to real earnings management.

3. Methodology

The study includes all the listed companies in Nigeria over the period of 2012-2016. Firm in the financial sector is excluded from the sample, also, companies under the alternative securities exchange market (ASEM) were also eliminated[1]. Finally, a total of 14 delisted and 12 without complete data were also excluded to arrive at the final sample of 400 firm-year observations as displayed in Table1.

Table 1
Sample Selection Period

Firm Listed on Nigerian Stock Exchange		170
less		
Financial Services companies	55	
firms from Alternative Securities		
Exchange Market	9	
Dead and Delisted firm	14	
Firms without complete data	12	90
Firm in the final sample		80
Number years		5
Firm-year observation		400

The data for the analysis was divided in to two: The financial and non-financial data: Financial data were collected from Thomson routers database while the non- financial information was extracted from the annual report of the sampled firms.

[1] ASEM are small and new listed firms recognized and registered to raised and prepared themselves to meet up the listing requirement of the Nigerian stock exchange. These firms have different form of reporting, their capital based is lower than those of publicly listed firms.

3.1 Variable Measurement
3.1.1 Dependent variable:

The dependent variable is real earnings management (REM) through the abnormal level of production. Consistent with Roychowdhury [3] and Zang [27], the abnormal production cost is defined as the cost of goods sold plus changes in inventory. According to Roychowdhury [3] managers manipulate sales by offering sales discount and or favourable credits terms. As result, the lower margin will upshot the production cost to be abnormally higher in relation to sales. following Roychowdhury [3], we estimate the normal inventory and the abnormal production using the following equations.

$$\Delta Invt\ it=Aseet\ it\text{-}1 =\alpha 0+ \alpha_1(1/Asset\ it\text{-}1) + \beta_1\ (\Delta\ sales i_t/Asset\ i_{t-1}) + \beta_2\ (\Delta\ sales\ i_{t-1}/Asset\ i_{t-1}) + €t \quad (1)$$

$$Prodtn\ i_t / Assets\ it\text{-}_1 = \alpha_0 + A_1\ [1/ Assets\ i_t\text{-}_1] + A_2\ [Sales\ i_t / Assets\ i_{t-1}] + A_3\ [\Delta\ sales\ it / Assets\ _{it}\ \text{-}_1] + A_4\ [\Delta sales\ it\text{-}_1 / Asset\ _{it}\text{-}_1] + €t \quad (2)$$

$$Prodtn= COGS\ t + \Delta INVT \quad (3)$$

where ΔINVT t, = changes in inventory, $Prodtn_{it}$ represents production cost in year t for firm i, Assets it-1 refers to the lag asset, sales it refers to sales or revenue for year t, Δ sales it-1 denotes lagged changes in the sales, €t represents error term. We subtract normal production from actual production cost to arrive at the abnormal cost of production as in equation 3.

3.1.2 Independent variable

The independent variable risk management committee (RMC) is measured as a dummy variable of 1 if a company has a stand-alone risk management committee and zero if otherwise [8,13]. Board independence refers to the proportion of non-executive directors on the board [28].

3.1.3 Control variable

The control variables employed are firm size, audit quality and profitability. The essence of the control variables is to minimize the endogeneity problems and error term correlation resulting from omitted variables. Firm size is defined as the natural logarithm of the total asset while profitability is defined as net profit after tax scale by total asset [29]. Finally, audit quality is measured as a dummy value of 1 if the firm is audited by Big4 and 0 if otherwise [30].

4. Empirical Model

This section presented the empirical model used in testing the research hypotheses.

$$Ab\_prodtn=\beta+\beta_1 RMC_{it}+\beta_2 BDIND_{it}+\beta_3\ FSZ+ \beta_4\ AQ+ \beta 5 ROA_{it}+€it \quad (4)$$

Ab_produtn referred to abnormal production, RMC is a risk management committee, BDIND is board independence, FSZ referred to firm size, AQ is audit quality, ROA is a return on asset.

4.1 Result and Discussion

4.1.1 Descriptive statistics

As presented in Table 2, the average score of Ab_prodtn is 0.893, indicating that on average abnormal productions is amounted to 89.3 million based on the studied sample. The mean value of RMC 0.643 indicates that 64% of listed companies in Nigeria have established an independent RMC. Similarly, the mean score of BDIND is 0.725 implies that 73% of board members in Nigeria are independent non-executive. The minimum of 0.16 is a signal that some companies did not comply with the provision of CG [5]. The average score for FSZ is 7.19, and 0.55 for AQ. This means that 55 of listed companies were audited by big4 auditors. Finally, ROA is averagely 0.059, indicating an average return of 59 kobo.

Table 2
Descriptive Statistics

Variable	OBS	Mean	Minimum	Max	SD
Ab-Prodtn	400	0.893	-0.283	5.334	0.702
RMC	400	0.643	0.000	1.000	0.480
BDIND	400	0.725	0.167	0.929	0.116
FSZ	400	7.199	5.631	9.170	0.718
AQ	400	0.550	0.000	1.000	0.498
ROA	400	0.059	-0.903	0.544	0.118

Note. Ab_prodtn = Abnormal over production; RMC =risk management committee; BDIND = Board independence; FSZ = Firm size; AQ= Audit quality; ROA = Return on assets.

4.1.2 Correlation matrix

Table 3 presented the result of the correlation matrix which shows none of the coefficients is higher than 0.9 as suggested by Hair *et al*., [31]. Specifically, the highest correlation is 0.4164 between FSZ and AQ. Thus, the correlations coefficients have no multicollinearity problems. Table 3 also shows that RMC has a negative correlation with Ab_Prodtn. BDIND is also negative with Ab_Prodtn. While FSZ, AQ and ROA have a significant positive correlation with Ab_Prodtn.

Table 3
Correlation of the Study Variables

Variable	REM1	RMC	. BDIND	FSZ	AQ	ROA	VIF
Ab-prodtn	1						
RMC	-0.0353	1					1.08
BDIND	-0.1144**	0.0593	1				1.03
FSZ	0.1089**	0.2102* **	-0.0598	1			1.27
AQ	0.2811***	0.2270***	0.1027**	0.4164***	1		1.28
ROA	0.3149***	0.0462	0.0566	0.2017***	0.1983***	1	1.06

Note. Ab_prodtn = Abnormal over production; RMC =risk management committee; BDIND = Board independence; FSZ = Firm size; AQ= Audit quality; ROA = Return on assets *** significant at 0.01 level, *** significant at 0.05 and * at 0.1 level

4.1.3 Multiple regression results

Table 4 presents the result of the relationship between the RMC, BDIND, FSZ, AQ, ROA and Ab_Prodtn. The result indicates that RMC has significant negative (β-0.135, P=0.008). This is an indication that establishing RMC deterred managers from abnormal production activities.

Table 4
Panel Corr Std. Err. Regression

Ab_Prodtn	Beta	std err.	z-stat	p-value
RMC	-0.135	0.050	-2.670	0.008***
BDIND	-0.958	0.132	-7.280	0.000***
FSZ	-0.056	0.031	-1.820	0.069*
AQ	0.403	0.040	9.970	0.000***
ROA	1.680	0.268	6.260	0.000***
Constant	2.144	0.236	9.100	0.000
R Square			0.185	
prob>F			0.000	
Breusch and Pagan LM test			0.000	
Hausman test			0.114	
Modified Wald Heteroskedasticity			0.000	
Wooldridge Autocorrelation			0.000	
Pesaran's cross sectional independence			0.493	
Model Specification Hat-square			0.250	

Note. RMC =risk management committee; BDIND = Board independence; FSZ = Firm size; AQ= Audit quality; ROA = Return on assets *** significant at 0.01 level, *** significant at 0.05 and * at 0.1 level

The result is in line with agency and resources dependency theory which suggest that RMC as sub-committee of the board is expected to assist the board to carry out the risk oversight function. This is also consistent with Kallamu [12] who finds that RMC enhances the firm's financial performance. The findings, therefore, demonstrate the relevance of RMC since effective risk management reduces the risk of firms and thus enhances the earnings figures.

The regression results also show that BDIND has a significant negative relationship (β -0.958, P=0.000) with Ab-Prodtn, this signifies that presence of independent directors also helps in reducing the possibility of manipulating abnormal production. This is consistent with prior scholars such as [18,20] who proved that independence directors constrain real earnings manipulations. regarding the control variables, FSZ has a significant negative influence on Ab_Prodtn (β-0.056, P=0.069), indicating that larger firms in term of the total asset have less earnings manipulations through abnormal production activities. The results of AQ indicates a significant positive influence on real earnings activities through ab_prodtn (β 0.403, P=0.000), this signifies that companies audited by Big4 auditors are associated with higher abnormal production activities. Likewise, the coefficient of ROA and Ab_prodtn reveals significant positive influence between Ab-prodtn and ROA (β 1.680, P=0.000), this means that profitable firms are more likely to increase their earnings through Ab_prodtn. This is consistent with Roychowdhury [3] and Zang [27] who establish that managers manipulate their sales activities through Ab_prodtn.

Moreover, the overall R^2 of 0.19 indicates the level of variability of the independent variables (RMC, BDIND, FSZ, AQ and ROA) on the dependent variable (Ab_prodtn). This signifies that 18% of changes in real earnings management through Ab_prodtn of listed firms is explained by the combined effect of independent variables. Similarly, the result also indicates that the average mean of VIF is 1.14 which indicates absent of multi collinearity problems (see Table 3).

4. Conclusions

This study examines the empirical linked between RMC and real earnings activities through sales manipulations of listed companies in Nigeria. Managers achieved their aims by temporarily engaging in over production and offering price discount to accelerate the level of sales, such practice is more likely to post severe consequence on the future cash flow and firm value in the long-run. The study establishes that setting up RMC mitigate the real earnings in sales through abnormal production. This is an indication that establishing independent RMC will enhance the reporting quality. The study also reveals that independent directors can exercise active monitoring and deterred managers from earnings management.

Therefore, our study contributes to the risk management and earnings management literature by documenting evidence that RMC is associated with lower real earnings management activities. Based on the above findings, we recommend that the Nigerian Securities and Exchange Commission should strengthen its regulation to ensure full compliance relating to RMC since only 64% of listed companies in Nigeria set up the RMC.

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