Determinants of Earnings Management in Firms Listed at the Nigerian Stock Exchange

By: Oshodin Ernest (PhD, ACA)[1] & Ogieva Osazee Frank (PhD, ACA)[2]

Abstract

This study aims to investigate the determinants of earnings management in Nigerian Listed firms. Eighty-eight (88) non-financial firms listed on the Nigerian Exchange Group were randomly selected and the annual reports of these firms for a period of 13 years were studied (2007-2019). Data on the dependent variable (earnings management) and independent variables (tax aggressiveness, directors' shareholding, share price, the likelihood of IFRS adoptions, and the likelihood of political connections in non-financial firms) were derived from the annual reports of these firms and the online search machine of Cash Craft Investment Management. Two regression models were specified and panel regression was the method of data analysis. The outcome of the analysis revealed that significant relationships exist between discretionary accrual management and each of the following: tax aggressiveness, share price, the likelihood of adopting IFRS, the likelihood of political connections in non-financial firms, and a non-significant relationship exists between discretionary accrual earnings management and directors' shareholding. Also, non-significant relationships exist between real activity earnings management and each of the following: tax aggressiveness, share price, and the likelihood of adopting IFRS; while significant relationships exist between real activity earnings management and each of the following: directors' shareholding, and the likelihood of political connections in non-financial firms. The similarity in directions of relationships between tax aggressiveness and earnings management in both models in this study is an indication that management of firms may be interested in swapping one technique of earnings management for the other to obscure tax aggressiveness. Therefore, this study calls for further empirical research into an investigation as to whether tax aggressiveness can influence managers' decision to swap real activity earnings management for discretionary accrual management.

Key Words: *Earnings Manipulations, Political Connections, Tax Aggressiveness, Market value of firms, Adoption of IFRS.*

1. Introduction

The presentation of accounting information is based on the specifications of accounting standards. Accounting standards like the International Financial Reporting Standards (IFRSs) permit those preparing financial reports a certain level of judgment (Langmead & Soroosh, 2009). The uses of discretion and judgments by managers in firms lead to the falsification of accounting reports,

---
[1] Department of Accounting, Faculty of Management Sciences, University of Benin, Benin City, Email: ernest.oshodin@uniben.edu
[2] Department of Banking & Finance, Faculty of Management Sciences, University of Benin, Benin City

which is described as earnings management in accounting literature (Healy & Wahlen, 1999; Jaggi & Tsui, 2007).

Earnings management is the practice, within the acceptable limits of accounting standards, by management for hitting a targeted result (Callao & Jarne, 2010). It may be through accrual management (ACM), real activities manipulations (REM), and classification shifting of expenses/revenues. The manipulation of earnings through the discretionary portion of accrual is accrual management (Omar, Abdul-Rahman, Danbatta, & Suliaman, 2014). REM occurs when an underlying operation of a firm is altered in an attempt to report either a boosted or dwindled profit for a period (Dechow & Skinner, 2000). Earnings management is achieved through classification shifting of expenses/revenue when expenses or revenue items are swapped between the usual and unusual with the aim to deceive the users of accounting information about the core earnings of a firm (Mcvay, 2006; Noh, Moon, Guiral, & Esteban, 2014).

Earnings management does not occur in a vacuum. The managers of firms, auditors, regulators, shareholders, investment analysts are interested actors of creative accounting in any country (Utusanya & Uadiale, 2016). The corporate environment and economic climate can also act as inducing or disincentive factors of opportunism in financial reporting (Beneish, 2001; Callo & Jarne, 2011; Cohen & Zarowin, 2007). To the best of our knowledge, the existing earnings management studies in Nigeria are skewed towards accrual management (Zayol, Adzembe, & Akaa, 2017). Thus, these studies have failed to give more detailed information on the factors that influence earnings management decisions in companies (Shen & Chih, 2007). To have a comprehensive explanation of the causative factors of earnings management in Nigeria, both ACM and REM should be investigated. This is because existing studies have shown that both earnings management tools can be complemented or swapped (Braam, Nandy, Weitzel, and Lodh, 2015; Elkalla, 2017). The lacunae in this area of research in Nigeria have necessitated a study of this nature. Consequently, the thrust of this study is to investigate the causative factors of both accrual and real activity earnings management in firms listed on the Nigerian Stock Exchange.

2 Literature Review

2.1 Earnings Management

Earnings management is described as "the phenomenon that occurs when a manager uses their discretion in financial reporting and in structuring transactions to change financial reports to mislead some stakeholders regarding underlying economic performance of a firm or to affect contractual outcomes relying on reported accounting practices" (Healy & Wahlen, 1999, p: 7). This suggests that managers sometimes intervene in reporting and disclosure processes to obtain some private gain (Schipper, 1989). Earnings management can be achieved through accounting choices and discretionary accruals, thus it is categorized into the real activities earnings manipulations, accruals manipulations, and classification shifting of expense/revenue in accounting literature.

Real activity earnings management is any "management actions that deviate from normal business practices, undertaken with the primary objective of meeting certain earnings thresholds" (Roychowdhury, 2006, p: 1). It takes place when managers use accounting methods that deviate from best practices to manipulate accounting earnings (McNichols, 2000; Wroblewski, 2016). Real activities earnings manipulations can be actualised by adjusting R&D expenditures, slashing expenses, increasing the number of inventory produced to cut the cost of goods sold, disposal of a fixed asset to report a gain, giving price discount to boost current period sales, repurchasing of company's stock, delaying sales, and acquiring of other companies (Dechow & Skinner, 2000; Graham, Harvey & Rajgopal, 2005; Roychowdhury, 2006). The manipulation of these transactions may have a negative effect on firms' value since actions are taken in respect of these transactions to shoot up earnings in the current period, reduce future cash flows.

Accrual management does not affect cash flow. Managers may decide to reach a target report by manipulating the value of the reported accrual, such as receivables, inventory, payables, deferred revenue, prepaid expenses, and accrued liabilities (Dharan, 2003). Accrual management could be achieved in two possible ways in accounting. First, accrual can be managed within the scope of accounting standards, by exploiting the flexibility permitted by accounting standards. Second, it

can be managed outside the scope of accounting norms, by violating the GAAPs of a country (Callao, Jarne, & Wroblewski, 2014). Besides, the real activities earnings management and accrual management, earnings may be manipulated through the classification shifting of items of expense or revenue. The classification shifting is an intentional misclassification of income statement items to report an impressive operative result (McVay, 2006). The classification shifting of expense is distinct from both accrual manipulation and real activities earnings manipulations in that it affects the different components of an income statement, it does not produce an accounting number different from the actual. Also, the classification shifting of expense/revenue unlike both accrual and real activity earnings manipulation cannot be used for settling income between periods (McVay, 2006). However, the emphasis of this study is on both the real activity earnings management and accrual management.

2.2 Tax Aggressiveness and Earnings Management

Tax aggressiveness is described as downward management of tax liabilities achieved through tax planning activities (Chen, Chen, Cheng & Shevlin, 2010). The existing studies on tax aggressiveness and earnings management have provided varied findings on the association between tax aggressiveness and earnings management (Frank, Lynch, & Rego, 2009; Lennox, Lisowsky, & Pittman, 2013). Specifically, Hashim, Ariff, and Amrah (2016) examine accounting irregularities and aggressiveness in tax reporting. Their result, based on the fixed effect regression model, revealed a non-significant and suggested that more accounting irregularities encourages tax aggressiveness in firms. However, unlike the study of Beneish (1999) that identifies fraudulent firms based on certain cut-off point, Hashim *et al.* (2016) assume that all the selected companies in the study are involved in accounting irregularities. This could have influenced the result of the study.

Furthermore, Yorke, Amidu, and Agyemin-Boateng (2016) analyse the relationship between earnings management and corporate tax avoidance in Ghana from 2003 to 2012. Their results suggested that managers employed tax avoidance techniques to manage earnings. However, their study could have been influenced by their estimate of the effective tax rate for loss-making firms. They assigned the value of 0 as the effective tax rate for loss-making firms, suggesting that these

firms avoided paying the statutory tax rate for the period. This may not be true for firms with positive pre-tax earnings. However, Lennox et al. (2013) provide contrasting evidence after using different proxies of tax aggressiveness.

2.3 Director's Shareholdings and Earnings Management

A director is an individual in charge of the supervision of a specific area in a firm. A director is usually a member of the board of directors. One way of ensuring that a manager's interest is aligned with those of the owners is through the participation of directors in the shareholding of a firm (Omoye & Eriki, 2014; Petrou & Procopious, 2016). Dabor and Ibadin (2013) examine earnings management in Nigerian banks. Applying the Pearson Product Moment correlation, they found that directors' shareholdings are positively related to abnormal loan loss provisions. However, Peasnell, Pope, and Young (2005), Teshima and Shuto (2008) suggest otherwise. Peasnell et al. (2005) investigate the association between the board's characteristics and earnings manipulations in United Kingdom firms. They found that the directors in UK firms were more involved in their monitoring roles when they had low shareholdings participation.

Also, Omoye and Eriki (2014) classify firms listed in the Nigeria Exchange group into those with a high and low level of accrual manipulation and investigated the effect of corporate governance in each of these categories. They found that directors' shareholdings could not significantly influence management decisions to adopt a high level of earnings management in Nigerian firms.

2.4 Quoted Share Price and Earnings Management

Premti (2013) examines the extent of earnings manipulations before the initial public offerings (IPOs) and its effect on the long term performance of firms in 28 countries. The study revealed a negative relationship between discretionary accrual and abnormal stock return over several time horizons. Aref, Ardekani, and Mohammad (2012) examine the association between earnings management and performance of Malaysian acquiring firms over the period of 2004 to 2010. Their study suggests that firms that acquired other firms through the issuing of shares, unlike those that

acquired through cash payment, manipulated their earnings before the acquisition announcement date.

In Nigeria, Ibrahim (2016) investigates the nexus between earnings quality and the share price of 20 manufacturing firms. The results suggest that accruals quality and income smoothing have a significant negative and non-significant relationship with the share price. However, Ibrahim (2016) measures income smoothing by Kothari (2005) discretionary accrual Model, as against the use of variability of changes in net income, the mean ratio of the variability of changes in net income, and spearman correlation between accrual and cash flow used in the literature (Barth et al., 2008). This could have influenced the outcome of his study on the relationship between income smoothing and share price.

2.5 IFRS and Earnings Management

Barth, Landsman, and Lang (2008) examine the accounting information of firms in 21 countries where IFRS has been adopted. The results of their study support the argument that the application of the International Accounting Standard has improved accounting quality. Similarly, Cai, Rahman, and Courtenay (2008) examine the relationship between IFRS adoption and accruals-based earnings management in 32 countries. They found that accrual management has gradually declined in the 32 countries after the adoption of IFRS. The authors conclude that the adoption of IFRS is more likely to discourage accrual management in countries with strong enforcement of accounting rules. This was corroborated by Hoque, Ziji, Dunstan, & Karim (2012). Hoque et al., (2012) examine 46 countries where IFRS is mandatorily applied. They found that the mandatory adoption of IFRS can only improve the quality of earnings in countries with strong investor protection.

Further, Lemma, Negash, and Mlilo (2013) examine the determinants of firm-level earnings management in 44 countries from 1996 to 2012. Their result suggests a negative relationship between IFRS adoption and the real activities management in high income and non-common law countries, and also a negative relationship between IFRS adoption and accrual management in the common law countries. Conversely, some studies have either found an increase or no change in

earnings manipulations after the adoption of IFRS (Paananen, 2008; Tendeloo & Vanstraelen, 2005).

In Nigeria, like every other African country, accounting and auditing practices are plagued by weakness in institutional regulations and enforcement of accounting standards (Owolabi, 2011) which are also influenced by corruption (Dauda, Ombugadu, & Aku, 2015; Florou & Pope, 2009; Nurunabi, 2015). Consequently, it may not be out of place to raise such question of whether IFRS adoption has improved the quality of accounting information churned out by firms in Nigeria since corruption moderates the relationship between accounting standards and quality of accounting information (Nurunabi, 2015; Oshodin & Bakare, 2019). However, it is not clear if the adoption of IFRS in Nigeria can influence managers' earnings management decisions in firms quoted on the Nigerian Stock Exchange.

2.6 Political Connections and Earnings Management

A firm is politically connected when members of the firm have political affiliations (Osazuwa, Ahmad, & Che-adams, 2016) or when a firm is controlled by the government (Attia, Lassoued, & Attia, 2016). Chaney, Faccio, and Parsley (2008) investigate the quality of accounting disclosures in politically connected firms. They found that the quality of earnings information disclosed by firms with political affiliations is significantly poorer than the earnings information disclosed by firms without political affiliations.

Sejati (2009) attempts to explore the association between firms' political connection and financial reporting quality in Malaysia from 1987 to 2007. The study was unable to provide evidence that suggested an association between political connections and accrual quality, and political connection and income smoothing.

2.7 Theoretical Framework

This study is anchored on the agency and signaling theories. Managers are appointed on behalf of shareholders to oversee the daily activities in firms. This is arguably the reason there exists a conflict of interest between management and owners in firms (Jensen & Meckling, 1976) since the

managers will sometimes wish to pursue their interest at the expense of the shareholders' wealth maximization.   This the managers may seek to hide by manipulating accounting information (Bhundia, 2012).

Signaling theory, on the other hand, explained the behaviour of the signaler and the receiver, wherein the signaler decides when to release information and the receiver is interested in how to interpret the information so received (Connelly, Certo, Ireland, & Reutzel, 2010). The signaler is an insider with access to all kinds of information (positive and negative information), he or she must decide whether and how this information should be communicated to the outsider. The primary focus of signaling theory is the deliberate communication of positive information (Connelly, 2010).

3. Methodology

This study adopted a longitudinal research design because it covered a period of 14 years (2006 – 2019). The data on earnings management, tax aggressiveness, directors' shareholding, quoted share price, IFRS, and political connections of 88 non-financial listed firms covering the periods of 2006 to 2019 were collected from annual reports and the web site of Cash Craft Investment Management. The Roychowdhury (2006) and Kothari et al. (2005) models were used to estimate the extent of real activities earnings management and discretionary accrual earnings management respectively. Tax aggressiveness was proxy by the statutory company tax rate minus effective tax rate of the selected companies. Directors' shareholding was captured by the proportion of directors' holdings in shares of companies. The stock price of quoted firm was measured by the annual listed price of the stock of firms on the Nigerian Stock Market. Data on the adoption of IFRS and politically-connected firms were proxy by dichotomous variables. Controlled for in the study are size, return on asset, and leverage of the selected firms. This is because these variables have been argued to influence earnings management in the literature (Jiang et al., 2008; Kiel & Nicholson, 2003; Lobo & Zhou, 2006).

The econometric models of this study were specified in line with Braam et al. (2015). This is specified below:

$$\text{REM/ACM}_{it} = \alpha_{it} + \beta_1\text{TAX}_{it} + \beta_2\text{DHOLD}_{it} + \beta_3\text{SPRICE}_{it} + \beta_4\text{IFRS}_{it} + \beta_5\text{PCON}_{it} + \beta_6\text{FSIZ}_{it} + \beta_7\text{ROA}_{it} + \beta_8\text{LEV}_{it} + \varepsilon_{it}$$

Where:

$\beta_1 - \beta_8 \geq 0$

REM = Real Activities Earnings Management; ACM = Accrual Management; TAX = Tax Aggressiveness; DHOLD = Director's Holdings; SPRICE=Quoted Share Price; PCON = Politically Connected Firms; ROA = Return on Assets; FSIZ = Firm Size; LEV = Leverage

The data on the variables of interest in the study were derived from the financial sections of the annual reports of the selected firms over the periods of 2006 to 2019. The data stream is not included due to its size.

4. Data Presentation and Analysis

Table 1 presents the descriptive statistics of the discretionary accrual management model. The mean, minimum and maximum values for discretionary accrual were (-0.02), (36.75), and 1.73 respectively.

Table 1: Descriptive Statistics (Discretionary Accrual Model)

	DISAC	TAX	DIRSHARE	SPRICE	IFRS	PCON	SIZE	ROA	LEV
Mean	-0.02	0.11	0.16	29.74	0.5	0.52	7	0.06	0.43
Median	0.06	0.02	0.01	5.4	1	1	6.91	0.04	0.43
Max	1.73	0.23	0.7	1046.32	1	1	9.05	0.79	0.6
Min	-36.75	-7.48	0.01	0.5	0	0	5.09	-0.6	0
J-Bera	1011	1230	2104	1943	124	124	27	1718	24
Prob	0	0	0	0	0	0	0	0	0

The average tax savings arising from tax planning by firms in our sample frame was 11% and the maximum was 23%. The mean and maximum director's shareholdings in firms under consideration in this study were 16% and 70%. The mean stock price of firms in the sample frame was ₦29.74k and the maximum was ₦1,046.32k. The mean value of 50% for IFRS suggests that 50% of the time frame of the study covered the post-IFRS adoption periods. The mean value of 52% for

political connections suggested that about 52% of the sampled firms were politically connected and the other 48% were without political influence. The significant probability values associated with the Jarque-Bera statistics suggests that the data for this study failed the normality test at 5% level of significance.

Table 2: Descriptive Statistics (REM Model)

	REM	TAX	DIRSHARE	SPRICE	IFRS	PCON	SIZE	ROA	LEV
Mean	-0.01	0.11	0.16	29.74	0.5	0.52	7	0.06	0.43
Median	0.1	0.02	0.01	5.4	1	1	6.91	0.04	0.43
Max	62.75	0.23	1	1046.32	1	1	9.05	0.79	0.6
Min	-75.32	-7.48	0	0.5	0	0	5.09	-0.6	0
J-Bera	4995	1230	2106	1943	124.33	124.3	27.996	2.00E+02	279528
Prob	0	0	0	0	0	0	1.0	0	0

Table 2 revealed the descriptive statistics of the real earnings management model. The mean, minimum and maximum values of real activity earnings management were (-0.01), (75.32) and 62.75 respectively. The mean value of -0.01 for real activity earnings management is an indication that more real activity transactions than accruals were manipulated to achieve targeted financial outcomes. The probability values associated with the Jarque-Bera statistics suggested that the data on the real activity earnings management model failed the normality test at 5% level of significance.

Table 3: Correlation Analysis (Discretionary Accrual Model)

	DISACC	TAX	DIRSHARE	SPRICE	IFRS	PCON	SIZE	ROA	LEV
DISACC	1								
TAX	0.03	1							
	(0.3)								
DIRSHARE	0.01	0.04	1						
	(0.8)	(0.7)							
SPRICE	-0.24**	-0.01	-0.15**	1					
	(0.000)	(0.88)	(0.00)						
IFRS	-0.12**	0.06	0.06	0.03	1				
	(0.001)	(0.06)	(0.12)	(0.47)					
PCON	-0.12**	0.04	-0.20**	-0.10*	-0.01	1			
	(0.000)	(0.30)	(0.00)	(0.02)	(0.73)				
SIZE	-0.38**	-0.08**	-0.19**	0.33**	0.13**	0.28**	1		
	(0.007)	(0.04)	(0.00)	(0.001)	(0.00)	(0.00)			
ROA	-0.01	-0.10**	-0.11**	0.26**	-0.13**	0.0015	0.06	1	
	(0.41)	(0.01)	(0.00)	(0.00)	(0.00)	(1.00)	(0.11)		
LEV	-0.09*	0.004	0.04	0.08	0.02**	0.03	0.21**	0.01	1
	(0.02)	(0.92)	(0.29)	(0.06)	(0.00)	0.47	(0.00)	(0.77)	

Relationship is significant at "*P<0.05"; "**P<0.01". P-values are disclosed in brackets

Table 3 presented the relationship among variables of interest in the discretionary accrual model.

Discretionary accrual is positively related to tax aggressiveness and directors' shareholding. Share price, IFRS adoptions, political connections, firms' size, ROA, and leverage are negatively related to discretionary accrual. Tax aggressiveness is positively related to directors' shareholding, IFRS adoption, political connections, and leverage. Tax aggressiveness is negatively related to share price, firm's size, and ROA. Directors' shareholding is negatively related to share price, political connections, firm's size, and ROA, and it has a positive relationship with IFRS adoption and leverage. Share price is positively related to IFRS adoptions, firm's size, ROA, leverage; but it is negatively related to political connections. IFRS adoption is negatively related to political connections.

Table 4: Correlation Analysis (Real Activity Earnings Management Model)

	REM	TAX	DIRSHARE	SPRICE	IFRS	PCON	SIZE	ROA	LEV
REM	1								
TAX	0.019	1							
	(0.5974)								
DIRSHARE	-0.018	-0.012	1						
	(0.6282)	(0.7426)							
SPRICE	0.063	-0.018	-0.111**	1					
	(0.0815)	(0.6189)	(0.0022)						
IFRS	0.075*	0.060	0.047	0.040	1				
	(0.0386)	(0.0923)	(0.0861)	(0.2976)					
PCON	0.005	0.014	-0.131**	-0.082*	-0.008	1			
	(0.9000)	(0.7108)	(0.0003)	(0.0240)	(0.9981)				
SIZE	0.115**	-0.046	-0.119**	0.322**	0.141***	0.288**	1		
	(0.0015)	(0.2055)	(0.0011)	(0.0000)	(0.0001)	(0.0000)			
ROA	-0.045	-0.009	-0.020	0.030	0.030	0.035	-0.097**	1	
	(0.2204)	(0.7962)	(0.5776)	(0.4183)	(0.4266)	(0.3339)	(0.0074)		
LEV	0.034	-0.042	0.029	0.026	0.106**	0.018	0.076*	0.006	1
	(0.3600)	(0.2504)	(0.4272)	(0.4734)	(0.0002)	(0.6167)	(0.0376)	(0.8692)	

Relationship is significant at "*P<0.05"; "**P<0.01". P-values are disclosed in brackets

Table 4 presented the correlation analysis of the variables in the real activity earnings management (REM) model of our study. REM is positively associated with tax aggressiveness, share price, IFRS adoption, political connections, firm's size, leverage, and it is negatively associated with directors' shareholding, and ROA. Tax aggressiveness is positively related to IFRS adoption, political connections, and it is negatively related to directors' shareholding, share price, firm's size, ROA, and leverage. Directors' shareholding is positively related to IFRS adoption, leverage, and it is negatively associated with share price, political connections, firm's size, and ROA. The share price of a firm is positively related to the likelihood of adopting IFRS, the firm's size, ROA, leverage, and negatively associated with the likelihood of political connections in firms. The likelihood of adopting IFRS is positively associated with firm's size, ROA, and leverage; but it is negatively related to the likelihood of political connections in non-financial firms in Nigeria. The existence of weak relationship among the explanatory variables in the real activity earnings management model suggested the absence of multi – collinearity.

Table 5: Regression Analysis Outputs

| | DAC MODEL | | | | REM MODEL | | | |
| | Fixed Effect | | Random Effect | | Fixed Effect | | Random Effect | |
Variables	Coeff.	Prob	Coeff.	PV	Coeff	PV	Coeff	Prob
C	-0.255*	0.049	-0.372**	0.002	-6.087**	0	-6.394**	0.005
TAX	0.008	0.322	0.144*	0.036	0.01	0.711	0.126	0.504
DIRSHARE	0.025*	0.025	0.319	0.1	-0.186*	0.038	-0.088	0.892
SPRICE	-0.0001*	0.024	-0.001*	0.023	0.001	0.268	0.002	0.519
IFRS	-0.078**	0.004	-0.179*	0.012	0.00001	0.999	0.234	0.545
PCON	-0.025	0.467	0.047	0.062	-0.126	0.072	-0.244	0.578
SIZE	0.031	0.097	0.038**	0.006	0.866**	0	0.882**	0.009
ROA	0.557	0.468	0.511	0.187	-0.004	0.987	-0.089	0.332
LEV	0.05	0.651	0.144	0.555	0.155	0.199	0.365	0.508
R^2	0.684		0.092		0.967		0.18	
Adj R^2	0.636		0.082		0.962		0.08	
F-stat	5.089		9.279		214.565		1.71	
Prob(F-statistic)	0		0		0		0.093	
D-Watson	1.836		1.139		1.902		1.761	
Hausman Test			0.471				0.016	

Relationship is significant at *$P<0.05$; **$P<0.01$.

The R-square of 0.09 and 0.96 for the random and fixed-effects of the discretionary accrual and real activity earnings management models on table 4.5 suggested that about 9% and 96% of the accrual management and real activity earnings management respectively is explained by the independent and control variables in the panel random and fixed-effect models. The F-statistics (prob. F-stat) of 5.08 (0.000) and 9.27 (0.000) respectively in the fixed and random effect models suggested a significant relationship between the explained and explanatory variables in the models. The existence of low Durbin-Watson statistics in the random effect models suggested that the residual of this model is serially correlated. However, this is adjusted for by the panel corrected standard error methodology which addressed the problems associated with serial correlation and heteroscedasticity. The high probability value of the Hausman test of 0.471 suggested that the random effect is more appropriate in the discretionary accrual management model.

The random-effect regression model suggested that there is a significant relationship existing between discretionary accrual manipulations and the following: tax aggressiveness (0.036), firm's

size (0.006), and non-significant relationship exists between discretionary accrual manipulations and the following: the likelihood of political connections in firms (0.062), directors' shareholding (0.319), return on assets (0.511) and leverage (0.144). This is an indication that a unit change in tax savings, the likelihood of political connections in firms, directors' shareholding, firm's size, return on assets, and leverage will lead to 14%, 47%, 32%, 4%, 51%, and 14% increase in discretionary accrual management. This implied that any quest to have more tax savings and to report more assets can encourage more manipulation accrual in a non-financial firm. The random effect model also, suggested that there exists a significant and negative relationship between discretionary accrual and share price (0.023), and discretionary accrual and the likelihood of adopting IFRS in firms (0.012). This also suggested that a unit change in share price and the likelihood of adopting IFRS can lead to 0.1% and 17% decreases in discretionary accrual manipulations. The implication of this is that adopting IFRS discouraged accrual management in firms.

The fixed effect model of the REM regression output suggested that there is a non-significant relationship between real activity earnings management and the following: tax aggressiveness (0.711), share price (0.268), the likelihood of adopting IFRS in firms (0.999), leverage (0.199), and a significant relationship between real activity earnings management and firm's size (0.000). This suggested that a unit change in tax aggressiveness, share price, the likelihood of adopting IFRS in firms, leverage, and firm's size can lead to 1%, 0.1%, 0.001%, 40%, and 87% increase in real activity earnings manipulation. Also, there is a significant relationship between real activity earnings management and directors' shareholding (0.038), and a non-significant relationship between real activity earnings management and the following: return on assets (0.987), and the likelihood of political connections in firms (0.072), This also suggested that a unit change in director's shareholdings, politically connected firms, and return on assets can lead to 18%, 13%, and 0.4% decreases in REM. More directors' shareholding and the likelihood of political connections in firms discouraged REM since it is more expensive compared to accrual management.

4.3 Discussion of Findings

A positive relationship between tax aggressiveness and accrual manipulation is an indication that tax aggressiveness in firms can lead to more discretionary accrual management. Similarly, a positive relationship existing between tax aggressiveness and real activities earnings management revealed that a quest for more tax savings can also lead to more real activities earnings management. The findings are supported by the studies of Frank et al. (2009), Hashim et al. (2016), and Yorke et al. (2016). However, the findings are not supported by the study of Lennox et al. (2013).

A positive association existing between the likelihood of political connections in non-financial firms and discretionary accrual manipulations is an indication that political affiliations of management teams of a firm encouraged more discretionary accrual manipulations. This is supported by Chaney et al. (2008). However, the existence of a negative association between political connections in firms and real activity earnings manipulations is an indication that politically connected firms eschew real earnings manipulations in Nigeria. This is also corroborated by Braam, et al. (2015) and Sejati, (2009).

A positive relationship between directors' shareholding and discretionary accrual management suggested that a high stake of directors in shareholdings of a firm can encourage high accrual management with a view to disclosing impressive financial information. This is in tandem with Dabor and Ibadin (2013), but contrary to the findings of the studies of Omoye and Eriki (2014), and Teshima and Shuto (2008).

The existence of a negative relationship between share price of a firm and accrual manipulation indicated that investors may see through accrual manipulations in firms, which may discourage them from investing in such firms with high discretionary accrual. This can negatively affect the share price of such firms. This is in tandem with existing studies that find a negative relationship between discretionary accrual manipulations and share pricing information of firms such as Ibrahim (2016). However, this cannot be inferred from the real activity earnings management model, which suggested a positive relationship between share price and real activity earnings management. This is an indication that the quest for high share price can lead to more real activity

earnings manipulations since the investors may not easily see through it. This argument is in tandem with the findings of the studies of Aref et al. (2012), and Ducharme et al. (2004).

A significant and negative relationship between the likelihood of adopting IFRS and discretionary accrual manipulations. This suggested that detailed disclosures promoted by IFRS are a source of discouragement to the practices of accrual manipulation since detailed disclosure can unfold accrual manipulations in financial reports. This is supported by findings of the studies by Barth et al. (2008), Cai et al. (2008), Hoque et al. (2012), and Lemma et al. (2013). However, this study revealed a positive relationship between the likelihood of adopting IFRS and real activity earning management suggesting that the adoption of IFRS in Nigeria has led to more real activity earnings management in firms (Doukakis, 2014; Ewert & Wagenhofer, 2005).

5. Summary of Findings

The outcome of the analyses conducted in the study revealed that a significant relationship exists between tax aggressiveness and discretionary accrual management, and a non-significant relationship exists between tax aggressiveness and real activity earnings management in the non-financial firms quoted on the Nigeria Exchange Group. A non-significant relationship exists between directors' shareholdings and discretionary accrual manipulations, and a significant relationship exists between directors' shareholdings and real activity earnings management.

The study also established that a significant relationship exists between share price and discretionary accrual manipulations, and a non-significant relationship exists between share price and real activity earnings management in non-financial firms quoted on the Nigeria Exchange Group. A significant relationship exists between IFRS adoption and discretionary accrual manipulations, and a non-significant relationship exists between IFRS adoption and real activity earnings management in non-financial firms quoted on the Nigeria Exchange Group.

Lastly, a significant relationship exists between political connections and discretionary accrual manipulations, and a significant relationship exists between political connections and real activity earnings management in the non-financial listed firms on the Nigeria Exchange Group.

5.1 Conclusion and Recommendations

This study investigated the determinants of earnings management in firms listed on the non-financial sectors of the Nigeria Exchange Group. To have a comprehensive view of some factors that can influence earnings management decisions in non-financial firms listed on the Nigeria Exchange Group, both discretionary accrual management and real activity earnings management was examined in the study. Eighty-eight (88) non-financial firms listed on the Nigeria Exchange Group were randomly selected and data on discretionary accrual management, real activity earnings management, tax aggressiveness, directors' shareholdings, share price, the likelihood of adopting IFRS, the likelihood of political connections in firms, firm's size, return on assets and leverages were derived from accounting information sourced from the annual reports of the selected firms. To have data of equal standing over the pre and post IFRS periods in Nigeria, the study covered a period of 14 years (2006 to 2019). In line with existing literature, our regression analyses revealed that tax aggressiveness has a positive influence on the decision to manipulate accounting earnings through discretionary accrual and real activity earnings management. Directors' shareholding, share price, the likelihood of adopting IFRS, and the likelihood of political connections in firms can positively and negatively influence managers' decision to manipulate accounting information through the discretionary accrual and real activity earnings management respectively. A Positive relationship between tax aggressiveness and each of the earnings management techniques examined in the study is a pointer that managers can substitute these earnings management techniques to obscure tax savings gained from shareholders and regulators. Therefore, the various regulators of companies in Nigeria should always watch out for the possibility of more real activity earnings management or discretionary accrual management in high tax avoidance companies.

References

Aref, M., Ardekani, N. Y., & Mohammad, H. (2012). Acquisition, earnings management, and firm's performance: Evidence from Malaysia. *Journal of Business Studies Quarterly, 4*(1), 91-110.

Barth, M., Landsman, W., & Lang, M. (2008). International Accounting Standards and accounting quality. *Journal of Accounting Research, 46*(3): 467-498.

Beneish, M. (2001). Earnings management: A perspective. *Managerial Finance*, 27(12), 3-17

Beneish, M.D. (1999). The detection of earnings manipulation. *Financial Analysts Journal*, *55*(5), 24-36.

Braam, G., Nandy, M., Weitzel, U., & Lodh, S. (2015). Accrual-based and real earnings management and political connections. *The International Journal of Accounting, 50*(2), 111-141.

Cai, L., Rahman, A., & Courtenay, S., (2008). The effect of IFRS and its enforcement on earnings management: An international comparison. www.ssrn.com.

Callao, S. & Jarne, J. (2010). Have ifrs affected earnings management in the European Union? *Accounting in Europe, 7(*2), 159-189

Chaney, P. K., Faccio, M. & Parsley, D. C. (2008). The quality of accounting information in politically connected firms. Working paper, Vanderbilt University.

Chen, S., Chen, X., Cheng, Q., & Shevlin, T (2010). Are family firms more tax aggressive than non-family firms? *Journal of Financial Economics, 95*(1), 41-61.

Chua, Y.L., Chee, S.C., & Graeme, G. (2012). The impact of mandatory IFRS adoption on accounting quality: Evidence from Australia. *Journal of International Accounting Research, 11*(1), 119-146

Cohen, D. A. & Zarowin, P. (2007). Earnings management over business cycle. Retrieved from. https://www.researchgate.net/publication/266471701.

Dabor, E. L. & Ibadin, P. O. (2013). An evaluation of the implications of earnings management determinants in the banking industry: the case of Nigeria. *African Journal of Social Sciences, 3*(3), 118-129

Dechow, P.M. & Skinner, D.J. (2000). Earnings management: Reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons, 14(*2), 235-255.

Doukakis, L. (2014). The effect of mandatory IFRS adoption on real and accrual-based earnings management activities. *Journal of Accounting and Public Policy, 33*, 551-572.

Elkalla, T. (2017). An empirical investigation of earnings management in MENA region (unpublished Ph.D. thesis), University of West England

Ewert, R. & Wagenhofer, A. (2005). The economic effect of tightening accounting standards to restricts earnings management. *The Accounting Review, 80*(4), 1101-1124

Frank, M., Lynch, L. & Rego, S. (2009). Tax reporting aggressiveness and its relation to aggressive financial reporting. *The Accounting Review, 84,* 67–96.

Graham, J. R., Harvey, C.R., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics, 40,* 3-73

Hashim, H.A., Ariff, A.M., & Amrah, M.R. (2016). Accounting irregularities and ta aggressiveness. *International Journal of Economics, Management, and Accounting, 24*(1), 1-16

Healy, P., & Wahlen, J. M., (1999). A review of the earnings management literature and its implication for standard setting. *Accounting Horizons, 13*(4), 143-147.

Hoque, M., Ziji, T., Dunstan, K., & Karim, A., (2012). The effect of IFRS adoption and investor protection on earnings quality around the World. *The International Journal of Accounting, 47*(3), 333-355.

Hung, M., & Subramanyam, K. (2007). Financial statement effects of adopting International Accounting Standards: The case of Germany. *Review of Accounting Studies, 12*(4), 623-657.

Ibrahim, M. (2016). The effect of earnings quality properties on share price of listed manufacturing firms in Nigeria (unpublished PhD thesis), Ahmadu Bello University, Zaria

Jaggi, B., & Tsui, J. (2007). Insider trading, earnings management, and corporate governance: Empirical Evidence based on Hong Kong firms. *Journal of International Financial Management and Accounting*, *18*(3), 192-222

Kothari, S. P., Leone, A., & Wasley, C. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics39*, 163–197.

Langmead, J. M., & Soroosh, J. (2009). International financial reporting standards: The road ahead. *CPA Journal 79*(3), 16–24.

Lemma, T., Negash, M., & Mlilo, M. (2013). Determinants of earnings management: Evidence from around the World. www.ssrn.com.

Lennox, C., Lisowsky, P., & Pittman, J. (2013). Tax aggressiveness and accounting fraud. *Journal of Accounting Research, 51*(4), 39-78.

McNichols, M. (2002). Discussion of the quality of accruals and earnings: The role of accrual estimation errors, *The Accounting Review77*, 61-69.

McVay, S. (2006). Earnings management using classification shifting: An examination of core earnings and special items. *The Accounting Review 81* (3), 501-531

Omar, N., Abdul-Rahman, R., Danbatta, L. B., & Suliaman, S. (2014). Management disclosure and earnings management practices in reducing the implication risk. *Procedia-Social and Behavioural Sciences, 145*, 88-96.

Omoye, S. A. & Eriki, P. O. (2014). Corporate governance determinants of earnings management: Evidence from Nigeria quoted companies. *Mediterranean Journal of Social Sciences, 5*(23), 553-564.

Osazuwa, N. P., Ahmad, A. C., & Che-Adam, N. (2016). Financial performance in Nigerian quoted companies: Influence of political connection and corporate governance mechanisms. *International Journal of Economics and Financial Issues, 6*(57), 137-142.

Oshodin, E., & Bakari, I. (2019). IFRS Adoption, Corruption, and Quality of Financial Reporting: A review of literature. *Management Sciences Review (MRS), 10*(1), 149-157.

Paananen, M. (2008). The IFRS adoption's effect on accounting quality in Sweden. Working paper, University of Hertfordshire

Peasnell, K.V., Pope, P.F. & Young, S. (2005) Board monitoring and earnings management: Do outside directors influence abnormal accruals? *Journal of Business Finance & Accounting, 32*, 1311-1346

Premti, A. (2013). Earnings management prior to initial public offerings and its effect on firm performance: International evidence. *International Journal of Financial Research, 4*(3), 10-24.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics, 42*, 335–370

Schipper, K. (1989). Commentary on earnings management. *Accounting Horizons, 3*(4), 91–102

Shen, C. H. & Chih, H. L. (2007). Earnings management and corporate governance in Asia's emerging markets. *Corporate Governance: An International Review, 15*, 999-1021.

Tendeloo, B. & Vanstraelen, A. (2005). Earnings management under German GAAP versus IFRS. *European Accounting Review, 14*(1), 155-180.

Teshima, N. & Shuto, A. (2008). Managerial ownership and earnings management: Theory and empirical evidence from Japan. *Journal of International Financial Management and Accounting, 19*(2), 107-132.

Wroblewski, R. D. (2016). The complex vision on the earnings management: The evidence from eastern European countries (Unpublished Doctoral Thesis). Universidad de Zaragoza

Yorke, S.M., Amidu, M., & Agyeman-Boateng, C. (2016). The effect of earnings management and corporate tax avoidance on firm value. *International Journal of Management Practice, 9*(2), 113-131.

Zayol, P. I., Adzembe, I., & Akaa, S.T. (2017). The determinant of earnings management of listed oil and gas firms in Nigeria. *International Journal of Recent Research in Commerce Economics and Management, 4*(2), 73-80.