REAL EARNINGS MANAGEMENT AND FIRM VALUE: EVIDENCE FROM NIGERIA

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Abstract

The study assesses how Real Earnings Management (REM) affects a firm's value. Specifically, the study focuses on non-financial firms listed in Nigeria as of December 31, 2020. Tobin's Q was used as a proxy for firm value while abnormal operating cash flow, abnormal production costs, and abnormal discretionary expenses was employed for REM. Seventy-six (76) companies with the necessary data needed for the study were chosen using a purposive sampling technique, for the period 2010–2020. The results show that abnormal discretionary expenses had a positive and significant influence on firm value, while abnormal operating cash flow and abnormal production costs had no significant effect. Also, it was discovered that return on equity and firm growth have no significant impact on the firm's value. However, leverage and firm size have a positive influence on firm value. The study concludes that abnormal discretionary expenses significantly affect the firm value of Nigeria's listed non-financial companies. Thus, the study recommends that managers make efficient use of discretionary expenses to smooth out fluctuations in earnings and present more consistent profits to boost firm value.

Keywords: firm value, real earnings management, non-financial listed firms, Nigeria

1. Introduction

One of the crucial elements for businesses, especially publicly traded ones, is firm value. The firm value can be used by the market to assess the success of the company. The business is therefore highly motivated to raise its company value. One metric to evaluate a company's success is firm value. The firm's stock price affects the value of firms. Thus, the company's valuation can be used to determine the shareholders' wealth. A high business valuation indicates greater shareholder prosperity. Stock prices can be used as a yardstick to measure firm value because they are believed to represent the value of the company (Mahendra *et al.*, 2012; Darmawan *et al.,* 2019). For businesses to draw in investors, the firm's worth must remain high. If a company's value declines, it indicates that investor confidence in the company is also declining, which poses a threat to the company's ability to survive. Earnings generated by companies have an impact on how the firms makes decisions (Al-Absy *et al.,* 2020). More so, analysts and investors utilize these figures to assess a company's investment potential and profitability. Since they want to show that the business is successful, management will therefore try to publish earnings that are high. To generate a significant amount of revenue to raise the firm's value in the face of intense

competition, a company must make numerous efforts to improve the quality of their product as well as providing smooth channel for getting feedback from customers. Regardless of how earnings are acquired, financial statements are solely used to report earnings information. The substantial amount of earnings demonstrates the company's efforts to raise firm worth. According to Ernayani and Robiyanto (2016), Purwanti and Natser (2016) as well as Shittu *et al*. (2022), companies use earnings management to boost or display high levels of earnings. Investors who prefer to see growth and stability may be concerned by the shifts even though significant swings in income and expenditures may be a regular component of a company's operations (Suryani & Putri, 2019).

Accrual or Real Earnings Management (REM) are both earnings management techniques for managing earnings by managers. While REM includes deviating from standard operating procedures to manipulate earnings numbers, it has a direct impact on both present and future corporate cash flows. Accrual earnings management involves changing estimates and accounting principles to boost or decrease earnings (Zang, 2012). According to Onaolapo and Shittu (2022), managers choose REM instead accrual earnings management because it makes it easier to achieve the desired profit goal and is more difficult to spot by auditors or regulators. The shortcoming of REM is that the company's future cash flow will have a bigger impact on company's decision than other earnings management techniques. Because it puts the firm's survival in jeopardy, stakeholders must genuinely anticipate this deception. Shittu and Amao (2022) disclose that managers tend to utilize both earnings manipulation approaches to meet their intended profit objective and choose both with distinct factors in mind. Roychowdhury (2006) asserts that there are three ways to manage earnings in favour of managers: through overproduction in the production process, manipulation of sales, and reduction of discretionary spending. There have been previous studies on how earnings management affects corporate value. However, earlier research had different findings and had mostly concentrated on accrual-based earnings management (Ridawan & Hunardi, 2013; Indriani *et al*., 2014; Abbas *et al*., 2017). More so, few studies worked on REM both in developed and developing countries were conducted outside Nigeria context (Ferdawati, 2009). In addition, none of these studies assessed the influence of REM on firm value by proxying REM in three ways as considered in this study. As a result, this study filled a research gap by examining the effect of REM proxied by abnormal operating cash flow, abnormal production costs, and abnormal discretionary expenses on firm value of selected listed non-financial firms in Nigeria separately. More so, the study considered leverage, Firm Growth (FG), Firm Size (FS) and Return on Equity (ROE) as control variables in line with (Elikala, 2017; Rahamon & Xiong, 2021).

2. Literature Review and Hypothesis Development

2.1 Real Earnings Management and Firm Value

Financial statements are said to be of high quality if users of financial statement can use earnings reported by to deduce company value and make better judgments as well as forecast future cash flows of firm (Bernard & Stober, 1998). Earnings management will be linked to lower business valuations if investors experience information risk due to uncertain accounting earnings. The financial statement offers crucial data that can be used to forecast future profits. Investors assesses the stock market's worth of companies through earnings reported by firms (Cohen *et al*., 2011). The basic assumption is that management will use earnings management to change the outcome of the accounting system and enhance signal and performance moving forward (Mulyasari *et al.,* 2016; Suryani & Putri, 2019). In a similar vein, Ewert and Wagenhofer (2004) and Gunny (2005) demonstrate how managers convert to real activity manipulation even though doing so has drawbacks (greater costs for businesses) and subsequently lowers company value. Similarly, (Zang, 2006; Cohen & Zarowin, 2008) confirmed that managers move to real activity manipulation if using accrual earnings management is more challenging for them. Previous researchers that have worked on REM and firm value observed different results; for instance, positive and significant influence of REM was revealed on firm value in a study conducted by Fernawati (2009) in Indonesia as well as Abass and Ayub (2019) among non-financial listed firms in Pakistian. However, negative influence of REM was revealed on firm value in a separate study carried out by Challen and Siregar (2012) as well as Darmarwan *et al.* (2019) among manufacturing firms in Indonesia. This result is aligned with the claim made by Rowchowdhury (2006) that REM can lower firm value because it can boost earnings for short time while it will reflect negative influence on the firm's future cash flows. There is a need to empirically analyze the influence of REM on firm value in developing nations such as Nigeria, where we have an unstable economy. Hence, the study formulated hypothesis as follows:

H_0: Real earnings management has no significant influence on firm value of non-financial listed firms in Nigeria.

2.2 Theoretical Review

The study anchored based on stewardship theory developed by Donaldson and Davis (1989), which is based on the collective behavior of stewards who prioritize achieving corporate goals like profitability, over pursuing personal objectives. Stewardship theory encourages managers to improve a firm's value by motivating them, which results in an exemplary way of reporting earnings when the adopted principles

of the firm are aligned with the firm's value. This behavior benefits the principal and has a good impact on financial objectives including profitability, share price and dividend. The interests of managers and the owners of the company are thought to be aligned. Therefore, optimal firm value should effectively coordinate inside the firm, in accordance with stewardship theory. According to the stewardship hypothesis, both managers and directors should be good stewards of the company to increase shareholder wealth. According to the sociological and psychological perspective known as stewardship theory, corporate leaders behave in the way that will add value to the system as well as in the interests of the shareholders (Albrecht *et al.,* 2004). According to Davis *et al.* (1997), attaining corporate goals rather than personal ones leads to greater steward satisfaction. The study further stated that meeting organizational objectives can also satisfy stewards' personal desires. As a result, the stewardship theory views non-financial motives as being crucial and highly motivating for managers. This study was based on stewardship theory because its motives include the need for achievement and recognition, respect for authority and the work ethic, and the intrinsic satisfaction required for successful job performance as well as improving value of the firms, among others.

3. Methodology

The study employed *ex-post facto* research design. As of the end of 2020, 113 Non-Financial Listed Companies (NFLC) on the Nigerian Stock Exchange made up the study's population. Seventy-six (76) NFLC having the necessary data for the study were purposefully chosen for the eleven-year period from 2010 to 2020 which cover pre, during and post COVID 19 period. More so, eleven years was chosen due to the fact most of previous studies reviewed particularly in Nigeria were less than ten years. Generalized Method of Moments (GMM) estimator was employed to analyze collected data.

Model Specifications

Models used in this study were adapted from the work of Elkalla (2017), who employed Rowchowdhury's (2006) model to measure REM are in three different forms as shown below:

Operating cash flow: REM1= $\frac{CFO_t}{A_{t-1}} = \alpha_1\left(\frac{1}{A_{t-1}}\right) + \alpha_2\left(\frac{S_t}{A_{t-1}}\right) + \alpha_3\left(\frac{\Delta S_t}{A_{t-1}}\right) + \varepsilon_t \ldots\ldots \text{eqn (1)}$

Production costs: REM2: $\frac{PROD_t}{A_{t-1}} = \alpha_1\left(\frac{1}{A_{t-1}}\right) + \alpha_2\left(\frac{S_t}{A_{t-1}}\right) + \alpha_3\left(\frac{\Delta S_t}{A_{t-1}}\right) + \alpha_4\left(\frac{\Delta S_{t-1}}{A_{t-1}}\right) + \varepsilon_t eqn(2)$

Discretionary expenses REM3: $\frac{DISX_t}{A_{t-1}} = \alpha_1\left(\frac{1}{A_{t-1}}\right) + \alpha_2\left(\frac{\Delta S_{t-1}}{A_{t-1}}\right) + \varepsilon_t \quad \ldots\ldots\ldots\ldots\ldots\ldots eqn\ (3)$

Thus, study models go as follows;

FVAL= β_0 + β_1REM1it + β_2FGit + β_3LEVit + β_4ROEit + β_5FZit +U.....eqn (4)

FVAL= β_0 + β_1REM2it + β_2FGit + β_3LEVit + β_4ROEit + β_5FZit +U.....eqn (5)

$FVAL = \beta_0 + \beta_1 REM3it + \beta_2 FGit + \beta_3 LEVit + \beta_4 ROEit + \beta_5 FZit + U$……..…eqn (6)

Where, At-1 = Total assets of firm i in year t-1; St = Total sales of firm i in year t; ΔSt = Change in Total sales of firm i in year t.; FVAL=Firm Value; REM1= represent Abnormal Operating Cash Flow (AOCF) ; REM2= represent Abnormal Production Costs (APCO); REM3= represent Abnormal Discretionary Expenses (ADIXE): FG= Firm Growth; LEV= Leverage; ROE= Return on Equity; FZ=Firm Size.

Table 1. Measurement of Variables

S/N	Variable	Acronym	Type	Measurement and Sources
1	Firm Value	FVAL	Dependent	Measured by Tobin's Q using Equity Market Value (EMV) + book value of total debt ⁄. Equity Book Value (EBV) + book value of total debt (Darmawan *et al.,* 2019).
2	Abnormal Operating Cash flow	REM1	Independent	As shown in eqn. (1), Elkalla (2017)
3	Abnormal Production Costs	REM2		As shown in eqn. (2), Elkalla (2017)
4	Abnormal Discretionary Expenses	REM3		As shown in eqn. (3), Elkalla (2017)
5	Firm Growth	FG	Control	Natural log of revenue of a firm, Nanik and Nur (2019)
6	Leverage	LEV		Ratio of debt to Total Asset (TA) (Ahmed *et al.,* 2021).
7	Return on Equity	ROE		Earnings ⁄. Capital employed, (Challen & Siregar, 2012).
8	Firm Size	FZ		Natural log of total asset of firm (Rahman & Xiong, 2021)

Source: Authors' Compilation, 2023

4. Results of the Analysis

4.1 Descriptive Statistics

Table 2 shows descriptive statistics of study variables. Firm value, REM1, REM2, FG, LEV, ROE, FZ have positive mean values of (43.09, 0.037, 0.053, 3.11, 29.68, 18.647 and 4.917) respectively. This implies that there is an improvement in firm value of selected manufacturing firms in Nigeria. However, REM3 has negative mean value of (-0.202). More so, all the variables have positive standard deviation of 24.18, 0.20, 0.33, 0.21, 7.37, 17.69, 15.42 and 5.06 for firm value, REM1, REM2, REM3, FG, LEV, ROE, FZ respectively.

Table 2. Descriptive Statistics

Variables	Obs.	Min.	Max.	Mean	Std. Dev.

FVAL	836	.079	98.823	43.090	24.178
REM1	836	-1.795	2.031	.0368	.2006
REM2	836	-4.696	3.089	.0535	.3329
REM3	836	-1.084	4.218	-.203	.213
FG	836	.0001	45.345	3.112	7.375
LEV	836	.535	94.225	29.68	17.696
ROE	836	.0189	77.105	18.647	15.425
FZ	836	.0007	51.724	4.917	5.056
Number of Samples	76	76	76	76	76

Note: Obs: Observation, Min: Minimum, Max: Maximum, Std. Dev. Standard Deviation
Source: Authors' Compilation, 2023
Note: FVAL=Firm Value; REM1= AOCF; REM2= APCO; REM3= ADIXE: FG= Firm Growth; LEV= Leverage; ROE= Return on Equity; FZ=Firm Size.

4.2 Correlation Matrix

Table 3 shows relationships between the model study variables and test for multicollinearity using Variance Inflation Factor (VIF). All the study variables showed low correlation between each other as they less than 0.5. Furthermore, the highest VIF value computed for REM1 was 1.26, which is below the threshold of 5, demonstrating that multicollinearity is not a major issue for the study model variables.

Table 3. Correlation Matrix

	FVAL	REM1	REM2	REM3	FG	LEV	ROE	FZ	VIF
FVAL	1								1.04
REM1	0.036	1							1.16
REM2	-0.125	-0.064	1						1.24
REM3	0.064	0.414	0.059	1					1.10
FG	-0.061	-0.058	0.119	-0.153	1				1.09
LEV	-0.394	-0.075	0.005	-0.002	0.181	1			1.06
ROE	0.089	0.037	0.074	-0.009	-0.138	-0.139	1		1.04
FZ	-0.162	-0.052	0.059	-0.005	-0.024	0.108	-0.013	1	1.02

Source: Authors' Compilation, 2023
Note: FVAL=Firm Value; REM1= AOCF; REM2= APCO; REM3= ADIXE: FG= Firm Growth; LEV= Leverage; ROE= Return on Equity; FZ=Firm Size.

4.3 Effect of Real Earnings Management (REM) on Firm Value

Table 4 shows the results of GMM estimator on the effect of REM on Firm Value (FV). REM1 and REM2 (β=-1.60; -0.85; P>|t|=0.109; 0.396 > 0.05) reveals negative and insignificant effect on FV respectively. However, REM3 (β=2.57; P>|t|= 0.010 < 0.05) showed positive and significant effect on FV. With regards to control variables, FG, and ROE (β=0.58; 0.49; p>|t|= 0.564; 0.625>0.05) shows positive influence on FV but insignificant. However, LEV (β=-4.99; P>|t|= 0.000 < 0.05) reveals negative and significant influence while FZ (β=1.98; P>|t|= 0.048 < 0.05) shows positive and significant effect on FV. With regards to Diagnostic tests, Wald chi2 statistics of (684.31 *p*=0.000) and Sargan test statistics (51.53; *p*=0.2030)

confirmed that the study model has a good fit. The Arellano-Bond test for second order autocorrelation AR (2) is (-1.1597, *p*=0.246). Hence, the test's null hypothesis, which says that there is no autocorrelation is correct. Thus, the findings valid for policy inference with diagnostic statistics of AR (2).

Table 4. Effect of Real Earnings Management (REM) on Firm Value

Variables	FVAL Model
FVAL $_{t-1}$	21.56** [0.000]
REM1	-1.60 [0.109]
REM2	-0.85 [0.396]
REM3	2.57** [0.010]
FG	0.58 [0.564]
LEV	-4.99** [0.000]
ROE	0.49 [0.625]
FZ	1.98** [0.048]
Constant	11.94** [0.000]
Wald Chi2 Statistic	684.31 [0.000]
Sargan Test	51.5285 [0.2030]
1st Order Auto Correlation Test	-4.2138 [0.000]
2nd Order Auto Correlation Test	-1.1597 [0.246]

Source: Authors' Compilation, 2023

Note: FVAL=Firm Value; REM1= AOCF; REM2= APCO; REM3= ADIXE: FG= Firm Growth; LEV= Leverage; ROE= Return on Equity; FZ=Firm Size.

bracket [ ] are p-values, ** means statistical significance at 5% level

4.4 Discussion of Findings

REM1 and REM2 which were measured by abnormal cash flow from operation and abnormal production cost respectively with coefficient greater than 0.05 suggests that real earnings management using both sales manipulation and excessive production does not have impact on firm value. The positive effect of REM3 measured by abnormal discretionary expenses on Firm Value (FV) implies that managers of selected firms were using discretionary expenses efficiently not opportunistically meaning that they did not partake in real earnings management for their own personal benefit. This finding is not aligned with Rowchowdhury's (2006) assertion that real earnings management can lower firm value to improve current-period earnings but negatively affects the firm's future cash flow. However, it agrees with the

research findings of Ferdewati (2009). With regards to control variables, positive effect of leverage on FV indicates that selected firms are making use of their capital structure through debt to improve their firm value. The results is line with (Aggrawal & Padhan, 2017; Nekhili *et al.,* 2017). More so, firm size found to have positive influence submits that bigger firms tend to be more have value than small firms. This corroborates with the work of (Prastyorini, 2013; Darmarwan *et al.* 2019) while differ from Shittu and Amao (2022).

5. Conclusion and Recommendations

This study concluded that abnormal cash flow from operation and abnormal production cost have no significant effect on FV. However, abnormal discretionary cost has positive and significant influence on FV. More so, leverage and firm size have a positive impact while ROE and FG were having no significant effect on the FV. Hence, the study recommends that managers make efficient use of discretionary expenses to smooth out fluctuations in earnings and present more consistent profits to boost firm value.

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