

**EFFECT OF EARNINGS MANAGEMENT  
ON FINANCIAL REPORTING QUALITY OF QUOTED INDUSTRIAL GOODS FIRMS  
IN NIGERIA**

**BY**

**JIBRILLA, ISMAIL MUBI  
NSU/GDM/FAA/0049/16/17**

**A DISSERTATION SUBMITTED TO THE SCHOOL OF POST-GRADUATE STUDIES,  
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**FORENSIC ACCOUNTING AND AUDITING  
INSTITUTE OF GOVERNANCE AND DEVELOPMENTAL STUDIES  
NASARAWA STATE UNIVERSITY, KEFFI  
NIGERIA**

**DECEMBER, 2019**

## **DECLARATION**

I hereby declare that this dissertation has been written by me and it is a report of my research work. It has not been presented in any previous application for the degree. All quotations are indicated and sources of information specifically acknowledged by means of references.

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ISMAIL JIBRILLA MUBI  
NSU/GDM/FAA/0069/16/17

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DATE

## CERTIFICATION

This Dissertation entitled, “Effect of earnings management on financial reporting quality of quoted industrial goods companies in Nigeria” meets the regulations governing the award of Master of Science Degree in Forensic Accounting and Auditing, Institute of Governance and Developmental Studies, Nasarawa State University, Keffi for its contribution to knowledge and literary presentation.

-----  
Prof. S. A. S. Aruwa  
Chairman, Supervisory Committee

-----  
Date

-----  
Prof. T. D. Lagi  
  
Director

-----  
Date

-----  
Dr. Musa Naburgi  
  
Internal Examiner

-----  
Date

-----  
  
External Examiner

-----  
Date

-----  
Prof. J. M. Ayuba  
  
Dean, School of Postgraduate Studies

-----  
Date

## **DEDICATION**

This project is dedicated to my family especially my mother for her kindness and devotion, for the moral and financial support through the period of my study. Your selflessness will always be remembered.

## **ACKNOWLEDGEMENT**

First and foremost, I would like to give thanks to Almighty Allah, for giving me the strength to do this project from the beginning to the end. I also wish to thank my family for providing me with moral support, advice, and to also express my gratitude for their financial support in having the opportunity to study and the means to afford all the materials and requirement that I used during this project.

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## Abstract

*Companies with better quality of financial information are associated with subsequent higher performance, due to the fact that the market positively assesses those companies which are more committed to the issuance of good information for shareholders and other stakeholders, aiming to reduce or avoid information asymmetries between market participants. Financial information issued by a company has become an essential resource for any market participant, since it provides a reduced amount of information asymmetries between managers, investors, regulatory agencies, society and other stakeholders. Therefore, the study examined the effect of earnings management on financial reporting quality of quoted Industrial goods firms in Nigeria from 2007 to 2016. Census sampling method was used as all the (17) quoted industrial firms were used for the study. Ex-post facto and causal research design was adopted and panel multiple regression was used to ascertain the effect. The data were collected from the company annual report using secondary method. From the analysis, the study discovered that accrual earnings management has negative effect on financial reporting quality and real earnings management has positive significant effect on financial reporting quality of Industrial firms in Nigeria. Therefore, the study recommends that Management should avoid the accrual management activities such as trying to manipulate the accounting techniques used in accounting preparation because it reduces the quality of their financial statement which is also affecting the performance of an organization negatively. Also, the real activities of the company such as promotion discount, cutting discretionary expenses i.e. advertising cost, research and development etc. should be adopted to improve cash flow by the management of an organization because it has a positive effect on the general reporting quality of an organization. This technique should be used in the short term to avoid a loss situation because long term usage may have negative consequences on the firm's future cash flow.*

## TABLE OF CONTENTS

DECLARATION .....	ii
CERTIFICATION .....	iii
DEDICATION .....	iv
ACKNOWLEDGEMENT .....	v
Abstract .....	vi

### CHAPTER ONE

#### INTRODUCTION

1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	4
1.3 Research Questions .....	6
1.4 Objectives of the Study .....	6
1.5 Statement of the Hypotheses.....	7
1.6 Significance of the Study .....	7
1.7 Scope of the Study .....	8

### CHAPTER TWO

#### LITERATURE REVIEW

2.1 Conceptual Framework.....	9
2.1.1 Concept of Earnings Management .....	9
2.1.1.1 Accrual Earnings management.....	11
2.1.1.2 Real Earnings Management.....	12
2.1.2 Concept of Financial Reporting Quality .....	13
2.2 Empirical Review.....	14
2.2.1 Accruals earnings management and Financial Reporting Quality .....	14
2.2.2 Real earnings management and Financial Reporting Quality .....	18
2.3 Theoretical Framework.....	23
2.3.1 Agency Theory .....	23
2.3.2 Stewardship Theory .....	25
2.5 Summary .....	26

**CHAPTER THREE**  
**RESEARCH METHODOLOGY**

3.1	Research Design.....	27
3.2	Population, Sample and Sampling Techniques.....	27
3.3	Methods of Data Collection.....	27
3.4	Technique for Data Analysis and Model Specification.....	28
3.5	Justification of Methods.....	31

**CHAPTER FOUR**  
**DATA PRESENTATION AND ANALYSIS**

4.1	Data Presentation.....	32
4.2	Data Analysis and Results.....	32
4.3	Discussion of Findings.....	38

**CHAPTER FIVE**  
**SUMMARY, CONCLUSION AND RECOMMENDATION**

5.1	Summary.....	40
5.2	Conclusion.....	41
5.3	Recommendations.....	42
5.4	Limitation of the Study.....	42
5.5	Suggestion for further Studies.....	43
	References.....	44
	Appendix.....	49

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

The importance of financial statement in providing valuable information about the financial position and performance of an entity in a standardized form to investors, regulators, financial analyst and other users in making economic decisions is very significant. The basic objective of financial reporting is to provide information about an enterprise that is useful to a wide range of users in making economic decision. Though, the validity of this objective is being questioned by many users of corporate financial reports because of the probable impact of earnings management on information contents of such reports.

Financial information issued by a company has become an essential resource for any market participant, since it provides a reduced amount of information asymmetries between managers, investors, regulatory agencies, society and other stakeholders. Companies with better quality of financial information are associated with subsequent higher performance, due to the fact that the market positively assesses those companies which are more committed to the issuance of good information for shareholders and other stakeholders, aiming to reduce or avoid information asymmetries between market participants.

Financial reporting quality is a broader concept that not only refers to financial information, but also to disclosures, and other nonfinancial information that is usefully attached in the reports for decision making, hence it is a main concern for both present and potential investors (Van Beest, Braam, & Boelens, 2009).

Earnings management undermines financial reporting quality when managers use judgments in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying performance of the company or to influence contractual outcomes that depend on reported accounting numbers (Healey & Wahlen, 1999). Earnings management is primarily accomplished through accounting transactions that are designed to achieve desired earnings level. Earnings management not only conceals the company actual performance, but it also masks underlying trends in revenue and earnings growth, which help to build expectations of future growth and product demand (McNichols & Stubben, 2008).

Lin (2006) opines that earnings management involves those techniques which are openly displayed (window dressing) as well as those which are sophisticated ones (off-balance sheet financing). According to Merchant and Rockness (1994), earnings management is management action which can distort profits and which is not a consequence of the economic reality, it actually represents the privilege of the financial engineering. Thus, the economic entity is presenting to the investors or to the prospective investors financial statement passed through the filter of some techniques capable of generating a more favourable image on the market but also the illusion of some more attractive results. A

firm can intentionally alter reported financial results, i.e., income statement and statement of cash flows, or reported financial position, i.e., the balance sheet, in some desired amount and/or some desired direction.

In accounting environment, companies manipulated their financial statements to avoid payment of tax, while earnings management was also left by the authorities responsible due to the weakness and ineffective financial regulations (Masud, 2013). Most of the country's accounting standards issued by Nigerian Accounting Standard Board (NASB) were insufficient and outdated to provide the necessary guidance to the accountants, auditors and managements in the preparation and presentation of high quality financial statements that ensure integrity and credibility of the global financial reporting framework. These problems mandated Financial Reporting Council of Nigeria to implement International Accounting Standards Board (IASB), International Financial Reporting Standards (IFRSs) by all public quoted companies and companies with significant public interest effective from 1 January 2012 for comparable, uniform and high quality financial statement with other countries of the world (IFRS Foundation survey in Nigeria 2011). There is a need to checkmate the activities of the company management in order to reduce these earnings management activities in an organization by appropriate authorities.

Therefore, this study is motivated to examine the effect of earnings management on financial reporting in quoted industrial firms in Nigeria.

## **1.2 Statement of the Problem**

Public listed firms is the most flourishing of all business forms because of its ability to raise large sums of capital by issuing shares to the public and offering shareholders limited liability. To provide owners, potential owners, and other stakeholders with information about the condition of the firm, management has to file period financial statements with the Securities and Exchange Commission. These statements are the basis for estimating the riskiness and value of the firm. As a result, the validity and accuracy of these documents are essential for the efficient allocation of resources within the economy. Though, this information is vital to users of such, it is however not reliable at times as a result of alteration by the management through earnings management activities.

Despite the increasing interest in the effect of earnings management on financial reporting quality, there is no in-depth study related to earnings management to test both accruals and real earnings management effect on financial reporting quality of industrialgoods firms in Nigeria. Most of the studies only concentrate on accrual earnings management without much concentration on real earnings management. Therefore, there is a need to study both accrual and real earnings management on industrial goods firms and to ascertain its effect on financial reporting quality.

Furthermore, most studies in this area focus on other sectors such as the study of Amadi, Sullivan and Franklin (2014), Auwalu (2015), Rahman, Sulaiman, Fadel and Kazemian (2016) without empirical findings in Industrial goods firms in Nigeria.

Study of Amadi, Sullivan and Franklin (2014) focus on the Nigeria consumer goods firms to investigate the effect of earnings management on financial statement. The estimates of the discretionary accruals were based on Jones model and modified Jones model. The study make use of only net accrual earnings management therefore, this study will used both accrual earnings and real earnings management to estimate earnings management. Auwalu (2015) assess the impact of international financial reporting quality on financial reporting quality. This study found that there is a positive relationship between less-earnings management and financial reporting quality as a result of the adoption of IFRS. Auwalu (2015) make use of less earnings management while this study will make use of both accrual earnings and real earnings management to measure earnings management.

In addition, Rahman, Sulaiman, Fadel and Kazemian (2016) determined the relationship between accruals earnings management as a proxy variable for discretionary accruals and real earnings management as the proxy for discretionary cash flow in Bursa Malaysia from 2001 to 2013. This study used both accrual earnings and real earnings management in Nigeria industrial firms from 2007 to 2016.

Therefore, to the extent of literature review, none of the study examined effect of earnings management on financial reporting of the Nigeria industrial goods firms. Also

none of the study used both accrual earnings and real earnings management to measure earnings management in Nigeria industrial goods firm. Therefore, this study filled this gap by examining the effect of earnings management on financial reporting quality of Nigeria industrial firms from 2007 to 2016 by using accrual and real earnings management to measure earnings managements.

Hence, this study ascertained the effect of real and accrual earnings management on the financial reporting quality of quoted industrial firms in Nigeria.

### **1.3 Research Questions**

The following research questions were answered in the study:

- i. What is the effect of accruals earnings management on financial reporting quality of quoted industrial firms in Nigeria?
- ii. To what extent does real earnings management affect financial reporting quality of quoted industrial firms in Nigeria?

### **1.4 Objectives of the Study**

The main objective of the study is to examine the effect of earnings management on financial reporting quality of quoted Industrial goods firms in Nigeria. The specific objectives are to:

- i. assess the effect of accruals earnings management on financial reporting quality of quoted industrial firms in Nigeria.

- ii. evaluate the effect of real earnings management on financial reporting quality of quoted industrial firms in Nigeria.

## **1.5 Statement of the Hypotheses**

The following hypotheses were tested in the study:

**H<sub>01</sub>:** Accruals earnings management has no significant effect on financial reporting quality of quoted industrial firms in Nigeria.

**H<sub>02</sub>:** Real earnings management has no significant effect on financial reporting quality of quoted industrial firms in Nigeria.

## **1.6 Significance of the Study**

This study adds to the existing literatures on the effect of earnings management on financial reporting quality in industrial firms in Nigeria by providing evidence on the effect of accruals earnings management and real earnings management on financial reporting quality in Nigeria industrial firms.

Also, policy makers will use the findings from the study to detect earnings management practices and formulate policies that will help in reducing these practices in Nigeria industrial firms.

The study will assist users of accounting information most especially investors to make decisions before investing in Nigeria Industrial firms.

## **1.7 Scope of the Study**

The study examined the effect of earnings management on financial reporting quality of quoted industrial firms in Nigeria for the period of 2007-2016. The 17 quoted Industrial firms on the Nigeria stock exchange as at 2016 were used for this study. Accrual earnings management and real earnings management were used as earnings management measure while financial reporting was measured by the quality of financial report. The period is considered adequate enough to evaluate the influence of earnings management on financial reporting quality.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Conceptual Framework**

##### **2.1.1 Concept of Earnings Management**

Earnings management according to Stanley and Waldron (2007) is a deliberate action taken within GAAP to bring about desired earnings outcomes. They argue that GAAP is rule based, but the wide latitude flexibility that exist in its application, and many subjective judgments and assumptions must be made in determining accrual-based earnings. Brown (1999) notes that it is precisely this latitude, flexibility, use of judgment, and subjectivity in applying GAAP that allow earnings management to flourish. Pitman (2001) define earnings management as the use of judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting judgment.

Merchant and Rockness (1994) defined earnings management as any action from management which can distort profits and which is not a consequence of the economic reality, it actually represents the privilege of the financial engineering. Thus, the economic entity is presenting to the investors or to the prospective investors financial statement passed through the filter of some techniques capable of generating a more favourable image on the market but also the illusion of some more attractive results. A firm can intentionally alter reported financial results, i.e., income statement and statement

of cash flows, or reported financial position, i.e., the balance sheet, in some desired amount and/or some desired direction.

Brown and Higgins (2001) earnings management occurs as management seeks to enhance share-price performance because of the resultant benefit accruing to them from their stock-based compensation packages. Church, Mcmillian and Schneider (2001) note that earnings-based bonus plans and restrictive debt covenants can create economic incentives for managers to manipulate earnings. They argue that the objective of such behavior is to maximize the present value of bonus income and maintain compliance with debt covenants. Such behavior may involve the use of discretionary accruals and accounting changes, it may also be affected through deliberate, non-GAAP manipulations of financial data.

Jara and López (2011) defined earnings management as a strategy used by the management of a company to modify the firm's earnings so that the figures match a predetermined target. "Earnings management involves the alteration, or manipulation, of firm reported economic performance by insiders.

Schipper (1989) states that financial statement manipulation can be divided into two separate but often blurred categories: earnings manipulation and earnings management. He argues that the distinguishing characteristic between manipulation and management is somewhat subjective but it is generally seen as a technique(s) used in preparing financial information that is either misleading or inaccurate. The difference according to Schipper (1989) can rest in whether the technique used might fall within or outside the

requirements and recommendations provided by the Generally Accepted Accounting Principles. Goeland Thakor (2003) earnings smoothing is a special case of earnings management involving inter-temporal smoothing of reported earnings relative to economic earnings; it attempts to make earnings less variable over time. They distinguish two types of earnings smoothing (artificial and real smoothing) and argue that real smoothing involves the changing the timing of cash flows from investments and providing promotional discount and provide financing to risky customers to boost sales. On the other hand artificial smoothing involves the use of flexibility afforded by the Generally Accepted Accounting Principal to attain desired sales level. Jackson and Pitman (2001) argue that earnings management represents purposeful intervention in the financial reporting process with the intent of obtaining personal gains.

In This study, earnings management is sub-divided into accrual earnings management and real earnings management.

#### **2.1.1.1 Accrual Earnings management**

Most literature has addressed the subject of earnings management by management through manipulation of accruals by decomposing it into discretionary and non discretionary components (Jones, 1991). Accrual is the difference between earnings and cash flow from operations. Islam, Ali and Ahmad (2011) note that discretionary accruals represent managerial interventions into the financial reporting process. They note, “The trick for researchers is to identify the discretionary component of accruals. They summarized three widely used techniques for estimating discretionary accrual as follows:

Islam, Ali and Ahmad (2011) state that accruals are a sure way for managers to manage earnings because it does not normally require disclosure and most often auditors do not question it. The extended Jones model uses “current period expenses, trade accounts payable at year-end, depreciation expense, and retirement benefits expense” in addition to total assets, current period revenues, balance of trade accounts receivable at year-end, and gross property, plant and equipment at year-end employed by the modified Jones model, to determine existence of earnings management.

Stubben (2010) examined revenue and accrual models in their ability to detect both simulated and actual earnings management. He finds that revenue models are less biased than accrual models, and that revenue models are better specified and more powerful in comparison to the accrual model. He also found that the revenue model is more likely to detect a combination of revenue and expense manipulation. Stubben’s methodology and findings though significant, are very dependent on the simulation of revenues and expenses. In the study, Stubben assumed a one percent of total asset manipulation of revenues, one percent of total assets manipulation of expenses and a combination of both one percent of total asset manipulation of revenues and expenses.

#### **2.1.1.2 Real Earnings Management**

Another means used by management to manage their earnings is by manipulating real activities (real earnings management) in order to meet certain earnings forecast. Real earnings management is not the same as accounting earnings management (accruals). According to Hashemi and Rabiee (2011), accounting earnings management involves pure accounting statement choices under GAAP, while real earnings management does

not involve accounting statement choices but instead involves changes in the timing or structuring of operations, investments, and/or financing transactions that have cash flow consequences. Hashemi and Rabiee (2011) show that with firms listed in Tehran Stock Exchange, there is a relationship between the use of earnings management and the expectation of unexpected income. They show that firms employ real earnings management first and then later augment with accounting earnings management to achieve desired income. They caution that their findings may be dependent on the income smoothing and unexpected earnings model employed in the study.

Thus, this study agrees with the concept of real earnings management by Hashemi and Rabiee (2011).

### **2.1.2 Concept of Financial Reporting Quality**

Financial reporting quality is a broader concept that not only refers to financial information, but also to disclosures, and other nonfinancial information that is usefully attached in the reports for decision making, hence it is a main concern for both present and potential investors (Van Beest, Braam&Boelens, 2009). Financial Accounting Standards Board Statement of Financial Accounting Concepts No. 1 (1978), states that financial reporting of entities is aimed to inform current and potential investors the expected firm's cash flows in making rational investment decision. Providing high quality financial reporting information is important, hence it will influence capital providers and other firm stakeholders positively in making investment, credit, and other similar resource allocation decisions for the overall market efficiency (IASB, 2006; & 2008). Accordingly, AICPA (1970) defines the purpose of financial accounting and

financial statements as “the provision of quantitative financial information about a business enterprise useful to the statement users.

Financial statement provides information about the financial position and performance of an entity in a standardized form to investors, regulators, financial analyst and other users in making economic decisions. Accounting standards is a set of rules to abide when preparing and presenting financial reports of an entity by preparers to ensure the standard across the market, and companies listed on the stock exchanges are to publish their financial statement in accordance with the relevant accounting standards (Hung &Subramanyam, 2007).

This study agrees with the concept of financial reporting quality by Van Beest, Braam and Boelens (2009) that Financial reporting quality is not only referring to financial information, but also to disclosures, and other nonfinancial information that is usefully attached in the reports for decision making.

## **2.2 Empirical Review**

### **2.2.1 Accruals earnings management and Financial Reporting Quality**

Rahman, Suleiman, Fadel and Kazemian (2016) determined the relationship between accruals earnings management as a proxy variable for discretionary accruals and real earnings management as the proxy for discretionary cash flow in 57 alleged fraud firms in Bursa Malaysia from 2001 to 2013. The study found a significant negative relationship between accruals earnings management and real earnings management among the fraud firms in Malaysia, suggesting that these firms aggressively manage earnings downwards

or upwards essentially to avoid regulators scrutiny apart from aiming to achieve personal incentives. The findings indicate that firms opt for real earnings management and make full use of its distinguished features of not easily traceable to continue managing earnings immediately subsequent to fraud year. The scope of the study could have been extended to 2015 since the study is conducted 2016 hence there is time lag in the study.

Amadi, Suvillan and Franklin (2014) investigated the relationship between the variance of selected financial statement accounts (Accounts Receivable (AR); selling, General and Administrative expense (SG&A); and Net Change in Accruals (NCA)) and the frequency with which a firm meets, or beats analysts' earnings forecast. The study focused on the consumer goods sector. The objective was to examine if the selected financial statement of accounts are purposefully used by management to manipulate earnings in order to meet and/or beat analysts' earnings forecasts. The estimates of the discretionary accruals were based on Jones model, and/or modified Jones model. The study found that there is a significant difference between the variance of SG&A and NCA of the firms that meet and/or beat the analysts' forecast and those that do not. The study also found that accounts receivable significantly affects the frequency of meeting and/or beating the analysts' forecast.

Demerjian, Lev and Mcvay (2006) studied and test the relationship between management's capability and quality of financial reporting. By creating a model which measures management's capability, and also separating management's specific effects from entity's specific effects, they try to identify management's specific effects. The results of their study indicate that the quality of financial reporting has a positive

relationship with management's capability. The study failed to establish diagnostic relationship between the independent variables.

MeilaniPurwanti (2013) examined the effect of earnings management and disclosure on information asymmetry from the public sector property companies, real estate and building construction in Indonesia Stock Exchange. Data analysis was conducted using data polled cross-section that includes 37 property companies, real estate and building construction and financial statement. Earnings management is measured by working capital accruals, measured by an index voluntary disclosure, and information asymmetry measured by abnormal returns. The result provided shows that earnings management does not affect the information asymmetry. Also, disclosure has significant negative effect on the information asymmetry.

Tucker and Zarowin (2006) investigated whether income smoothing mis-states earnings information or increases the informativeness that current earnings provide about future earnings and cash flows. The results show that the degree of management's authority in financial reporting can clarify more information about future earnings and cash flows. Also, the results reveal that income smoothing increases earnings persistence.

Auwalu (2015) assessed the impact of international financial reporting standard on financial reporting quality. This study found that there is a positive relationship between less-earnings management and financial reporting quality as a result of the adoption of IFRS. In addition, value-relevance positively associated with the quality of financial report. The study suggests that managers should ensure value-relevance and timeliness on

financial reports in order to measure how these factors would influence the quality of financial reports.

Yadollah, Mehdi and Maryam (2012) investigated the effect of earnings management on financial reporting of 70 listed companies in Tehran Stock Exchange. The findings of the study indicated that earnings management through accruals decreased the quality of financial reporting, that is, the purpose of performing earnings management was to misstate and distort financial reports and managers performed it to opportunistically benefit themselves since earnings management decreased the accuracy of predicting future operating cash flows. However, earnings management had no effect on the persistence of accounting profit.

Daniel and Andhika (2015) analysed the factors that influence financial statement fraud in the perspective of fraud diamond. Proxy variables of this research using pressure that is proxied by financial stability, external pressure, and financial targets; opportunity is proxied by ineffective monitoring and nature of the industry; rationalization is proxied by the turn of the auditor and capability is proxied by the change of directors. The study used banking company listed in Indonesia Stock Exchange. The results of this research indicate that the variable pressure is proxied by financial stability, external pressure, and financial targets; Opportunity is proxied by ineffective monitoring and nature of the industry; Rationalization is proxied by the turn of the auditor and Capability proxied by the change of directors. But in this research proves that the Variable Pressure with proxies financial stability, external pressure and financial targets; Opportunity Variable, Nature of the Industry, Ineffective Monitoring and Rationalization variables change in the

Auditor does not affect the financial statement fraud while Capability variable with proxy turn of directors gave a positive and significant effect on the Financial Statement Fraud. Daniel and Andhia (2015) did not conduct a variance inflation factor multicollinearity test which will enable them know which of the data from the variables have collinearity problem.

Farzin and Roshani (2012) assessed earnings management in Iran and the effect of discretionary accruals, as a proxy for earnings management, on future profitability. Also, the study considered the effect of firm size, ownership structure, audit quality and the proportion of independent board members on it using a sample of 167 firms in a 6 year financial period from 2004 to 2009. It was analyzed using fixed effect regression method. The results show that managers tends to use efficient earnings management in Iran and firm size, ownership structure, audit quality and the proportion of independent board members can influence on the type of earnings management.

Farichah (2017) examined how the intensity of management in earnings management, how the earnings quality before and after the implementation of IFRS and whether earnings management affects the earnings quality. The results revealed that the intensity of management in earnings management is higher when it is compared to the one after the implementation of IFRS, by looking at the amount of discretionary accrual.

### **2.2.2 Real earnings management and Financial Reporting Quality**

Pae and Quinn (2011) investigated whether firms that issue new bonds engage in earnings management, and if they do whether they use accrual-based or real activities.

They use abnormal cash flow from operation (CFO), abnormal discretionary expenses, and abnormal production cost to proxy for real activities management. With a sample of bonds issuing firms from 1992 to 2002, it was discovered that these firms increase their accruals before issuing bonds, and then decrease the accruals after the issuance year. Also, that bond issuers also engage in real earnings management. As refreshing as it is to know that firms that issue bonds not only manage earnings via accruals but that they also use real operating activities to manage earnings, the study still relied on the estimation of normal and abnormal accruals.

Cohen, Mashruwala, and Zach (2010) examined whether managers engage in real earnings management to meet quarterly financial reporting benchmarks. Their study uses advertising expenditures as the instrument of real earnings management. It was found that there is evidence of earnings management (abnormal or residual) of a firm's monthly advertising time series regression. The study discovered that managers of the sample firms reduce advertising spending to avoid losses and earnings decrease. On the contrary, they also find that mature firms tend to increase advertising to meet earnings benchmarks. Their findings do not indicate actions aimed at distorting financial statement information. Rather it shows that managers respond to changing operating results by altering the levels of operating activities.

Hamilton and Justin (2012) assessed the management of financial fraud in quoted companies in Nigeria employing a sample of 22 firms and using the questionnaire and oral interviews as study instruments, data was obtained, and analyzed using simple percentages and frequency distribution tables. It was found that poor internal systems are

the major cause of fraud in Nigeria organizations, Funds diversion is the commonest kind of fraud. Furthermore, most business organizations do not make fraud cases public. Also, young people within the age brackets of 31-40 years and polygamists recorded highest cases of involvement in fraudulent acts among the employees and the frequency of Males involvement in fraudulent act surpassed that of females.

Kingsley (2015) examined unethical accounting and financial practices designed to boost earnings and to meet financial market expectations, he discussed financial shenanigans and earnings management and what motivate managers to engage in unethical financial practices. This paper explores the role accounting standards play in the creative accounting practices by the corporate manager. He also looked at the role accounting rules and standards, auditors and external factors play in earnings management and revenue recognition.

Perols and Lougee (2011) used a sample of 108 US fraud and non-fraud firms found that there is a significant positive relation between aggregated discretionary accruals three years prior to fraud year and fraud firms. However, they found a marginal significant relationship between real earnings management and fraud firms. Further analysis prior to fraud year indicates positive relations between real earnings management and fraud firms.

Hafiza and Susela (2012) studied the relationship between institutional ownership in Malaysia and the quality of reported earnings covering 1998 to 2006. Given the typically significant stake and unique position of influence, participation from active institutional investors is said to provide an effective monitoring role in the companies in which they invested. Using the accrual quality model to measure earnings quality, the study provides

evidence that concentrated shareholdings, in the hands of institutional investors, afford greater incentives to closely monitor firms' activities. The results confirm the active monitoring hypothesis, which suggests that institutional investors are likely to actively monitor their investments due to the large amount of wealth they invested.

Bala and Ibrahim (2016) determined the relationship between monitoring characteristics and financial reporting quality of Listed Conglomerates Firms in Nigeria. The study covers the period of six years 2009 to 2014. After running the OLS regression, a robustness test was conducted. A multiple regression was employed to test the model of the study using OLS regression Model. The results from the analysis revealed a positive relationship between board independence, board meetings audit committee independence and audit committee meetings and financial reporting quality of listed Conglomerates Firms in Nigeria. Board financial expertise, audit committee financial expertise and firm size are negatively significantly related to financial reporting quality of listed Conglomerates firms in Nigeria. The study recommended among others that the regulators such as SEC should increase the minimum number of members with financial expertise in the board and also they should have a statutory position on the maximum number of board meetings, as SEC code of corporate governance is silent on this.

Tarjo and Nurul (2015) analyzed the ability of m-score Beneish in detecting financial fraud. This study data refer to companies that commit fraud according to the fraud Database of Sanctions of Issuer Cases Public Companies that was released by the Financial Services Authority in the period of 2001-2014. The results showed that overall Beneish m-score model was capable to detect financial fraud. Gross margin index,

depreciation index, index of sales and general administrative burden and total accruals were all significant in detecting financial fraud. Sales index, asset quality index, and leverage index was statistically not significant in detecting financial fraud.

Hamilton and Justin (2012) ascertained the management of financial fraud in quoted companies in Nigeria employing a sample of 22 firms and using the questionnaire and oral interviews as study instruments, data were obtained, and analyzed using simple percentages and frequency distribution tables. It was found that:- poor internal systems are the major cause of fraud in Nigeria organizations, Funds diversion is the commonest kind of fraud. Furthermore, most business organizations do not make fraud cases public. Also, young people within the age brackets of 31-40 years and polygamists recorded highest cases of involvement in fraudulent acts among the employees and the frequency of Males involvement in fraudulent act surpassed that of females. The study however concludes that even though fraud cannot be completely eliminated from our business life, its occurrence can be minimized through better internal control systems and by placing those personality types with the least propensity to commit fraud in sensitive and vulnerable positions.

Ahmadpour and Shahsavari (2016) investigate the relationship between earnings management and quality of earnings for the bankrupt and non-bankrupt firms listed in the Tehran Stock Exchange from 2007 to 2012. The earnings quality is measured by four separate accounting-based earnings attributes: accruals quality, earnings persistence, earnings predictability; earnings and is also examined by testing the relationship between discretionary accruals as a measure of earnings management, being opportunistic or

efficient earnings management. Also, the future profitability was measured by each of the three variables, future change of earnings, future cash flow from operation, and future non-discretionary earnings. The results of estimating unbalanced panel data technique for 55 firms subjected to bankruptcy of Altman's model, and 198 non-bankrupt firms, shows that the bankrupt firms tend to use opportunistic earnings management, and the non-bankrupt choose efficient earnings management. Moreover, the results show that earnings management performs better than earnings quality in predicting future profitability. Meanwhile, the non-discretionary earnings more effectively than future change of earnings and future cash flow from operation for providing a picture of the future profitability of the firm.

## **2.3 Theoretical Framework**

### **2.3.1 Agency Theory**

According to Jensen and Meckling (1976), agency theory is a contract under which one party (the principal) engages another party (the agent) to perform some service on their behalf. As part of this, the principal will delegate some decision-making authority to the agent. Implicit in this theory is the belief that the agent will be driven by self-interest rather than a desire to maximize the profits for the principal. The board, as an intermediary, is expected to resolve such conflict of interest and minimize the agency costs.

The agency theory is based on the relationship between the principal (owners) and the agent (managers). The separation of ownership from management in modern corporations

provides the context for the function of agency theory. Modern organizations have widely dispersed ownership, in the form of shareholders, who are not normally involved in the management of their companies. In this instance, an agent is appointed to manage the daily operations of the company. This distinction between ownership and control creates the potential for conflicts of interest between agents and principals, which result in costs associated with resolving these conflicts (Jensen & Meckling, 1976; and Eisenhardt, 1989).

The most important basis of agency theory is that the managers are usually motivated by their own personal gains and work to exploit their own personal interests rather than considering shareholders' interests and maximizing shareholder value. Consequently, management has an incentive to manage the company's financial report process in order to meet or beat earning targets and, thus, to receive any bonuses that may be tied to the company's earnings (performance-related pay). This creates an information asymmetry in that managers can exercise the discretion they have on accruals, which in turn reduces the relevance and reliability of reported earnings, and the whole financial statements. Thus, the key predicament indicated by agency theory is ensuring that managers pursue the interests of shareholders and not only their own interests. In order to effectively limit agency costs caused by the separation of ownership and control, Fama and Jensen (1983) propose that firms need a system that can separate decision management from decision control. This would limit agency costs by controlling the power of management and ensuring the proper consideration of shareholders interest.

**2.3.2 Stewardship Theory:** This theory was developed by Donaldson and Davis (1991 & 1993) is a new perspective to understand the existing relationship between ownership and management of the company. This theory arises as an important counterweight to Agency theory.

Stewardship theories argue that the managers or executives of a company are stewards of the owners, and both groups share common goals (Davis, Schoorman, & Donaldson, 1997). Therefore, the board should not be too controlling, as agency theories would suggest. The board should play a supportive role by empowering executives and, in turn, increase the potential for higher performance (Hendry, 2002; Shen, 2003). Stewardship theories argue for relationships between board and executives that involve training, mentoring, and shared decision making (Shen, 2003; Sundaramurthy & Lewis, 2003). Furthermore, the theory advocates that management should disclose information of their operations to the stakeholders in order to enable them make decision.

The stewardship theory established the relationship between the activities of the management of industrial goods in Nigeria with the stakeholders that used the financial statement of the firms. The theory supports the relationship between earnings management variables and financial reporting quality of Industrial firms in Nigeria.

#### **2.4 Gap of the study**

Though studies were carried out in the area but the area of their focus is on other sectors such as the study of Amadi, Sullivan and Franklin (2014), Auwalu (2015), Rahman, Sulaiman, Fadel and Kazemian (2016) without empirical findings in Industrial goods firms in Nigeria which enables the decision to embark on this study.

## **2.5 Summary**

This chapter explains the concept of earnings management and its components used in the study which are the accrual earnings management and real earnings management. Literatures were reviewed based on the objectives of the study while agency theory and stewardship theory were reviewed as the underpinning theories of the study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

The study adopts ex-post facto and causal research design. This design helps to establish the effect of the independent variable on the dependent variable. Therefore, in this study it is used to establish the effect of earnings management on financial reporting quality of quoted Industrial firms in Nigeria.

#### **3.2 Population, Sample and Sampling Techniques**

The population for this study comprised of all the seventeen (17) Quoted Industrial firms in Nigeria as at 31-December, 2016. The study adopted census sampling technique as all the firms were used for this study since there exist all the financial statement of the firms within the period of the study.

#### **3.3 Methods of Data Collection**

Secondary method of data collection was used for collecting data for purposes of examining the effects of earnings management on financial reporting quality of quoted Industrial firms in Nigeria. The data was collected from the published annual report of the firms. Thus, the financial statement of each of these firms was scrutinized to provide the data relevant for the study. The data gathered was for accrual earnings management, real earnings management and financial reporting quality.

### 3.4 Technique for Data Analysis and Model Specification

Data was analysed using panel multiple regression. In order to test the effects of earnings management on financial reporting quality of quoted Industrial firms in Nigeria, Hausman test was done to ascertain whether to accept fixed and random effect of the regression. Also descriptive statistics, correlation matrix and variance inflation factor, heteroskedasticity test was analyzed in the study. Analysis was aided by E-view.

The model of the multiple regression analysis is:

$$FRQ_{it} = \alpha + \beta_1 AEM_{it} + \beta_2 REM_{it} + \beta_3 FS_{it} + \mu_{it}$$

Where

$FRQ_{it}$  = Financial reporting quality of firm i at time t (Roychowdhury, 2006)

$AEM_{it}$  = Accruals earnings management of firm i at time t (Rahman, Sulaiman, Fadel and Kazemian, 2016)

$REM_{it}$  = Real earnings management of firm i at time t (Rahman, Sulaiman, Fadel and Kazemian, 2016)

$FS_{it}$  = Firm size of firm i at time t

$\alpha$  = Constants.

$\beta_1$ -  $\beta_3$  = Coefficient of the variables

$\mu$  = Error term

## Measurement

Accruals earnings management as a proxy variable for discretionary accruals is measured using Jones model as used in studies by Hasnan, Abdul Rahman, and Mahenthiran (2014) and Kothari, Leone, and Wasley (2005). To estimate the accruals earnings management, total accruals (TAC) are measured as the change in non-cash current assets minus the change in current liabilities excluding the current portion of long-term debt, minus depreciation and amortization, scaled by lagged total assets.

The measurement for real earnings management as a proxy variable for discretionary cash flow from operation has been proposed by Roychowdhury (2006). This variable is used to measure sales manipulation. Sales manipulation is defined as managers' attempt to temporarily increase sales during the year by offering price discounts or more lenient credit terms. It is expected that the real management activities will lead to lower current period cash flow and higher production cost and simultaneously causing a negative effect on the abnormal cash flow.

Real earnings management is determined by Roychowdhury (2006). To estimate the model, the following cross-sectional regression for every industry and year:

Estimate the model

$$\frac{CFO_t}{A_{t-1}} = \beta_0 + \beta_1 \frac{1}{A_{t-1}} + \beta_2 \frac{S_t}{A_{t-1}} + \beta_3 \frac{\Delta S_t}{A_{t-1}} + \varepsilon_t$$

Where,

$CFO_t$  = Cash flow from operations in year  $t$ ,

$A_t$  = Total assets in year  $t - 1$ ,

$S_{t-1}$  = Total sales in year  $t$ ,

$\Delta S_{t-1} = S_t - S_{t-1}$  so sales in period  $t$  minus sales in period  $t - 1$ ,

$\beta_0, \beta_1, \beta_2$  and  $\beta_3$  = Parameters to be estimated, namely the betas,

$\varepsilon_t$  = Residuals in year  $t$ .

### **Models applied in measuring the quality of financial reporting**

#### **Barth, Cram and Nelson model (2001)**

In this model, the accuracy of predicting expected future operating cash flows from accounting profit is considered as the quality of financial reporting index. For Measuring the accuracy empirically, residuals of regression of predicting operating cash flows through previous period's earnings components are applied. In this study, the attained residuals from estimating the following regression model are used as the basis for measuring the quality of financial reporting:

$$CFO_{i,t+1} = \alpha_0 + \beta_1 CFO_{i,t} + \beta_2 \Delta ARI_{i,t} + \beta_3 \Delta INVI_{i,t} + \beta_4 \Delta API_{i,t} + \beta_5 DEPRI_{i,t} + \beta_6 OTHER_{i,t} + \varepsilon_{i,t}$$

Where  $CFO_{i,t}$  is the operating cash flows for  $i$  company in year  $t$ ;

$\Delta ARI_{i,t}$  is the changes in accounts receivable;  $\Delta INVI_{i,t}$  is the changes in inventory;

$\Delta API_{i,t}$  is the changes in accounts payable and deferred liabilities;

DEPRI<sub>i,t</sub> is the depreciation expense of tangible fixed assets and amortization of intangible assets;

OTHER<sub>i,t</sub> is the net of other accruals which is measured as follow:

$$OP_{i,t} - (CFO_{i,t} + \Delta AR_{i,t} + \Delta INV_{i,t} - \Delta AP_{i,t} - DEPR_{i,t})$$

OP<sub>i,t</sub> is the operating earnings;  $\epsilon_{i,t}$  is the amount of error which is supposed to have a mean of zero (0) and a fixed variance.

### **3.5 Justification of Methods**

Panel Regression is used in making prediction because of the linearity that exists between dependent and the independent variables. It explains the level of changes in dependent variables for a given level of changes in the independent variables. Pre-diagnostic test of variance inflation, heteroskedasticity test, and serial correlation test was conducted to ascertain to multicollinearity of the variables.

## CHAPTER FOUR

### DATA PRESENTATION AND ANALYSIS

#### 4.1 Data Presentation

The data for the study is attached as appendix which comprised of accrual earnings management, real earnings management and financial reporting quality data. The analysis carried out include the descriptive statistics, variance inflation factor (VIF) of the independent variable, Heteroskedasticity test, regression result and the wald test of the individual variables effect on the dependent variable which is financial reporting quality.

#### 4.2 Data Analysis and Results

**Table 4.1 Descriptive Statistics**

	FRQ	AEM	REM	FS
Mean	0.695320	0.025499	0.009684	10.70322
Median	0.613300	0.033550	0.018075	7.633977
Maximum	5.828255	1.452300	0.177200	17.32000
Minimum	-1.049000	-1.552500	-0.259300	6.745267
Std. Dev.	0.913239	0.407397	0.075520	4.006106
Skewness	2.206007	-0.979692	-0.795117	0.362687
Kurtosis	12.03665	8.394413	4.044041	1.304278
Jarque-Bera	716.3154	233.3171	25.63364	24.09497
Probability	0.000000	0.000000	0.000003	0.000006
Sum	118.2043	4.334840	1.646297	1819.548
Sum Sq. Dev.	140.9468	28.04934	0.963844	2712.262
Observations	170	170	170	170

**Eview output Source:**

The table above described the data used in the study with a mean value of financial reporting quality of 0.695320 and the deviation from the mean which is the standard deviation of 0.913239. This therefore means that financial reporting quality is not normally distributed because the probability of the Jarque-Bera is below 5%. This is due to the fact that, the data cut across many firms which may majorly varied in terms of financial data. Also, the median and the Skewness of financial reporting quality is 0.613300 and 2.206007 respectively. The maximum distribution of financial reporting quality of Industrial goods firms in Nigeria is 5.828255 and -1.049000. The negative aspect of financial reporting quality indicates that the management tries to avoid earnings management in their financial reporting.

In like manner, Accrual earnings management is not normally distributed because the probability of Jarque-Bera is 0.000000 which is less than 5% and the mean as well as the median is 0.025499 and 0.033550. This therefore means that management of Industrial goods firms in Nigeria tries to avoid accruals earnings management because it has a maximum and minimum value of 1.452300 and -1.552500 which is nearer to zero and negative. The nearer to zero of accrual earnings management value the better the financial reporting of a firm which also means that the management did not engage in the earnings management.

Furthermore, real earnings management is nearer to zero because its maximum value is 0.177200 and -0.259300 which is negative. This means that the management of industrial goods firms does not engaged in real earnings management activities as evident by the maximum and minimum

value. In the same vein, it has a mean of 0.009684 with a median of 0.018075. The deviation from the mean is 0.075520 and -0.795117 as the skewness. Firm size has a mean of 10.70322 and median of 7.633977. Firm size is not normally distributed because its probability is below 5% and the standard deviation is 4.006106.

**Table 4.2 Variance Inflation Factors Result**

Variance Inflation Factors

Date: 09/02/18 Time: 18:42

Sample: 1 170

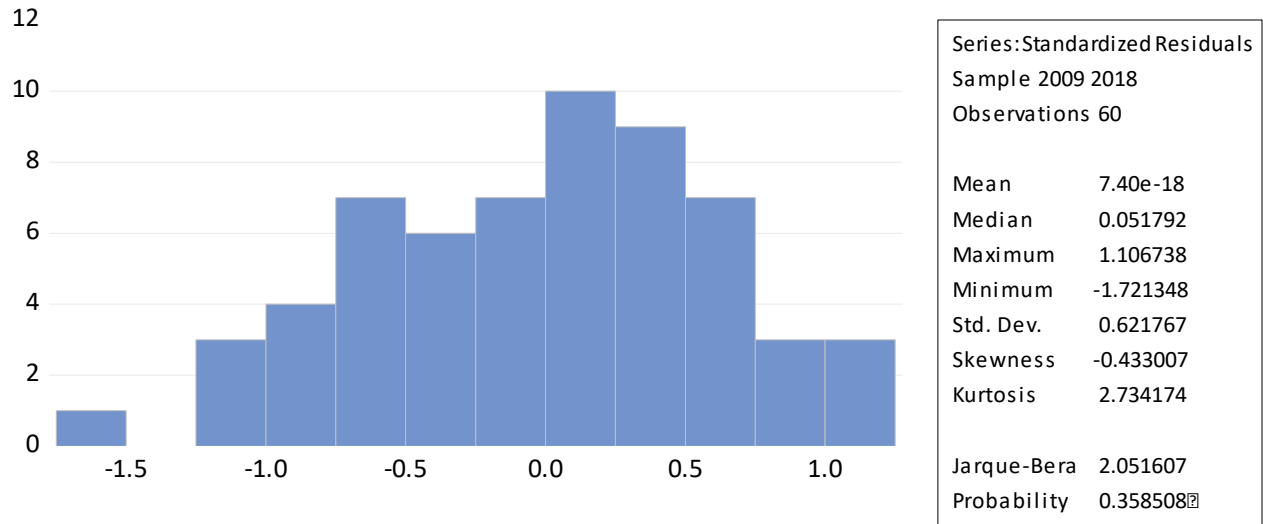
Included observations: 170

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
AEM	0.021354	1.010117	1.006152
REM	0.627447	1.032706	1.015902
FS	0.000224	8.360868	1.022066
C	0.029058	8.298228	NA

**Source: Eview output**

The multicollinearity was check with variance inflation factor and heteroskedasticity test. The variance inflation factor indicates that accrual earnings management has a VIF of 1.010117 while real earnings management has a VIF of 1.032706 and firm size has a VIF of 8.360868. From the values of VIF, it means that the independent variables have nocollinearity problem because the VIF values are below 10.

**Table 4.3 Normality Test**



**Source: Eview output**

The residual of the variables is determined by histogram normality test which indicates that the variables are normally distributed because it has Jarque-Bera probability of 0.358508 which is greater than 5% level of confidence.

**Table 4.4 Regression Analysis Summary**

<b>Variables</b>	<b>Coefficient</b>	<b>t-values</b>	<b>P-values</b>
Constant	-0.459527	-0.454183	0.6504
AEM	-0.055956	-0.375849	0.7076
REM	1.943763	2.240894	0.0265
FS	0.106272	1.126375	0.2618
R <sup>2</sup>	0.393978		
Adj. R <sup>2</sup>	0.317215		
F-stat.	5.132409		
F-sig.	0.000000		
Hausman p-value	0.0062		
Heteroskedasticity Chi-square	0.2268		
HeteroskedasticityProb	0.2300		

**Source: Eview output**

To choose between fixed and random effect model, Hausman specification is run. If the p-value of Hausman specification is greater than 5%, Random model is more appropriate but if the p-value is less than 5%, fixed effect is more appropriate. Hence, from the Hausman specification with p-value of 0.0062, it shows that fixed effect model is more appropriate because the p-value is greater than 5%. Therefore, interpretation of the result is based on the fixed effect model.

From the regression analysis, it is evident that accrual earnings management has negative insignificant effect on financial reporting quality of Industrial goods companies in Nigeria because the p-value is greater than 5% level of confidence. This means that in Industrial goods companies in Nigeria, the manipulative means used in the financial reporting such as accounting techniques does not affect their reporting quality.

Real earnings management has a positive significant effect on financial reporting quality of Industrial goods companies in Nigeria with p-value of 0.0265 which is less than 5% level of confidence. This indicates that increase in the real activities of Industrial goods companies in Nigeria will increase their financial reporting quality. Also increase in 1 unit of real activities of the companies will also leads to increase in financial reporting quality by 1.943763.

Furthermore, firm size as a control variable has no significant effect on the reporting quality of Industrial goods companies in Nigeria because the p-value is greater than 5% level of confidence. The coefficient of determination explained variation on financial

reporting quality to the extent of approximately 39% (0.393978) while the remaining variation is explained by other variables not captured in the model. The model is fit with f-significance of 0.000000.

The heteroskedasticity showed that there is no heteroskedasticity problem because the chi-square is 0.2268 and prob. of 0.2300 is greater than 5%.

### **4.3 Discussion of Findings**

**Ho<sub>1</sub>:** Accruals earnings management has no significant effect on financial reporting quality of quoted industrial firms in Nigeria.

It is evident that accrual earnings management has negative insignificant effect on financial reporting quality of Industrial goods companies in Nigeria. This means that in Industrial goods companies in Nigeria, the manipulative means used in the financial reporting such as accounting techniques does not affect their reporting quality. The study therefore accepts the stated hypotheses that Accruals earnings management has no significant effect on financial reporting quality of quoted industrial firms in Nigeria. This findings is consistent with the findings of Rahman, Suleiman, Fadel and Kazemian (2016), MeilaniPurwanti (2013), Yadollah, Mehdi and Maryam (2012) that accrual earnings management has negative insignificant effect on financial reporting quality but disagrees with the findings of Demerjian, Lev and Mcvay (2006) that accrual earnings management has positive effect on financial reporting quality.

**H<sub>02</sub>:** Real earnings management has no significant effect on financial reporting quality of quoted industrial firms in Nigeria.

Also, Real earnings management has a positive significant effect on financial reporting quality of Industrial goods companies in Nigeria which indicates that increase in the real activities of Industrial goods companies in Nigeria will increase their financial reporting quality. Hence, increase in 1unit of real activities of the companies will also lead to increase in financial reporting quality. The study rejects the stated hypothesis that Real earnings management has no significant effect on financial reporting quality of quoted industrial firms in Nigeria but accept the alternate hypothesis that Real earnings management has significant effect on financial reporting quality of quoted industrial firms in Nigeria.

This findings is tantamount to the findings of Cohen, Mashruwala, and Zach (2010), Perols and Lougee (2011), Farzin and Roshani (2012), that real earnings management has a positive effect on financial reporting quality of companies but not in agreement with the study carried out by Rahman, Suleiman, Fadel and Kazemian (2016), Tucker and Zarowin (2006) that real earnings management has a negative significant effect on financial reporting quality of companies.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Summary**

The importance of financial statement in providing valuable information about the financial position and performance of an entity in a standardized form to investors, regulators, financial analyst and other users in making economic decisions is very significant. The basic objective of financial reporting is to provide information about an enterprise that is useful to a wide range of users in making economic decision. Though, the validity of this objective is being questioned by many users of corporate financial reports because of the probable impact of earnings management on information contents of such reports. Financial information issued by a company has become an essential resource for any market participant, since it provides a reduced amount of information asymmetries between managers, investors, regulatory agencies, society and other stakeholders. Companies with better quality of financial information are associated with subsequent higher performance, due to the fact that the market positively assesses those companies which are more committed to the issuance of good information for shareholders and other stakeholders, aiming to reduce or avoid information asymmetries between market participants.

Earnings management undermines financial reporting quality when managers use judgments in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying performance of the company or to influence contractual outcomes that depend on reported accounting numbers. Earnings management is primarily accomplished through accounting transactions that are designed to achieve desired earnings level. Therefore, the study examined the effect of earnings management on financial reporting quality of Industrial goods firms in Nigeria from 2007 to 2016.

Review was done based on the objectives of the study agency theory as well as the stewardship theory were reviewed as the theory that underpinned the study. Ex-post facto research design was adopted and the panel multiple regression was used to ascertain the effect. From the analysis, the study discovered that accrual earnings management has negative insignificant effect on financial reporting quality of Industrial goods companies in Nigeria and real earnings management has a positive significant effect on financial reporting quality of Industrial goods companies in Nigeria.

## **5.2 Conclusion**

The study ascertained the effect of earnings management on financial reporting quality of quoted Industrial goods firms in Nigeria. From the outcome, the study concludes that accrual earnings management will not influence financial reporting quality of Industrial goods companies in Nigeria because accrual earnings management has insignificant effect on financial reporting quality.

Furthermore, based on the findings of the study, the study concludes that real earnings management will increase financial reporting quality of Industrial goods companies in Nigeria because it has positive effect on financial reporting quality.

### **5.3 Recommendations**

The study recommends that:

1. Management should avoid the accrual management activities such as trying to manipulate the accounting techniques used in accounting preparation because it reduces the quality of their financial statement which is also affecting the performance of an organization negatively.
2. The real activities of the company such as promotion discount, cutting discretionary expenses i.e. advertising cost, research and development etc. should be adopted to improve cash flow by the management of an organization because it has a positive effect on the general reporting quality of an organization. This technique should be used in the short term to avoid a loss situation because long term usage may have negative consequences on the firm's future cash flow.

### **5.4 Limitation of the Study**

This study is limited to the effect of earnings management on financial reporting quality of Industrial goods firms in Nigeria from 2007 to 2016. Earnings management is divided into accrual earnings management and real earnings management and financial reporting

quality is measured by Barth's 2006 model. The study covered all the seventeen (17) quoted industrial firms in Nigeria and Multiple regression is used for the analysis. Therefore, interpretation of the result is limited to the period of the study as well as the sector used in this study.

## **5.5 Suggestion for further Studies**

The study covered Industrial goods companies in Nigeria hence, the study suggest that similar study can be carried out in other sectors in Nigeria and also, the same Industrial goods companies can be used but accrual earnings management can be divided into discretionary and non-discretionary accruals earnings management.

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**Appendix  
Data**

YEAR	COMPANY	FRQ	AEM	REM	FS
2007	AFRICAN PAINTS (NIGERIA) PLC (AFRPAINTS)	-0.033733	0.0432	0.0098	15.23
2008		1.100801	0.0132	-0.00152	15.52

2009		1.139211	0.0021	0.0095	15.77
2010		1.584781	-1.2023	0.0535	15.97
2011		1.624417	0.0056	0.0045	15.79
2012		1.458888	-0.0104	-0.0303	16.23
2013		1.498332	-0.1005	0.0016	16.11
2014		1.156337	-0.0211	0.0305	16.04
2015		1.082421	-0.0201	0.0626	16.28
2016		1.288373	0.0301	0.0071	16.34
2007	ASHAKA CEM PLC (ASHAKACEM)	1.484214	0.0211	0.0487	14.56
2008		1.322976	0.0512	0.07067	14.53
2009		1.26156	0.0482	0.07001	14.64
2010		1.93492	0.0723	0.0514	14.77
2011		1.313204	0.0058	0.0957	14.8
2012		1.525157	0.0026	0.0156	14.88
2013		-0.28366	0.2532	0.0114	15.08
2014		2.727514	0.0823	0.0709	15.11
2015		1.376503	0.2063	0.01802	15.18
2016		0.920902	0.0306	0.03381	15.23
2007	AUSTIN LAZ & COMPANY PLC (AUSTINLAZ)	1.00932	-0.0626	0.06736	16.31
2008		1.084108	0.04676	0.0933	16.45
2009		-0.243664	0.0532	0.00621	16.4
2010		-0.918084	-0.04235	0.00692	16.6
2011		2.321626	0.0612	-0.03596	16.71
2012		1.196982	0.2766	-0.00312	16.93
2013		0.938045	0.0125	0.0193	17.12

2014		1.413794	-0.01086	0.0987	17.11
2015		0.932581	-0.0011	0.09481	17.12
2016		1.016185	-0.1231	0.10328	17.32
2007	AVON CROWNCAPS & CONTAINERS PLC	1.285832	0.0309	0.0999	16.02
2008		1.468525	0.0042	0.0852	15.99
2009		1.193754	0.00321	0.1361	15.48
2010		1.064698	-0.0312	0.04625	16.19
2011		1.158611	0.0171	0.01594	16.35
2012		0.890531	0.00712	0.08114	16.47
2013		0.947482	0.0101	-0.0315	16.53
2014		2.071431	-0.0104	0.03767	16.57
2015		1.169369	0.1105	0.0986	16.66
2016		1.432026	0.0015	0.04887	16.81
2007	BERGER PAINTS PLC (BERGER)	0.793711	0.0851	-0.24234	14.5
2008		1.001762	-0.7901	-0.16362	14.61
2009		1.14453	-0.2004	-0.1123	14.59
2010		5.425963	-0.6313	0.01327	14.68
2011		0.979825	0.6111	-0.0044	14.94
2012		1.213152	-1.1012	0.0326	14.87
2013		0.966258	0.7821	-0.1013	14.93
2014		1.041185	-0.0051	0.0201	14.94
2015		2.768872	0.3313	0.0097	15.04
2016		1.316693	0.5445	0.0309	15.41
2007	BETA GLASS COMPANY PLC (BETAGLAS)	1.310109	0.0771	0.0657	13.37
2008		1.254034	-1.5525	0.0342	13.54

2009		0.903602	0.0052	0.03026	13.57
2010		1.321281	1.4523	0.04738	13.87
2011		1.478728	0.1051	0.01813	13.75
2012		1.214714	0.0305	0.0544	13.76
2013		1.013183	0.0071	-0.0427	13.89
2014		1.240735	-0.0204	-0.0913	14.37
2015		5.828255	0.2356	0.0211	14.49
2016		1.461077	0.0147	0.1021	14.45
2007	CAP PLC (CAP)	1.378044	0.3006	-0.0985	14.47
2008		0.392598	0.0084	-0.2593	14.98
2009		0.83906	0.0235	0.0042	14.79
2010		1.406768	-0.1345	0.07188	14.81
2011		0.957442	-1.2542	0.10718	14.82
2012		0.970876	-0.1487	-0.10262	14.76
2013		3.952375	0.0076	0.0272	14.78
2014		1.176715	0.0207	0.01564	14.72
2015		1.130568	0.3221	0.0205	14.66
2016		-1.049	0.0041	0.0311	14.61
2007	CEMENT COMPANY OF NORTHERN NIG. PLC (CCNN)	1.156062	0.0841	0.0251	6.789122
2008		1.907919	0.1305	0.05922	6.986684
2009		-0.117735	0.2171	0.05121	7.005802
2010		-0.070102	0.1268	0.00213	7.075326
2011		1.132026	0.2387	0.0321	7.015684
2012		-0.047222	0.2147	-0.1282	6.986305
2013		-0.053481	0.3319	0.0057	9.652905
2014		1.048223	0.5108	0.03562	9.682392

2015		-0.022157	0.2965	0.03971	9.703664
2016		-0.098047	0.0132	0.0078	9.712893
2007	CUTIX PLC (CUTIX)	1.027121	0.0412	0.03972	9.77645
2008		1.134602	0.0342	0.07675	9.800708
2009		0.018279	0.0213	0.02742	9.827792
2010		0.019186	-1.3214	-0.01251	9.836051
2011		0.005971	-1.2201	0.03174	7.155292
2012		0.330907	-1.2004	0.03291	7.153932
2013		0.013218	-0.1103	0.0476	6.885938
2014		-0.003665	0.2204	0.04636	6.885909
2015		0.155811	0.5214	0.0293	6.889262
2016		0.048566	0.2104	0.0525	6.944185
2007	DANGOTE CEMENT PLC (DANGCEM)	0.05042	0.0421	0.04521	6.948881
2008		0.168927	0.1028	-0.01027	6.978876
2009		0.013435	0.0738	0.02825	9.787486
2010		1.008644	0.7031	0.11308	9.786172
2011		0.003922	0.1071	0.02593	9.842872
2012		-0.00056	0.2301	-0.02076	9.868792
2013		-0.001564	0.0721	0.1052	7.190155
2014		0.006466	0.1218	0.17131	7.130222
2015		0.013212	0.1951	0.1772	7.110376
2016		0.102628	0.1064	0.0834	7.171311
2007	DN MEYER PLC (DNMEYER)	0.052421	0.0042	0.0088	7.205703
2008		0.004698	0.0421	0.0721	7.365289
2009		1.00536	0.0321	0.1137	7.522163
2010		0.014464	0.1041	0.0835	7.616837

2011		1.008596	0.0213	0.0042	7.230777
2012		1.003775	0.2131	-0.0732	7.298073
2013		0.00333	-1.4215	-0.0459	7.363248
2014		0.002561	0.05231	-0.18136	7.435973
2015		0.107221	0.5101	-0.0882	7.459238
2016		1.004492	-0.1041	0.0809	7.534835
2007	FIRST ALUMINIUM NIGERIA PLC (FIRSTALUM)	0.004492	0.1012	0.0326	7.578869
2008		1.005325	0.1203	0.013247	7.62404
2009		0.053638	0.0091	-0.06353	7.272827
2010		0.001585	0.0321	-0.02589	7.029138
2011		0.043534	0.1015	-0.04679	7.03911
2012		0.012633	0.2192	-0.0964	6.950952
2013		0.008997	0.00412	0.04064	6.943934
2014		0.002878	0.1203	0.01435	6.881127
2015		0.002395	0.0067	-0.00129	6.926117
2016		0.004022	0.1001	-0.0369	6.946181
2007	GREIF NIGERIA PLC (VANLEER)	0.004359	0.04304	0.1044	6.946181
2008		0.006885	0.0321	-0.1174	6.952579
2009		0.09456	-1.03021	-0.0614	6.991152
2010		0.00132	-0.5201	-0.09419	6.99088
2011		0.750637	0.05012	-0.0425	7.127518
2012		1.004671	0.11002	0.03203	7.153521
2013		0.004671	0.12005	0.1041	7.207727
2014		0.467122	-0.2239	-0.01294	7.285518
2015		0.013368	1.0056	0.0059	6.836748

2016		0.002331	1.1204	-0.09969	6.867293
2007	LAFARGE AFRICA PLC (WAPCO)	0.475963	0.02104	-0.02735	6.878266
2008		0.003689	0.10012	-0.15383	6.813679
2009		1.001687	0.0935	0.0239	6.839382
2010		0.011133	0.1535	0.0167	6.86294
2011		0.015199	0.1215	-0.1622	6.917685
2012		0.01019	0.17025	-0.0997	6.933532
2013		0.004088	0.03074	-0.05363	6.946181
2014		0.111946	0.1288	-0.0831	7.002343
2015		0.007531	0.30457	0.0059	7.02181
2016		0.004448	0.38334	0.1302	7.229348
2007	PAINTS AND COATINGS MANUFACTURERS PLC	0.009599	0.03213	0.1029	7.248917
2008		-0.003831	0.01401	0.1302	7.254698
2009		-0.001586	-0.30121	-0.06257	7.289862
2010		0.004823	0.11023	-0.12049	7.30819
2011		1.002244	0.03051	-0.0123	7.078964
2012		0.002244	1.4301	-0.01024	7.223123
2013		0.006809	0.32101	-0.1569	7.347735
2014		0.005678	0.00611	-0.09903	7.451698
2015		0.001375	-0.00322	0.0214	7.508469
2016		0.004467	-0.52101	0.0147	7.643913
2007	PORTLAND PAINTS & PRODUCTS NIGERIA PLC	1.003607	0.05142	0.00284	7.663653
2008		0.005825	0.04122	-0.06267	7.711519

2009		0.012091	0.02006	0.1476	6.745267
2010		0.010533	-0.10204	0.00432	6.847057
2011		1.008559	-0.5226	-0.04235	6.920496
2012		0.004976	0.67102	0.0822	6.892602
2013		0.004976	0.3321	0.1327	7.001988
2014		0.004976	0.0329	0.0128	7.049184
2015		0.012436	-0.1381	-0.01086	7.096365
2016		1.00472	0.0921	-0.01086	7.161141
2007	PREMIER PAINTS PLC (PREMPAINTS)	0.0079	0.0689	-0.12631	7.305576
2008		0.001449	0.0738	0.0308	7.327385
2009		2.006199	0.1565	0.03642	7.324064
2010		0.006643	0.0634	-0.0363	7.337109
2011		0.009953	0.0301	-0.00224	7.383486
2012		0.005986	0.0473	-0.03645	7.346639
2013		0.006704	0.0181	0.0653	7.309343
2014		0.003063	0.0303	-0.16266	7.340069
2015		2.003004	-0.30427	0.08282	6.84123
2016		0.006288	-0.04122	0.0494	6.807948

### Descriptive Statistics

	FRQ	AEM	REM	FS
Mean	0.695320	0.025499	0.009684	10.70322
Median	0.613300	0.033550	0.018075	7.633977

Maximum	5.828255	1.452300	0.177200	17.32000
Minimum	-1.049000	-1.552500	-0.259300	6.745267
Std. Dev.	0.913239	0.407397	0.075520	4.006106
Skewness	2.206007	-0.979692	-0.795117	0.362687
Kurtosis	12.03665	8.394413	4.044041	1.304278
Jarque-Bera	716.3154	233.3171	25.63364	24.09497
Probability	0.000000	0.000000	0.000003	0.000006
Sum	118.2043	4.334840	1.646297	1819.548
Sum Sq. Dev.	140.9468	28.04934	0.963844	2712.262
Observations	170	170	170	170

### Variance Inflation Factors Result

Variance Inflation Factors

Date: 09/02/18 Time: 18:42

Sample: 1 170

Included observations: 170

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
AEM	0.021354	1.010117	1.006152
REM	0.627447	1.032706	1.015902
FS	0.000224	8.360868	1.022066
C	0.029058	8.298228	NA

### Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.450540	Prob. F(3,166)	0.2300
Obs*R-squared	4.342637	Prob. Chi-Square(3)	0.2268
Scaled explained SS	32.56717	Prob. Chi-Square(3)	0.0000

Test Equation:  
 Dependent Variable: RESID^2  
 Method: Least Squares  
 Date: 09/02/18 Time: 18:43  
 Sample: 1 170  
 Included observations: 170

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.344265	0.508838	-0.676571	0.4996
AEM	-0.166355	0.436196	-0.381376	0.7034
REM	0.829731	2.364471	0.350916	0.7261
FS	0.086120	0.044708	1.926273	0.0558

R-squared	0.025545	Mean dependent var	0.581288
Adjusted R-squared	0.007934	S.D. dependent var	2.312285
S.E. of regression	2.303093	Akaike info criterion	4.529631
Sum squared resid	880.5036	Schwarz criterion	4.603415
Log likelihood	-381.0187	Hannan-Quinn criter.	4.559572
F-statistic	1.450540	Durbin-Watson stat	2.071065
Prob(F-statistic)	0.230027		

## POOLED REGRESSION

Dependent Variable: FRQ  
Method: Least Squares  
Date: 08/31/18 Time: 16:53  
Sample: 1 170  
Included observations: 170

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AEM	-0.057215	0.146129	-0.391534	0.6959
REM	1.064980	0.792115	1.344476	0.1806
FS	0.119942	0.014978	8.008122	0.0000
C	-0.597298	0.170465	-3.503940	0.0006

R-squared	0.298892	Mean dependent var	0.695320
Adjusted R-squared	0.286222	S.D. dependent var	0.913239
S.E. of regression	0.771553	Akaike info criterion	2.342426
Sum squared resid	98.81890	Schwarz criterion	2.416210
Log likelihood	-195.1062	Hannan-Quinn criter.	2.372367
F-statistic	23.58938	Durbin-Watson stat	1.986068
Prob(F-statistic)	0.000000		

## FIXED EFFECT

Dependent Variable: FRQ

Method: Panel Least Squares

Date: 08/31/18 Time: 16:29

Sample: 2007 2016

Periods included: 10

Cross-sections included: 17

Total panel (balanced) observations: 170

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AEM	-0.055956	0.148879	-0.375849	0.7076
REM	1.943763	0.867405	2.240894	0.0265
FS	0.106272	0.094349	1.126375	0.2618
C	-0.459527	1.011768	-0.454183	0.6504

### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.393978	Mean dependent var	0.695320
Adjusted R-squared	0.317215	S.D. dependent var	0.913239
S.E. of regression	0.754616	Akaike info criterion	2.384916
Sum squared resid	85.41686	Schwarz criterion	2.753834
Log likelihood	-182.7179	Hannan-Quinn criter.	2.534619

F-statistic            5.132409    Durbin-Watson stat    2.313796  
 Prob(F-statistic)    0.000000

**RANDOM MODEL**

Dependent Variable: FRQ  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 08/31/18    Time: 16:36  
 Sample: 2007 2016  
 Periods included: 10  
 Cross-sections included: 17  
 Total panel (balanced) observations: 170  
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AEM	-0.057461	0.144477	-0.397716	0.6914
REM	1.279938	0.797610	1.604717	0.1105
FS	0.119278	0.017192	6.937979	0.0000
C	-0.592265	0.195971	-3.022198	0.0029

Effects Specification		S.D.	Rho
Cross-section random		0.150803	0.0384
Idiosyncratic random		0.754616	0.9616

Weighted Statistics			
R-squared	0.245631	Mean dependent var	0.587786
Adjusted R-squared	0.231997	S.D. dependent var	0.863801
S.E. of regression	0.756998	Sum squared resid	95.12570
F-statistic	18.01712	Durbin-Watson stat	2.100645
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.298581	Mean dependent var	0.695320
Sum squared resid	98.86281	Durbin-Watson stat	2.021239

## HAUSMAN SPECIFICATION

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

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Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.049645	3	0.0062

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Cross-section random effects test comparisons:

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Variable	Fixed	Random	Var(Diff.)	Prob.
AEM	-0.055956	-0.057461	0.001291	0.9666
REM	1.943763	1.279938	0.116210	0.0515
FS	0.106272	0.119278	0.008606	0.8885

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Cross-section random effects test equation:

Dependent Variable: FRQ

Method: Panel Least Squares

Date: 08/31/18 Time: 16:37

Sample: 2007 2016

Periods included: 10

Cross-sections included: 17

Total panel (balanced) observations: 170

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.459527	1.011768	-0.454183	0.6504
AEM	-0.055956	0.148879	-0.375849	0.7076
REM	1.943763	0.867405	2.240894	0.0265
FS	0.106272	0.094349	1.126375	0.2618

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.393978	Mean dependent var	0.695320
Adjusted R-squared	0.317215	S.D. dependent var	0.913239
S.E. of regression	0.754616	Akaike info criterion	2.384916
Sum squared resid	85.41686	Schwarz criterion	2.753834
Log likelihood	-182.7179	Hannan-Quinn criter.	2.534619
F-statistic	5.132409	Durbin-Watson stat	2.313796
Prob(F-statistic)	0.000000		

## **CORRECTIONS**

### **Abstract**

There is need for a brief introductory statement

The abstract did not address the sources of data collected and the method of data collection.

### **Chapter 2**

The presentation of the literature review in respect of each specific objective was to come under the review of the current literature and not under the empirical review ( see page 16- forward).

Empirical study from page 16 writing without subtitles makes the reading cumbersome. See 2.2.1 from page 16 -21 and 2.2.2 from page 21 – 27. You need to sub-title them. The concluding part of the literature review did not indicate the gap discovered which needed to be filled by your study was not stated.

### **Chapter 3**

State the sampling technique used.

Method of data collection was totally confused with sources of data. Item 3.3 need to be re-written.

#### **Chapter 4**

Hypothesis are meant to be either accepted or rejected before conclusion can be drawn. In this study, each hypothesis was not so treated to be able to know how each was accepted or rejected.

How then did you arrive at the conclusion?

#### **References**

APA format was not followed.