EFFECT OF AUDIT QUALITY ON EARNINGS MANAGEMENT OF LISTED MANUFACTURING FIRMS IN NIGERIA

By

Abdulrauf Olayinka ISIAKA
B.Sc. (Accounting), Unilorin
Matriculation Number: 15/27/MAC016

BEING A DISSERTATION PRESENTED AND SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND FINANCE, COLLEGE OF HUMANITIES, MANAGEMENT AND SOCIAL SCIENCES, KWARA STATE UNIVERSITY, MALETE, NIGERIA.

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CERTIFICATION

This is to certify that this thesis written by AbdulRauf Olayinka ISIAKA with matriculation number: 15/27/MAC016 titled "Effect of Audit Quality on Earnings Management of Listed Manufacturing Firms in Nigeria" has been read and approved as meeting the requirement for the award of Master of Science (M.Sc.) Degree in Accounting, Kwara State University, Malete, Nigeria.

Dr. M. Sanni Supervisor	_____ Signature	_____ Date
Dr. Emmanuel Imoloame Head of Department	_____ Signature	_____ Date
Dean, School of Post Graduate Studies	_____ Signature	_____ Date
Internal Examiner	_____ Signature	_____ Date
External Examiner	_____ Signature	_____ Date

DEDICATION

This project is dedicated to my wife, Mrs Isiaka Kafayat.

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ABSTRACT

The incessant manipulations of accounting figures in the financial statement of companies globally in the last decade have led to several accounting scandals and corporate failures. This has posed a great challenge on the value relevance of audit due to lack of credibility and integrity of audited financial statements and stakeholders' confidence in external auditors' independence as companies engage in earnings management without any report of such in the audited financial statement by the auditors. Therefore, this study examined the effect of audit quality on earnings management of listed manufacturing companies in Nigeria. To achieve this objective, the specific objectives are to: (i) determine the extent to which audit firm size affect earnings management of listed manufacturing firms in Nigeria; (ii) examine the impact of audit fee on earnings management of Nigerian listed manufacturing firms; (iii) assess the effect of audit tenure on earnings management of listed manufacturing firms in Nigeria; and (iv) determine whether there is difference in the level of earnings management practice among the various sub-sectors of the Nigerian manufacturing industry. The study employed ex-post facto research design. The population of the study consists of seventy-four (74) listed manufacturing firms in the Nigeria Stock Exchange as at 31st December, 2017 and fifty (50) companies were selected as its sample size. Secondary data were collected from the annual report and accounts of companies chosen as sample for a period of six years (2012-2017). Panel fixed-effect model technique was employed in testing hypotheses one to three while Analysis of Variance (ANOVA) was used in testing the fourth hypothesis. The study found out that audit firm size and audit fees have significant negative effect on the earnings management (real earnings management) at 95% confidence level (t-values of -2.50 and -3.96 with p-values of 0.013 and 0.000 respectively). This implies that audit firm size and audit fee restrict and reduce the level of earnings management in the listed manufacturing firms in Nigeria. The study also revealed that audit tenure has a significant positive effect (t-value=2.13 with p-value=0.039) on earnings management at 95% confidence level. This implies that lengthy auditor tenure is a mechanism through which management influence auditors to compromise their independence in Nigerian listed manufacturing firms. The result of the study also revealed that there is no significant difference in the level of earnings management practice in the sub-sectors of the listed manufacturing companies in Nigeria (F-stat=1.168 with p-value=0.326). The study, therefore, concludes that, audit quality has significant negative effect on earnings management. The study recommends that professional accounting bodies and Financial Reporting Council of Nigeria (FRCN) to issue a framework or guideline which will back and enforce three years professional requirements for auditors in Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The incessant reported cases of manipulations of accounting figures in the financial statement of firms globally in the last decade, has led to several accounting scandals and failure of corporate organizations which have put the auditing function into doubt as the auditors were not able to detect and report these manipulations. The increasing incidence of these has led to loss of public confidence in the quality of reported accounting earnings and the audit function, thus become a matter of great concern to policy makers, practitioners as well as researchers on the consequences it has on corporate survival (Okolie, 2014).

Series of corporate scandals were recorded in the late 1990s and the beginning of the 21st century, (such as the cases of Xerox in 2000, Enron in 2001, Adelphia in 2002, WorldCom in 2002 and Global Crossing in the Unites States in 2002 and Ahold and Tyco in 2002, Parmalat in 2003, Adeco in 2008, in the Europe among others) around the globe. In the case of ENRON, profits were overstated by five hundred and eighty-six ($586) million dollars for four years. In the case of WorldCom fraud in 2002, operating expenses of 3.8billion dollars were capitalized thus overstating its profit. In Italy, Parmalat failed in 2003 when it engaged in accounting scandals worth 8 billion Euros while in New Zealand, Allied Nationwide Finance failed in September 2010 while NZF Money became bankrupt in January, 2011 (Lianne, 2011; Demaki, 2011; Fodio, Ibikunle & Oba, 2013; Egbunike, Ezelibe & Aroh, 2015). Nigeria has had its own share of financial reporting failures with the problems in Cadbury Nigeria Plc. in 2006; Afribank Nigeria Plc faced problem of financial reporting in 2009; Intercontinental Bank Plc. (2009); Lever Brothers Nig. Plc.; Oceanic Bank Plc and Skye Bank Plc. (2018).

Manipulations of financial statement have dire consequences for any economy and the victim firms. Its effects include financial loss and dent on the reputation of the victim organization. In the wake of the high profile accounting scandals at WorldCom and ENRON, average loss per case increased to $400million (Beasley, Carcello, Hermanson & Neal, 2010). The ENRON scandal also led to the disintegration of Arthur Anderson (an International Accounting firm). In Nigeria, the growing incidence of corporate fraud has made investors' confidence in the capital market to become weaker. For instance, investors in Cadbury (Nig.) plc lost heavily as the share price of the company took a downward turn. Some corporations which were never suspected to have problems were found to be living in the past glory due to excessive manipulation of accounting figures and corporate bankruptcies. These ugly practices which were later discovered to have been on for sometimes went neither detected nor reported by auditors. The experience has since left its perils in the mind of shareholders, prospective investors, regulators and financial analysts (Okaro, Okafor & Ofoegbu, 2013 & Lopes, 2017).

Manipulations of accounting figures can be done through window dressing, creative accounting, fraud or earnings management (Kitiwong, 2014). It has been observed that the most harmful method is the application of earnings management which, most of the times, go undetected not to talk of reporting it by the external auditors. Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial report either to mislead some stakeholders about the underlying economic performance of the company for bonus or compensation to the manager or to influence/mislead contractual outcomes that depend on reported accounting figures (Healy & Wahlen, 1999). This is achieved by exploring the loopholes in the accounting methods of preparing the financial statement.

Managers engage in earnings management either to meet earnings bench mark or to beat analysts' expectations such as personal compensation (incentives and bonuses) to the manager, debt covenant and market reactions (Dechow & Skinner, 2000). This arises as a result of information asymmetry and conflict of interest between the equity holders (principal) and the management (agent). Information asymmetry arises when perfect information is absent which makes equity holders and other stakeholders to have difficulty in detecting accounting manipulations in the financial statement (Watts & Zimmerman, 1986). The reason is that the goal of the manager most of the time, is different from the objective of the equity holders. This leads to agency problem. To eliminate this problem, the need for high audit quality becomes necessary.

The demand for auditing arises from the auditor's monitoring role in the principal agent relationship in the modern corporate world (Eilifsen & Messier, 2000). The auditor's attestations to the financial statement lend credibility to the information in the annual reports. Therefore, various stakeholders rely on the audited financial statement and make various investment decisions or contractual decisions. Watts & Zimmerman (1986) observed that audit minimizes information asymmetry and protects the interest of the shareholders (principals), investors, creditors and other stakeholders by providing reasonable assurance that the financial statements prepared by the management are free from material misstatements, errors and omissions of financial data.

In order to maintain high audit and earnings quality and to curb the spate of vicious corporate collapses that pervade the globe in the past decade, audit quality standards and codes of best practice have been developed in different countries to restore the confidence to the investors. These codes constitute the bulk of the regulatory frameworks that are meant to guarantee integrity of auditors' reports in relation to corporate earnings and financial statements. For

example, Sarbanes- Oxley Act Code 2000 was enacted in the US, code of Corporate Governance in South Africa, and different countries of the world.

The probability that an auditor will detect a breach depends largely on the probability of discovery, which is related to the auditors' competence. Similarly, the probability that an auditor will report the detected breach is related to the auditors' independence. Thus, the auditors should provide a professional opinion regarding the reliability of the information contained in the financial statements (Balsam, Krishnan & Yang, 2003). However, the Public Company Accounting Oversight Board (2008) and International Auditing and Assurance Board (2013) have spelt out that quality of audit service can be measured through direct and indirect measures.

The direct measures include quality review; issuing of going concern opinions; financial reporting in compliance with Generally Accepted Accounting Principles (GAAP); material restatement, preferably initiated by the auditor or Securities and Exchange Commission; the desk review; SEC performance; perception based measures; and financial reporting characteristics (IAASB, 2013). The indirect measures are the auditors' size, audit fee, industry-based specialization, joint audit service, auditor tenure, reputation, non-audit service and auditor skills (PCAOB, 2008). Previous researches on audit quality (Becker, 1998; Francis & Yu, 2009; Choi, Kim & Zang, 2010) have focused on either factors contributing to audit quality or consequences of audit quality. In this study, the researcher studied the factors which affect audit quality such as audit firm size (big 4 auditors), audit fee and auditor tenure.

In Nigeria, however, businesses had been beset by bank distresses, corporate frauds and collapses in various dimensions. This was further heightened subsequent to the collapse of several financial and non-financial institutions which include the Bank PHB, Spring Bank Plc, Oceanic Bank Plc, Intercontinental Bank Plc., African Petroleum Plc., Levers brother

and Cadbury plc. An investigation into the cause revealed significant, deep-rooted problems in the account preparation and intentional misconduct of managers which led to the concurrent sack of eight (8) bank chiefs by the governor of Central Bank of Nigeria in 2012 and the call for an investigation of the efficacy of the monitoring and controlling of managerial and financial behaviour of managers (Ndukwe & Onwuchekwa, 2014).

Regulatory authorities in Nigeria have responded to the quality issue with new initiatives. An example of such an initiative was the long overdue revision of the 2003 Code of Corporate Governance in 2011 and the Financial Reporting Council of Nigeria Act, No. 6, 2011 that established the Financial Reporting Council of Nigeria (FRCN). This government agency has the mandate to monitor the activities of auditors of a public reporting entity. A provision of this Act is the mandatory registration with the council and financial statements for those in audit practice. In addition, starting from 2013, audited annual reports were compelled to include personal signature of a named auditor/audit partner. This process differed from the previous practice, which requires that only the seal of the auditing firms be used. The expectation was that all the regulatory initiatives would improve auditor's independence, which in turn, would improve financial reporting quality. The central objective of corporate governance code in Nigeria was to restore the reliability of financial statements by curbing earnings management and accounting fraud (Cohen, Dey, & Lys, 2008; AbdulMalik & Ahmad, 2016). Demaki (2011) opined that launching of governance mechanisms Code, 2003 in Nigeria is expected to mitigate corporate scandals and other related issues. However, corporate failure and scandals are still there.

1.2 Statement of the Problem

The collapse of businesses and series of accounting scandals in the world have posed great challenges to the auditing profession. This has been attributed to the negligence and the

inability of the auditors to alert the shareholders and other stakeholders of the manipulations and misrepresentation in the financial statement and report against them. As a result of this, the ability of the audit function to effectively constrain earnings misstatement across the world and Nigeria in particular, has become considerably doubtful. Series of corporate scandals have occurred in the listed companies in Nigeria such as Intercontinental Bank, Oceanic Bank, Afribank in the banking sector; Cadbury Nigeria Plc.; Lever Brothers; and Skye Bank Nigeria Plc. in the manufacturing sector where the auditors could not discover and report these manipulations.

The so called large auditing firms could not help in combating the earnings management as they are facing litigations on various accounting scandals (Deloitte was fined in the Cadbury accounting manipulations, Ernst & Young was ordered to pay $99 million to investors for its role in the fall of Lehman Brothers). Large audit firms have high tendency of large forecasting errors in the audited financial statement as well as allowing management of their client firms to choose income increasing/decreasing methods of accounting manipulations (Cadbury Report, 2008). The remuneration of the auditor is also a cause for concern. When an auditor receives huge amount for audit service, the independence of the auditor is also compromised as he would not want to provide negative reports against the client as it is believed that he has created economic bond with the client. Moreover, the duration which the external auditors spend with a client firm is another major issue. Longer audit-client relationship compromises the auditor's objectivity as the auditor may form personal ties, familiarity and bond of loyalty with the client which make auditor to be sympathetic towards the client's firm (such as the case of Enron and Arthur Anderson), therefore, there is low tendency that discovered earnings management will be reported. In addition, the way in which earnings are managed in each sub-sector of the manufacturing industries are different

as some sectors managed earnings more than the other sectors due to complexity of business operations, thereby, disclosing more earnings than the others.

Prior academic researchers (such as Tyokoso & Tsegba 2015; Masoyi, Abubakar & Peter 2015; Uwalomwa, Uwuigbe & Okorie, 2015; etc.) have focused on accrual manipulations (discretionary accruals). There are relatively fewer studies examining the effect of audit quality on real earnings management, especially in the Nigerian context. To the best of this researcher's knowledge, studies conducted in Nigeria have not examined the difference in the level of earnings management practice in various sub-sectors of the Nigerian manufacturing industries. Therefore, this study has filled the gap in the literature.

1.3 Research Questions

From the foregoing, the following research questions were raised and answered in the course of the study:

i. To what extent does audit firm size affect earnings management of listed manufacturing firms in Nigeria?

ii. What is the effect of audit fee on earnings management of Nigerian listed manufacturing companies?

iii. How does audit tenure affect the earnings management of listed manufacturing firms in Nigeria?

iv. What is the difference in the level of earnings management practices among the various sub-sectors of the Nigerian manufacturing industry?

1.4 Objectives of the Study

The broad objective of this study is to examine the effect of audit quality on earnings management of Nigerian listed manufacturing companies. The specific objectives are to:

i. determine the extent to which audit firm size affects earnings management of listed manufacturing firms in Nigeria;

ii. examine the effect of audit fee on earnings management of Nigerian listed manufacturing firms;

iii. assess the effect of audit tenure on earnings management of listed manufacturing firms in Nigeria; and

iv. establish the difference in the level of earnings management practice among the various sub-sectors of the Nigerian manufacturing industry.

1.5 Statement of Research Hypotheses

To provide answers to the research questions raised earlier, the following hypotheses were formulated and tested in the course of the study:

H_{01}: Audit firm size has no significant effect on earnings management of listed manufacturing firms in Nigeria

H_{02}: There is no significant effect of audit fee on earnings management of Nigerian listed manufacturing firms.

H_{03}: Audit tenure has no significant effect on earnings management of listed manufacturing firms in Nigeria.

H_{04}: There is no significant difference in the level of earnings management practice among the various sub-sectors of the manufacturing industry in Nigeria.

1.6 Justification for the Study

This study is motivated by the growing concern by regulators, investors and the public over the credibility and integrity of audited financial reports, and stakeholders' confidence in the audit. Previous studies conducted on the subject matter have shown conflicting results ranging from positive, negative and indifference results (See Aerts, 2012; Tan, 2013; Kitiwong, 2014; Hussainey, 2015; Smii, 2016; Lisar & Zadeh, 2016; Alhadab & Clacher, 2017; Saleem & Alzoubi, 2018; El-Guindy & Basuony, 2019). Previous empirical studies on effect of audit quality and earnings management in the Nigeria context have largely focused on the banking industry (such as Jubril, 2014; Masoyi, Aliyu & Zacahriah, 2015; Eriabie & Dabor, 2015) while few studies have been conducted in one sub-sector of the manufacturing industry (such as Okoh, 2015; and Onaolapo, Ajulo & Onifade, 2017). Methodologically, most of the previous studies in Nigeria had used Ordinary Least Square regression analysis technique (See Jubril, 2014; Tyokoso & Tsegba, 2015; Miko & Kamardin, 2015; Masoyi, *et al.,* 2015; Onaolapo, *et al.* 2017).

This study therefore provides empirical evidence on the effect of audit quality on earnings management of listed manufacturing firms in Nigeria. The results of this study would be of great importance to policy makers, management and other stakeholders as a feedback to enhance audit quality in Nigeria. The result of this study will contribute to the academic field of knowledge by adding to the dearth knowledge on earnings management in the manufacturing companies in Africa and in Nigeria in particular as most literatures on this topic were based on the banking industry. It will also serve as a body of reference for future researchers in the area of earnings management.

Policy makers such as Institute of Chartered Accountants of Nigeria can use the result of this study in formulating and administering pragmatic policies to improve audit quality in Nigeria

audit setting. Policy makers can use the findings of the study to regulating the minimum length of audit firm tenure, in years, that same auditor should audit the financial statements of a company. This study will also serve as a yardstick which professional accounting bodies can use in establishing policies and procedures to guide members on improving the quality of their audit work in order to reduce the way earnings are being manipulated by manufacturing firms. Similarly, the accounting professional bodies will find this study critical in that it will show whether their members are complying with the ethical code of conduct set by them or not.

The regulators such as Securities and Exchange Commission (SEC) and Financial Reporting Council of Nigeria (FRCN) can also use the result of this study in their supervisory position to distinguish between legitimacy, outright fraudulent reporting and earnings statements that reflect the desires of management rather than the underlying performance of the company and to impose appropriate disciplinary penalties on the offenders. This study will provide practitioners with methods and techniques employed to measure earnings management and other audit firm's characteristics variables. In addition, it will provide different methodologies and analytical techniques for carrying out the real earnings management. It will also provide the basic concepts for audit quality and earnings management, explaining theories supporting the connection between the audit variables to show how the factors of firms' characteristics can affect earnings management.

1.7 Scope of the Study

This study was restricted to the listed Nigerian manufacturing companies. The justification for the choice of this domain is that the sector has high tendency of using real earnings manipulations (due to the nature of their business which involves conversion of raw materials into finished product) compared to other sectors where discretionary accruals are highly

employed. The study covers the period of six (6) years, from 2012 to 2017. This period is chosen because it is within these periods that some firms suffered crises which involved management's unethical practices through accounting manipulations while the last audited financial statement of firms is for the year 2017.

CHAPTER TWO

LITERATURE REVIEW

This chapter deals with the conceptual review (the concepts of the earnings management, audit quality concepts as well as the approaches to the measurement of audit quality), various theories in relation to the study and the previous empirical studies carried out on the topic.

2.1 Conceptual Review

2.1.1 Earnings Management

Financial statement prepared is expected to provide clear and detailed information about the economic performance, the financial position as well as the changes in the company's equity. This information is expected to be stated in both qualitative and quantitative terms. The quantitative information reveals the financial performance in terms of profit made, financial position and the changes in the entity's equity as shown in the statement of comprehensive income, statement of financial position and the statement of cash flows respectively while the qualitative information discloses the non-financial performance activities such as sustainability performance of the firm (Bello, 2005; Okoh, 2015).

According to Healy and Wahlen (1999), earnings management occurs when managers use 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 practices. Therefore, managers employed earnings management as an opportunistic behaviour in order to satisfy their personal objective or to place the firm in a better economic performance. It represents an intentional intervention in the external reporting process with the aim of obtaining some private gains or compensations (Schipper, 1989). This also signifies that

management have incentives to manipulate the earnings with the aim of either maximizing the wealth of the company or as a bonus or compensation to the manager. This may encourage fraud and material misstatement by the reporting companies as the financial result and position of the business might not be presented accurately (Ching, Teh, San & Hoe, 2015).

Watt and Zimmerman (1990) opined that earnings management is derived from the flexibility of accounting choices that are allowed within Generally Accepted Accounting Principles. The Generally Accepted Accounting Principles allow managers to choose the appropriate reporting procedures and to make estimations and assumptions that suite their business environment. Hence, as an alternative on offer, the manager may choose the reporting procedures that best suit him in order to maximize their wealth by exhibiting opportunistic behaviour. As a result, accounting manipulation power may create the problem of management manipulating earnings. Therefore, this makes shareholders, investors and creditors to be unable to distinguish the true net worth and economic value of a firm because the reports presented do not accurately reflect the actual performance of the firm.

Dechow and Skinner (2000) opined that earnings management is the use of accounting choices which are allowed by GAAP; conversely, fraudulent accounting is that which does not comply with GAAP. Managed earnings are earnings which do not result from a neutral treatment but from the use of aggressive accounting or conservative accounting. In doing so, a management has to alter real events or to choose accounting choices. Adopting conservative or aggressive accounting practices through purposely selecting accounting estimations and assumptions is far preferable to structuring real transactions because, as remarked by Goncharov (2005), operating earnings management is more costly than accounting earnings management since it affects real cash flows.

Several researches found different reasons that managers engage in earnings management which may be internal or external. The internal reasons are personal incentives or management compensation and contract as well as preventing decrease in income or losses to avoid being sacked while the external reasons include debt covenants, stock market incentives, tax purpose, regulatory motivations and political costs (Rahman, Moniruzzaman & Sharif, 2013). DeFond and Jiambalvo (1994) asserted that firms accelerate earnings prior to lending covenants, and Holthausen, Larcker and Sloan (1995) observed that managers manipulate earnings downwards when their bonuses are at their maximum. Healy (1985) also documented similar evidence. Another set of studies focused on top managers' job security and their incentives to manipulate earnings when the managers are faced with a possibility of losing their respective jobs. Watts and Zimmerman (1986) suggested that certain factors such as debt covenant constraints, compensation plan provisions, and political costs, the need to issue equity capital, insider trading, etc. provide managers with incentives to manage earnings. Another reason for earnings management practice among firms is compensating for regulatory or political costs (Han & Wang, 1998; Cahan, 1992; Jones, 1991).

Earnings management techniques are divided into real operating decisions and pure financial reporting decisions (Schipper, 1989; Peasnell, Pope & Young, 2000; Ewert & Wagenhofer, 2004). Schipper (1989) pointed out that real earnings management is designed to manage the timing of decision-making on a company's investments and production while accounting earnings management is designed to select accounting techniques allowed by GAAP. Ewert and Wagenhofer (2004) explained that the management's interpretation of accounting standards with intent to make existing standards apply to existing accounting events and transactions and/or with intent to shift partial earnings between periods is one form of earnings management. In terms of real earnings management, a manager is required to organize transactions or alter the timing of transactions to help him/her transform bad news

into good news. Real earnings manipulation usually includes overstating earnings, recording unrealized gains and uncertain revenues, increasing inventory value or increasing capitalized expenditures. Furthermore, earnings can be smoothed through specific use of accounting techniques where managers defer revenue during a good year if the next year is anticipated to be a challenging one, or delay the recognition of expenses in a difficult year because profitability is expected to improve in the near future (Jubril, 2014).

According to GAAP, accrual method principle provides the rule that firms have to recognize expenses in the period in which they are incurred and not when they are paid on a cash basis. Thus, managers can increase earnings not only through increasing sales and revenues, but via decreasing some of the expenditures, such as discretionary expenditures. For instance, it can be Research and Development costs which are capitalized instead of being expensed in a period. Hence, expenses are reduced and the statement of the financial position may include intangible assets, thereby, misleading the users. Cooper and Selto (1991) cited in Seybert (2010) proposed that managers are less willing to invest in profitable research and development projects when costs are expensed, because they must sacrifice certain current period cash flows for uncertain future cash flows. According to International Financial Reporting Standards (IFRS), "IAS 38 Intangible Assets" provides that an intangible asset arising from research (or from the research phase of an internal project) must not be recognized. Expenditure on research should be recognized as an expense when it is incurred.

Roychowdhury (2006) indicated that managerial manipulation can influence financial statements not only via the use of accounting rules, but also by operational decisions. For instance, it can be achieved through acceleration of sales, alterations in shipment schedules, and delaying of research and development (R&D) and maintenance expenditures as earnings management methods available to managers. Another way of manipulating earnings is through overproduction of goods which leads to decreased cost of goods as long as fixed

overheads are absorbed by larger number of products. As a result, fixed cost per unit is reduced and hence, manager report better gross profit ratio and operating margins. On the other hand, excessive production leads to increased production costs and costs of maintaining inventory (Roychowdhury, 2006).Moreover, mainly in the manufacturing industry, firms' management may make overproduction of goods in order to decrease reported cost of goods sold to receive higher gross profit.

Firms can adopt real earnings management through the acceleration of sales. The acceleration of sales can be achieved through the use of price discounts and lenient credit terms, with the intention to persuade more customers. By introducing price discounts, firms can accelerate their sales from the next year to the current year. The price discounts will boost total earnings in the current period but it will also lead to lower margins. This would subsequently lead to a situation where production costs relatively to sales will be abnormally high (Roychowdhury, 2006). However, the increase in sales is a temporary situation. When the old prices are re-enacted, there would be lower sales and lower profit margin.

Moreover, firms can lower their costs of goods sold through an increase of their production. By increasing their production more than normal, firms can spread the fixed overhead costs over more units. This would subsequently decrease the fixed cost per unit. However, due to the overproduction, firms might contract additional holding costs and therefore cash flows from operations are lower than the normal sales levels (Roychowdhury, 2006).

Finally, firms can decide to alter the levels of discretionary expenditures such as advertising, R&D and selling, general and administrative (SGA) expenses (Roychowdhury, 2006). By reducing these expenses firms can increase their current period earnings, which subsequently lead to an increase in the current period cash flows when these expenses are paid in cash.

However, there is a risk that this may negatively affect the cash flows in the future (Roychowdhury, 2006).

2.1.2 Auditing and Audit Quality Process

The International Audit and Assurance Standard Board (2013) defined audit as "an independent examination of, and expression of opinion on the financial statements of a business enterprises by an appointed and independent auditor in accordance with his terms of appointment and in compliance with the relevant statutory and performance requirement. This shows that audit report is the end-product of every audit assignment which the auditor issues to his client firm expressing his opinion on the true and fair view of the client firm's financial statement.

Auditing and audit process provide an evaluation of the probability of material misstatement and reduce the possibility of undetected misstatement to a reasonable or appropriate assurance level (Knechel, 2009). Therefore, audit is expected to improve the value of information presented in the financial statement and as a result, audit quality has to do with a display of professionalism, diligence and due care by an auditor in the audit process which could lead to a true and fair view of financial statement (Arrunada, 2000).

Auditor's independence has been of serious concern not only to the end users of financial information but to the whole society in general. This is to ensure dependable and high quality audit work which largely focuses on auditor's independence in order to ensure that an auditor is not too familiar or dependent on his client, because it may jeopardize the integrity of the auditor and in turn, impair their independent opinion as to the financial health of their client.

Auditor's independence is defined as an auditor's unbiased mental attitude in making decisions throughout the audit and financial reporting process (Babatolu, Osaserere &

Emmanuel, 2016). An auditor's lack of independence increases the possibility of being perceived as not being objective and the probability of an auditor not likely to report a discovered breach (DeAngelo, 1981). The impaired independence of an auditor results in poor audit quality and allows for greater earnings management and lower earnings quality (Okolie, 2014).

DeAngelo (1981) defined audit quality as the probability that an auditor will both discover and truthfully report material errors, misrepresentation and omissions detected in a client's accounting system. This means that an auditor should be able to detect errors or manipulation of accounting figures and must report this to the shareholders as well as other stakeholders in their audit report. The audit quality lies on the broad concept of an auditor's professional conduct which includes independence, confidentiality, integrity and technical competence (Adeniji, 2010). Hope and Langli (2007) also viewed audit quality as when the auditor carries out his work with higher degree of independence and objectivity on one hand and defined auditor's independence as the auditor's objectivity and ability to withstand client's pressure on the other hand. This pressure may include monetary and non-monetary issues that make the auditor comply with management desire rather than his professional judgment.

Duff (2004) suggested that audit quality is made up of both technical quality and service quality (the level of client's satisfaction and expectations). Technical qualities (such as an auditor's ability to detect and report errors) have been established to be the defining aspect of audit quality. Okoh (2015) stated that technical quality consists of reputation, cost of capital, capability, expertise, experience and independence scales while service quality includes responsiveness, empathy and the provision of non-audit services (NAS).

Okoh (2015) in Wooten (2003) explained that audit firm's characteristics, audit teams and professional judgment or auditor independence serve as the principal contributors to audit

quality. Audit team and audit firm's characteristics (such as human resources, industry expertise, audit processes, audit planning, supervision and professionalism) directly contribute to the skill and competence of auditors in detecting errors and misstatements. Factors such as audit tenure, audit fees, non-audit service, do not only impair auditor's independence directly, but they also support auditor effectiveness. Therefore, audit quality is seen as the ability of an auditor to provide an independent audit service and assurance that the audited financial statement is free from material errors, misstatement and manipulation of figures.

2.1.3 Approaches to Measuring Audit Quality

Measurement of audit quality has been a problematic and complex phenomenon in the audit quality research. However, the International Auditing and Assurance Standards Board (2013) and public Company Accounting Oversight Board (2008) identified several potential measures for audit quality in both practice and academic literatures. A large body of accounting researches had used various drivers and indicators of audit quality. Some of these indicators have been expressed in qualitative and quantitative terms or in both. The commonly used proxies for audit quality are categorized into direct and indirect measures (DeFond & Zhang, 2014). These measures are associated with audit procedures, the documentation of audit evidence and compliance with auditing standards.

The direct measures cover financial reporting in compliance with Generally Accepted Accounting Principles (GAAP); issuing of going concern opinions; material restatement, preferably initiated by the auditor or Securities and Exchange Commission; quality control review, desk review and SEC performance, financial reporting characteristics such as using signed or absolute discretionary accruals; and perception based measures such as the earnings

response coefficient (ERC), stock price reactions to auditor's related events and cost of measures (IAASB, 2013).

Material restatements is a great proxy for measuring audit quality as it directly speaks about the quality of the audit process but these observations, while capturing egregious conduct, is almost, by definition, rare and also do not account for "within GAAP" manipulations of financial statements. Moreover, absence of a material restatement does not automatically imply higher audit quality as even the most carefully audit cannot guarantee detection of fraud. Furthermore, managerial and auditor incentives can lead to non-disclosure of identified misstatements (Srinivasan, Rajgopal & Zheng, 2015). Going concern opinions are also direct measures of the auditor's opinion about the financial statements but these are issued only in exceptional cases. While financial reporting characteristics are easy to compute and capture an element of audit quality since financial reporting and audit quality are inextricably intertwined, they are rife with measurement errors and biases (Kothari, Leone & Wasley, 2005; Dietrich, Muller & Riedl, 2007; Patatoukas & Thomas, 2011; and Ball, Kothari & Nikolaev, 2012). Perception based measures such as ERC can capture audit quality in more comprehensive and less error prone ways than financial reporting measures. However, direct measures of audit quality have posed empirical challenges due to difficulty in measuring and generalizing results, low occurrences and the proprietary nature of the data.

There are various indirect variables that affect the audit quality such as auditor's characteristics, independence, level of competition in the audit service market, non-audit services, etc. (PCAOB, 2008). Auditor's characteristics include several factors such as auditor' size, audit fees (economic dependence), industry-based expertise/specialization, auditor skills, non-audit service, auditor tenure, reputation (Wooten, 2003). Audit quality proxies like audit firm size, audit fee, audit tenure and industry specialist auditor are mostly employed in researches to show the audit quality exhibited by audit firms. Studies such as

Smii (2016); Ching, Teh, San and Hoe (2015); Yasar (2013); Rad, Salehi and Valipour (2016); Bamahros and Wan-Hussin (2015); Okolie (2014); Babatolu, Osasrere and Emmanuel (2016) etc., have employed different combinations of these proxies to assess the relationship between audit quality and the level of earnings management practice in a client's firm.

One of the most commonly used indirect measures of audit quality is audit firm size. The theory advanced by DeAngelo (1981) proposes that the size of an audit firm is an indicator of audit quality. Because larger firms have more equipment, they have greater reputation at stake, more resources at their disposal, attract more highly skilled employees, have narrow tendency to compromise standards and avoid costly litigation from failed audits, thereby, providing better audit service compared to small audit firms. Audit firms that are greater in size are considered to be more resistant from management pressures. The greater the size of the auditing company, the greater are the possibilities that this auditing company will try to be as much professional as it can in order to protect its name and reputation by providing higher audit quality (Marsel & Ali, 2015). The link between the request for audit services and audits to large-firms is based on the agency theory as well as the links between audit quality and the auditor size (Lindberg, 2001). Therefore, clients that intend to choose a high quality auditor to reach the best auditing results are more interested in demanding for large audit firms with higher reputation compared with small audit firms. The higher the reputation, the higher the incentives to issue clean and accurate audit report, because inaccurate audit reports can lead to decline in the reputation. The decline of reputation could result in attracting fewer clients and in the decrease of audit fees.

Large auditors with higher credible clients can suffer noticeable losses compared with small auditors if they issue inaccurate report. Therefore, the large audit firms have more incentive to issue a reliable audit report with the purpose of maintaining their reputation (DeAngelo,

1981). DeAngelo (1981) theorized that larger firms perform better audits because they have a greater reputation at stake. In addition, because larger firms have more resources at their disposal, they can attract more highly skilled employees (Okolie, 2014). Others have theorized that large auditors attract a fee premium because their greater wealth reduces clients' exposures in litigation (the deep pockets theory). Others have theorized that there is no real audit quality difference, but the perception exists because large firms are well known and have gained a reputation for high quality. On the whole, the evidence is mixed, but it appears that there is a close relationship between audit firm size and earnings management. Based on DeAngelo's reports, many other studies use auditor size (specifically Big8, Big6, Big5 or Big4 Vs non-Big8, non-Big6, non-Big5 or non-Big4) to differentiate audit quality levels (Okolie, 2014). The big four auditors in the world are Ernst and Young (EY); Akintola Williams Deloitte; PriceWaterhouseCoopers (PwC); and KPMG (Wikipedia, 2017).

Audit firm tenure is the length that an audit firm is engaged to a client-firm for performing audit of the financial statement (Johnson *et al.,* 2002; Eilifsen *et al.,* 2015). Audit tenure reflects the relation between auditor and audited entity. Audit tenure is one of the most controversial issues in the study of earnings management. Audit tenure is defined as short when the same auditor has audited the financial statements of a company for two or three years. Audit tenure is defined as long when the same auditor has audited the financial statements of a company for nine or more years. One of the commonly used arguments in favor of audit firm rotation is based upon the assumption that long auditor tenure may cause a relationship to be established between the auditor and the client, which in turn possibly may compromise the auditor's independence and objectivity. When the auditor's independence is compromised by a relationship between the auditor and the entity that is being audited, breaches discovered in financial statements may less likely be reported (Carmen, 2012).

Another argument that is often used by supporters of audit firm rotation is that audit firm rotation avoids situations in which auditors are becoming too aligned with managers of the issuer, which in turn can compromise the auditor's independence (Jackson *et al.,* 2008). In order to avoid such undesirable situations, it would be enhancing for the auditor's independence if there is a fixed maximum term on the period in which one auditor may be appointed to the same client (Carmen, 2012). Supporting this claim on independence, Adeyemi and Okpala (2011) found evidence suggesting that a longer audit firm tenure can result in a compromised auditor's independence. Johnson *et al.* (2002) make a distinction between short, medium and long audit-firm tenure. A short tenure is between two and three years, a medium tenure is four to eight years and a long tenure is nine years or longer (Johnson *et al.,* 2002; Carcello & Nagy, 2004). Johnson *et al.* (2002) suggested that tenure of 9 years or longer did not have a negative effect on financial reporting quality. Carcello and Nagy (2004) found that financial reporting fraud is more likely to take place within the first three years of the auditor-client relationship. Their results supported opponents of mandatory audit firm rotation who addressed the adverse effects on audit and financial reporting quality.

As a result of this, Sarbanes Oxley Act (2002) specified that an audit firm should not use more than five years with a client firm while section 33(2) of the Nigerian Code of Corporate Governance stipulated that external audit firms should be retained for no longer than ten (10) years continuously and could only be re-engaged after seven (7) years of their disengagement.

Another indirect measure is audit fee. Onaolapo *et al.,* (2017) explained audit fee to be the amount charged by the auditor for an audit assignment carried out, that is, amount charged by the auditor for any work done in order to express opinions on the true and fair state of affairs or position of the client's enterprise. Audit fee consists of the amount paid for the audit of financial statement and the amount paid for other non-audit services provided by the audit

firm to the client's firm. Non-audit services are the services that the auditor can provide apart from normal auditing procedures, by offering different services to the clients from which he can earn extra revenues. Recently, the demand for business expert services has increased and expanded in different range of services which include: training, risk management advice, mergers and acquisition, taxation, portfolio monitoring, recruitment and human resources and corporate governance. An auditor needs to pay much attention when both audit and non-audit services are provided to the same client, because these non-audit services may threaten the independence of auditor (Marsel & Ali, 2015). The Sarbanes–Oxley Act increased disclosure requirements for auditor compensation by requiring a clear breakdown of audit, audit-related, and non-audit fees, and restricted non-audit services that audit firms can provide to audit clients.

The regulators' concerns about auditor independence is underlined by the economic bonding hypothesis that argues that the strength of the audit firm's economic dependence on the client or the economic bond, consciously or otherwise, reduces the auditor's independence, or the willingness to resist client-induced biases in the reporting process. Thus, the lack of auditor independence is assumed to result in poor earnings quality (Koh *et al.*, 2013). It is based on this that different measures are used to proxy economic bonding (such as audit fee, non-audit fee, audit fee to non-audit fee ratio, etc.) so as to draw inferences on auditor independence.

2.2 Theoretical Review

Different theories have been formulated relating to audit quality on earnings management. These theories include the agency theory, theory of inspired confidence, economic dependence theory, lending credibility theory and signaling theory. The researcher examined

the authors of these theories, the philosophy behind the theories and how they relate as well as their relevance to the concept being discussed.

2.2.1 Agency Theory

Agency theory was first propounded by Mitnick in 1973. He defined agency theory to be the study of the agency relationship and the issues that arise from this, particularly the dilemma that the principal and the agent, while working towards the same goal, may not always share the same interests. Jensen and Meckling (1976) explained further that the agency relationship is one in which one or more persons (the principals) engage another person (the agent) to perform some services on their behalf which involves delegating some decision making authority to the agent. Agency theory explains the agency problem which is due to the agent (management) acting in their own benefit and in an opportunistic manner on the expense of the principal (owners/shareholders) (Jensen & Meckling 1976).

Conflicts and dissimilar interests lead to information asymmetries between the two parties. The existence of information asymmetries results in two major agency problems, namely, moral hazard and adverse selection problems (Okoh, 2015). Moral hazard problems are associated with the problem of hidden actions when agents have the incentive to pursue self-interested behaviour. They arise when principals are unable to observe actions that are undertaken by the agents. Formally, an agent is expected to maximize the principal's wealth through their actions and decisions. However, agents tend to pursue their own interests. By contrast, adverse selection problems are associated with hidden information, where the agent has more information than the principal. Both problems may create the phenomenon of

earnings management that, in turn, may cause shareholders, debt holders to be unable to distinguish the true economic value of a firm.

According to agency theory, since the managers or agents are inspired by extrinsic motivations (Sundaramurthy & Lewis, 2003), the principals had to identify ways to motivate the agents and to ensure that they act in the best interest of the principals. Jensen and Meckling (1976) suggested that agency cost can be an alternative way to reduce agency conflict and they define agency cost as consisting of monitoring cost, bonding cost and residual loss. Monitoring costs are the costs that are associated with the appointment of appropriate agents, such as external auditors, and with mechanisms that control the agents' behaviour, such as the roles played by the board. Bonding cost is the cost that is associated with contracting in order to ensure that agents always make decisions that support the principal's wealth. These costs include those that are related to the agent's compensation system. Residual loss is the agency loss that is associated with the imbalance between monitoring and bonding costs or, in other words, it is the reduction in principals' welfare that arises from an imperfect alignment of interest between agents and principals (Jensen & Meckling, 1976).

In this research work, the monitoring roles of auditors are studied as the mechanism that mitigates agency conflicts. Zahra and Pearce (1989) argued that agency theory is the most comprehensive theory that clarifies the auditors' functions and highlights the importance of their controlling role. Solomon (2007) claimed that the external audit represents a crucial element of a firm's internal control system and that it provides a check and balance system that helps shareholders to monitor and control the management's activities. Given the separation of ownership from management, the directors are required to report on their stewardship by means of the annual reports and financial statements sent to the shareholders. The audit provides an external and objective check on the way in which the financial

statements have been prepared and presented, and it is an essential part of the checks and balances required. Hence, it can be argued that agency theory is essential to this study since it recognizes the monitoring role of an external audit as mechanism to control management opportunistic behaviors.

2.2.2 Theory of Inspired Confidence

The theory of inspired confidence also known as theory of rational expectation was propounded by Limperg (1932) to address both the demand and the supply for audit services. The demand for audit services is the direct consequence of the participation of third parties (interested parties of a company) in the company. These parties demand accountability from the management, in return for their investments in the company. Accountability is realized through the issuance of periodic financial reports. However, since this information provided by the management may be biased, and outside parties have no direct means of monitoring, an audit is required to assure the reliability of this information. With regard to the supply of audit assurance, Limperg (1932) suggested that the auditor should always strive to meet the public expectations.

The auditors' theory of inspired confidence offers a linkage between the users' requirement for credible and reliable financial reports and the capacity of the audit processes to meet those needs. It sees through the development of these needs of the public (stakeholders) and the audit processes over time. Developed by the Limperg Institute in Netherlands in 1985 (Limperg, 1985), the theory of inspired confidence states that the auditor, as a confidential agent, derives his broad function in society from the need for expert and independent examination as well as the need for an expert and independent judgment supported by the examinations. Thus, accountants and auditors are expected to know and realize that the public

continues to expect a high rate of audit failures. This requires that the auditors must plan and perform their audit in a manner that will minimize the risk of undetected material misstatements. The accountant is under a duty to conduct his work in a manner that does not betray the confidence which he commands (Limperg, 1985).

2.2.3 Economic Bonding Theory

Economic bonding theory is derived from the agency theory perspective. It argues that the strength of the audit firm's monetary dependence on the client or the economic bond consciously or unconsciously reduces the auditor's independence or the willingness to resist client-induced biases in the financial statements. This is also supported by the psychological belief that auditors are rational wealth maximizers who would be intentionally biased towards compromising audit quality (independence) in order to generate wealth for themselves. Therefore, economic bonding theory maintains that auditors are more likely to comply to client pressures, including pressure to allow earnings management, when the provision of non-audit services or abnormal fees generate economic rents to auditor (Franke *et al.*, 2002). In addition, Beattie *et al.,* (1998) stated that self interest in terms of familiarity or tenure compromises auditor independence where audit partner's income depends on the retention of a specific audit client. That is, auditors compromise their independence for the fear of losing a key client, thus increasing the tenure with the key client.

Similarly, Kinney and Libby (2002) provided a framework based on the economic bonding that link auditor with economic benefit derivable from audit. They maintained that, more insidious effects on the economic bond may result from unexpected non-audit and audit fees that may more accurately be likened to attempted bribes and other unethical acts. Thus, they concluded that the audit quality is decreasing by economic bond, through earnings

management by the client. For auditors to successfully discharge this responsibility, they need to be independent; that is, the state of being objective and just. Therefore, the higher the auditor's independence, the more they detect management's manipulations in the financial statements.

2.2.4 Lending Credibility Theory

The lending credibility theory suggests that the primary function of the audit is to add credibility to the financial statements. In this view, the service that the auditors are selling to the clients is credibility. Audited financial statements are seen to have elements that increase the financial statement users' confidence in the figures presented by the management (in the financial statement). The users are perceived to gain benefits from the increased credibility. These benefits are typically considered to be that the quality of investment decisions when they are based on reliable information.

2.2.5 Signaling Theory

Wallace (1980) posited that signaling is a kind of implicit guarantee. The signaling theory offers an explanation for the demand for different levels of audit quality. Signaling through auditor choice stands on the agency theory, and is a manner by which managers and/or directors may impart to the market, additional information about their company and their own behaviour. Signaling theory suggests that companies with good performance use financial information disclosure to send signals to the market. Craven and Marston (1999) showed that firms will attempt to accept the same level of disclosure as similar firms operating in the same industry since if a firm does not keep up with the same level of disclosure as others, it may be perceived by stakeholders that it is hiding bad news or negative information. As the

types of financial statements produced have become standardized, potential information differentiation that a company can use to send a signal to the market through its financial statements is reduced. Companies are thus provided an incentive to signal, other than through transparency in their notes to the accounts and other voluntary disclosures, through their choice of auditor. Moreover, even voluntary disclosures that may be used as signals achieve enhanced credibility in the presence of a quality auditor.

A high quality audit sends a signal to the market that the financial statements are more credible than those audited by lower quality auditors. The market perceives audit firm size and specialist auditors to be of a higher quality than others and rewards (punishes) companies with larger improvements (or falls) in share prices accordingly (Teoh & Wong, 1993; Khuranan & Raman, 2004; and Menon & Williams, 1994).

Signaling theory does not actually require higher audit quality. It merely needs the market to believe that Top Tier firms are associated with higher audit quality because of the fee premiums they are able to command (Sweeney, 1994). It has been shown that the market's perception of the quality of the company's auditor influences that company's share price. As such, directors and management may want to signal to the stakeholders that their interest is being well monitored. Therefore, signaling should, theoretically, affect the demand for audit quality over and beyond the monitoring function alone. The positive signal of transparency and credibility it sends to the market and the assurance it provides to stakeholders about the quality of earnings performance disclosures suggest a positive association between market price per share and audit quality. The signaling theory has shown that high quality audit sends a signal to the market that financial reports audited by higher quality auditors are more credible than those audited by lower quality auditors.

The theoretical framework for this study is anchored on the agency theory.

2.3 Empirical Review

This sub-chapter covers the review of empirical studies on the relationship between earnings management and the various proxies of audit quality used in this study. The objective is to critically examine the contribution of earlier researchers on the subject matter.

2.3.1 Audit Firm Size and Earnings Management

2.3.1.1 Empirical Studies in Developed Countries

Mehmet and Emin (2012) assessed earnings management, audit quality and legal environment: An international comparison. They used 1,507 firms' observations from listed companies in private firms across different eight (8) emerging countries. Using big four and non-big four to measure audit quality, the result of the regression analysis showed that big four auditors do not constrain the discretionary accruals earnings management incentives in every emerging country but legal system does.

Tan (2013) examined the impact of audit quality and PCAOB on real earnings management with evidence from NASDAQ and NYSE listed firms. The data was collected from the CSRP/COMPUSTAT of New York Stock Exchange and NASDAQ for the periods 1996 to 2011 covering 109,826 firm-year observations. The result of the panel regression analysis indicated that big N auditors do stimulate real earnings management, that is, the higher standard delivered by big N auditors has an unintended consequence on more real earnings management.

Hussainey (2015) examined the impact of audit quality on earnings predictability for profitable and unprofitable firms in the United Kingdom. Data was sourced through the annual report of 631 listed firms in the United Kingdom and was analyzed using multiple regression analysis. He used the returns earnings regression model developed by Collins *et al.* (1991) and found that investors are able to better anticipate future earnings when financial statements are audited by the big four accounting firms.

Alhadab and Clacher (2017) assessed the impact of audit quality on real and accrual earnings management activities of IPO firms in the United Kingdom. The data collected from the annual report of the United Kingdom IPO firms between 1998 and 2008 were analyzed using regression analysis. The study showed that high audit quality through BIG 4 constrains the use of real activities manipulations that occur via the management of discretionary expenses.

2.3.1.2 Empirical Studies in Developing Countries

Zgarni, Hlioui and Zehri (2012) examined the effect of audit quality on earnings management in the Tunisian context for the periods 2000 to 2010 using 29 listed firms as sample, the result of the regression analysis shows that longer auditor tenure is not associated with greater real and accruals earnings management. They also found that big four auditors is associated with lower levels of accruals earnings management and enhances the extent of real earnings management, that is, there is significant negative relationship between audit firm size and earnings management.

In the study carried out by Yasar (2013) on Big Four Auditors quality and earnings management: evidence from Turkish Stock Market, data was obtained from the annual report of sampled manufacturing industry firms for the period 2003-2007 and was analyzed using

univariate and multivariate regression analysis. The study showed that audit firm size does not have an impact on discretionary accruals. It also shows that there is no difference in audit quality between big four and non-big four audit firms for restriction of earnings management in Turkey.

Mahmoud, Forough and Hamid (2013) assessed the relationship between auditor tenure and size of the audit firm with earnings management in Pharmaceutical companies listed on Tehran stock exchange. The data collected from the annual report of the twenty-five (25) pharmaceutical companies selected as sample for the periods 2005 to 2010 was analyzed using multivariate regression analysis based on panel data method. The study revealed that audit firm size reduces management flexibility in the use of discretionary accruals for earnings management, that is, there is a significant negative correlation between audit firm size and earnings management.

Pouraghajan, Tabari, Emamgholipour and Mansourinia (2013) investigate the effect of audit quality on earnings management with evidence from Iran. One hundred and forty (140) annual report of firms listed on the Tehran Stock exchange were used for data collection and multivariate regression analysis was employed in testing the hypothesis. The study revealed that audit firm size has insignificant negative relationship with discretionary accruals (modified Jones Model) earnings management.

In the study of Soliman and Ragab (2014) on audit committee effectiveness, audit quality and earnings management of listed companies in Egypt, data was collected from annual report and accounts of fifty (50) Egyptian non-financial sector firms listed on the Egyptian Stock Exchange during the periods 2007 to 2010 and was analyzed using univariate and multivariate analysis. The study indicates that audit firm size has significant negative relationship with the level of discretionary accruals.

Naser, Mahmood and Forough (2014) investigated the relationship between type of ownership, audit quality and earnings management of listed companies in Tehran Stock Exchange. Data collected through the financial statements of the companies under sample was analyzed using panel regression method. The study revealed that there is significant negative relationship between audit firm size and earnings management meaning that earnings management would reduce if large audit firm is employed.

Kitiwong (2014) investigates the relationship between earnings management audit quality with evidence from South-East Asia. Data was sourced through structured interviews and annual report of 2,148 listed firms in Indonesia, Malaysia, the Philippines, Singapore and Thailand for the periods 1992 to 2011. The results of the panel regression analysis showed that big four audit firms have significant negative effect on discretionary accruals.

Al-Rasas and Kamardin (2015) examined the association between internal external audit attributes, audit committee characteristics, ownership concentration and discretionary accruals. Data was sourced from the annual report of 508 firms listed on the Malaysian main market from 2009 to 2012 and was analyzed using panel regression analysis. The result of their study showed that big four audit firms have no significant association with discretionary accruals.

Ebrahimie, Bahraminasab and Khorram (2015) assessed the effect of over-valued equity on the relationship between audit quality and earnings quality with evidence from Iran. The sample of the study consists of 189 companies listed on Tehran stock exchange during the periods 2008 to 2012 and data was sourced from their annual report and accounts. The result from the ordinary least square regression showed that there is a reverse relationship between audit firm size and absolute accruals, indicating that high audit quality causes higher earnings quality.

Piyawiboon (2015) assessed the relationship between audit quality and earnings quality of the listed firms in four (4) industrial groups in the stock exchange of Thailand for the periods of 2009 to 2013. The result of the panel regression analysis revealed that audit firm size has a negative correlation with the discretionary accruals. Gumanti, Nastiti, Utami and Manik (2015) carried out their study on audit quality and earnings management in Indonesian Initial public offerings. Sample firms constitute 62 firms making IPO between 2000 and 2006 and the data collected was analyzed using multiple regression analysis. The study revealed that big four audit firm constrains the extent of discretionary accruals earnings management for Indonesian IPO firms and provides more precise information that makes management have less incentive to manage earnings.

Ching, Teh, San and Hoe (2015) studied the relationship among audit quality, earnings management and financial performance of Malaysian public listed companies. Data was collected from the annual report of the one hundred (100) industrial products and consumer products industry listed on the main Board of Bursa Malaysia during the periods 2008 to 2013 and was analyzed using multiple regression analysis. The result of the study revealed that there is no significant but positive relationship between audit firm size and discretionary accruals (modified Jones model) earnings management.

Jacob, Desai and Agarwalla (2015) determined whether big four audit fee premiums always related to superior audit quality with evidence from India's unique audit market. Using annual report and accounts of 50 firms chosen as sample for data collection, regression analysis was employed in analyzing the data collected. They discovered that there is no difference in the quality of audit provided by big four and non-big four and the quality of reported earnings.

In the study carried out by Ahmad, Suhara and Ilyas (2016) on the effect of audit quality on earnings management within manufacturing companies, data was sourced from the annual report and accounts of 105 listed manufacturing companies listed on the Indonesian stock exchange for the periods 2010 to 2013. The result of the multiple regression analysis showed that big four audit firms have significant negative effect on discretionary accruals.

Lisar and Zadeh (2016) evaluate the effect of independent audit quality and ownership structure on earnings management in the listed companies of Tehran Stock Exchange. Data was obtained from library and annual report and accounts of 170 companies listed firms chosen as samples for the periods 2010 to 2014. The result of the study indicated that audit firm size has no effect on earnings management.

Ben Amar and Chabchoub (2016) examined the effect of audit quality on earnings management to avoid losses and earnings decrease. The data of the study were collected from the "Thomson One-Banker" and "World scope" Data-Base over the period 2001-2007 for the French listed firms belonging to SBF 250 companies. The result of the study revealed that auditor size provides a constraint on earnings management to avoid losses and earnings decreases.

Smii (2016) investigated the impact of the audit quality on that of the accounting profits using companies listed on the Tunisian Stock Exchange. The study covered the period 2005 to 2009 using a sample of twenty (20) non-financial companies listed on the Tunis Stock Exchange (TSE). The data collected from their annual report was analyzed using panel regression analysis. The results of the study show that there is a positive and significant relationship between big four auditors and the quality of accounting. This means that large audit firms produce higher quality services because they have better techniques and well informed human skills.

Affes and Smii (2016) assessed the impact of the audit quality on the earnings management of Tunisian firms. They collected data from annual report and accounts of twenty (20) companies listed in the non-fictional sector for the periods 2005 to 2009 was analyzed using panel regression analysis. The study found that there is a positive and significant relationship between big four auditors and the quality of accounting earnings.

Nawaish (2016) argued whether earnings management can be influenced by audit quality using Jordanian listed firms. Using thirteen (13) annual reports of listed banks for the periods 2006 to 2010, the result of the panel regression analysis revealed that big four audit firms have significant relationship with discretionary earnings management.

Ashtiani, Oskou and Takor (2016) assessed the impact of audit quality on earnings management in Tehran listed companies. Data was sourced from the annual report and accounts of ten (10) firms listed on the Tehran Stock Exchange. The results of the panel regression analysis showed that big N auditors have significant negative effect on real earnings management of companies listed on Tehran stock exchange.

Khalil and Ozkan (2016) investigated the relationship between board independence, audit quality and earnings management. Data extracted unique data set of EGX and the Capital Market Authority (CMA) of non-financial publicly listed companies in Egypt over the periods of 2005 to 2012 and was analyzed using panel regression analysis. The study revealed that big four auditor has significant negative effect on earnings management of the sample firms.

In the study of Bassiouny, Soliman and Ragab (2016) on the impact of firm characteristics on earnings management: An empirical study on the listed firms in Egypt, data was sourced from the financial statements of fifty (50) most active firms in the Egyptian stock Exchange for the periods 2007-2011. The data were analyzed using random effect generalized least

square regression model. Their research study shows that audit firm size has an insignificant relationship with earnings management.

Ishak, Amran and Abdul Manaf (2016) examined the effect of leadership structure, gender diversity and audit quality on earnings management in Malaysian listed companies. Regression analysis was employed in analyzing the data collected from the annual report and Thomson Data stream of 1597 firm-years observation from 2009 to 2012. The result of the study showed that there is positive and significant relationship between BIG 4 and real earnings management, that is, by having BIG 4 as auditors, firms failed to prevent manager form managing the earnings figures.

Alzoubi (2017) examined the relationship between audit quality, debt financing and earnings management in Jordan. Generalized least square regression analysis was employed in analyzing the data collected from the annual report of seventy-two (72) industrial companies selected as sample for the periods 2006 to 2012. The result revealed that auditor size has significant negative effect on the level of earnings management.

Prayogo and Agoes (2017) assessed the role of audit regulation on the effect of corporate governance and audit quality on earnings management. Data was sourced from the annual report and accounts of sixty-nine (69) companies listed in Indonesian Stock exchange with 480 firm-years observation for the periods 2008 to 2015 and was analyzed using partial least squares (SEM-PLS) and one-way ANOVA. The result of the study indicated that audit firm size has significant and negative influence on earnings management in the period 2008 to 2010 and the periods 2011 to 2014.

In the study of Chi and Ziebart (2017) on the impact of audit quality and attributes of management of earnings forecasts, data collected from the annual report of the sample firms for ten years was analyzed using regression analysis. The study revealed that BIG 5 auditors

constrain earnings management but may induce management to provide forecasts that have greater errors, may be biased and be less informative.

In the study of Astami, Rusmin, Hartadi and Evans (2017) on the role of audit quality and culture influence on earnings management in companies with excessive free cash flows in Asia-Pacific region, data was sourced from the annual report and accounts of listed companies in nine countries in the Asia Pacific region. The result of the panel regression analysis showed that big 4 audit firm has significant and negative effect on discretionary accruals earnings management.

In India, Houque, Ahmed and Van Zijl (2017) examined the effect of audit quality on earnings management and cost of capital of listed companies in India. Regression analysis was employed to analyze the data collected from the annual report and accounts of 7,303 firm-years observation of the sample firms for the periods 1998 to 2009. The result of the study revealed that companies employing high quality auditors through Big 4 audit firm have a lower degree of earnings management of sample firms in India.

Habbash and Alghamdi (2017) assessed the association between audit quality and earnings management in less developed economies using Saudi Arabia as the case study. Data was sourced from the annual report of 337 non-financial listed firms for the periods 2006 to 2009 and the data was analyzed using multiple regression analysis. The result of the study showed that auditor size has no significant effect on earnings management practice measured through discretionary accruals.

2.3.1.3 Empirical Studies in Nigeria

Okoli, Izedonmi and Enofe (2013) carried out a study on the impact of audit quality on accrual-based earnings management of listed companies in Nigeria. Pooled and panel

regression analysis was employed in analyzing the data collected from the financial statements of fifty-seven (57) sampled companies. The study revealed that there is significant negative relationship between audit firm size and earnings management.

Okolie, Izedonmi and Enofe (2014) assessed the audit quality and cash-based earnings management of listed companies in Nigeria. Data was sourced from the annual report of sample firms for the periods 2006 to 2011 and the data was analyzed using multivariate analysis. The result of the study revealed that audit firm size has significant negative impact on real cash-based earnings management.

In the study of Miko and Kamardin (2015) on the impact of audit committee and audit quality on preventing earnings in the pre and post Nigerian Corporate Governance Code, 2011, the result of the multiple regression revealed that audit firm size has significant negative impact on earnings management, that is, it will reduce manipulation of accounts through discretionary accruals.

Tyokoso and Tsegba (2015) examined the impact of audit quality on earnings management of listed oil marketing companies in Nigeria. Data was sourced from annual report and accounts of eight (8) listed oil marketing companies from 2004 to 2013 and was analyzed using multiple regression analysis. The study found out that audit firm size has negative and insignificant impact on earnings management.

Okoh (2015) carried out a study on the impact of audit quality on earnings management of listed chemical and paint firms in Nigeria. Data was sourced from the financial statement of eight (8) listed chemical and paints firms chosen as sample and was analyzed using generalized least square technique. The result of the study showed that there is significant negative impact of audit firm size and earnings management.

Masoyi, Aliyu and Zachariah (2015) investigated the impact of audit quality on earnings management of listed deposit money banks in Nigeria. Ordinary least square (OLS) regression technique was employed to analyze the data collected from the annual report and accounts of ten (10) listed deposit money banks taken as sample for the periods 2006-2013. The study found that audit firm size has significant negative impact on the earnings management of listed deposit money banks in Nigeria.

Uwalomwa, Uwuigbe and Okorie (2015) assessed the effects of firms' characteristics on earnings management of listed firms in Nigeria. Data obtained from the annual report and accounts of twenty (20) listed firms taken as sample for the periods 2006 to 2010 was analyzed using pooled ordinary least square regression. Their study revealed that audit firm size has significant positive impact on earnings management (discretionary accruals).

In the study carried out by Atu, Atu, Enegbe and Etu (2016) on the determinants of earnings management in Nigerian listed companies, ordinary least square regression analysis was employed to analyze the data sourced from financial statements of listed companies. The results of their study indicated that audit firm size has insignificant positive relationship with earnings management.

2.3.2 Audit Fee and Earnings Management

2.3.2.1 Empirical Studies in Developed Countries

Choi, Kim and Zang (2010) argued whether abnormal high audit fees impair audit quality and earnings management of listed companies in Singapore. They found that abnormal audit fees are negatively associated with audit quality and earnings management. They suggested that auditor's incentives to deter biased financial reporting differ systematically depending on whether their clients pay more than or less than the normal level of audit fees.

Basiruddin (2011) examined the relationship between governance practice, audit quality and earnings management, UK evidence. Based on the data obtained from FTSE 350 between 2005 and 2008, the result showed that audit fees have significant relationship with earnings management, that is, higher audit fee is likely to reduce earnings manipulations between abnormal audit fee and discretionary accruals.

Choi, Sohn and Yuen (2018) investigated whether auditors care about real earnings management in their audit fee decisions or not. Regression analysis was employed in analyzing the data collected from the financial statements of large US firms. The study found that there is significant positive relationship between real earnings management and audit fee of the sample firms.

2.3.2.2 Empirical Studies in Developing Countries

Jacob, Desai and Agarwalla (2015) determined whether Big four audit fee premiums are always related to superior audit quality with evidence from India's unique audit market. Using a sample of 500 firms which are part of the SandP BSE and was analyzed using regression analysis, their study indicated that abnormal audit fee is not associated with reduction in the quality of audit and reported earnings.

In India, Houque, Ahmed and Van Zijl (2015) carried out their study on the effect of audit quality on earnings quality and cost of equity capital. Using a sample of fifty (50) companies covering ten (10) years from 1998 to 2009, the results of the regression analysis showed that audit fee has significant negative effect on earnings management of sample firms in India.

Ching, Teh, San and Hoe (2015) studied the relationship among audit quality, earnings management and financial performance of Malaysian public listed companies. Data was collected from the annual report of the one hundred (100) industrial products and consumer products industries listed on the main Board of Bursa Malaysia during the periods 2008 to

2013 and was analyzed using multiple regression analysis. The result of the study revealed that there is no significant but negative relationship between audit fees and earnings management.

Al-Rasas and Kamardin (2015) examined the association between internal external audit attributes, audit committee characteristics, ownership concentration and discretionary accruals. Data was sourced from the annual report of 508 firms listed on the Malaysian main market from 2009 to 2012 and was analyzed using panel regression analysis. The result of their study showed that there is insignificant negative relationship between external audit fee and discretionary accruals (using modified Jones model).

Nawaiseh (2016) carried out his study on "whether earnings management can be influenced by audit quality of Jordanian listed firms. Secondary historical data was obtained from the annual reportof13 banks listed on Amman Stock Exchange (ASE) over a period of years from 2006 to 2010 and was analyzed using regression analysis. The study revealed that there is negative relationship between audit fee and discretionary earnings management.

Martinez and Moraes (2017) investigated the impact of audit fees on earnings management in the Brazilian market. Regression analysis was employed to analyze the data obtained from the Economatica Database and the website of the Brazilian Securities Commission of 300 firms listed on the BM and Bovespa. The study found that there is no significant positive relationship between audit fee and discretionary accruals.

Alzoubi (2017) examined the relationship between audit quality, debt financing and earnings management in Jordan. Generalized least square regression analysis was employed in analyzing the data collected from the annual report of seventy-two (72) industrial companies selected as sample for the periods 2006 to 2012. The result found that audit fee reduces the potential of earnings management and enhance the financial reporting quality.

2.3.2.3 Empirical Studies in Nigeria

Okolie, Izedonmi and Enofe (2013) examined the impact/relationship between audit quality and accrual-based earnings management of listed companies in Nigeria. Secondary data was obtained from the annual report and accounts for the periods 2006 to 2011 and was analyzed using pooled and panel regression. They found that audit fee has significant effect on earnings management.

In the study carried out by Jubril (2014) on auditor's independence and earnings management of deposit money banks in Nigeria, ordinary least square technique was used in analyzing the data sourced through annual report for the periods 2006-2012. The result of the study showed that audit fee has significant positive effect on the earnings management through discretionary accruals.

Okolie, Izedonmi and Enofe (2014) determined the impact of audit quality on real cash-based earnings management of listed companies in Nigeria. The data sourced from annual report from the annual reports of fifty-seven (57) firms used as sample and was analyzed using multivariate analysis. The study showed that there is significant negative impact on real cash-based earnings management.

In the study of Miko and Kamardin (2015) on the impact of audit committee and audit quality on preventing earnings in the pre and post Nigerian Corporate Governance Code, 2011, the result of the multiple regression revealed that audit fee has significant negative impact on earnings management, that is, it will reduce manipulation of accounts through discretionary accruals.

Masoyi, Aliyuand Zachariah (2015) examined the impact of audit quality on earnings management of listed deposit money banks in Nigeria. Ordinary Least Square (OLS)

regression technique was employed to test the data sourced from the annual report and accounts of ten (10) listed deposit money banks for a period of eight (8) years (2006-2013). The study revealed that auditor financial independence (audit fee) has significant positive impact on earnings management of listed deposit money banks in Nigeria.

Eriabie and Dabor (2015) carried out a study on audit quality and earnings management in listed Nigerian banks. Data was gathered through annual report and accounts of sample firms and wasanalyzed using regression analysis. The study found that there is positive relationship between audit fee and earnings management, that is, high audit fee aggravates earnings management.

In the study of Onaolapo. Ajulo and Onifade (2017) on the effect of audit fee on audit quality of cement manufacturing companies in Nigeria, multiple regression using ordinary least square model estimation technique was employed in analyzing the data collected from the audited report of four (4) sample companies for the periods of six (6) years (2010-2015). Findings from the study showed that audit fee has a significant positive impact on audit quality (earnings management).

2.3.3 Audit Tenure and Earnings Management

2.3.3.1 Empirical Studies in Developed Countries

Aerts (2012) determined the impact of audit firm tenure on earnings quality in Netherlands. The study used annual report and accounts of 38 listed firms for the periods 2002-2011 and employed regression analysis and descriptive statistics to analyze the data collected. The result of the study indicated that earnings quality does not change with firm tenure, that is, there is no relationship between audit firm tenure and earnings quality.

Tan (2013) examined the impact of audit quality and PCAOB on real earnings management with evidence from NASDAQ and NYSE listed firms. Data was sourced from the CSRP/COMPUSTAT of NYSE and NASDAQ for the periods 1996 to 2011 covering 109,826 firms' year observations. The result of the panel regression analysis showed that long-term audit tenure has a downward effect on real earnings management while long-term audit firm tenure has an upward effect on discretionary accruals earnings management.

Trans (2016) assessed whether or not there is improvement and deterioration of the financial reporting quality through audit firm rotation and audit tenure of Dutch listed firms. Data obtained from Dutch public firms listed on the AEX, AMX, and ASCX from 2002 to 2015 was analyzed using panel regression analysis. The study found that audit firm tenure eventually led to a higher financial reporting quality. He further explained that audit firm tenure does not have immediate effect on financial reporting quality but short audit firm tenure (three years or less) does has a positive effect on financial reporting quality relatively to medium audit firm tenure (between four and eight years). There is no evidence that a longer audit firm tenure from nine (9) years or longer affects the financial reporting quality.

In the study of Rad, Salehi and Valipour (2016) examined the impact of audit quality and ownership structure on earnings management of listed firms on Tehran Stock Exchange. Multiple linear regression model with panel data and fixed effect were used to analyzed the data obtained from annual report and accounts of one hundred (100) firms listed on Tehran Stock Exchange for the periods of five years (2009-2013). The result of the study showed that auditor tenure has a significant and negative impact on earnings management.

2.3.3.2 Empirical Studies in Developing Countries

Mahmoud, Forough and Hamid (2013) assessed the relationship between auditor tenure and size of the audit firm with earnings management in Pharmaceutical companies listed on Tehran stock exchange. Data sourced from the annual report and accounts of twenty-five (25) pharmaceutical companies for the periods 2005 to 2010 was analyzed using multivariate regression analysis based on panel data method. The study revealed that there is no significant relationship between auditor tenure and earnings management.

Nasar, Mahmoud and Forough (2014) examined the relationship between type of ownership, audit quality and earning management of listed companies in Tehran stock exchange, panel regression analysis was employed to test the hypothesis on the data collected through financial statement of the sample firms. The result of the study showed that there is negative and significant relationship between audit tenure and earning management, that it, earning management is reduced with increased auditor tenure.

Kitiwong (2014) investigated the relationship between earnings management audit quality with evidence from South-East Asia. Data were sourced through structured interview and annual report of 2,148 firms' year observation of listed firms in Indonesia, Malaysia, the Philippines, Singapore and Thailand for the periods 1992 to 2011. The results of the panel regression analysis showed that audit firm tenure has significant negative effect on discretionary accruals.

Ching, Teh, San and Hoe (2015) studied the relationship among audit quality, earnings management and financial performance of Malaysian public listed companies. Data was collected from the annual report of the one hundred (100) industrial products and consumer products industry listed on the main Board of Bursa Malaysia during the periods 2008 to 2013 and was analyzed using multiple regression analysis. The result of the study revealed

that there is no significant but positive relationship between audit partner tenure and earnings management.

Bamahros and Wan-Hussin (2015) investigated the association of non-audit services and audit firm tenure with earnings management in Malaysian public listed firms. The data collected through the annual report and accounts of 525 companies selected as sample for financial year of 2009 was analyzed using panel regression analysis. The study revealed that longer audit firm tenure reduces earnings.

Ebrahimie, Bahraminasab and Khorram (2015) assessed the effect of over-valued equity on the relationship between audit quality and earnings quality with evidence from Iran. The sample of the study consists of 189 companies listed on Tehran Stock Exchange during the periods 2008 to 2012. The result from the ordinary least square regression showed that there is a reverse relationship between audit tenure and absolute accruals indicating that high audit quality causes higher earnings quality.

Rad, Salehi and Valipour (2016) assessed the impact of audit quality and ownership structure on earnings management of listed firms on Tehran Stock Exchange. Questionnaires were administered to one hundred (100) listed firms in Tehran Stock Exchange for 5 years (2009 - 2013) and were analyzed using multiple linear regression model with panel data and fixed effect. The result of the study showed that auditor tenure has a significant and negative impact on earnings management.

Ashtiani, Oskou and Takor (2016) assessed the impact of audit quality on earnings management in Tehran listed companies. The results of the panel regression analysis showed that audit tenure has significant negative effect on real earnings management of companies listed on Tehran stock exchange. Smii (2016) investigated the impact of the audit quality on that of the accounting profits using companies listed on the Tunisian Stock Exchange. The

study covered the period 2005 to 2009 using a sample of twenty (20) non-financial companies listed on the Tunisian Stock Exchange (TSE). The data collected from their annual report of the sample firms was analyzed using panel regression analysis. The results of the study showed that auditor tenure has a positive and significant effect on the model of the relevance of the accounting profits, and a negative and significant effect on the results and accounting conservatism management.

Affess and Smii (2016) carried out their study on the impact of audit quality on earning management of listed firms in Tunisia. Panel regression analysis was employed to analyze the data collected from the annual report of twenty (20) companies used as sample for the period 2005 to 2009. The study revealed that audit tenure has a positive and significant effect on earnings management of the sample firms.

Barghathi, Collison and Crawford (2017) studied the relationship between audit quality and earnings management using stakeholders' perceptions. Data collected through questionnaire from one hundred and two (102) respondents was analyzed using multiple regression analysis. The study found out that audit firm tenure/rotation deters and has significant impact on earnings management.

Habbash and Alghamdi (2017) assessed the association between audit quality and earnings management in less developed economies using Saudi Arabia as the case study. Data was sourced from the annual report of 337 non-financial listed firms for the periods 2006 to 2009 and was analyzed using multiple regression analysis. The result of the study showed that auditor tenure/change has no significant effect on earnings management practice measured through discretionary accruals.

Alzoubi (2017) examined the relationship between audit quality, debt financing and earnings management in Jordan. Generalized least square regression analysis was employed in

analyzing the data collected from the annual report of seventy-two (72) industrial companies selected as sample for the periods 2006 to 2012. The result found that auditor tenure diminishes the potential of earnings management and enhances the financial reporting quality.

Prayogo and Agoes (2017) assessed the role of audit regulation on the effect of corporate governance and audit quality on earnings management. Data was sourced from the annual report and accounts of sixty-nine (69) companies listed in Indonesian Stock Exchange with 480 firms' year observations for the periods 2008 to 2015 and was analyzed using partial least squares (SEM-PLS) and one-way ANOVA. The result of the study showed that audit tenure has negative and significant influence on earnings management in the period 2008 to 2010 and the periods 2011 to 2014.

El-Guindy and Basuony (2018) investigate the association between audit firm tenure and earnings management. The sample of the study comprised the United Kingdom listed companies for five years and collected data through World Scope for financial and accounting standards data and FAME database. The result of the panel regression analysis revealed that negative association exists between audit firm tenure and earnings management of the pooled United Kingdom firms.

Saleem and Alzoubi (2018) examined the relationship between audit quality, debt financing and earnings management of firms in Jordan, Generalized least squares (GLS) regression analysis was employed to analyze the data collected from the annual reports of seventy-two (72) listed industrial companies for the period of 2006 to 2016. The result of the study revealed that long term auditor tenure diminishes the potential of earnings management.

El-Guindy and Basuony (2019) investigated the association between audit firm tenure and earnings management and the impact of changing accounting standards in the United

Kingdom. The data sourced from the World-Scope and FAME database of six hundred and eighty-eight (688) listed firms in the United Kingdom chosen as sample for the period of 2003 to 2007 was analyzed using panel regression analysis. The result of the study revealed that there is a negative association between audit firm tenure and earnings management (using discretionary accruals).

2.3.3.3 Empirical Studies in Nigeria

Okolie, Izedonmi and Enofe (2013) investigate the relationship between audit quality and accrual based earning management of listed companies in Nigeria. Pooled and panel regression analysis was employed in analyzing the data collected through annual report for the period of 2006 – 2011. The study revealed a significant effect of audit tenure on the level of discretionary accrual.

Jubril (2014) carried out study on auditor's independence and earning management of deposit money banks in Nigeria. Ordinary least square (OLS) was used in the analysis of secondary data collected from annual report and accounts of fourteen (14) banks used as sample for a period of seven years (2006 - 2012). The study found that audit tenure has significant positive effect on earning management, that is, lengthy audit tenure is a mechanism through which management influences auditors to compromise their independence.

Okolie, Izedonmi and Enofe (2014) examined the effect of audit quality and cash based earnings management of listed companies in Nigeria. Multivariate analysis was employed to analyze the data collected from the financial statement of the sample companies. The study revealed that audit tenure has positive but insignificant relationship/effect on real cash based earning management.

In the study carried out by Okoh (2015) on audits quality and earning management of listed chemicals and paints firms in Nigeria for period of seven years (2006 - 2012), generalized least square techniques was used to estimate the regression coefficients of the data obtained from the annual report of sample firms. He found there is insignificant negative relationship between auditor independence and earning management.

Tyokoso and Tsegba (2015) investigated the impact of audit quality on earning management of listed oil marketing companies in Nigeria. Data sourced through annual report and accounts for the periods 2009 and 2013 was analyzed using multiple regression analysis. The study shows that audit tenure has significant negative impact on earning management of the sampled companies. Eriabie and Dabor (2015) examined the impact of audit quality and earning management in listed Nigerian banks. The data sourced through annual report for the periods 2005 to 2010 was analyzed using regression analysis. They found that change in audit tenure will aggravate earnings management.

In the study of Miko and Kamardin (2015) on the impact of audit committee and audit quality on preventing earnings in the pre and post Nigerian Corporate Governance Code, 2011, the result of the multiple regression revealed that audit tenure has significant negative impact on earnings management, that is, it will reduce manipulation of accounts through discretionary accruals.

Onaolapo *et al.* (2017) examined the effect of audit fees on audit quality, evidence from cement manufacturing companies in Nigeria. Data was sourced from the annual report of the fours (4) sampled firms and was analyzed using multiple regression (OLS). The study found out that audit tenure exhibits positive but insignificant relationship with audit quality.

Previous researchers (such as Miko & Nuraddin, 2015; Pouraghajan *et al.,* 2013; Mehmet & Emin, 2012; Bassiouny *et al.,* 2016; etc.) have employed different control variables which

could also lead to increase in earnings management practice. Some of the control variables employed are company's size, leverage, cash flows from operations, growth of the firm, among others. Therefore, this study used company's size and leverage as the control variables.

2.4 Summary and Gap Identified in the Literature

This chapter provides review on conceptual, theoretical and empirical issues relating to the research area. The empirical review showed that previous studies have provided conflicting results. The review showed that there are still remained unanswered questions. Therefore, this study provides further evidence to fill the gaps identified in the literature. Consequently, the body of literature reviewed on the effect of audit quality on earnings management showed that the difference in the level of earnings management practice in each sub-sector of the Nigerian manufacturing industries has not been studied. The previous studies have largely focused on accrual-based (discretionary) earnings management in banking industry (See Jubril, 2014; Eriabie & Dabor, 2015; and Masoyi *et al.*, 2015) while the few studies on manufacturing industry were based on single sector (See Onaolapo *et al.*, 2017). Therefore, based on the extant literatures reviewed and to the best of the researcher's knowledge, the past studies have not compared the level of earnings management practice in the various sub-sectors of the Nigerian manufacturing industries.

Furthermore, it has been observed that most of the studies reviewed used discretionary accruals as determinant of earnings management (See Jubril, 2014; Miko & Nuraddin, 2015;

Masoyi *et al.*, 2015). Thus, the present study measured earnings management through real earnings manipulations in order to capture the methods employed in manipulating earnings in the manufacturing industry. . More so, none of the literatures reviewed (See Jubril, 2014; Masoyi *et al.*, 2015; Onaolapo *et al.*, 2017) has studied the effect of audit quality on earnings management up to the period of 2017. Moreover, none of the literatures reviewed has studied the effect of audit quality on earnings management up to the period of 2017 (See Jubril, 2014; Onaolapo *et al.,* 2017; Tyokoso & Tsegba, 2015; Masoyi *et al.,* 2015;).

2.5 Theoretical Framework

This study was guided by the agency theory and the economic dependence theory. Agency theory tends to address the issue of information asymmetry which leads to conflicts and dissimilar interests between the principals (shareholders) and the agent (manager) which makes managers to take opportunistic behavior of manipulating the financial statement. Agency theory posits that, to prevent the managers from manipulating the accounting figures in order to mislead the stakeholders, there is need for an independent party to attest to the financial statement prepared by the management. To achieve this, high quality of audit service is required.

The agency theory perceives that audit firm size, audit fee and auditor tenure are associated with higher audit quality. The reason being that large audit firms have the necessary resources to identify and report any manipulations in the financial statement. This sends signal to the market that the financial statements prepared have credible and reliable information than those audited by the non-big four audit firms. Furthermore, large audit firms command higher audit fee in the audit market making them to be independent of their clients, thereby, providing higher audit service. Economic dependence theory which is also a form of

agency theory states that for an auditor to provide high level of audit service, he should be financially independent, that is, an auditor must not rely on his client in terms of monetary benefits. Therefore, when the remuneration is high, the auditor is expected to provide high audit service, thereby, reducing the level of earnings management. Therefore, the higher the auditor's quality and independence, the more they detect management's manipulations in the financial statements.

2.6 Conceptual Model

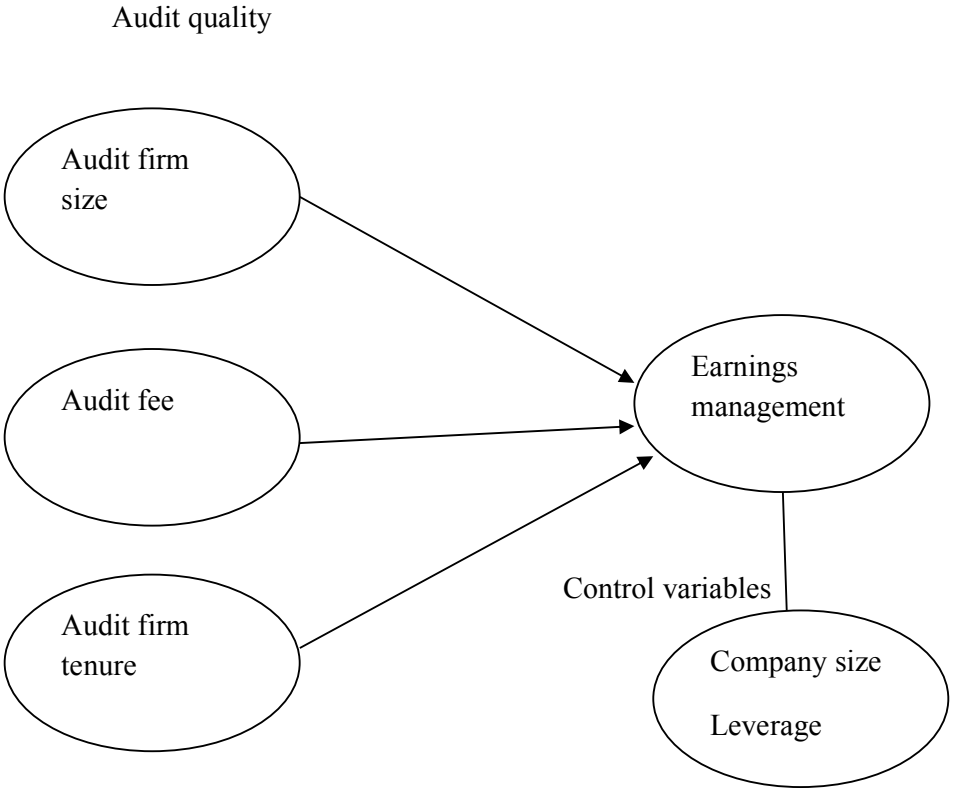

Figure 2.5

Source: Author's Survey (2019).

The figure 2.5 shows the conceptual model reflecting the effect of independent variables on the dependent variable. The dependent variable in this study is earnings management which

was measured through the real earnings management. The independent variable is the audit quality proxy by audit firm size, audit fee and audit firm tenure.

CHAPTER THREE

METHODOLOGY

This chapter discusses the procedures used in collecting data for the study and the technique employed in analyzing the data collected. It also discusses the population of the study, the sample size and the sampling technique used, the definition and measurement of variables and model specification of the study.

3.1 Research Design

This study employed ex-post facto research design. This is because the design is a quasi-experimental technique in which pre-existing groups are compared on the dependent variable. Ex-post facto is a type of research that is undertaken after the event has already taken place; data are already in existence and cannot be manipulated nor controlled (Ijaiya, 2013). It explains how a regressor affects the regressand. This design was chosen because the data used were already in existence in the sample companies' financial statement and can neither be manipulated nor influenced by the researcher. Hence, this study was conducted after the period under review.

3.2 Population of the study

The population of the study comprised all the seventy-four listed manufacturing companies listed on the floor of the Nigerian Stock Exchange as at 31st December, 2017. (NSE Fact book, 2017).

3.3 Sample Size and Sampling Technique

The sample size of the study was fifty (50) listed manufacturing companies. This is based on the judgmental approach or opinion of the researcher. In selecting the sample for the study, the companies chosen as sample must have the following criteria:

a. the company must have its accounts published for the last ten years (2008-2017);

b. it must not have been delisted from the Nigerian Stock Exchange within this periods;

c. its share must be actively traded on the floor of the Nigerian Stock Exchange within the period of the study;

d. it must have published its complete annual audited report within the selected periods of the study.

After taking these criteria into consideration, fifty companies met the criteria stated and form the sample size of the study. The companies in the Nigerian manufacturing industry were stratified into five (5) sub-sectors which include consumer goods sector: conglomerate sector: industrial and domestic sector: health and pharmaceutical sector: and natural resources sector (NSE Fact book, 2017).

3.4 Sources and Data Collection Method

The study made use of the annual report and accounts of the sampled manufacturing companies listed on the floor of the Nigerian Stock Exchange as its main source of data for the periods of 2012 to 2017. The reason is that data for all the variables to be used are contained in the annual report and accounts of the companies. Quantitative data were sourced from the annual report of the sampled companies. This is due to the fact that both the dependent and independent variables are expected to be stated in the financial statement.

3.5 Model Specification

This study examined the impact of audit quality on earnings management of listed manufacturing firms in Nigeria. The model of Masoyi, Aliyu and Zacharriah (2015) was adapted and modified. Their model was presented as:

$EMG_{it} = \gamma_0 + \gamma_1 AFSIZE_{it} + \gamma_2 JA_{it} + \gamma_3 FDEP_{it} + \mu_i$ ---------- 3.1

Where EMG is the earnings management; AFSIZE is the audit firm size; JA is joint audit while FDEP is independence of the auditor. The model of this study is a modified and an extension of the Masoyi *et al.,* (2015) model as their model did not include control variables incorporated in the present model.

The model of this study is written as:

EM = f (AUDQUA) ----------3.2

The model is re-written as:

(REM) = f (AUDFS, AUDFEE and AUDTEN) ----------3.3

The model is written in an explicit form as:

$REM_{it} = \beta_0 + \beta_1 AUDFS_{it} + \beta_2 AUDFEE_{it} + \beta_3 AUDTEN_{it} + \beta_4 LEV_{it} + \beta_5 COYSIZE_{it} + \varepsilon_{it}$ ---3.4

Where:

REM = Real Earnings Management of firm in ithyear

AUDFS = Audit Firm Size of the firm in ith year

AUDFEE = Audit Fees of the firm in ith year

AUDTEN = Audit Tenure of the firm in ith year

COYSIZE = Company Size of the firm in ith year

LEV = Leverage of the firm in ith year

β_0 = intercept or constant of the coefficient

$\beta_1 - \beta_3$ = are the parameters of the estimate

$\beta_4 - \beta_5$ = are the control variables

ε = error term

a priori expectation

The *a priori* expectation of the study is that audit firm size, audit fee and audit firm tenure should reduce earnings management (β_1, β_2 and $\beta_3<0$), while leverage and company size are expected to increase earnings management (β_4 and $\beta_5>0$). This is because the audit quality variables are expected to reduce earnings management practice while the control variables used could lead to increase in the manipulation of accounting figures for revealing better performance of the company.

3.6 Definition and Measurement of Variables

There are two variables in the study which are dependent and independent variables. The dependent variable is the earnings management which was measured using the real earnings management (REM). The real earnings management is measured thus:

REM = Abnormal cash flows + Abnormal Production cost + Abnormal Discretionary Expenses

Abnormal cash flows was measured using the model developed by Dechow, Kothari and Watts (1998) where the level of cash flow operations is expressed as a linear function of sales

and change in sales. For every firm-year, abnormal cash flows from operations is the difference between the actual cash flows from operation and the expected cash flows from operation.

The model of Rowchodhury (2006) and Zgarni, Hlioui and Zehri (2012) was employed in measuring the abnormal production costs where production cost is defined as the summation of cost of goods sold and change in inventory during the year.

Discretionary Expenses = Research and Development + Advertising + Selling, General and Administrative expenses.

The independent variable is the audit quality. Variables used to measure audit quality include the audit firm size, audit fees and the audit tenure.

Table 3.6.1 Definition and Measurement of Variables

Variables	Definition and Measurement	Previous Studies
Dependent variable		
Earnings Management	Measured with Real Earnings Management i.e. abnormal cash flows plus abnormal production cost plus abnormal discretionary expenses	Zgarni, *et al.*, (2012); AbdulRahman & Mohd Isa (2013); Ahearne, Boichuk, Chapma & Steenburgh (2016); Mandour, Elharidy & Mokhtar (2018).
Independent Variables		
Audit firm Size	Dummy variable, 1 if audited by big 4 audit firm, 0 if otherwise (big four audit firm are: Ernst and Young; Deloitte; PwC; and KPMG)	Mahmoud, *et al.,* (2013); Ching, Teh, San & Hoe (2015); Nawaiseh, (2016);
Audit fee	Natural logarithm of audit fee paid by the company to the auditor	Basiruddin (2011); Reid, Carcello & Neal (2015); Martinez & Moraes (2017); Liu (2017)
Audit tenure	Length of time spent by an auditor with a company. Dummy variable, 1 for all the times spent by the same audit firm and, 0 for the year of auditor change.	Aerts (2012); Mahmoud *et al.,* (2013); Nawaiseh (2016); Rad *et al.,* (2016).
Control variables		

Company's size	Natural logarithm of total asset of the firm	Tyokoso & Tsegba (2015); Affess & Smii (2016); Barghathi, *et al.* (2017)
Leverage	Total liabilities divided by total equity of firms	Mehmet & Emin (2012); Miko & Nuraddin (2015); Bassiouney, *et al.* (2016).

Source: Author's Compilation from Literature, (2019).

Prior studies have shown that earnings management, accounting or real, are affected by several factors. The control variables used (company's size and leverage) were intended to capture the effects of these external factors on earnings management. A firm with higher leverage is more likely to be associated with the debt covenants violation. This is because as the level of debt increases, the firm may experience tighter accounting constraints, which in turn increases the higher possibility of debt covenant violations. Several studies suggest that in order to avoid violating restrictive debt covenants, the higher leveraged firms are more likely to choose accounting procedures and methods that support income increasing discretionary accruals as well employing real activities manipulation if discretionary accruals methods have been exhausted (Ujah & Brusa, 2011; Mehmet & Emin, 2012; Pouraghajan, *et al.,* 2013; Miko & Nurradin, 2015; and Bassiouny, *et al.,* 2016). It has also been argued that the larger the firm size, the higher the likelihood that the managers will engage in earnings management. Watt and Zimmerman (1990) found that larger firms are associated with higher political costs, and that there is a higher incentive to manipulate reported earnings in order to mitigate potentially adverse political actions.

3.7 Data Analysis Technique

This study adopts the use of both descriptive and inferential statistics. The descriptive statistics used were means, standard deviation, minimum and maximum values of the variables in order to depict the snapshot of the components of both dependent and independent variables. The normality test was also carried out to test the normality distributions of the data collected. The most fundamental assumption in data analysis is normality, which considers the benchmark for statistical methods. The main statistical tests for normality which are available in most of the statistical programs are skewness, kurtosis and Jarque-bera. A non-significant result (p-value of more than 0.05) indicates that the distribution is normal; meanwhile, a significant result (p-value of less than 0.05) indicates that the distribution violates the assumption of normality which is common in large samples (Gujarati, 2004). Heteroskedasticity test was done using Breusch Pagan/Cook-Weiberg test while Hausman test was employed in testing the appropriateness of the model to be used between fixed effect and random effect.

The inferential statistics employed were panel regression analysis technique and Analysis of Variance (ANOVA) in testing the hypotheses stated in chapter one. Panel regression analysis was employed to test hypotheses one to three stated in chapter one. This is due to the nature of data that was employed in this study which is in form of longitudinal data that comprises time series and cross-sectional data i.e. (fifty companies over 6years). This method of analysis was adopted because it assumed that the data of the companies that were selected vary and the variation could either be fixed effect or random effect. Analysis of variance (ANOVA) and Tukey HSD Multiple Comparisons Test were employed in testing the hypothesis four. Tukey HSD Multiple Comparisons post-hoc Test is said to be best for all possible pair-wise comparisons when sample sizes are not equal or confidence intervals are needed and the observations tested are independent within and among the groups (Day &

Quinn, 1989). STATA statistical packages was employed in running the data and 5% significance level was used in the acceptance or rejection of the hypotheses stated in chapter one.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

This chapter dealt with the analyses of the data collected and the interpretation of the result. The hypotheses stated were also tested using the panel regression analysis technique and Analysis of Variance (ANOVA). It also dealt with the discussion of findings and the policy implications of the findings.

4.1 Descriptive Analyses

The result in table 4.1 shows the descriptive analysis of the data collected through mean, standard deviation, minimum and maximum values in order to summarize the large data set.

Table 4.1.1: Descriptive statistics

Variables	Mean	S.D	Min	Max	Observations
REM	3.7576	0.7793	0.0341	190.54	300
AUDFS	0.6493	0.4812	0.0000	1.0000	300
AUDFEE(₦ million)	3.3537	0.7734	1.0000	5.5000	300
AUDTEN	0.8829	0.3223	0.0000	1.0000	300
COYSIZE(₦ million)	5.0600	2.3400	1.7100	15.772	300
LEV	1.0461	0.9246	0.0000	6.6200	300

Source: Author's Computation, (2019).

Table 4.1 presents the descriptive statistics of the variables such as mean, standard deviation, maximum value, minimum value and the descriptive analysis of the normality distribution test (skewness and kurtosis and Jarque-Bera) between the dependent and the independent variables. The dependent variable is earnings management proxy with real earnings

management (REM), while the independent variable is audit quality proxy with variables such as; audit firm size (AUDFS), audit fee (AUDFEE) and audit tenure (AUDTEN) and two control variables used are leverage (LEV) and firms' size (COYSIZE) ranging from 2012-2017 for selected Nigerian manufacturing companies.

Results in table 4.1 show that the earnings management measured through real earnings management has an average value of 3.7576 with a standard deviation of 0.7793, and minimum and maximum value of 0.0341 and 190.54 respectively. The standard deviation of 0.7793 implies that there is a wide dispersion of the data from the mean value. The result in table 4.1 also revealed that audit firm size has an average value of 0.6493 with standard deviation of 0.4812 while the minimum and maximum values which are dichotomous are 0 and 1 respectively. The standard deviation of 48.12% signifies that the data is widely dispersed from the mean value of the sample manufacturing firms. The average value implies that majority of the firms (that is, 65% of the sample firms) in the manufacturing companies in Nigeria are audited by big audit firms during the period under study. Table 4.1 also shows that audit fee has an average value of 3.3537 (in millions naira) with standard deviation of 0.7734, while the minimum and maximum values are 1.0000 and 5.5000 respectively. The standard deviation of 0.7734 implies that data is widely dispersed from the mean value in the sample firms.

Furthermore, the result in table 4.1 shows that on average, the auditor tenure during the period of the study is 88.29% with standard deviation of 32.23%, while the minimum and maximum values of auditor tenure as measured by dichotomous variable are 0 and 1 respectively. The standard deviation of 32.23% implies that the data of the sample manufacturing companies deviate from the mean value by 32.23%.

4.2 Preliminary Analyses

The preliminary analyses concentrate on normality distribution test, multicollinearity test, heteroskedasticity test and Hausman in order to test the validity of the data as well as the model to be chosen in testing the hypotheses.

4.2.1 Normality Distribution of Data

Variables	REM	AUDFS	AUDFEE	AUDTEN	LEV	COYSIZE
Skewness	1.9856	-0.6010	1.9467	-2.3820	2.1745	1.5962
Kurtosis	0.9938	1.3612	2.5112	2.6742	1.0425	0.3949
Jarque-Bera	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Source: Author's Computation, (2019).

The result in table 4.2.1 shows the skewness and kurtosis result of the of the normality distribution of the data collected. Skewness and Kurtosis have been widely used in testing the normality distribution of data set. The rule of thumb is that any value of skewness and kurtosis that falls outside ±3 has problem of normality distribution (Peck & order, 2015). It could be deduced from the result in table 4.1 that all variables do not have normality distribution problems because none of the variable has values that falls outside the range of -3 to +3.

The Jarque-Bera shows that the data for all the variables are not normally distributed as shown by p-value of 0.0000 which is less than 5% significance level, therefore, violates the normal distribution assumption.

Table 4.2.2: Multi-collinearityTest - Variance Inflation Factors

Variable	VIF	1/VIF
AUDFS	1.82	0.5500
AUDTEN	2.01	0.4975
AUDFEE	1.57	0.6388
LEV	1.97	0.5076
COYSIZE	2.30	0.4926
Mean VIF	1.27	

Source: Author's Computation, (2019).

Table 4.2.2 augments the result of pair-wise correlation with the use of variance inflation factors (VIF) of the independent variables. The result also shows that there is absence of multicollinearity problem among the variables as indicated by VIF for each variable which is less than 10, and the average VIF (tolerance level) also exceeds the value of 0.05. The decision criterion for the Variance Inflation Factor is that a value of 10 and above implies the presence of perfect multicollinearity.

Table 4.2.3 Breusch-Pagan/ Cook-Weisberg Test for Heteroskedasticity

Variable	**Chi^2**	**P-value**
Model	1.27	0.6901

Source: Author's Computation, (2019).

Heteroskedasticity shows in a model if the variances of the error- term of the different observation are different. This study analyzes Breusch-pagan test to check if there is problem of heteroskedasticity. The null hypothesis of Breusch-pagan tests states that the error

variances are all equal against the alternative, that the error variance are a multiplicative function of one or more variables.

The result in table 4.2.3 shows that the p-value (0.6901) is greater than 5% significance level, the null hypothesis was rejected. Therefore, these models do not face any heteroskedasticity problem. This implies that the correlation coefficients between independent variables are fairly small.

Table 4.2.4 Hausman test

Variable	**Chi2**	**p-value**
Model	22.06	0.0005

Source: Author's Computation, (2019).

Table 4.2.4 shows the result of the hausman test. Hausman test was computed to check the model that is appropriate between fixed-effects and random-effects regression. The result shows that fixed-effects model is most appropriate as indicated by P-value (0.0005) which is less than 5% level of significance.

4.3 Restatement and Test of Hypotheses

Table 4.3 was used to provide answers to the research questions raised and also to test the hypotheses formulated in chapter one.

Table 4.3: Regression Results

Variables	Coefficient	Std error	t-value	p-value
Audfs	-9.2398**	3.6927	-2.50	0.013
Audfee (log)	-22.718*** (0.000)	5.7368	-3.96	0.000
Audten	2.7982**	1.1304	2.48	0.039
Lev	0.3545	0.7839	0.45	0.652
Coysize (log)	5.4442***	1.6933	3.35	0.000
Cons	24.775***	4.2448	5.84	0.000
F-stat	21.191*** (0.0000)			
Wald X^2	19.910 (0.0000)			
R^2	0.5695 (0.0000)			

*, **, *** : denotes Significant at 10%, 5% and 1% level respectively.

() : denotes P-value, while the value denotes Coefficients

Source: Author's Computation, (2019).

The result in table 4.3 shows the linear relationship between real earnings management and audit quality of selected manufacturing firms in Nigeria, with the use of panel regression analysis. The results from Table 4.3 indicate that the independent variables of the model explained around 56.95% of the variations in the dependent variables (real earnings management) of listed manufacturing companies in Nigeria, from the coefficient of

determinations (R^2 value of 0.5695). The remaining 43.05% represents the other independent variables not included in the model. The table also shows that the model is fitted as evidenced by the F-Statistic of 21.191 which is significant at 1% level of significance as indicated by the P-value of 0.0000.

Following the fitness of the model, the test of hypotheses formulated in chapter one was conducted.

4.3.1 Restatement and Test of Hypothesis one

H_{01}: Audit firm size has no significant effect on earnings management of listed manufacturing firms in Nigeria.

Based on the result shown in table 4.3, the first hypothesis of the study was tested using the magnitude coefficient of variable audit firm size (AUDFS) which has significant negative effect on real earnings management (REM) of selected manufacturing firms in Nigeria as indicated by coefficient (-9.2398) with p-value (0.013) at 5% level of significance. Therefore, the null hypothesis which states that audit firm size has no significant effect on real earnings management of listed manufacturing firms in Nigeria was rejected, thereby, leading to the acceptance of the alternative hypothesis. This implies that if the financial statement of firms is audited by one of the big4 audit firms, this will induce 9.24% reductions in real earnings management practices in the Nigerian manufacturing firms. This also implies that large reputable audit firms with relevant expertise do not compromise independence in the course of their audit exercise as indicated by a negative effect on earnings management.

4.3.2 Restatement and Test of Hypothesis two

H_{02}: There is no significant effect of audit fee on earnings management of Nigerian listed manufacturing firms.

The result in table 4.3 indicates that audit fee (AUDFEE) also has significant negative effect on real earnings management (REM) of selected manufacturing firms in Nigeria as indicated

by coefficient (-22.718) with P-value (0.000) at 5% level of significance. The null hypothesis which states that: there is no significant effect of audit fee on earnings management of Nigeria listed manufacturing firms, was rejected. Therefore, alternative hypothesis which states that there is significant effect of audit fee and earnings management was accepted. This implies that every N1 increase in audit fee will induce 22.7% reductions in real earnings management practice in the Nigerian manufacturing firms. This implies that adequate audit fee paid by the client firm does not impair the auditor's independence and objectivity which results in detecting and discovery of earnings management practiced by the manager during the period under review.

4.3.3 Restatement and Test of Hypothesis three

H_{03}: Audit tenure has no significant effect on real earnings management of listed manufacturing firms in Nigeria.

The result in table 4.3 indicates that audit tenure has significant positive effect on real earnings management (REM) of listed manufacturing firms in Nigeria as indicated by coefficient (2.7982) with P-value (0.039) at 5% level of significance. The null hypothesis which states that audit tenure has no significant effect on real earnings management of listed manufacturing firms in Nigeria was rejected, leading to the acceptance of the alternative hypothesis. This implies that a long relationship between the external auditor and the clients' management will lead to 2.8% increase in real earnings management practice in the firm. This shows that longer auditor tenure results in lower independence and objectivity of external auditors and as a result, there are lower chances of discovering earnings management.

Finally, for the two control variables, company's size (COYSIZE) has positive significant effect on real earnings management as indicated by coefficient (5.4442) with P-value (0.000 at 5% significance level. This implies that larger firms engage more in the practice of

earnings management in the manufacturing firms. This agree with the *a priori* expectation as the researcher expects that the larger companies may tend to engage in earnings management through information asymmetry so as to manipulate the information in the financial statement for the purpose of concealing information for other stakeholders. This shows that the management may adopt income-increasing accounting manipulations method so that the financial statement will portray better economic performance of the firm in order to deceive various users of the financial statement information.

The result in table 4.3 also shows that the control variable leverage (LEV) has no significant effect on real earnings management as indicated by coefficient (0.3545) with P-value (0.652) greater than 5% significance level. This implies that leverage has nothing to do with earnings management practice, that is, whether a company is highly levered or not, it does not have any effect on manipulations of accounting figures by the management.

Overall, the result implies that the higher the level of audit service provided, the lower the level of earnings management practice in Nigerian listed manufacturing firms.

4.3.4 Restatement and Test of Hypothesis Four

ANOVA Results

The table below provides answer to research question four as well as tests the hypothesis four stated in chapter one.

Table 4.4

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
REM Between Groups	1466.335	4	366.584	1.168	.326
Within Groups	63082.148	296	313.842		
Total	64548.483	300			

Source: Author's Computation, (2019).

The result in table 4.4 shows the differences between the levels of earnings management practice in the sub-sectors of the listed manufacturing firms in Nigeria with the use of Analysis of Variance (ANOVA). The result shows that level of earnings management practice is not significantly different within the sub-sectors of manufacturing industries in Nigeria as indicated by F-stat of 1.168 with prob. of 0.326 at 5% level of significance. This implies that there is no significance difference in the level of earnings management (real earnings management) practice among the sub-sectors of the Nigerian manufacturing industries.

Table 4.4.1: Tukey HSD Multiple Comparisons Test

To further make comparison between the sub-sectors selected more explicitly, post hoc was carried out and it eventually leads to computation of Tukey HSD multiple comparison.

Table 4.4.1

Multiple Comparisons

Sectors	Earnings Management
Earnings management in the consumer goods sector companies	5.0887 (0.421)
Earnings management in the Industrial and Domestic goods sector companies	5.9262 (0.554)
Earnings management in the Healthcare Pharmaceutical sector companies	0.8375 (0.999)
Earnings management in the Natural Resources sector companies	1.8030 (0.996)
Earnings management in the Conglomerate goods sector companies	1.4757 (0.998)

(): denotes Prob. while the value denotes mean difference

Source: Author's Computation, (2019).

Table 4.4.1 shows the result of the difference between five sub-sectors in the manufacturing industry with the use of Tukey HSD post hoc test. The result shows that earnings management of the overall manufacturing industries is not significantly different from the level of earnings management practice in the consumer goods sector producing firms; industrial and domestic goods sector companies; healthcare and pharmaceutical sector; natural resources sector; and conglomerate goods producing companies as indicated by mean difference of (5.0887, 5.9262, 0.8375, 1.8030 and 1.4757) with p-value of (0.421, 0.554, 0.999, 0.996 and 0.998) respectively at 5% significant level. The result from table 4.6.4.1 as supported by the result in table 4.6.4.2 shows that there is no significant difference in the

level of earnings management practice in the sub-sector of the Nigeria manufacturing industry. Therefore, this leads to the rejection of the alternative hypothesis, thereby leading to the acceptance of the null hypothesis. The null hypothesis states that there is no significant difference in the level of earnings management practice of the sub-sector in the Nigeria manufacturing industry.

Table 4.4.1 shows that the Industrial and Domestic goods sector companies is the sub-sector that has the highest level of earnings management, that is, it is the sector that managed earnings most as shown 5.9262. The table also revealed that the consumer goods sector companies also employed earnings management techniques in managing the earnings of the firms in the sector. The level of earnings management practice in the pharmaceutical sector, natural resources sector and the conglomerates goods sectors is low compared to the consumer goods sector and industrial and domestic goods sectors as shown by the average values of 0.8375, 1.8030 and 1.4757 respectively.

The reason for the high level of earnings management practice of the listed Nigerian manufacturing sector may be as a result of the lack of specific regulatory guidelines by the industry in preparing the financial statement of the industry unlike the banking industry that has different frameworks or guidelines such as Banks and other financial Institutions Act (BOFIA), Central Bank of Nigeria Act and the Prudential Guidelines.

4.4 Discussion of Findings

From the empirical analysis and hypotheses conducted, the study shows that audit quality measured through audit firm size and audit fee has significant negative effect on real earnings management and that there is significant positive effect between audit tenure and real earnings management of selected manufacturing firms in Nigeria. When audit quality variables are considered individually, all the variables (audit firm size, audit fee and auditor tenure) are significant.

This study found out that audit firm size has significant and negative effect on earnings management (real earnings management) of Nigerian manufacturing companies. This provides evidence of higher independence and objectivity associated with reputable large audit firm. As such, they are more independent than small audit firms. This implies that large audit firms perform better audit service because they have greater reputation at stake, more resources at their disposal, attract more highly skilled employees, have narrow tendency to compromise standards and avoid costly litigation from failed audits, thereby, providing better audit service compared to small audit firms. The result is in line with the findings of Okolie, *et al.* (2014); Piyawiboon (2015); Okoh (2015); Gumanti, *et al.* (2015); Khalil & Ozkan (2016); and Ben Amar and Chabchoub (2016). They found that audit firm size has significant negative effect on earnings management of firms. The finding is in contrast with results of Uwalomwa, *et al.*, (2015); Smii (2016); and Atu *et al.* (2016) where their results show positive relationship between audit firm size and earnings management. The result is in line with the assumption of the agency theory as it suggests that large audit firms would be more independent and objective in audit exercise and thereby, have higher chances of discovering and reporting earnings management employed by the managers. Therefore, when financial statement is audited by big four firms, it would reduce the level of earnings management practice in the financial statement. It is also in line with the *a priori* expectation that, audit firm size would drastically reduce the level of earnings management through real manipulations of earnings.

The study also found that audit fee significantly impact on earnings management (through real earnings management) negatively. This is confirmed by the argument of the economic dependence theory which stipulates that auditors should not be financially dependent on the fees (audit and non-audit service fee) from any client, thereby, making him less likely to bow to pressure from clients in the event of discovering accounting irregularities. This implies that

when auditors are adequately remunerated, they would use quality and more experienced staff, employ high technology and increase the number of hours of audit work since they know that they would still have better profit at the end of the audit assignment, therefore, leading to higher chances of detecting and reporting earnings management, because they are also profit oriented firms. The result also implies that lower audit fee paid to external auditors gives high chances to managers engaging in earnings management due to low audit services rendered. It shows that high audit fee leads to high audit service from the external auditors. This corroborates with the results of Ching, *et al.,* (2015); Miko and Kamarddin (2015); Masoyi, *et al.,* (2015); and Nawaiseh (2016) as they found that audit fee has negative impact on earnings management. In contrast, Eriabie and Dabor (2015); Onaolapo, *et al.,* (2017); and Martinez and Moraes (2017) found that audit fee aggravate earnings management of firms.

From the empirical result, the study indicates that longer auditor tenure has significant and positive effect on earnings management of sampled firms. This implies that the more time an audit firm spends with the client, the more the auditor independence is compromised, and the greater the possibilities of not discovering earnings management. This is because as the auditor-client relationship lengthens, the auditor may develop close relationship with the client and there is likelihood for the auditor to act in favor of management, thereby, resulting in reduced objectivity and lower audit quality. This finding confirms the position of regulators around the world, particularly US SEC that, independence is compromised through long-term auditor tenure, thereby, making auditors less likely to report a discovered misstatement in the financial statements. The result of this study concurs with the findings of Jubril (2014); Tyokoso and Tsegba (2015); and Affess and Smii (2016) as they found that auditor tenure has positive and significant effect on earnings management. The result is not in line with the results Bamahros & Wan-Hussin (2015); Ebrahimie, Bahraminasab and

Khorram (2015); and Rad, *et al.,* (2016) as their studies show that audit tenure has negative effect on earnings management.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The series of accounting manipulations globally has led to various failures of corporate organizations in the world. This has put the reliability and credibility of figures in the financial statement into doubt. In addition, it has subjected audit function into serious problems. Firms that have engaged in the manipulations of figures are now living in the past glory (such as Enron, Xerox, WorldCom, Parmalat, Cadbury Nig. Plc., Lever Brothers Plc, Bank PHB, Intercontinental bank, etc.). All these accounting manipulations went undetected by auditors, thus, making stakeholders to lose their investments (the case of Artuhr Anderson and Enron and WorldCom) and confidence on the figures in the financial statement. Therefore, this study examines the effect of audit quality on earnings management of listed manufacturing companies. Three specific objectives were developed to proffer answers to the research questions and they include: determine the extent to which audit firm size affects earnings management of listed manufacturing firms in Nigeria; examine the impact of audit fees on earnings management of Nigerian listed manufacturing firms; and assess the effect of audit tenure on earnings management of listed manufacturing firms in Nigeria.

The study reviews different literatures on earnings management and audit quality. The reviews were divided into three; the conceptual review; theoretical framework and empirical review. The study critically examines the concepts of earnings management; measurement of earnings management; and the concepts of audit and audit quality. Agency theory is the theory upon which this study was premised. The agency theory was propounded by Mitnick in 1973 where he defined agency theory to be the study of the agency relationship and the issues that arise from this, particularly the dilemma that the principal and the agent, while working towards the same goal, may not always share the same interests. Jenssen and

Meckling (1976) further explained that the agency problem arises due to the agent (management) acting in their own benefit and in an opportunistic manner on the expense of the principal (owners/shareholders) (Jensen and Meckling 1976). Conflicts and dissimilar interests lead to information asymmetries between the two parties and the principals had to identify ways to motivate the agents and to ensure that they act in the best interest of the principals. Therefore, agency theory is essential to this study as it recognizes the monitoring role of an external auditor as a mechanism to control management opportunistic behaviors. The results of the previous studies were empirically reviewed and were divided into international and local studies. The international studies were further divided into studies in the developed and developing nations for easier understanding.

The study adopted ex-post facto research design. The population of the study comprised the listed manufacturing companies as at 31st December, 2017 totaling seventy-four firms. The sample size was determined using Yamane (1967) adjusted statistical method of determining sample size. The sample size of the study was forty-one listed manufacturing companies. The data were sourced from the annual reports and accounts of the sample firms and was analyzed through the descriptive and inferential statistics. The hypotheses formulated were tested using panel regression analysis technique and analysis of variance (ANOVA). Panel regression analysis was employed in testing the hypotheses one to three while analysis of variance was employed in testing the hypothesis four. The study adopted the model of Masoyi, *et al.*, (2015) which was modified and extended in order to include the variables used in the study. Earnings management (dependent variable) was measured through real earnings management while the audit quality (independent variable) was measured through audit firm size, audit fee and audit tenure.

The study found amongst others that audit quality through audit firm size and audit fee has significant negative effect on earnings management. This shows that both audit firm size and

audit fee constrain the practice of earnings management in the Nigerian listed manufacturing firms. The study also revealed that audit tenure has positive but no significant effect on the level of earnings management. This means that audit tenure aggravates the management of earnings through real manipulation activities.

5.2 Conclusion

Based on the result of the hypotheses tested in chapter four, the study concluded that audit firm size and audit fee have significant negative effect on earnings management of listed manufacturing firms in Nigeria. This implies that large audit firm and adequate audit fee would drastically reduce the level of earnings management in the Nigerian manufacturing companies. Both big 4 auditors and audit fee have helped in reducing the level earnings management to the barest minimum as well as regaining the investors' confidence in the audited financial statement. This assures the stakeholders that the financial statement can be relied upon as not containing manipulation of figures. The study also concluded that audit quality in the Nigerian manufacturing companies is compromised through longer audit firm tenure. This is supported by significant positive effect of audit tenure on earnings management. Longer auditor-client relationship leads to increase in the level of earnings management practice. Therefore, this study concluded that audit quality has significant negative effect on earnings management of listed manufacturing firms in Nigeria.

5.3 Policy Implications of Findings

The implications of the findings of this study are that:

i. The study revealed that Big4 audit firms reduce the level earnings management. The implication of this is that if financial statements are audited by Big4 audit firms, there is higher chance of detecting and reporting earnings management identified in the financial statement. This is due to the fact that larger audit firms perform better audit service because they have greater reputation at stake, more resources at their disposal, attract more highly

skilled employees, have narrow tendency to compromise standards and avoid costly litigation from failed audits, providing better audit service compared to small audit firms.

ii. The study shows that audit fees do not impair the auditor's independence, thereby reducing earnings management. The implication of this is that, any attempt by the regulatory authorities to reduce the amount of audit fees received by auditors in Nigeria, it might have harmful result on the quality of audit service provided, leading to lower chance of detecting and reporting earnings management in the financial statement of the Nigerian manufacturing industries. The amount of audit fee charged by the auditors in Nigeria depicts the additional effort expended during the audit assignment.

iii. If the regulatory authorities do not address the issue of longer auditor tenure with their clients, the financial statements of manufacturing firms would not be objectively audited as it will impair the auditor independence. A rather too long association between the auditor's tenure and his client may constitute a threat to independence as personal ties and familiarity will be developed between the parties, and this may lead to less vigilance on the part of the auditor, and even to an obliging attitude of the auditor towards the top managers of the company. As a result, the audit engagement may be routine over time, and if so, the auditor will devote less effort to identifying the weaknesses of internal control. Existing and potential shareholders also would not have clear financial statements, as errors and deliberate misstatements would affect the quality of the information reported.

5.4 Recommendations

Based on the findings of this study, the following recommendations were made to ensure that the quality of audit services provided has significant negative effect in reducing the level of earnings management practices in Nigerian manufacturing firms:

i. Manufacturing industry plays vital role in economic growth and development. Therefore, the industry must be prevented from collapsing by showing financial statement free of accounting manipulations and errors. Based on the result of the hypothesis one which shows that Big 4 audit firms reduce the level earnings management in the Nigerian manufacturing firms, this study recommends that regulators should emphasize the use of large reputable audit firms (Big 4 auditors) by the Nigerian listed manufacturing companies, in order to avoid possible instances of low audit quality and poor financial reporting. Stakeholders and other users of accounting information should always rely only on the audit report issued by large audit firms (Big4) on financial statement as this reduces the level of earnings management.

ii. Good incentives make auditors to put more effort into audit assignment because they would have better return after the audit assignment. Based on the result of hypothesis two, which shows that audit fee reduces the level of earnings management practice in the Nigerian listed manufacturing firms, this study therefore recommends that policy maker such as the Institute of Chartered Accountants of Nigeria should not reduce the current scale of professional fee set by Institute of Chartered Accountant of Nigeria in a gazette in May, 2011, in order to prevent likely future of impairment of auditor's independence. In addition, it is also recommended that separate audit firm should be employed to provide non-audit services to a client's firm and that audit firm should not be engaged in statutory audit of same client in the future.

iii. Based on the result of the audit tenure and earnings management, the study recommends that the present audit firm tenure policy (that a firm can use the same auditor for the maximum period of ten years) should not be increased beyond the ten years. Moreover, professional accounting bodies, regulatory bodies and Financial Reporting Council of Nigeria (FRCN) should issue a framework or guideline which will reduce the ten (10) years specified for auditors in Nigeria as well as giving room for rotation of auditors.

iv. As the result of the study shows that manufacturing firms in Nigeria employed real earnings management in managing their earnings, in Nigeria apart from the IFRS like the banking industry.

5.5 Contribution to Knowledge

This study examined the effect of audit quality on earnings management of listed manufacturing firms in Nigeria. Previous academic researchers have assessed different ways in which audit quality variables affect earnings management of different sectors in Nigeria but none of them has examined the level of earnings management practice in the sub-sectors of the listed manufacturing firms in Nigeria. Hence, this study is unique as it examined the difference in the level of earnings management practice in the various sub-sectors of the listed manufacturing firms in Nigeria as well as comparing the level of earnings management practice among the various sub-sectors of the industry. More so, the previous studies reviewed concentrate on single sector of the manufacturing industry. This study extends the previous literature by covering all the sectors in the manufacturing industry in Nigeria.

5.6 Limitations and Delimitation to the Study

The findings of this study are limited to Nigerian listed manufacturing firms, and the audit quality variables covered in this study. This is because there are other proxies of audit quality that are not captured in this study. Another limitation is that, the study did not conduct a survey of opinions from the stakeholders in the Nigerian manufacturing industries. This could have increased the robustness of the results. Nevertheless, this did not affect the findings of this study in any way, due to the adequate empirical supportive evidence available in the study as the results are reliable and fit for policy formulation.

REFERENCES

Adeniji, A.A. (2010). *Auditing and assurance services*. First edition. Lagos. El-Toda ventures.

Adeyemi, S.B. & Okpala, O. (2011). The impact of audit independence on financial reporting: Evidence from Nigeria. *Business and Management Review, 1*(4), 9-25.

Aerts, M.J.B. (2012). Firm tenure and earnings quality in the Netherlands. A Master thesis submitted to the Accountancy Department, Faculty of Economics and Business Studies, Tilburg University, Netherlands.

Affes, H. & Smii, T. (2016). The impact of the audit quality on that of the earnings management: Case study of Tunisia. *Journal of Accounting and Marketing, 5*(3), 170-178.

Ahmad, L., Suhara, E. & Ilyas, Y. (2016). The effect of audit quality on earnings management within manufacturing companies listed on Indonesian Stock Exchange. *Research Journal of Accounting and Finance, 7*(8), 132-138.

Alhadab, M. & Clacher, L. (2017). The impact of audit quality on real and accrual earnings management around IPOs. *The British Accounting Review, 2*(1)*,* 17-30.

Al-Rasas, A.H. & Kamardin, H. (2015). Internal and external audit attributes, audit committee characteristics, ownership concentration and earnings quality: Evidence from Malaysia. *Mediterranean Journal of Social Sciences, 6*(3), 458-470.

Alzoubi, E.S.S. (2017). Audit quality, debt financing and earnings management: Evidence from Jordan. *Journal of International Accounting, Auditing and Taxation, 1*(10), 1-8.

Arrunada, B. (2000). Audit Quality: Attributes, Private Safeguards and the role of regulations. *The European Accounting Review, 9*(2), 205-225.

Ashtiani, M.R., Oskou, V. & Takor, R. (2016). Audit quality and earnings management in Tehran Stock Exchange listed companies. *International Journal of Academic Research in Accounting, Finance and management Sciences, 6*(1), 142-149.

Astami, E.W., Rusmin, R., Hartadi, B. & Evans, J. (2017). The role of audit quality and culture influence on earnings management in companies with excessive cash flows: Evidence from the Asia-Pacific region. *International Journal of Accounting and Information Management, 25*(1), 2-42.

Atu, O.O.K., Atu, F.O., Enegbe, O.P. & Atu, E.C. (2016). Determinants of earnings management in Nigerian listed companies. *Igbinedion University Journal of Accounting, 1*, 118-133.

Babatolu, A.T., Osaserere, A.O. & Emmanuel, U. (2016). Auditor's independence and audit quality: a study of selected deposit money banks in Nigeria. *International Journal of Finance and Accounting, 5*(1), 13-21.

Ball, R., Kothari, S.P. & Nikolaev, V.V. (2012). On estimating conditional conservatism. *The Accounting Review, 88*(3), 755-787.

Bamahros, H.M. & Wan-Hussin, W.N. (2015). Non-audit services, audit firm tenure and earnings management in Malaysia. *Asian Academy of Management Journal of Accounting and Finance, 11*(1), 145-168.

Bargathi, Y. Collison, D. & Crawford, L. (2017). Earnings management and audit quality: stakeholders' perceptions. *Journal of Management and Governance,* 1-31.

Basiruddin, R. (2011). The relationship between governance practice, audit quality and earnings management: UK Evidence. Durham theses, Durham University. Available at Durham E-Theses online:http://www.etheses.dur.ac.uk/1382.

Bassiouny, S.W., Soliman, M.M. & Ragab, A. (2016). The impact of firms' characteristics on earnings management: An empirical study on the listed firms in Egypt. *The Business and Management review, 7*(2), 91-101.

Beattie, V., Fearnley, S. & Brandtl, R. (2004). A grounded theory model of auditor-client negotiations. *International Journal of Auditing, 8*(1), 1-19.

Bello, A. (2010). Corporate governance and accounting ethics in Nigeria. Department of Accounting, Ahmadu Bello University, Zaria, Nigeria.

Ben-Amar, A. & Chabchoub, M. (2016). Audit quality and earnings management to avoid losses and earnings decreases: The French case. *International Journal of Academic Research in Accounting, Finance and management Sciences, 6*(4), 20-27.

Cahan, S.R. (1992). The effect of anti-trust Investigations on discretionary accruals: A refined test of the political-cost hypothesis. *The Accounting Review, 67*(1), 77-95.

Carcello, J.V. & Nagy, A.L. (2004). Audit firm tenure and fraudulent financial reporting. *Auditing: Journal of Practice and Theory, 23*(2), 55-70.

Carmen, J. (2012). Real earnings management and accrual-based earnings management as substitutes: The extent to which the relative costs of real earnings management and accrual-based earnings management affect the trade-off. Master thesis submitted to Department of Accountancy, Faculty of Economics and Business Studies, Tilburg University.

Chi, Y.H. & Ziebart, D.A. (2017). Audit quality and attributes of management earnings forecasts. *Review of Accounting and Finance, 16*(4), 406-423.

Ching, C.P., Teh, B.H., San, O.T. & Hoe, H.Y. (2015). The relationship among audit quality, earnings management and financial performance of Malaysian public listed companies. *International Journal of Economics and Management, 9*(1), 211-231.

Choi, J.H., Kim, J.B. & Zang, Y. (2010). Do abnormally high audit fee impair audit quality? *Auditing: A Journal of Practice and Theory, 29*(2), 115-140.

Clarke, T. (2004). *Theories of corporate governance: the philosophical foundations of corporate governance.* London . Routledge Taylor and Francis Group.

Cohen, D.A., Dey, A. & Lys, T.Z. (2008). Real and accrual-based earnings management in the pre- and post-Sarbanes-Oxley periods. *The Accounting Review, 83*(3), 757-787.

Day, R.W. & Quinn, G.P (1989). Comparisons of treatments after an Analyisis of Variance in ecology. *Ecological Monographs, 59*, 433-463.

DeAngelo, L. (1981). Auditor size and audit quality. *Journal of Accounting and Economics, 3*(3), 183-199.

Dechow, P., Kothari, S. & Watts, R. (1998). The relationship between earnings and cash flows. *Journal of Accounting and Economics*, *25*(2), 133-169.

Dechow, P.M. & Skinner, D.J. (2000). Earnings management: Reconciling the views of accounting academics, practitioners and regulators. *Accounting Horizons, 14*(2), 235-250.

DeFond M., & Jiambalvo J. (1994). Debt covenant violation and manipulation of accruals: accounting choice in troubled companies. *Journal of Accounting and Economics, 17*(1-2), 145-176.

DeFond, M. & Zhang, J. (2014). A review of archival auditing research. *Journal of Accounting and Economics, 58*(2-3), 275-326.

Demaki, G.O. (2011). Proliferation of Codes of corporate governance in Nigeria and economic development. *Business and Management Review, 1*(16), 1-7.

Dietrich, J.R., Muller III, K.A. & Riedl, E.J. (2007). Asymmetric timeliness tests of accounting conservatism. *Review of Accounting Studies, 12*(1), 95-124.

Ebrahimie, S.K., Bahraminasab, A. & Khorram, F. (2015). The effect of over-valued equity on the relationship between audit quality and earnings quality: Evidence from Iran. *International Letters of Social and Humanistic Sciences, 46*, 119-128.

Egbunike, A.P., Ezelibe, C.P. & Aroh, N.N. (2015). The influence of corporate governance on earnings management practices: A study of some selected listed companies in Nigeria. *American Journal of Economics, Finance and Management, 1*(5), 482-493.

Eilifsen, A. & Messier, W.F. (2000). The incidence and detection of misstatements: a review and integration of archival research. *Journal of Accounting Literature, 19*, 1-43.

Eisenhardt, K.M. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1), 57-74.

El-Guindy, M.N. & Basuony, M.A.K. (2018). Audit firm tenure and earnings management: The impact of changing accounting standards in United Kingdom firms. *The Journal of Developing Areas, 52*(4), 167-181.

Eriabie, S. & Dabor, E.L. (2017). Audit quality and earnings management in listed Nigerian banks. *Journal of Accounting, Finance and Auditing Studies, 3*(1), 1-16.

Ewert, R. & Wagenhofer, A. (2004). Economic effect of tightening accounting standards to restrict earnings management. Working paper: Goethe-University, Frankfurt, Germany and University of Graz, Austria.

Fodio, M. I., Ibikunle, J., & Oba, V. C. (2013). Corporate governance mechanisms and reported earnings quality in listed Nigerian insurance firms. *International Journal of Finance and Accounting, 2*(5), 279–286.

Frankel, R. M., Johnson, M. F., & Nelson, K. K. (2002). The relation between auditors' fees for non-audit services and earnings management. *The Accounting Review, 77*(1), 71–105.

Gerayli, M.S., Yanesari, A.M. & Ma'atoofi, A.R. (2011). Impact of audit quality on earnings management: Evidence from Iran. *International Research Journal of Finance and Economics, 66*, 77-84.

Goncharov, I. (2005). Earnings management and its determinants: Closing gaps in empirical accounting research (Frankfurt am Main: Peter Lang).

Gujarati, D. (2003). *Basic Econometrics.* 5th Edition. New York. McGraw-Hill/Irwin.

Gumanti, T.A., Nastiti, A.S., Utami, E.S. & Manik, E. (2015). Audit quality and earnings management in Indonesian initial public offerings. *Mediterranean Journal of Social Sciences, 6*(5), 223-229.

Habbash, M. & Alghamdi, S. (2017). Audit quality and earnings management in less developed economies: The case of Saudi Arabia. *Journal of Management and Governance, 21*(2), 351-373.

Healy, P.M. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics, 7*, 85-107.

Healy, P.M. & Wahlen, J.M. (1999). A review of the earnings management literature and its implications for standard settings. *Accounting Horizons, 13*(4), 365-383.

Holthausen, R., Larcker, D.F. & Sloan, R.G. (1995). Annual bonus scheme and the manipulation of earnings. *Journal of Accounting and Economics, 19*, 29-74.

Hope, O. & Langli, J.C. (2007). Auditor independence in a private firm setting. Working Paper No 1/2007. Norwegian School of Management.

Houque, N., Ahmed, K. & VanZijl, T. (2015). Effect of audit quality on earnings quality and cost of equity capital: Evidence from India,. Working paper. University of Wellington, Wellington, New Zealand.

Houqe, M.N., Ahmed, K. & Van Zijl, T. (2017). Audit Quality, earnings management and cost of equity capital: Evidence from India. *International Journal of Auditing, 21*(2), 177-189.

Hussainey, K. (2015). The impact of audit quality on earnings predictability. A paper presented to the division of Accounting, Management School, University of Sterling, United Kingdom.

Ijaiya, G.T. (2013). *Social Science Research Reporting: A Manual for Beginners.* 2nd Edition. Ilorin. Unilorin Press.

Ishak, R., Amran, N.A. & AbdulManaf, K.B. (2016). Leadership structure, gender diversity and audit quality influence on earnings management in Malaysian listed companies. *International Review of Management and Marketing, 6*(8), 342-345.

Jackson, A.B., Moldrich, M. & Roebuck, P. (2008). Mandatory audit firm rotation and audit quality. *Managerial Auditing Journal, 27*(1), 75-84.

Jacob, J., Desai, N. & Agarwalla, S.K. (2015). Are big 4 Audit fee always related to superior audit quality? Evidence from India's unique audit market. *Indian Institute of Management Journal, 3*(10), 1-21.

Jensen, M. & Meckling, W. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305-360.

Johnson, V.E., Khurana, I.K. & Reynolds, J.K. (2002). Audit firm tenure and the quality of financial reports. *Contemporary Accounting Research, 19*(4), 637-660.

Jones, J. (1991). Earnings management during import relief investigations. *International Journal of Accounting Research, 29*(2), 193-228.

Jubril, M.A. (2014). Auditors' independence and earnings management of deposit money banks in Nigeria. Thesis submitted to the School of Postgraduate, Ahmadu Bello University, Zaria, Nigeria.

Khalil, M. & Ozkan, A. (2016). Board independence, audit quality and earnings management: Evidence from Egypt. *Journal of Emerging Market Finance, 15*(1), 84-118.

Khuranan, I.K. & Raman, K. (2004). Litigation risk and the financial reporting credibility of big four versus non-big four audits: Evidence from Anglo-American countries. *The Accounting Review, 79*(2), 473-495.

Kiel, G.C. & Nicholson, G.J. (2003). Board composition and firm performance: how the australian experience informs contrasting theories of corporate governance. *Corporate Governance: An International Review, 11*(3), 189-203.

Kinny, W.R. & Libby, R. (2002). Discussion of the relationship between auditors' fee for Non-audit services and earnings management. *the Academic Review, 77*, 107-114.

Kitiwong, W. (2014). Earnings management and audit quality: Evidence from South-East Asia. A PhD thesis submitted to the York Management School, University of New York, USA.

Knechel, W.R. (2009). Audit lessons from the economic crisis: Rethinking audit quality. Inaugural lecture delivered at Maastricht University, Friday, September 11.

Koh, K., Rajgopal, S. & Srinivasan, S. (2013). Non-audit services and financial reporting quality: Evidence from 1978 to 1980. *Review of Accounting Studies, 18*, 1-33.

Kothari, S.P., Leone, A.J. & Wasley, C.E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics, 39*, 163-197.

Limperg, T. (1932). *Theory of Inspired Confidence.* The Netherland. University of Amsterdam.

Lindberg, D.L. (2001). Discussion of the demand for auditor reputation across international markets for audit services. *The International Journal of Accounting, 36*(4), 429-432.

Lisar, A.T. & Zadeh, P.I. (2016). Evaluation of the effect of independent audit quality and ownership structure on earnings management in the listed companies of Tehran Stock Exchange. *Journal of Economics and Finance, 7*(5), 53-56.

Mahmoud, M., Forough, H. & Hamid, M. (2013). Investigating the relationship between auditor tenure and the size of the audit firm with earnings management in pharmaceutical companies listed in Tehran Stock Exchange. *Journal of Natural and Social Science, 2*(3), 2454-2465.

Marsel, S. & Ali, S. (2015). An overview of factors affecting auditing quality in Albania. *Academic journal of interdisciplinary studies, 4*(3), 223-228.

Martines, A.L. & Moraes, A.J. (2017). Audit fees and earnings management. *International Journal of Accounting and Finance, 57*(2), 148-157.

Masoyi, D.A., Aliyu, M.U. & Zachariah, P. (2015). Impact of audit quality on earnings management of listed deposit money banks in Nigeria. *Journal of Accounting and Financial Management, 1*(8), 31-46.

Mehmet, U.M. & Emin H.C. (2012). Earnings management, audit quality and legal environment: An international comparison. *International Journal of Economics and Financial Issues.*

Menon, K. & Willlaims J.D. (1994). The use of audit committee for monitoring. *Journal of Accounting and Public Policy, 13*(2), 121-139.

Miko, N.U. & Kamardin, H. (2015). Impact of audit committee and audit quality on preventing earnings management in the pre- and post-Nigerian Corporate Governance Code 2011. *Procedia Social and Behavioural Sciences, 172*(2015), 651-657.

Nam, L.H. (2015). Earnings management and audit fee responses in New Zealand. Phd thesis submitted to the School of Accounting and Commercial Law, Victoria University of Wellington, New Zealand.

Naser, N.N., Mahmoud, M. & Forough, H. (2014). An investigation of the relationship between type of ownership, audit quality and earnings management of listed Companies in Tehran Stock Exchange. *Interdisciplinary Journal of Contemporary Research in Business, 5*(1), 202-210.

Nawaiseh, M.E. (2016). Can earnings management be influenced by audit quality? *International Journal of Finance and Accounting, 5*(4), 209-219.

Newton, N.J. (2013). Earnings management pressure on audit client: auditor response to analyst forecast signals. A PhD dissertation submitted to the office of Graduate Studies of Texas A&M University, USA.

Okoh, V.N. (2015). Audit quality and earnings management of listed chemical and paints firms in Nigeria. Research Dissertation submitted to the School of Postgraduate Studies, Ahmadu Bello University, Zaria, Nigeria.

Okolie, A.O., Izendonmi, F.O. & Enofe, A.O. (2013). Audit quality and accrual-based earnings management of listed companies in Nigeria. *Journal of Economics and Finance, 2*(2), 7-16.

Okolie, A.O. (2014)a. Audit tenure, audit independence and accrual-based earnings management of listed companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research, 2*(2), 63-90.

Okolie, A.O. (2014)b. Audit quality and earning response coefficients of listed companies in Nigeria. *Journal of Applied Finance and Banking, 4*(2), 139-161.

Okolie, A.O., Izedonmi, F.O. & Enofe, A.O. (2014). Audit quality and cash-based earnings management of listed companies in Nigeria. *Journal of Finance and Investment Analysis, 3*(1), 35-50.

Onaolapo, A.A., Ajulo, O.B. & Onifade, H.O. (2017). Effect of audit fees on audit quality: Evidence form cement manufacturing companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research, 5*(1), 6-17.

Otusanya, J.O. & Lauwo, S. (2010). The role of auditors in the Nigerian banking crisis. *Accountancy Business and the Public Interest, 9*, 159-204.

Patatoukas, P.N. & Thomas, J.K. (2011). More evidence of bias in the differential timeliness measure of conditional conservatism. *The Accounting Review, 86*(5), 1765-1793.

Peasnell, K.V., Pope, P.F. & Young, S. (2000). Board monitoring and earnings management: Do outside directors influence abnormal accruals? *Journal of Business, Finance and Accounting, 32*, 1311-1346.

Pierre, K. & Anderson, J. (1984). An analysis of the factors associated with lawsuits against public accountants. *The Accounting Review, 54*, 242-263.

Piyawiboon, C. (2015). Audit quality, effectiveness of board audit committee and earnings quality. *Review of Integrative Business and Economics Research, 4*(2), 366-377.

Pouraghajan, A., Tabari, N.A.Y., Emamgholipour, M. & Mansourinia, E. (2013). The effect of audit quality on earnings management: Evidence from Iran. *International Journal of Basic Sciences and Applied Research, 2*(4), 399-404.

Prayogo, B. & Agoes, S. (2017). Role of audit regulation on the effect of corporate governance and audit quality on earnings management. *OIDA International Journal Sustainable Development, 10*(10), 53-66.

Rad, S.E.M., Salehi, H. & Valipour, H. (2016). The impact of audit quality and ownership structure on earnings management of listed firms on Tehran Stock Exchange. *International Journal of Business Management, 10*(10), 1827-1832.

Rahman, M.M., Moniruzzaman, M. & Sharif, M.J. (2013). Techniques, motives and controls of earnings management. *International Journal of Information Technology and Business Management, 11*(1), 22-34.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics, 42*(3), 335-370.

Sarbanes-Oxley Act, 2002. Sarbanes-Oxley Act of 2002 [online]. Available from: http://www.gpo.gov/fdsys/pkg/PLAW-107Pub/204/content-detail.html [Accessed August, 2018].

Sarbanes-Oxley Act (SOX) 2002. Public Law No. 107-204. GPO: Washington, D.C.

SEC Code. (2003). Corporate Governance Code. Nigeria.

SEC Code. (2011). Corporate Governance Code. Nigeria.

Schilling, M.A. (2000). Decades ahead of her time: Advancing stakeholder theory through the ideas of Mary Parker Follett. *Journal of Management History, 6*(5), 224-242.

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

Smii, T. (2016). The impact of audit quality on that of the accounting profit: The case of companies listed the TSE. *International Journal of managing Value and Supply Chains, 7*(1), 39-54.

Soliman, M.M. & Ragab, A.A. (2014). Audit committee effectiveness, audit quality and earnings management: An empirical study of the listed companies in Egypt. *Research Journal of Finance and Accounting, 5*(2): 155-166.

Solomon, J.F. (2007). *Corporate governance and accountability.* 2nd Edition. New York. Wiley Publications.

Srinivasan, S., Rajgopal, S. & Zheng, X. (2015). Measuring audit quality. *The Accounting Review,* 1-56.

Stice, J. (1991). Using financial and market information to identify pre-engagement factors associated with lawsuits against auditors. *The Accounting Review, 66*, 516-533.

Sundaramurthy, C. & Lewis, M. (2003). Control and collaboration: Paradoxes of governance. *Academy of Management Review, 28*(3), 397-415.

Sweeny, A.P. (1994). Debt covenant violations and managers' accounting responses. *Journal of Accounting and Economics, 17*, 281-308.

Tan, J. (2013). Real earnings management: The impact of audit quality and PCAOB: Evidence from NASDAQ and NYSE Listed Firms. A Master thesis Submitted to School of Economics, Erasmus University, Rotterdam.

Teoh, S.H. & Wong, T.J. (1993). Perceived earnings auditor response quality and the coefficient. *The Accounting Review, 68*: 346-366.

Trans, K.D. (2016). Audit firm rotation and audit firm tenure, improvement or deterioration of the financial reporting quality for Dutch listed firms? Master thesis submitted to the department of Accounting, Radboud University, Nijmegen, Netherland.

Tyokoso, G.M. & Tsegba, I.N. (2015). Audit quality and earnings management of listed oil marketing companies in Nigeria. *European Journal of Business and Management, 7*(29), 34-42.

Uwalomwa, U., Uwuigbe, O.R. & Okorie, B. (2015). Assessment of the effects of firms' characteristics on earnings management of listed firms in Nigeria. *Asian Economic and Financial Review, 5*(2), 218-228.

Wallace, W.A. (1980). *The economic role of the audit in free and regulated markets.* USA. Touche Ross & Co. Aid to Education Program.

Watts, R. & Zimmerman, J. (1986). *Positive accounting theory*. United Kingdom. Prentice Hall, Eaglewood Cliff.

Watts, R.L. & Zimmerman, J.L. (1990). Positive accounting theory: A ten year perspective. *The Accounting Review, 65*(1), 131-156.

Wooten, T.C. (2003). Research about audit quality. *The CPA Journal.* Available at http://www.nysscpa.org/cpajournal/2003/0103/dept/d014803.htm

Yamanne, T. (1967). *Statistics: An introductory analysis.* 2nd Edition. New York. Harper and Row Ltd.

Yasar, A. (2013). Big four auditors' audit quality and earnings management: Evidence from Turkish Stock Exchange. *International Journal of Business and Social Science, 4*(17), 153-163.

Zahra, S.A. & Pearce, J.A. (1989). Boards of directors and corporate financial performance: a review and integrative model. *Journal of Management, 15*(2), 291-334.

Zgarni, I., Hlioui, K. & Zehri, F. (2012). Audit quality and earnings management in the Tunisian context. *International Journal of Accounting and Financial Reporting, 2*(2), 17-33.

APPENDICES
Appendix I

	REM	AUDFS	AUDTEN	AUDFEE	LEV	COYSIZE
Mean	3.757636	0.649302	0.882927	33537395	1.046146	5.06E+08
Median	1.791601	1.000000	1.000000	14500000	0.800000	15772494
Maximum	190.5440	1.000000	1.000000	5.50E+08	6.620000	1.71E+10
Minimum	0.034081	0.000000	0.000000	1000000.	0.000000	285772.0
Std. Dev.	0.779340	0.481217	0.322294	77335263	0.924611	2.34E+09
Skewness	1.98562	-0.601040	-2.382071	1.946691	2.174477	1.596198
Kurtosis	0.993754	1.361249	2.674263	2.51109	1.042454	0.394881
Jarque-Bera	82655.91	35.28136	309.1850	6395.099	632.4005	11645.62
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	770.3153	132.0000	181.0000	6.88E+09	214.4600	1.04E+11
Sum Sq. Dev.	64587.46	47.00488	21.19024	1.22E+18	174.4006	1.12E+21
Observations	300	300	300	300	300	300

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of rem

         chi2(1)      =   1.27
         Prob> chi2   =   0.6901
```

```
    Variable |       VIF       1/VIF
-------------+----------------------
      audfee |      1.57    0.638849
       audfs |      1.82    0.549451
     coysize |      2.30    0.492611
         lev |      1.97    0.507614
      audten |      2.01    0.497512
-------------+----------------------
    Mean VIF |      1.27
```

```
     Source |       SS       df       MS              Number of obs =     300
-------------+------------------------------           F(  5,   199) =    6.13
       Model |  8616.74699    10   1723.3494           Prob > F      =  0.0000
    Residual |  55970.7179   290  281.259889           R-squared     =  0.1334
-------------+------------------------------           Adj R-squared =  0.1116
       Total |  64587.4649   300   316.60522           Root MSE      =  16.771
------------------------------------------------------------------------------
-
         rem |      Coef.   Std. Err.      t    P>|t|     [95% Conf.Interval]
-------------+----------------------------------------------------------------
       audfs |  -4.867208   2.89203     -1.68   0.094    -10.57017    .8357499
 log(audfee) |   -13.7918  -2.836737     4.86   0.000     8.197881    19.38573
      audten |   3.656204   3.667651     1.00   0.320    -3.576244    10.88865
         lev |  -1.286147   1.315881    -0.98   0.330    -3.881006    1.308713
     coysize |  -5.129072   1.314426    -3.90   0.000    -7.721062   -2.537082
       _cons |  -5.604462   18.27602    -3.07   0.002    -92.08414    -20.0051
------------------------------------------------------------------------------
```

```
Fixed-effects (within) regression               Number of obs      =       300
Group variable: id                              Number of groups   =        50
R-sq:  within  = 0.5695                         Obs per group: min =         5
       between = 0.0000                                        avg =       5.0
       overall = 0.0331                                        max =         5
                                                F(5,159)           =    21.191
corr(u_i, Xb)  = -0.9448                        Prob > F           =    0.0000
------------------------------------------------------------------------------
         rem |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       audfs |  -9.239795   3.692678    -2.50   0.013    -16.53282   -1.94677
 log(audfee) |  -22.71835   5.736813    -3.96   0.000     11.38817   34.04853
      audten |   2.798165   1.130357     2.48   0.039    -5.820615   .2242854
         lev |   .3545158   .7839065     0.45   0.652    -1.902728   1.193697
     coysize |   5.444227   1.693335     3.22   0.000    -57.78661  -51.09794
       _cons |  -24.77491   4.244793     5.84   0.000     163.9146   331.5836
-------------+----------------------------------------------------------------
     sigma_u |  51.635965
     sigma_e |  5.7059967
         rho |  .98793611   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(40, 159) =    39.00                 Prob > F =0.0000


Random-effects GLS regression                   Number of obs      =       300
Group variable: id                              Number of groups   =        50
R-sq:  within  = 0.5301                         Obs per group: min =         5
       between = 0.0176                                        avg =       5.0
       overall = 0.0772                                        max =         5
    Wald chi2(5)       =    19.910
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
         rem |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       audfs |  -16.11668   4.889753    -3.30   0.001    -25.70042  -6.532939
 log(audfee) |  -34.89938   5.615938     6.21   0.000     23.89234   45.90642
      audten |  -.1675121   2.653264     0.06   0.950    -5.367813   5.032789
         lev |  -.8018246   1.317287    -0.61   0.543    -3.383659    1.78001
     coysize |   30.71505   2.217364   -13.85   0.000      -35.061   -26.3691
       _cons |  -9.889491   38.48188    -0.26   0.797     -85.3126   65.53361
-------------+----------------------------------------------------------------
     sigma_u |  10.406044
     sigma_e |  5.7059967
         rho |  .76883385   (fraction of variance due to u_i)
------------------------------------------------------------------------------


. hausman fixed .

                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |     fixed        random       Difference          S.E.
-------------+----------------------------------------------------------------
       audfs |   -9.239795    -16.11668        6.876883               .
 log(audfee) |   -22.71835    -34.89938        12.18103        1.171436
      audten |    2.798165    -.1675121        2.965677               .
         lev |    .3545158    -.8018246        1.156340               .
     coysize |     5.444227     30.71505       -25.27082               .
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained fromxtreg
            B = inconsistent under Ha, efficient under Ho; obtained fromxtreg

  Test:  Ho:  difference in coefficients not systematic
                 chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                         =       22.06
               Prob>chi2 =      0.0005
               (V_b-V_B is not positive definite)

.
```

ANOVA

Rem	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1466.335	4	366.584	1.168	.326
Within Groups	63082.148	296	313.842		
Total	64548.483	300			

Multiple Comparisons

Dependent Variable:rem

	(I) fact	(J) fact	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	1	2	-5.08866	2.95007	.421	-13.2093	3.0320
		3	.83750	3.78629	.999	-9.5850	11.2600
		4	1.80298	4.97969	.996	-11.9046	15.5106
		5	1.47572	4.97969	.998	-12.2319	15.1833
	2	1	5.08866	2.95007	.421	-3.0320	13.2093
		3	5.92616	3.91021	.554	-4.8375	16.6898
		4	6.89164	5.07455	.655	-7.0771	20.8604
		5	6.56438	5.07455	.695	-7.4043	20.5331
	3	1	-.83750	3.78629	.999	-11.2600	9.5850
		2	-5.92616	3.91021	.554	-16.6898	4.8375
		4	.96548	5.60216	1.000	-14.4556	16.3865
		5	.63822	5.60216	1.000	-14.7828	16.0593
	4	1	-1.80298	4.97969	.996	-15.5106	11.9046
		2	-6.89164	5.07455	.655	-20.8604	7.0771
		3	-.96548	5.60216	1.000	-16.3865	14.4556
		5	-.32726	6.46881	1.000	-18.1340	17.4794
	5	1	-1.47572	4.97969	.998	-15.1833	12.2319
		2	-6.56438	5.07455	.695	-20.5331	7.4043
		3	-.63822	5.60216	1.000	-16.0593	14.7828
		4	.32726	6.46881	1.000	-17.4794	18.1340

1 = Consumer goods sector; 2 = Industrial and Domestic goods sector; 3 = Pharmaceutical and Health sector; 4 = Natural Resources sector; and 5 = Conglomerates goods sector.

APPENDIX II

Population Frame

S/N	Consumer Goods	Industrial and Domestic Goods	Natural Resources Sector
1	DN Tyre and Rubber	1. African Paints Nigeria Plc.	1.B.O.C. Gases Plc.
2	Champion Breweries	2. Ashaka Cement Plc.	2. Aluminium Extrusion Industrial Plc.
3	Golden Guinea Breweries Plc.	3. Berger Paints Plc.	3. Aluminium Manufacturing Company Plc.
4	Guinness Nigeria Plc.	4. chemical and Allied Product (CAP)Plc.	4. Multiverse Plc.
5	International Breweries Plc.	5. cement Company of Northern Nigeria Plc.	5. Thomas Wyatt Nigeria Plc.
6	Jos International Breweries Plc.	6. Dangote Cement Plc.	
7	Nigerian Breweries Plc.	7. DN Meyer Plc.	**Pharmaceutical Sector**
8	Premier Breweries Plc.	8. First Aluminium Nigeria Plc.	1. Pharma-Deko Plc.
9	Seven-Up Bottling Company Plc.	9. IPWA Plc.	2. Neimeth International Pharmaceutical Plc.
10	Nigerian Bottling Company Plc.	10. Paints and Coatings Manufacturers Nigeria Plc.	3. Morison Industries Plc.
11	Big Treat Plc.	11. Portland Paints and Products Nigeria Plc.	4. May and Baker Nigeria Plc.
12	McNichols Consolidated Plc.	12. Premier Paints Plc.	5. Nigerian-German Chemicals Plc.
13	Dangote Flour Mills Plc.	13. Lafarge Cement Nigeria Plc.	6. Glaxo Smithkline Consumer
14	Dangote Sugar Refinery Plc.	14. Cutix Plc.	7. Evans Medical Plc.
15	Flour Mills of Nigeria Plc.	15. Nigerian Wire and Cable Plc.	8. Ekocorp Plc.
16	Honeywell Flour Mills Plc.	16. Avon CrownCaps and Containers Plc.	9. Fidson Healthcare Plc.
17	P.S. Mandrides Plc.	17. Poly-Products Nigeria Plc.	10. Union Diagnostic and clinical services Plc.
18	Multi-Trex Integrated foods	18. Beta Glass Plc.	

	Plc.		
19	National Salt Company of Nigeria Plc.	19. Greif Nigeria Plc.	
20	Northern Nigeria Flour Mills Plc.	20. West African Glass Plc.	
21	Union Dicon Salt Plc.	21. Nigerian Ropes Plc.	
22	UTC Nigeria Plc.	22. Nigerian Sewing Machine Manufacturing Company Plc.	
23	Cadbury Nigeria Plc.	23. Stokvis Nigeria Plc. 24. ADSwitch Plc.	
24	Nestle Nigeria Plc.	**Conglomerates Sector**	
25	Nigerian Enamelware Plc.	1. A.G. Leventis Nigeria Plc.	
26	Vita-foam Nigeria Plc.	2. Chellarams Plc.	
27	Vono Products Plc.	3. John Holt Plc.	
28	PZ Cussons Nigeria Plc.	4. SCOA Nigeria Plc.	
29	Unilever Nigeria Plc.	5. Transnational Corporation Plc.	
30		6. UACN Nigeria Plc.	

Appendix III

Sample Frame

Consumer Goods Sector	**Industrial and Domestic Goods Sector**	**Health and Pharmaceutical Sector**
Champion Breweries plc.	Chemical and Allied Products	May and Baker Nigeria plc.
International Breweries plc.	Beta Glass Company Plc	Neimeth International Pharmaceuticals plc.
Nigerian Breweries plc.	Cement Company of Northern Nigeria plc	Morison Industries plc.
Cadbury Nigeria plc.	Cutix plc	GlaxoSmithKline Nigeria plc.
McNichols Consolidated plc.	Dangote Cement plc.	Fidson Healthcare plc.
7UP Bottling company plc.	Avon Crowncaps and Containers plc	Pharma Deko plc.
Nestle Nigeria plc.	Berger Paints plc.	Ekocorp Plc.
Honey-well Flour Mills plc.	Premier Paints plc.	First Aluminium Nigeria Plc.
Northern Nigeria Flour Mills plc.	Paints and Coatings Manufacturing plc.	**Conglomerate Sector**
Flour Mills of Nigeria plc.	Lafarge WAPCO plc.	John Holt plc.
Dangote Flour Mills plc.	Greif Nigeria plc.	A.G Leventis Nigeria plc.
Dangote Sugar Refinery plc.	DN Meyer plc.	Transnational Corporation plc.
Guinness Nigeria plc.	Portland Paints and Products Nigeria Plc.	Chellarams Plc.
PZ Cussons Industries plc.	Nigeria ropes Plc	**Natural Resources Sector**
Vitafoam Nigeria plc.	Ashaka Cement Plc	Multiverse Resources plc.
Champion Breweries Plc.		B.O.C Gases plc.
Unilever Nigeria Plc		Thomas Wyatt Nigeria plc.
Nigerian Bottling Company		