

Effect of Corporate Governance Mechanisms on Earnings Management: Evidence from Listed Nigerian Petroleum Marketing Companies

Ernest Apaa-Terhemen Mchi

Benue State Teaching Service Board Headquarters

ernestapaatermchi@gmail.com

+234-8135826099

<https://doi.org/10.56201/ijefm.v11.no10.2026.pg79.100>

Abstract

This study sought to ascertain the effect of corporate governance mechanisms on earnings management among listed Nigerian petroleum marketing companies. Specifically, it examines the influence of ownership concentration, board size, non-executive directors, gender diversity, and financial expertise on earnings management, with leverage and firm size as control variables. Using panel data from 2014–2023 for a sample of 7 petroleum marketing companies from 9 companies listed on the Nigerian Exchange Group (NGX), employing discretionary accruals as a measure with firm size and leverage as control variables, the results from fixed effects and robust regression models reveal that non-executive directors, gender diversity, and financial expertise significantly constrain earnings management than board size in the petroleum marketing companies, while ownership concentration exhibits a positive and significant impact. Consequently, the study concludes that female representation, financial expertise, non-executive directors as well as reasonable board size should be considered by companies if the purpose is to monitor restrain earnings management and increase reliability of financial statement. The study contributes to governance literature and offers practical insights for regulators, stakeholders, and policymakers in emerging markets.

Keywords: *Earnings management, Corporate governance, Governance mechanisms, Discretionary Accruals, Gender diversity, Financial Expertise*

1. Introduction

Corporate governance has become globally a topical issue in business environment for investors, regulators, practitioners and the general public. This might be due to corporate failure of several multinational organizations such as Enron, WorldCom, Nortel, Parmalat and Tyco as a result of inefficient and ineffective corporate governance and accounting malpractices (Goncharov, 2005, Sorensen and Miller, 2017). Corporate governance generally aims at reducing the divergence of interest between management and others stake-holder group in a corporation. In a world characterized by imperfect information and costly monitoring, divergence of interest between shareholders and managers creates agency cost that can lead to suboptimal management decisions like opportunistic management of earnings. Earnings management occurs when managers exploit

the flexibility in accounting standards to manipulate reported earnings in order to achieve personal or organizational objectives rather than faithfully representing economic performance. This phenomenon is necessitated as a result of modern feature of firms where owners are being separated from managers of business. Earnings management therefore remains a major concern, and a persistent issue in corporate financial reporting, particularly in emerging economies such as Nigeria where regulatory enforcement and institutional frameworks are relatively weak.

Concern about corporate governance in many emerging markets like Nigeria emerged as a result of a series of recent corporate accounting scandals earlier mentioned across the United States, Europe, and Asia (e.g. Enron, HealthSouth, Parmalat, Tyco, WorldCom, Adelphi communications, Northern Rock, Crescent Investment Bank and Xerox). A central part of these accounting scandals was usually as a result of earnings management. In reaction to this, countries like Malaysia introduced and mandated compliance with Code of Corporate Governance. Other countries like Chinese in 2001, followed the Malaysian example, Pakistan in 2002 and Nigeria in 2003 and 2006 for other public companies and banks respectively (Abdullahi, 2015). But the failure of Cadbury Nigeria plc in 2006, in which the company was found to have altered the accounting documents, made investors doubt the earning quality of firms in Nigeria. This practice clearly indicates the presence of devious practice and throws doubt on the functions of corporate governance structure in mitigating earnings management in Nigerian firms (Eze 2017). However, Corporate governance mechanisms are designed to serve as critical monitoring tools aimed at reducing this managerial opportunism and ensuring that financial reports reflect firms' true economic performance. These mechanisms are ensured to mitigate agency conflicts between managers and shareholders by enhancing monitoring, transparency, and accountability.

In Nigeria, the petroleum sector is of strategic importance due to its contribution to government revenue, foreign exchange earnings, and economic growth and a collapse in this sector will greatly affect the economy. However, the sector has been characterized by ownership dominance, weak board oversight, and limited diversity, which raise concerns about the quality of financial reporting. Despite regulatory reforms and improvements in corporate governance codes in Nigeria, cases of financial misreporting and earnings manipulation continue to surface, particularly in capital-intensive sectors such as petroleum. The sector's exposure to oil price volatility, high leverage, and concentrated ownership structures increases incentives for managers to manipulate earnings in order to stabilize reported performance. Strong governance is widely believed to mitigate opportunistic reporting (Bhagat & Bolton, 2008). On the other hand, a weak corporate governance structure may provide an opportunity for managers to engage in behavior that would eventually result in a lower quality of reported earnings, which is a strong indication of a serious decay in business ethics (Jesus and Emma, 2013).

Following the adoption of International Financial Reporting Standards (IFRS) in 2012 and corporate governance reforms by the Securities and Exchange Commission (SEC) in Nigeria, it has become imperative to examine whether corporate governance mechanisms have effectively constrained earnings management in Nigerian petroleum marketing companies. Moreover, it is clear from the knowledge of the researcher that previous studies on corporate governance and earnings management in Nigeria have documented mixed results which allow for further research on this topic. Empirical evidence on the effectiveness of corporate governance mechanisms in curbing earnings management in Nigeria remains inconclusive. While some studies report that certain corporate governance mechanisms reduce earnings manipulation, others find weak or

insignificant relationships, especially regarding ownership concentration and board size. Moreover, limited attention has been paid to gender diversity and financial expertise within the context of Nigerian petroleum firms. Also, most existing Nigerian studies like Uadiale (2012), Hassan & Ahmed (2012), Ugbede, Lizam & Kaseri (2013), Fodio, Ibikunle & Oba (2013), Kurawa & Saheed (2014), Uwuigbe, Ranti, and Bernard (2015), Ezeani, Udeh, and Uche (2019), are either sector-general or focus on manufacturing and banking industries, or using profitability as a measure of financial performance and the effects of corporate governance to performance on various sectors of the economy leaving a gap in petroleum-sector-specific evidence. Additionally, few studies incorporate a long-term post-IFRS period that captures recent governance reforms. This lack of consistent and sector-specific empirical evidence necessitates a focused investigation into how corporate governance mechanisms affect earnings management in listed Nigerian petroleum marketing companies between 2014 and 2023. This study therefore examines the effect of ownership concentration, board size, non-executive directors, gender diversity, and financial expertise on earnings management, using leverage and firm size as control variables, over the period 2014–2023. The study contributes to the literature by providing sector-specific evidence from Nigeria, an under-researched emerging market, and by incorporating multiple governance attributes within a unified empirical framework. The remainder of this study is structured as follows: the second section reviews the extant literature beginning with theoretical then conceptual framework and hypotheses. The third section is methodology adopted in this study. The fourth section elaborates the data analysis and results. The conclusions are explained in the last section.

2. Literature Review and Hypothesis Development

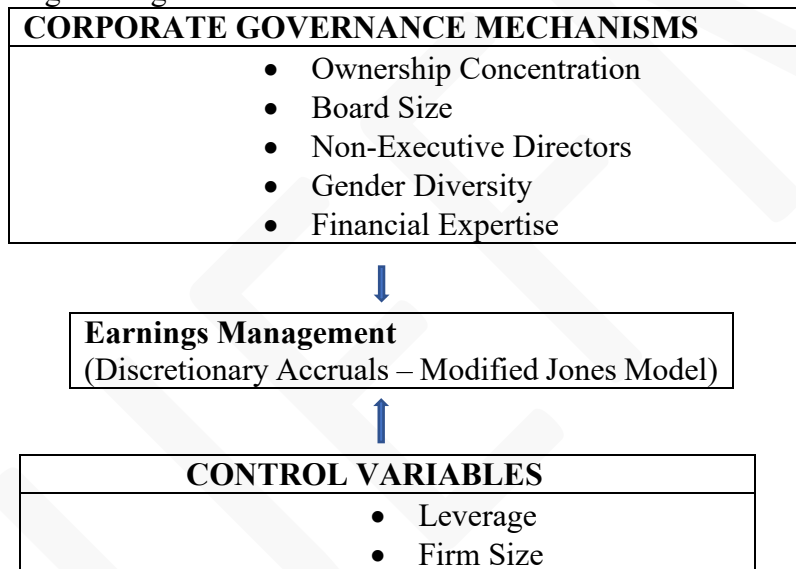
2.1. Theoretical Framework

Earnings management practice is explained by several theories, this study is anchored on four key theories; agency, resource dependency, stakeholder, and positive accounting theories among others: The study is grounded primarily in Agency theory, which explains the need for governance mechanisms to curb managerial opportunism. Jensen & Meckling, (1976) explains agency theory as the conflict arising from separation of ownership and control. Managers may manipulate earnings to maximize personal benefits at the expense of shareholders. Corporate governance mechanisms such as board independence, financial expertise, and ownership structure are designed to reduce agency costs and constrain earnings management. Agency theory therefore, posits that conflicts arise due to separation of ownership and control, as managers may pursue personal interests at the expense of shareholders. Corporate governance mechanisms are therefore instituted to reduce information asymmetry and managerial opportunism. Effective governance enhances oversight and discourages earnings manipulation. Resource dependence theory also supports the role of board size, diversity, and expertise in providing critical monitoring and advisory resources that enhance reporting quality. Resource dependence theory (Pfeffer & Salancik, 1978) posits that boards provide critical resources such as expertise, legitimacy, and external linkages. Board size, gender diversity, and financial expertise improve oversight quality and access to resources, thereby enhancing financial reporting quality. Bathula (2008) stressed the importance of unique bundles of resources of a firm that are crucial for its growth. Such resources include all assets, capabilities, organizational processes, firm attributes, information, and knowledge controlled by a firm in order to improve efficiency and effectiveness. Stakeholder theory explores the dilemma regarding the interest of different stakeholders to the companies. The stakeholder theory takes account of a wider

group of constituents rather than focusing on shareholders. The theory recognizes that many groups have connections with the firm and are affected by the firm's decision making. Stakeholder theory helps to fill the observed gap created by omission found in the agency theory which identifies shareholders as the only interest group of a corporate entity. It is therefore an extension of the agency view which holds that firms are accountable to various stakeholders which include shareholders, employees, suppliers, bankers, regulatory authorities, pressure groups, debenture holders and members of the general public for their stewardship over the resources entrusted them (Kaufman & Englander 2006). Positive accounting theory is concerned with the contractual view of the firm. It predicts and explains actions taken by agents to maximize their utility. Positive accounting theory (Watts & Zimmerman, 1986) explains earnings management as a rational response to contractual incentives. Managers manipulate earnings to meet debt covenants (leverage hypothesis), reduce political costs (size hypothesis), or increase compensation. This theory supports the inclusion of leverage and firm size as control variables.

2.2 Conceptual Framework

The conceptual framework illustrates the relationship between corporate governance mechanisms and earnings management.



Explanation:

The framework illustrates that corporate governance mechanisms directly influence earnings management practices in listed Nigerian petroleum companies, while leverage and firm size act as control variables that may also affect managerial reporting behavior.

2.3 Corporate Governance

Corporate governance is a phenomenon that has received much academic interest because of the numerous incidences of corporate failures experienced by several, highly visible firms in countries around the world (Okpala, 2012). A good number of literatures available on this subject have defined Corporate Governance in so many ways. According to Asuagwu (2013), Corporate Governance is a structure used to reduce agency costs which occur as result of distinct interest

between principals and agents. But according to Hamid (2009), there is no generally accepted definition of corporate governance which enjoys consensus of opinion in all settings and countries of the world. Therefore, corporate governance can simply be defined as the process through which an organization is being directed and controlled to ensure maximum protection of shareholders' interest. However, Wilson (2006) in his own view added that corporate governance is about the manner in which corporations are directed, controlled, and held to account for the resources used. Charreaux and Desbrieres (2001) described the corporate governance system as the mechanisms that govern managers' behaviour and delineate the managers' discretionary decision. Corporate governance has also been referred to the ways in which suppliers of finance to corporations assure themselves of getting a return on their investments (Shleifer & Vishny 1997). According to O'Donovan (2003), Corporate Governance is an in-house structure designed to direct and control management functions by being knowledgeable, objective and accountable in ensuring that shareholders' and stakeholders' investments are protected. In the same line, Kurawa (2013) maintains that corporate governance is the mechanism that safeguards the shareholders' interest which is necessitated as a result of separation between the owners of business and managers of business. In their view, OECD Principles of corporate governance (2004) it is the most effective way to manage the relationships of all the participants in an organization with integrity so that the organization can enhance its performance in all sectors of the operations. Therefore, from the above definitions, corporate governance can be seen in essence as the structures established by a firm or an organization to inculcate corporate discipline, transparency and accountability in the management of employees of a firm or an organization to enable them safeguard the assets of the firm or organization adequately and above all protects the interest of shareholders and other stakeholders. In Nigeria corporate governance evolves within Companies and Allied matters Act (CAMA)1990 as amended, Securities and Exchange Commission (SEC) 2003, and Central Bank of Nigeria (CBN) code of corporate governance for banks (2006). Although corporate governance has been in existence in Nigeria for quite some time, it came to limelight with the establishment of corporate governance code 2003 by the securities and exchange commission after the recommendation of Peterside Atedo report. It puts the board of directors at the centre of the implementation of the corporate governance principles of public companies in Nigeria. The code recommend that, the board should comprise a mix of executive and non-executive directors, board size should be minimum of five (5) and maximin of fifteen (15) but extended to twenty (20) in the reviewed code, and the position of chairman and chief executive officer (CEO) should be separated. The CEO and his team to be in charge of day to day operation of the company. CBN in 2006 proceeded in its separate code for banks due to the regulated nature of banking systems in order to win and retain public confidence in Nigerian banks.

2.4 Concept of Earnings Management

Earnings management refers to deliberate managerial actions that influence reported earnings through accounting choices or real operational decisions, without necessarily violating accounting standards. Earnings management, unlike fraud, involves the selection of accounting procedures and estimates that conform to generally accepted accounting procedures (GAAP). That is, firms that have earnings management would be manifested within the bounds of accepted accounting procedure manipulation (Rahman and Ali 2007). It is this regard, that managers often exploit the flexibility inherent in accounting standards to manipulate reported earnings in order to meet

targets, influence share prices, satisfy debt covenants, or protect personal interests. Such practices reduce the reliability and transparency of financial statements, thereby undermining investors' confidence. It is observed from previous literature that the earnings management definition differs, depending on how someone consider the practice of managing earnings, for those who accept the practices of earnings management indicating that it is good for the firm, they define earnings management as a means used by managers to improve financial position of firms.

On the other hand, those who see earnings management into a negative way consider the practice as manipulation of earnings by management in order to gain out of it or show that the firm is performing while it is not at the expense of shareholder's wealth as well as the investors. This shows that there are two types of earnings management i.e. beneficial earnings management and opportunistic earnings management. Managing earnings to achieve stockholders' incentive constitute beneficial earnings management, and managing earnings to achieve private incentive (manager's desired goals) constitute opportunistic earnings management. Healy and Wahlen (1999) describe earnings management as occurring when managers use judgment in financial reporting to mislead stakeholders or influence contractual outcomes. The Assurance Handbook (2003) defined earnings management to include the recording of accounting entries, without any event to justify the accounting or the failure to record or correctly record transactions for the purpose of altering results. These two definitions show that they are on the negative side. We may also now argue that, earnings management can take two major forms: accrual-based manipulation, which involves discretionary accounting choices, and real earnings management, which affects actual business operations.

This study focuses on accrual-based earnings management, commonly measured using discretionary accrual models. Of the above-mentioned earnings management techniques, accruals management is the most damaging to the usefulness of accounting reports because investors are unaware of the extent of such accruals (Roodposhti and Chashmi 2011). Several reasons have been given in the literature for earnings manipulation by managers. However, Chang, Shen and Fang (2008) note three incentives to manage earnings; Capital market motivation which includes initial public offerings, seasoned equity offerings, management buoyant plans and plans for merger to meet earnings forecast, to smooth earnings, etc. Second, Contract motivation such as management compensation, debt agreement or job security. Third laws and regulations can also serve as an incentive for earnings manipulation. Nevertheless, a number of academic studies have argued that, earnings management may be beneficial because it potentially enhances the information value of earnings. Scott (2003) believed that there is a good side of earnings management and that it can be a device to convey inside information to the market, enabling share price to better reflect the firm's future prospects.

2.5 Hypothesis Development

2.5.1 Ownership Concentration and Earnings Management

Ownership concentration reflects the proportion of shares held by large shareholders. Concentrated ownership may reduce agency problems by enhancing monitoring; however, it can also encourage expropriation of minority shareholders. Empirical evidence remains inconclusive. While some studies find that concentrated ownership reduces earnings management through closer monitoring (Iturriaga & Hoffmann 2005; Roodposhti & Chashmi 2011; Alves 2012), others report increased manipulation due to controlling shareholders' influence over reporting decisions (Waweru and

Riro 2013; Al-Fayoumi et al., 2010). Iturriaga and Hoffmann (2005) examine internal mechanisms of corporate governance and earnings management from Chilean firms, they concluded that ownership concentration encourages managers monitoring and restrain earnings management in Chile. Roodposhti and Chashmi (2011) examine the effect of corporate governance management in Iran between 2004 and 2008 they find that earnings management is negatively related to ownership concentration. Alves (2012) corroborate in the studies of corporate structure and earnings management in Portugal. The study result suggest that ownership concentration improves quality of earnings by reducing levels of earnings management. In contrast, Waweru and Riro (2013) investigates corporate governance and firm specific characteristics on earnings management among Kenyan listed companies, they find ownership structure has a significant positive relationship with earnings management. Similarly, Al-Fayoumi, Abuzayed and Alexander (2010) also find that insider's ownership is significant and positively affects earnings management among Jordanian industrial firms in their studies. Adegbite, Amaeshi, and Amao (2012) argue that ownership concentration in Nigeria often leads to dominance by controlling shareholders, which may weaken minority shareholder protection and encourage opportunistic financial reporting. Based on the presented arguments, and considering that the majority of studies suggest a negative effect between ownership concentration and earnings management, it is possible to formulate the following hypothesis:

***H1:** Ownership concentration has a significant negative effect on earnings management.*

2.5.2 Board Size and Earnings Management

Board size represents the total number of directors on a company's board. Larger boards may provide diverse expertise and stronger oversight, thereby reducing earnings management. However, excessively large boards may suffer from coordination problems, reducing effectiveness (Eisenberg et al., 1998; Jensen, 1993; Lipton and Lorsch, 1992). Prior empirical studies generally support a negative relationship between board size and earnings management when boards remain within an optimal range (Uwuigbe, Ranti, and Bernard 2015; Abed, Al-Attar and Suwaidan 2012; Abdul Rahman and Ali 2006). However, some studies Alonso et al. (2000); and Taibi et al. (2015) found otherwise while another viewpoint is that there is no relationship between earnings management and the board size (Ideh et al., 2021; Abata & Migiro, 2016; Gulzar & Wang, 2011). Uwuigbe et al. (2015) investigate the effect of corporate governance on earnings management in Nigerian listed firms and find that board size and board independence significantly constrain earnings manipulation, whereas leverage increases earnings management. Abed et al. (2012) examine the relationship between earnings management and characteristics of corporate governance mechanism for a sample of Jordanian non-financial firms during the period 2006 – 2009. The result document that there is negative and significant relation between earnings management and board size. In the same vein, Soliman and Ragab (2013) found discretionary accruals as a proxy for earnings management negatively related to board size in their study of board of director's attributes and earnings management in Egypt. Similarly, Aygun et al. (2014) studied impact of the size and corporate ownership on earnings management and found negative relationship of institutional ownership and board size on earnings management. In contrast, Alonso, Palenzuela and Iturriaga (2000) found positive and significant impact of board size on earnings management from the relationship between boards of directors and earnings management from 10 OECD countries arguing that large board exhibit poorer coordination and commination

between members. Again Taibi et al. (2015) investigate the effectiveness of board characteristics in limiting earnings management. Empirical result depicted the positive impact of board size on earnings management. Based on the arguments presented, it is possible to formulate the following hypothesis:

H2: *Board size has a significant negative effect on earnings management.*

2.5.3 Non-Executive Directors and Earnings Management

Non-executive directors (NEDs) are independent members of the board who are not involved in daily management of a firm. The role of non-executive directors is to bring independent judgement to the board. As outside members do not play a direct role in the management of the company, their existence may provide an effective monitoring tool to the board and thus produce higher quality financial reports (Hashim & Devi, 2008). In fact, their primary role is monitoring management and protecting shareholders' interests. A higher proportion of non-executive directors is expected to strengthen board independence and reduce opportunistic financial reporting. Since the outside directors do not possess any interest regarding the shareholding of the firm, in order to maintain their reputation, they are expected to act in such a manner that maximizes the value of the firm thereby reducing earnings management. Literature in respect of non-executive directors and earnings management shows mixed results. Abata and Migiro (2016) examine corporate governance and earnings quality in Nigerian quoted companies and report that non-executive directors and board size have a significant negative effect on earnings management, while ownership concentration shows mixed results. Chekili (2012) examine the impact of some governance mechanisms on earnings management in Tunisia between 2000 and 2009, the result shows that earnings management is negatively linked to the presence of external directors within the board. In consonance with the studies, Fodio, Ibikunle and Oba (2013) study the effect of corporate governance on reported earnings quality of listed insurance companies in Nigeria they find that outside independent directors on board is negatively and significantly associated with earnings management. Also, Talbi et al. (2015) did study to investigate the efficacy of board characteristics in restraining management's earning management, whereby results showed that outside independent directors played a significant role in controlling earnings management. On the other hand, Shah, Zafar and Durrani (2009) found positive relationship between earnings management and external directors among Pakistani listed companies from 2003 to 2007. In corroboration, Meeampol, Rueangsuwan and Jaithat (2012) study the relationship between corporate governance and earnings management in Thailand, they also find that independent directors who also hold directorial position have a significant positive relationship with earnings management. This led to the third hypothesis stated thus;

H3: *A higher proportion of non-executive directors reduces earnings management.*

2.5.4 Gender Diversity and Earnings Management

Gender diversity on corporate boards has gained attention in governance research. It refers to the extent to which both men and women are represented within an organization's leadership and decision-making structures. In corporate governance research, it is commonly operationalized as the proportion or number of female directors on the board. Female directors are often associated with ethical sensitivity, risk aversion, and enhanced monitoring. Therefore, female presence on corporate boards is associated with low levels of earnings manipulations because they tend to

reduce information asymmetry and do not engage in unethical conduct to gain private benefits (Abad, Lucas-Pérez, Minguez-Vera, & Yagüe, 2017; Lakhal et al., 2015;) However prior literature on the relationship between female board representation and earnings management reflects diverse findings, contributing to a mixed understanding of this association. Nevertheless, empirical studies increasingly suggest that gender-diverse boards are more effective in constraining earnings manipulation (Damak 2018; Obagbemi et al., 2016; Lakhal et al., 2015; Peni & Vahamaa 2010; Ezeani et al., 2019; Tijjani & Dabor 2010). Damak (2018) investigated the influence of board gender diversity on earnings management for a sample of 85 companies listed in the SBF120 over the period 2010–2014. Results showed a significant negative effect of women's presence on the board on earnings management. This finding supports the efforts made by French political bodies to increase gender diversity on corporate boards and might inspire political actors of other countries to take initiatives to regulate and/or promote women's appointment to boards of directors. Again Obigbemi et al. (2016) attempted to assess the role board structure plays in curtailing earnings management practices in Nigerian companies. The sample of 137 companies was taken for a period of eight (8) years (2003 - 2010). Earnings management was measured using discretionary accruals as estimated by the performance matched modified Jones model. The study stated that there is a negative significant relationship between board gender diversity and earnings management. In the same vein, Lakhal et al. (2015) examine the effect of gender diversity in the board and top-level management positions on earnings management, whereby the result depicted that increase in the percentages of women directors in the board lead to the reduction in earnings management. Ezeani, Udeh, and Uche (2019) focus on manufacturing firms in Nigeria and report that gender diversity and financial expertise are associated with improved earnings quality. The study emphasizes the growing relevance of board diversity in emerging markets. Peni and Vahamaa (2010) examine the association between earnings management and gender of firm's executives. Using sample of S&P 500 firms with 1,955 firm-year observations from 391 firms, and using panel regression as a method of analysis they found a negative relationship between gender and earnings management thereby suggesting that firms with female executives may be associated with income-decreasing discretionary accruals. Tijjani & Dabor (2010) found that the composition of women directors in the board had a negative relationship with earnings management and a positive relationship with firm performance but had no significant impact. In addition, Abdullahi (2015) documented that the women director representative in Nigerian cement firms has negative but insignificant effect on the earnings management behavior of these firms. On the other hand, Buniamin, Johari, Rahman and Rauf (2012) sought to examine the relationship between board diversity and discretionary accruals practices in Malaysia using data from annual reports of 100 top companies in Malaysia Corporate Governance(MCG) index for the year 2008 they found positive relationship between women and discretionary accruals from the multiple regressions. Moradi et al. (2012), Emmilia & Sami (2010) and Adams & Ferreira (2009) could not find any relationship between earnings management and gender of firms. This debate led to assume the fourth hypothesis.

H4: *Gender diversity on the board negatively affects earnings management.*

2.5.6 Financial Expertise and Earnings Management

Financial expertise refers to the presence of board members with accounting or finance-related qualifications and experience. Board financial expertise is viewed as another element in the board

characteristics that may have effect on earnings management. Directors with financial expertise are better positioned to detect aggressive accounting practices and challenge management, thereby improving earnings quality. Empirical studies show that financial expertise is an important determinant of financial quality statement. Barton, Coombes & Wong (2004) suggested that to do their task effectively they must have the ability for asking management tough questions, actively helping to set corporate strategy, monitoring risk management, contributing to CEO succession plans and ensuring that companies set and meet their financial and operating targets. So far, this can only be achieved if the board has vital expertise to fully embrace such duties. Empirically very few studies have explored financial expertise and earnings management (Ahmed & Duellman 2011; Olowookere & Adebayo 2020; Lin & Hwang 2010; Metawee 2013). Nevertheless, those few studies show mixed results. Ahmed and Duellman (2011) find that board independence and financial expertise significantly reduce earnings manipulation in Nigerian listed firms. Their study highlights the importance of director competence in improving financial reporting quality. Corroborating, Olowookere and Adebayo (2020) examine oil and gas firms in Nigeria and find that board independence and financial expertise significantly reduce earnings manipulation, while high leverage increases incentives for earnings management. Although their study period includes pre and post IFRS adoption in Nigeria from 2007 – 2011 and then 2018 – 2022 meanwhile IFRS was adopted in 2012 it did not capture some years. Besides, Lin and Hwang (2010) examine the relationship between earnings management and corporate governance and audit quality. Using meta-analytic techniques from 48 empirical studies they find a negative relationship between board financial expertise and earnings management. On the other hand, Metawee (2013) found a positive relationship between board financial expertise and earnings management from their studies on the relationship between the characteristics of each board of director, audit committees and earnings management in Egyptian companies. We therefore argue that nomination of people with higher qualification in financial expertise on the board of directors represent skills and competence as firms face demands for more sophisticated talent to improve organizational effectiveness. We therefore assume the fifth hypothesis.

H5: Financial expertise on the board reduces earnings management.

2.5.7 Control Variables

- **Leverage:** Leverage can be referred to as the degree to which a company uses fixed income securities such as debt (borrowings) and preferred equity. A company may use borrowed money to increase production or acquire additional asset. Highly leveraged firms may manage earnings to meet debt covenants. Basically, they are two different streams that are found describing the relationship between leverage and earnings management. Becker et al. (1998) noted that managers of highly leveraged firms have incentives to strategically report discretionary accruals in order to increase reported earnings in their efforts to avoid debt covenant violation. On the other hand, Abed et al. (2012) stated that highly indebted firms may be less able to practice earnings management because they are under close scrutiny of lenders.
- **Firm Size:** Larger firms are subject to greater scrutiny and may have stronger internal controls, reducing earnings management. They face greater political costs relative to their small counterpart. Political costs refer to costs arising from direct or indirect regulation causing a heavy scrutiny by stock market. Consequently, large firms may have a greater incentive to manage earnings downward to escape from such constraints. Fodio et al. (2012) show that firm size has a significant

negative association with discretionary accrual, meaning that larger firms are less engaged in earnings management. Other researchers who agree on the existence of a negative relation between firm size and earnings management are (Albreth and Richardson 1990, Persons 1995, Lee and Choi 2002 and Sanchez-Ballesta and Garcia- Meca 2007). However, Roodposhti and Chashmi (2011) found firm size positively related to earnings management. Also, those that find a positive relation are (Rangan 1998 and Degeorge *et al* 1999) who mention in their research that large firms have the tendency to manipulate their accruals to overstate their earnings and avoid any negative earnings report.

3. Research Methodology

3.1 Research Design

The research design adopted for this study was ex-post facto research design using panel data for the periods under study (2014-2023). It allows for the collection of past and multi-dimensional data which will provide basis for the full establishment of the relationship between the variables of this study. This is appropriate because it relies on historical data and does not involve manipulation. The population for this study consists of all the listed petroleum marketing firms in Nigeria on the floor of the Nigerian Exchange Group (NGX). Secondary source of data was utilized. These data were obtained from the annual reports and accounts of 9 petroleum marketing companies quoted in the Nigerian stock exchange covering the period from 2014 to 2023.

3.2 Population and Sample

The population comprises all petroleum marketing companies listed on the Nigerian Exchange Group (NGX) beginning from 2014 – 2023. These firms are selected because of their economic importance and regulatory exposure. Moreover, firms from the same industry appear to have similar influences, they suffer from the same competition, financial pressure, growth opportunities and other factors that influence performance. In this study a sample size of seven (7) companies are used even though the population is not much is taken from a sample frame of nine (9) petroleum marketing companies. A purposive sampling technique was adopted to select firms with continuous listing on Nigeria exchange group between 2014 and 2023, availability of complete annual reports and consistent corporate governance disclosures. Firms with missing or inconsistent data were excluded to ensure reliability of the panel dataset as the criteria.

3.3 Sources of Data

The study relies solely on secondary data obtained from website of companies' annual reports and accounts of sampled firms, Nigerian Exchange Group (NGX) Factbook, Corporate governance disclosures, and Financial statement notes. Studies in this area done by previous researchers (Shah *et al.*, 2009; Waweru and Riro, 2013; Fodio *et al.*, 2013) used secondary data and it empirically yielded the desired result, this study also used data from secondary sources. The study examined data for the years 2014 and 2023.

3.4 Measurement of Variables

3.4.1 Dependent Variable

This study uses discretionary accruals estimated through the **Modified Jones Model (1995)** which is a proxy for earnings management as dependent variable and corporate governance mechanisms

as independent variables to determine the effect on earnings management of petroleum marketing companies listed on the NGX.

The model is as follows:

$$DA = TA_{it}/A_{it-1} - [a_1(1/A_{it-1})] + a_{1i}[(\Delta REV_{it} - \Delta REC_{it})/A_{it-1}] + a_{2i}[PPE_{it}/A_{it-1}]$$

Prior researchers like Shah et al., (2009), Roodposhti & Chashmi (2011), Buniamin et al., (2012), Fodio et al., (2013) and Uwuigbe et al., (2014) use the model in their studies.

Table 1. Independent Variables

Variable	Symbol	Measurement
Earnings Management	DA	Discretionary Accruals (Modified Jones Model)
Ownership Concentration	OC	% shares held by major shareholders
Board Size	BS	Total number of directors
Non-Executive Directors	NED	Ratio of NEDs to total board size
Gender Diversity	GD	Ratio of female directors
Financial Expertise	FEXP	Ratio of financial expert on the board
Leverage	LEV	Total debt / total assets
Firm Size	SIZE	Natural log of total assets

3.5 Model Specification

The econometric model for the study is specified as:

$$DA = \beta_0 + \beta_1 OC_{it} + \beta_2 BS_{it} + \beta_3 NED_{it} + \beta_4 GD_{it} + \beta_5 FEXP_{it} + \beta_6 LEV_{it} + \beta_7 SIZE_{it} + \epsilon_{it}$$

Where:

DA = Discretionary Accruals
OC = Ownership Concentration
BS = Board Size
NED = Non-Executive Directors
GD = Gender Diversity
FEXP = Financial Expertise
LEV = Leverage
SIZE = Firm size
e = Error term
i = firm
t= time (2014–2023)

3.6 Method of Data Analysis

Data were analyzed using Stata. The following techniques were employed: Descriptive statistics, Pearson correlation analysis, Multicollinearity diagnostics (VIF and Tolerance), Multiple regression analysis. Panel regression results were interpreted at 5% and 1% significance levels.

3.7 Validity and Reliability of Data

Reliability of result demand for the surety that when the research would be repeated the researchers will get the same results and the result of the research would be valid as well. Data reliability was ensured through the use of audited annual reports. Validity was enhanced by adopting well-established measurement models widely used in earnings management literature.

4. Data Analysis, Results and Discussion

4.1 Study Period and Panel Structure

This study covers a ten-year period from 2014 to 2023, a timeframe chosen to capture post-IFRS adoption effects, corporate governance reforms by the Nigerian Securities and Exchange Commission (SEC), and recent improvements in disclosure practices within the Nigerian petroleum sector. The period also reflects varying economic conditions, including oil price volatility and regulatory changes affecting petroleum firms. The dataset consists of balanced panel data, combining cross-sectional observations of listed Nigerian petroleum companies with time-series data over the ten-year period, resulting in firm-year observations suitable for panel regression analysis.

4.2 Descriptive Statistics

Descriptive statistics summarize the distribution and behavior of earnings management and governance variables across the study period.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
DA	70	0.12	1.13	-2.01	2.23
OC	70	70.47	7.08	55.09	84.17
BS	70	9.24	1.98	5.00	14.00
NED	70	0.54	0.14	0.17	0.78
GD	70	0.16	0.09	0.00	0.38
FEXP	70	0.20	0.10	0.00	0.50
LEV	70	0.61	0.63	0.11	1.96
SIZE	70	7.90	0.35	7.19	8.78

Explanation of Descriptive Statistics

The average discretionary accruals (DA) of 0.12 indicates moderate earnings management among listed petroleum marketing firms in Nigeria. The relatively high standard deviation suggests variability in reporting practices across firms and years. Ownership concentration averaged 55.09%, implying that shareholdings are largely concentrated among dominant shareholders. This is consistent with the Nigerian corporate ownership structure where institutional ownership dominates. The mean board size of approximately 9 directors suggests moderately large boards capable of providing oversight. Although the number is low as compared to advanced economies like USA with a mean of 11 members (Bhagat & Black 2002). Non-executive directors constitute about 54% of board membership, indicating compliance with corporate governance recommendations that non-executive directors should be more on the board. Gender diversity averaged 16%, showing relatively low female representation on boards. Financial expertise recorded a mean of 0.20, implying that boards exhibit modest levels of financial expertise, with approximately one-fifth of directors possessing accounting or finance backgrounds. Firm size and leverage averages indicate that petroleum marketing firms are highly capital intensive and significantly financed through debt.

4.3 Correlation Analysis

Table 3: Pearson Correlation Matrix

Variable	DA	OC	BS	NED	GD	FEXP	LEV	SIZE
DA	1.000							
OC	0.332**	1.000						
BS	-0.60	0.153	1.000					
NED	-0.405**	0.158	0.193	1.000				
GD	-0.278*	0.371**	0.194	0.218	1.000			
FEXP	-0.285*	-0.485**	0.127	0.212	0.287*	1.000		
LEV	0.202	-0.087	0.104	0.046	0.10	-0.19	1.000	
SIZE	0.386**	-0.252*	0.206	0.451**	0.127	0.210	0.006	1.000

*Correlation is significant at the 0.01 level (2-tailed) ***

*Correlation is significant at the 0.05 level (2-tailed) **

Explanation of Correlation Results

Pearson correlation coefficients were computed to assess the strength and direction of relationships among variables. Key observations include: Ownership concentration shows a positive correlation (0.332) with earnings management. Board size, non-executive directors, gender diversity, and financial expertise are negatively associated with discretionary accruals. This suggests that stronger governance mechanisms reduce earnings manipulation. Non-executive directors have the strongest negative relationship with discretionary accruals (-0.405), implying that boards with more independent directors are more effective in constraining opportunistic financial reporting. Firm size and leverage show a positive relationship with discretionary accruals (0.386) and (0.202), indicating that large firms and highly leveraged firms are more likely to engage in earnings management to satisfy creditors and debt covenants.

4.4 Regression Results

Panel regression analysis was conducted using Fixed Effects and Random Effects models. The Hausman test favored the Fixed Effects model, indicating that firm-specific characteristics significantly influence earnings management behavior over time.

Table 4: Fixed Effect Panel Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Tolerance	VIF
C	-1.405	2.833	-0.496	0.622		
OC	2.271	0.754	3.606	0.001	0.754	1.326
BS	-0.017	0.51	-0.341	0.735	0.911	1.098
NED	-0.055	0.016	-3.328	0.001	0.676	1.479
GD	-6.702	1.145	-5.854	0.000	0.811	1.234
FEXP	-1.808	1.042	-1.735	0.008	0.732	1.367
LEV	0.300	0.154	1.947	0.056	0.974	1.026
SIZE	0.581	0.313	1.857	0.068	0.748	1.337

R² 0.558
Adjusted R² 0.508
F-statistic 11.191
Prob(F-statistic) 0.000
Durbin-Watson 1.761

Discussion of Regression Results

The regression result indicates that corporate governance mechanisms significantly influence earnings management among Nigerian listed petroleum marketing companies. Ownership concentration has a positive and significant coefficient (2.721, $p < 0.001$), indicating that concentrated ownership does not reduce discretionary accruals. Large shareholders unlikely provide effective monitoring of management activities. This result is in line with Al-Fayoumi et al. (2010) and Waweru & Riro (2013) but contradicts the findings of Roodposhti & Chashmi (2011) and Alves (2012) who found negative relationship between ownership concentration and earnings management. Board size has a negative but statistically insignificant effect on discretionary accruals (-0.017, $p < 0.735$), suggesting that larger boards improve oversight but slightly reduce managerial opportunism. The result corroborates with other studies of Sitienei (2023), Abdul Rahman and Ali (2006), and Kao & Chen (2004) who found negative but not statistically significant relationship between board size and earnings management. It is not in tandem with Uwaigbe et al. (2015); Abed et al. (2012); Soliman and Ragab (2013) who found negative and significant relationship between board size and earnings management. Also, the findings contradict Alonso et al. (2000) and Taibi et al. (2015). They found positive relationship between board size and earnings management. Non-executive directors significantly reduce discretionary accruals with a negative and significant coefficient of (-0.055, $p < 0.001$), implying that independent directors strengthen monitoring and financial reporting quality. This result support the findings of Abata & Migiro (2016); Chekili (2012) and Fodio et al. (2013). They found a negative relationship between the proportion of outside directors and earnings management in their studies. On the other hand, the result disagrees with Shah et al. (2009) and Meeampol et al. (2012) who found a positive relationship. Gender diversity also exhibits a significant negative relationship with earnings management (-6.702, $p < 0.00$). This finding supports the argument that female directors enhance ethical standards, transparency, and board effectiveness. Despite the fact that the representation of women on the board is still rare, the findings suggest that the contribution of women participation is quite relevant. This finding is consistent with Damak (2018); Peni and Vahamaa (2010) but negates the studies of Gulzar & Wang (2011) and Buniamin et al (2012) they found positive relationship between gender diversity and earnings management. Financial expertise has a strong negative effect on discretionary accruals. The presence of financially literate directors improves the board's ability to scrutinize accounting policies and detect manipulative reporting practices. This result is in tandem with Xie et al. (2003) and Lin & Hwang (2010) who found negative relationship between financial expertise and earnings management but contrary to the findings of Metawee (2013) who confirms that, the number of board members with financial expertise was positively related to earnings management. Firm size positively affects earnings management, suggesting that larger firms may have greater incentives and opportunities to manipulate earnings because of political visibility and market expectations. Leverage positively

and significantly influences discretionary accruals though at 10%, implying that firms with high debt levels are more likely to manage earnings to meet debt obligations and maintain creditor confidence.

The adjusted R^2 of 50.8% indicates that the explanatory variables account for a substantial proportion of variations in earnings management among the sampled firms. Also, the F-Statistic (11.191) and the probability value less than 0.05 means that, the regression model is statistically significant, indicating the explanatory variables jointly influence discretionary accruals. This means that corporate governance mechanisms collectively have a significant effect on earnings management among the sampled Nigerian petroleum marketing companies.

4.5 Robustness and Diagnostic Tests

To ensure reliability of results across the 2014–2023 period; diagnostic tests were conducted. According to Hair et al. (2019) and Gujarati and Porter (2009), multicollinearity becomes a serious concern when the correlation coefficient between independent variables exceeds 0.70 (or 0.80 under a more conservative criterion). No correlation coefficient exceeds 0.70, suggesting the absence of serious multicollinearity problems among the explanatory variables. Variance Inflation Factor (VIF) tests confirm that all values fall below the threshold of 5, validating the suitability of the regression model. Robust standard errors were applied to correct heteroskedasticity. Serial correlation tests confirmed no significant autocorrelation. The Durbin–Watson statistic is 1.761, which is close to the benchmark value of 2.0. This indicates that there is no evidence of serious first-order autocorrelation in the regression residuals. Alternative earnings management measures yielded consistent results.

4.6 Implications of the 2014–2023 Findings

The decade-long analysis demonstrates that governance reforms implemented during the period have contributed to improved earnings quality, though challenges remain in ownership structures and leverage management.

Table 5: Hypotheses Testing Summary

Hypothesis	Variable	Expected Sign	Result	Decision
H1	Ownership Concentration	±	Positive	Not Supported
H2	Board Size	–	Negative	Supported
H3	Non-Executive Directors	–	Negative	Supported
H4	Gender Diversity	–	Negative	Supported
H5	Financial Expertise	–	Negative	Supported

5. Summary, Conclusion and Recommendations

5.1 Summary of the Study

The purpose of this study is to examine the effect of corporate governance mechanisms on earnings management in listed Nigerian petroleum marketing companies over the period 2014–2023. The selected governance mechanisms investigated include ownership concentration, board size, non-executive directors, gender diversity, and financial expertise, while leverage and firm size were used as control variables. Using secondary data and regression analysis, the empirical examination

of the hypotheses in this study reveal that ownership concentration was found to have a positive effect on earnings management and the effect is significant showing that it does not constrain the practice of earnings management but rather exacerbates it. Non-executive directors, gender diversity and financial expertise was found to have negatively and significantly affect earnings management more than board size indicating that they constrain earnings manipulation in the Nigerian petroleum sector. The findings support agency theory, which argues that effective governance mechanisms reduce agency conflicts and managerial opportunism.

5.2 Conclusion

Research on the effect of corporate governance mechanisms was motivated by renewed interest evinced due to corporate failures and scandals. The event at Enron and other spectacular failure have helped bring out to limelight the importance of strengthening governance mechanisms. This has led to a number of countries issuing corporate governance regulations, codes and principles. In Nigeria the petroleum industry is one of the industries that are strategically important to the growth of the economy. Consequently, the desire for better firm performance due to reduction in earnings management such that the sector remains healthy and sound cannot be overemphasized. Based on the findings, which is in line with our hypotheses the study concludes that, a significant relationship exists between some governance mechanisms and earnings management and that effective corporate governance mechanisms play a critical role in reducing earnings management in listed Nigerian petroleum companies. We therefore argue that if non-executive directors are increased on the board with increase in female representation and financial expertise of members it will constrain manipulation of earnings in the petroleum marketing companies.

5.3 Recommendations

The thrust of this study is to find the extent to which corporate governance mechanisms impact on earnings management in petroleum marketing companies. Based on the findings, the following recommendations are made: Regulatory Authorities through the Securities and Exchange Commission (SEC) and Financial Regulatory Council of Nigerian (FRC) should strengthen enforcement of board independence and especially gender diversity requirements as this constrain earnings management just like Norway, Spain, France and Italy have recognized the value of women and legislated in favour of gender quotas' in listed companies. Also, corporate boards of petroleum marketing companies should appoint more financially skilled and independent directors to enhance monitoring and reporting quality as this may reflect in their performance. Besides, on the ownership structure, policies should be introduced to protect minority shareholders in firms with highly concentrated ownership structures. Emphasis on concentrated ownership (core investor) by government and the general public is misplaced as it has been found not to constrain earnings management in companies and firms should adopt prudent leverage policies to reduce earnings manipulation incentives associated with debt covenants.

5.4 Contribution to Knowledge

This study contributes to existing literature by providing sector-specific evidence from the Nigerian petroleum industry, incorporating gender diversity and financial expertise within a post-IFRS framework over a long study period.

5.5 Limitations of the Study

The study focused solely on accrual-based earnings management and is measured by popular Jones model but does not examine the quality of accruals. Second, it was limited to petroleum companies listed on the Nigeria Exchange Group but did not include other sectors of the economy.

5.6 Suggestions for Further Studies

Future research may: Examine real earnings management practices, or extend the study to other sectors or countries and incorporate corporate governance reforms over time to obtain a more robust result.

References

- Abad, D., Lucas-Pérez, M. E., Mínguez-Vera, A., & Yagüe, J. (2017). Does gender diversity on corporate boards reduce information asymmetry in equity markets? *BRQ Business Research Quarterly*, 20(3), 192–205. <https://doi.org/10.1016/j.brq.2017.04.00>
- Abata, M.A & Migiro, S.O. (2016). Corporate governance and management of earnings: Empirical evidence from selected Nigerian-listed companies. *Investment Management and Financial Innovations*, 13(2-1), 189-205.
- Abdul Rahman, R & Ali F.H. (2006). Board, audit committee, culture and earnings management: Malaysian evidence. *Managerial Auditing Journal*, 21(7), 783 – 804. <https://doi.org/10.1108/0268690061068054>
- Abdullahi, Z. (2015). *Corporate board structure, audit committee attributes and earnings management of listed cement companies in Nigeria*. Unpublished Master's thesis, Bayero University Kano Kano, NG
- Abed, S., Al-Attar, A & Suwaidan, M., (2012). Corporate governance and earnings management: Jordanian evidence. *International Business Research*. 5 (1), 216 – 225.
- Abu Siam Y. I, Laili, N. H. B., & Khairi, K. F. B (2014). Board of directors and earnings management among Jordanian listed companies: Proposing conceptual framework. *International Journal of Technical Research and Applications*. 2(Special Issue 3):01-07. e-ISSN: 2320-8163
- Ahmed, A.S & Duellman, S. (2007). Accounting conservatism and board of director characteristics: An empirical analysis. *Journal of Accounting and Economics*, vol. 43, no. 2–3, 411-37.
- Akers M, Giacomino D., & Bellovary J., (2007). Earnings management and its Implications. *The CPA Journal*, 79, (8), 64-68.
- Albrechth, W., & Richardson F., (1990). Income smoothing by economy sector. *Journal of Business Finance and Accounting*, 17, (5), 713–730
- Al-Fayoumi N., Abuzayed B & Alexander D., (2010). Ownership structure and earnings management in emerging markets: The case of Jordan. *International Research Journal of Finance and Economics*, 38, (1), 28-47
- Alves, S., (2012). Ownership structure and earnings management: Evidence from Portugal. *Australasian Accounting, Business and Finance Journal*, 6(1): 57-74.
- Asuagwu, G. (2013). Implication of Corporate Governance on the performance of deposit money banks in Nigeria. *Arabian Journal of Business & Management Review*, 2(10): 22-45.
- Aygun, M., Suleyman I. C, & Sayim M. (2014). The effect of corporate ownership structure and board size on earnings management: Evidence from Turkey. *International Journal of business and management*. 9(12): 112 – 123.
- Bathula, H. (2008). Board characteristics and firm performance: Evidence from New Zealand. (Doctoral thesis, Auckland University of Technology, New Zealand). Doi:10.11648/j.jfa.20140203
- Bhagat, S., & Bolton, B. (2008). Corporate governance and firm performance. *Journal of Corporate Finance*, 14(3), 257–273.
- Charreaux, GJ & Desbrieres, P (2001). Corporate governance: stakeholders' value versus shareholders value. *Journal of Management and Governance*, 5, (2), 107-28.

- Chekili, S. (2012). Impact of some governance mechanism on Earnings Management: An empirical validation within Tunisian market. *Journal of Business Studies Quarterly*, 3(3): 95-104.
- Damak S T. (2018). Gender diverse board and earnings management: Evidence from French listed companies. *Sustainability Accounting, Management and Policy Journal*, 9 (3): 289-312.doi: 10.1108/SAMP J-08-2017-0088
- Emilia, P., & Sami, V. (2010). Female executives and Earnings Management. *Journal of Managerial Finance*, 36(7): 629-645. [https://doi: 10.1108/03074351011050343](https://doi.org/10.1108/03074351011050343)
- Faouzi M., & Mohamed A., (2012). Earnings management to avoid earnings decreases and losses: Empirical evidence from Islamic banking industry. *Journal of Finance and Accounting*, 3, (3), 88-106
- Gujarati, D. N & Porter, D. C (2009). *Basic econometrics* (5th ed.). New York, NY: McGraw-Hill/Irwin.
- Gulzar, M.A. & Wang, Z. (2011). Corporate governance characteristics and earnings management; empirical evidence from Chinese listed firms. *International Journal of Accounting and Finance*, 1(1), 133-151.
- Hair J F, Black W. C, Babin B. J & Anderson R. E (2019). *Multivariate data analysis* (8th ed.). Boston, MA: Cengage
- Hashim H.A., & Devi S.S. (2008). Board independence, CEO duality and accrual management: Malaysian evidence. *Asian J. Bus. Account.* 1(1):27-46
- Hamid, K.T. (2009). The nature of the relationship between corporate governance and internal control system: A study of Nigerian banking industry. *Nigerian Journal of Accounting & Finance*, 1(2): 881-906.
- Healy P., & Wahlen J., (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, Vol.13, No.4, pp. 83-365
- Ideh, A. O., Jeroh, E. & Orits, F. E., (2021). Board structure of corporate organizations and earnings management: Does size and independence of corporate boards matter for Nigerian firms? *International Journal of Financial Research*, 12(1), 329-335.
- Iturriaga, F. & Hoffman, P., (2005). Managers discretionary behaviour, earnings management, and internal mechanisms of corporate governance: Empirical evidence from Chilean Firms. *Corporate Ownership and control*, 3(1): 17-29.
- Jensen, M. & Meckling, W. (1976). Theory of the firm: Managerial behaviour, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Kurawa, J.M. (2013). "Effect of corporate governance on corporate social responsibility of listed firms in the Nigerian petroleum marketing industry". Paper presented at 5th international conference on corporate governance: Governance of public and private sector.
- Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics*, 33(3), 375-400. [https://doi.org/10.1016/S0165-4101\(02\)00059-9](https://doi.org/10.1016/S0165-4101(02)00059-9)
- Lakhal, F., Aguir, A., Lakhal, N., & Malek, A. (2015). Do women on boards and in top management reduce earnings management? Evidence in France. *Journal of Applied Business Research*, 31(3), 1107–1118. <https://doi.org/10.19030/jabr.v31i3.9236>

- Metawee A., (2013). The relationship between characteristics of audit committee, board of directors and level of earning management: Evidence from Egypt. *Journal of International Business and Finance*, Plymouth Business School, UK
- Moradi, M., Salehi, M., & Najari, M., (2012). A Study of the Effective Variables on Earnings Management: Iranian Evidence. *Research Journal of Applied Sciences, Engineering and Technology*, 4(17): 3088-3094
- Obigbemi, I. F., Omolehinwa, E. O., Mukoro, D. O., Egbide B. C, & Olusanmi, O. A (2016). Earnings management and board structure: Evidence from Nigeria. *Sage* 6, (3) 2158244016667992.
- O'Donovan, G. (2002). Environmental Disclosures in the Annual Report: Extending the Applicability and Predictive Power of Legitimacy Theory. *Accounting, Auditing & Accountability Journal*, 15(3), 344-371. DOI: 10.1108/09513570210435870
- Peni, E., & Vahamaa, S. (2010). Female executives and earnings management. *Managerial Finance*, 36(7), 629–645. <https://doi.org/10.1108/03074351011050343>
- Persons, O, (2006). Corporate Governance and Non-Financial Reporting Fraud. *The Journal of Business and Economic Studies*, 12 (1), pp. 27 – 40.
- Rangan, S., (1998). Earnings Management and the Performance of Seasoned Equity Offerings. *Journal of Financial Economics*, 50: 101-122.
- Roodposhti, F.R., & Chashmi, S.A.N. (2011). The impact of Corporate Governance mechanisms on Earnings Management. *African Journal of Business Management*, 5(11): 4143-4151.
- Scott, W. R. (2003). *Financial Accounting Theory*. (3rd ed.). Toronto: Prentice Hall.
- Shah S., Zafar N., & Durrani T., (2009). Board composition and earnings management an empirical evidence from Pakistani listed companies, *Middle Eastern Finance and Economics*, 3, (29), 30-44
- Sitienei, E. (2023). Corporate governance characteristics and discretionary accruals among non-financial firms listed in Nairobi Securities Exchange. *International Journal of Management, Accounting and Economics*, 10(3), 157-169. <https://doi.org/10.5281/zenodo.7906136>
- SEC (2003). Code of corporate governance for listed companies in Nigeria. Retrieved from: www.sec.gov.ng.
- Shleifer, A., & Vishny, R. (1997). A survey of corporate governance. *The Journal of Finance*, 52(2), 737-783.
- Soliman M., & Ragab 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.
- Sorensen, D.P. & Miller, S.E. (2017). Financial accounting scandals and the reform of corporate governance in the United States and in Italy Corporate Governance: *The International Journal of Business in Society*, 17 (1), 77-88.
- Tijjani, B., & Dabor, E.L. (2010). The impact of earnings management and corporate governance on firm performance. *Bayero International Journal of Accounting Research*, 4(1):209-234.
- Uadiale, O.M. (2012). Earnings management and corporate governance in Nigeria, *Research Journal of Finance and Accounting*, 3 (3), ISSN 2222-1697 (Paper).

- Uwuigbe U., Ranti O., & Bernard O., (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.
- Watts R., & Zimmerman J., (1986). *Positive Accounting Theory*. Englewood Cliff, NJ: Prentice Hall.
- Waweru N., & Riro G., (2013). Corporate governance, firm characteristics and earnings management in an emerging economy. *Jamar*, 11, (1), 43-64
- Xie, B., Davidson, W. N., & DaDalt, P. J. (2003). Earnings management and corporate governance. *The Accounting Review*, 78(3), 795–818.

Appendix A

List of Petroleum Marketing Companies listed on NGX from 2014 - 2023

S/N	Name of Company
1	Conoil Plc
2	MRS Oil Plc
3	TotalEnergies Marketing Nigeria Plc
4	Eterna Oil Plc
5	11 Plc formerly Mobil oil
6	Oando Plc
7	Arдова Plc formerly Forte oil Nig Plc