

# Impact of Corporate Governance Structures on Earnings Management and Performance: An Empirical Investigation of Quoted Manufacturing Companies in Nigeria

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## Abstract

*The study examines the impact of corporate governance structure on earnings management and corporate performance of manufacturing listed firms in Nigeria. The study used a sample size of twenty-seven listed manufacturing firm in Nigeria from 2012-2021. The study adopted a panel data research design. A multiple regression statistical tool was used to test the hypotheses. The predictor variable was measured using board size, board meeting frequency, audit committee size and audit committee meeting frequency. Earnings management was measured using Discretionary Accrual after the modified Jones (1991) model. Corporate performance was measured by return on security market stock (RET). Results of the multiple regression analysis indicated that the four governance categories have a negative and significant association with earnings management, but a positive and significant relationship with RET. The study recommended that there should an increase in board size, board meeting frequency, audit committee size and audit committee meeting frequency.*

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**Keywords:** corporate governance, earnings management, performance, board, audit committee

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## 1.1 Introduction

Regulators, shareholders, and scholars continue to pay close attention to the connection between corporate governance, earnings management, and business performance (Puni & Anlesinya, 2020). Research on corporate governance has remained unabated because it is acknowledged as a performance enhancer for businesses both in developed (Casavecchia, 2016) and developing countries (Ciftci et al., 2019; Kazemian et al., 2022). Moreover, it is well documented that corporate governance practices promote organisational competitiveness, sustainability and survival (Ho, 2005; Ehikioya, 2009; Aboagye & Otieku, 2010; Hurst & Ihlen, 2018; Gangi et al.,

2021; Rehman & Hashim, 2021).

Additionally, businesses with good corporate governance increase shareholder value by generating greater cash flow and lowering their capital costs (Jensen & Meckling, 1976; Fama & Jensen, 1983; Kyereboah-Coleman, 2007; Agyemang & Castellini, 2015; Zgarni et al., 2016). On the contrary, inadequate corporate governance systems are unable to provide a vehicle for long-term shareholder value since they hardly hold management accountable for their actions (Agyemang & Castellini, 2015; Kyereboah-Coleman, 2007). Such scenario could lead to underperformance and corporate death.

The collapse of the US corporate giant, Enron, Australian One Tel, Canadian Nortel, Italian Parmalat, Malaysian Transmile Group Berhad, and Nigerian Oceanic Bank, Intercontinental bank, Afribank and Cadbury revealed the unethical behaviour by members of the boards of major corporations which has caused many to question not only the credibility of the auditing profession but also the effectiveness of the structures put in place to monitor the performance of corporate organisations (Okike, 2004; Uwalomwa et al., 2014). Poor corporate governance practices have been highlighted as one of the reasons of corporate failures observed among corporations in the financial sector as well as enterprises in Nigeria (Adeyemi & Fagbemi, 2010). According to Egbunike et al. (2015), corporate governance standards including board size, company size, board independence, and audit committee strength have a substantial impact on the ways in which Nigerian listed businesses practice earnings management. Moreover, it was observed that quoted companies in Nigeria prefer to use high earnings management practices (Omoye, & Eriki, 2014). Also compendia of literature provide evidence of a positive association between the trio of corporate governance, earnings management and corporate performance (Love, 2011).

Extant literature on the subject matter shows that despite the avalanche of studies conducted on the nexus between corporate governance, earnings management and corporate performance (Cornett, 2009; Kumari & Pattanayak, 2017), very little research on this theorized model has been done in the Nigerian manufacturing sector. In addition, empirical literature on how corporate governance influences firm's performance has been conducted using ROE (Brown & Caylor, 2006; Kasbar et al., 2022) and ROA (Klein, 1998; Epps & Cereola 2008; Neves et al., 2022; Okolie & Uwejeyan, 2022) as proxies of performance. However, there is scant research that utilized return on security market stock (RET) as an attribute of corporate performance. It is documented that market-based performance measures, such as RET, give a better explanation of a firm's true financial performance than accounting based measures (Al-Farooque, et al., 2019).

## **2. Literature review**

### **2.1 Theoretical framework**

Two corporate governance theories are used as the foundation of this study. These theories are

discussed as follows:

### **Agency Theory**

The agency theory was developed from an economic perspective of risk sharing (Eisenhardt, 1989), which occurs between two parties, namely the principal and the agent (Jensen & Meckling, 1976; Fama & Jensen, 1983; Haslinda & Benedict, 2009). An agency relationship is “a contract under which one or more persons (principals) engages another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent” (Jensen & Meckling, 1976, p. 308). According to this view, the company's shareholders, who serve as its owners or principals, employ the agents. The directors or managers who act as the agents of the shareholders are given the authority to govern the firm by the principals (Clarke, 2004).

Essentially, shareholders anticipate that the agents will act and decide in the best interests of the principle. The theory suggests that the agent may be driven by self-interest, opportunistic conduct, and a failure to align their goals with those of the principal.

A limitation of this theory is that the understanding about what constitutes risk varies among agents and principals. Despite these difficulties, agency theory, which is essentially a separation of ownership and control, was established (Bhimani, 2008) for individuals or workers should be held accountable for their duties and commitments. Corporate governance structure aligns with the agency theory because it emphasizes that the agent must be held accountable for any act capable of thwarting the expectations of shareholders who are the principal.

### **Stewardship Theory**

Davis, Schoorman & Donaldson (1997) aver that “*a steward protects and maximizes shareholders wealth through firm performance, because by so doing, the steward's utility functions are maximized*”. Stewardship is defined as “the extent to which an individual willingly subjugates his or her personal interests to act in protection of others' long-term welfare” (Hernandez, 2012, p. 174). Thus, stewards are business leaders and managers who work for the shareholders to safeguard and increase earnings for them. Stewardship theory basically places less emphasis on individualism than it does on the stewardship function of senior management, which involves integrating their objectives into the business. According to the stewardship concept, stewards are driven and fulfilled when organisational success is realized (Kluvers & Tippett, 2011). They are intrinsically motivated and “act for the collective good of their firms” (Miller & Le Breton-Miller, 2006, p. 74), even if they do not harvest direct benefits in the pursuit of such collective good (Davis et al., 2000).

The necessity of trust-based, maximally autonomous arrangements that provide the steward authority is acknowledged by stewardship theory. In order to maximize profits for shareholders, it places emphasis on the responsibility of employees or executives to act with greater autonomy. The expenses related to tracking and regulating behaviour could thus be reduced. In addition, according to stewardship theory, the chairman and CEO should play a unified role in the firm to cut expenses and enhance their stewardship responsibilities. In such instance, the interests of the stockholders would be better protected (Donaldson & Davis, 1991; Davis et al., 1997; Abdullah & Valentine, 2009).

## 2.2 Conceptual Review and Hypotheses Development

### Corporate Governance

Corporate governance (CG) entails the initiation and operation of a set of rules that foster transparent and accountable relationships between executive boards, board of directors, shareholders and other stakeholders (Samlal, 2020). The Organisation for Economic Co-operation and Development defines Corporate Governance as “a set of relationships between a company’s management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined” (OECD, 2004, p. 11). Corporate governance, at its most fundamental level, deals with problems brought on by the separation of ownership and control.

A fair and transparent business environment and the ability to hold corporations responsible for their activities are ensured by good corporate governance. Regardless of the type of venture, only good governance can deliver sustainable good business performance (Oana Pinte, Pop, Dan Gavriletea & Sechel, 2021). Through improved access to capital and financial markets, increased transparency and disclosure, risk reduction through asset diversification, an exit strategy to ensure a smooth intergenerational wealth transfer, and the sale of assets, compliance with the CG principles can benefit business owners and managers. It can also help them survive in an environment that is becoming more and more competitive (Ho, 2005; Ehikioya, 2009; Aboagye & Otioku, 2010; Hurst & Ihlen, 2018; Gangi et al., 2021; Rehman & Hashim, 2021).

Also, adopting good Corporate Governance Practices may lead to a better system of internal control, thus leading to greater accountability and better profit margins. Good Corporate Governance practices can pave the way for possible future growth, diversification, or a sale, including the ability to attract equity investors – nationally and from abroad – as well as reduce the cost of loans/credit for corporations. Conversely, weak Corporate Governance could lead to waste, mismanagement of funds and eventual collapse of firms and governments.

### Dimensions of Corporate Governance

Scholars have suggested various dimensions of corporate governance system. These dimensions include board independence, CEO duality, management ownership, financial expertise, board size, board meetings frequency, audit committee, audit committee meeting frequency. These attributes are known to influence firms’ decision-making process and thus play an important role in controlling managers’ discretionary power, earnings management practices, financial reporting process and the overall performance of firms (Buniamin et al., 2011; Al-Farooque, Buachoom & Sun, 2019; Puni & Anlesinya, 2020). This study adopts Board size, Board Meetings Frequency, Audit Committee, Audit Committee Meeting Frequency.

A board is a group of persons responsible for monitoring a firm’s operations, advising top management and making strategic decisions that may affect the performance and sustainability

of a firm. The entire number of executive and non-executive board members is referred to as the board size. The agency theory indicates that organisations that have small board sizes monitor activities more effectively than larger ones because they are faster in decision making, and more efficient in communication and coordination (Jensen, 1993; Lipton & Lorsch, 1992; Raheja, 2005). A larger board may also increase boardroom conflicts and stifles the chances of the board to craft sustainable strategies for optimal performance. However, the resource dependence theory suggests that companies with large board sizes are more equipped with directors who may have diverse experience in the industry and greater monitoring skills, thereby leading to more access to markets, new and better technologies and raw materials and firm's success. The features of the firm, its range of activities, and any agreements reached between the CEO and outside board members will all influence the size of the board (Bazeet et al., 2020).

The board of directors holds board meetings to review the company's operations in a transparent way, enabling stakeholders to determine if the actions are in line with the overall goals. Board Meetings take into account how often a company's board of directors meets over the course of a year. The majority of businesses have board meetings at least once every three months or in case of an emergency. The frequency of board meeting is an important indicator of the intensity and effectiveness of monitoring and disciplining in firms (Jensen 1993; Vefefas 1999). During board meetings, critical issues pertaining to the firm's performance are addressed. Literature suggests that firms that hold frequent board meetings reduce earnings management incidences (Dzingai & Fakoya, 2017).

Audit committee size is referred to as the number of directors appointed to be members in the audit committee. Audit committee size may be small, medium and large. In Nigeria, the Companies and Allied Matters Act, 1990 states that a public limited liability company should have an audit committee with a maximum of six (6) members of equal representation of three (3) members each representing the management/ directors and shareholders in place. The board of directors of the business forms an audit committee, which is made up of non-executive directors, to make sure that the corporate governance standards are followed in financial reporting and the relevant disclosures made by the company.

In addition, an audit committee's "core responsibility is to oversee the process of financial reporting to make sure managers ethically report their firm's performance and to reduce information asymmetry" (Al-Okaily & Naueihed, 2019, p. 1021). The amount of transparency in interim reports may also depend on the audit committee's size. This appears to indicate that bigger audit committees lead to more effective monitoring. According to Bedard et al. (2004), this is because a larger audit committee is more likely to find and fix possible issues with the financial reporting process. This is due to the likelihood that it will offer the strength, variety, and knowledge needed to assure successful monitoring.

The number of sessions held by the audit committee constitutes the audit committee meeting frequency, a component of activity intensity. Because it is common knowledge that audit committees serve to defend stakeholders' interests, regular meetings are required of them. An audit committee must not only be independent, but should also be very active by holding frequent meetings. Moreover, audit committees meet frequently to re-emphasize the need to promote transparency and accountability in all organisational activities (Menon & Williams,

1994; Kyereboah-Coleman, 2009). Abbott et al., (2003) submit that more frequent audit committee meetings enables members to be more informed and knowledgeable about contemporary accounting and auditing practices (Abbott et al., 2003).

### **Earnings Management**

Healy and Wahlen (1999) state that “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 numbers” (p.369). Leuz, Nanda and Wysocki (2003) submit that earnings management is “the alteration of firms’ reported economic performance by insiders to either mislead some stakeholders or to influence contractual outcomes (p. 506).

Earnings management is either an opportunistic or informative behaviour (Alzoubi, 2016). Managers are said to exhibit opportunistic version of earnings management when they purposefully falsify current financial reports, manipulate real activities or misclassify items within the income statement, to mislead stakeholders in order to protect their credibility, meet auditors’ performance expectations, and secure more pay or incentives (Leuz et al., 2003; Fisher, Gavius & Martel, 2019). Informative behaviour involves the disclosing of more relevant information by managers to the stakeholders (Katmon & Al-Farooque, 2017; Rezaee & Tuo, 2019). One of the ways managers practice earnings management is through discretionary accruals. According to Saleh and Ahmed (2005), “managers use income increasing discretionary accruals if they are able to obtain waivers from lenders for the violation of debt covenants, but use income decreasing discretionary accruals if debt restructuring takes place or debts are renegotiated because waivers are denied” (p.69). Earnings Management jeopardizes the quality of financial reporting and may be mitigated through good corporate governance practices (Uadiale, 2012).

The collapse of giant’s corporations globally and in Nigeria has revealed the weakness and fake practices of corporate governance which has led to Earnings management been influenced or manipulated using specific accounting methods (or changing methods), recognizing one-time non-recurring items, deferring or accelerating expense or revenue transactions or using other methods designed to influence short term earnings. Consequently, corporate performance and reporting are now in doubt. There is substantial evidence that executives manipulate company financial statements (Healy, 1985; Guidry et al., 1999; Defond & Jiambalvo, 1994; Teoh et al., 1998a,b; Kasznik, 1999). One means of managing earnings is by manipulation of accruals without revealing cash flow data - a practice called accrual manipulation. Examples include delaying asset write-offs and under-provisioning for bad debt costs (Sugata, 2006).

In Nigeria, The Nigerian Securities and Exchange Commission’s Corporate Governance Code (SEC Code1) applies to Public companies with securities listed on the Stock Exchange. In spite of ‘A Review of Corporate Governance Codes 2014’, there are still cases of misappropriation of fund and falsification of reports to suit management interest. Additionally, the harsh economic situation and rising inflation may have forced Nigerian businesses to undertake earnings control



for a variety of reasons. Given this background, this study investigates how corporate governance affects earnings management and company performance in Nigeria.

### **Corporate Performance**

Corporate performance reflects a firm's ability to achieve its objectives and meet (and even exceed) the expectations of various stakeholders (Vij & Bedi 2016). Performance indicators extensively used in literature include Return on Asset (ROA), Return on Investment (ROI), Return on Capital Employed (ROCE), etc. This study deploys return on Security Market Stock (RET) as a proxy of firm performance. It is the gain in stock price plus dividend paid, divided by initial price of stock.

### **Corporate Governance (board size, board meetings frequency, audit committee size, audit committee meetings frequency) and earnings management**

A considerable literature exists on the effect of board size on earnings management/corporate performance. The influence of board size has received mixed results in previous studies. On one hand, a large board may have more experience, knowledge, and opinions from different sources; therefore, this can strengthen its monitoring function (Chaganti et al., 1985; Dalton et al., 1999). Some studies find that larger boards are associated with lower levels of discretionary accruals or earnings management (Zahra & Pearce, 1989; Eisenberg et al., 1998; Klein, 2002; Xie et al., 2003; Peasnell et al., 2005; Ebrahim, 2007; Patrick et al., 2015; Abbadi et al., 2016; Al-Haddad & Whittington, 2019; Habbash, 2019). Yu (2008) indicate that small boards seem more prone to failure to detect earnings management. Davila, & Watkins, (2009) add that if the size of the Board is very small, the monitoring of the management team is smaller too, so they tend towards greater discretion in receiving higher remuneration, a greater chance of earnings management and are more prone to information asymmetry. Thus, a larger size of board assumes a better supervision of the management team and a higher quality of corporate decisions.

However, others scholars (e.g. Rahman & Ali, 2006; Ball & Shivakumar, 2008; Talbi et al., 2015) conclude that earnings management will be more prevalent when the size of board increases. Also, Beasley (1996) finds that the larger the board size, the more the incidence of financial statement fraud. Ching et al. (2006) have a similar finding that there is a significant positive relation between board size and levels of earnings management, whereas Osma (2008) find no association between board size and earnings management. Finally, Campos et al. (2002) aver that board size must not be neither too big nor too small and suggest that the optimal size is between five and nine members.

A board meeting is a formal board of director's meeting that is conducted typically at regular intervals to discuss important topics and policies. Except where there are compelling reasons that the board must disclose to the shareholders at the annual general meeting, every director is expected to attend all board meetings, and attendance is one of the conditions for re-nomination of a director. The views about the relationship between board meetings and business performance have been controversial. One argument is that the efficacy of the board's monitoring abilities and the frequency of board meetings are both indicators of board activity. Regular board meetings can lead to increased levels of management oversight, which can have both a bad and good influence on earnings management and business financial performance, respectively

(Vafeas, 1999; Ntim, 2009).

Directors can connect at regular meetings, thereby fostering and deepening their bonds of cooperation, which can discourage earnings management (Ntim, 2009; Lipton & Lorsch, 1992). According to Conger et al. (1998) and Vafeas (1999), the greater the meeting frequency, as proxy by the number of board meetings, the more effective will be the board's monitoring function. However, Habbash (2019) aver that frequent board meetings are inconsequential to earnings management because directors of firms are too busy with the day-to-day office running that makes them less responsive to critical challenges, and, indeed, less attentive to monitoring tasks. Xie et al. (2003) also argue that when board meetings are rare, issues such as earnings management may not be on the priority list due to paucity of time.

One of the subcommittees created by firms with the responsibility of providing the assurance on financial and compliance concerns is the audit committee. Its responsibilities include selecting and overseeing accounting standards and guidelines, managing the hiring and firing of external auditors, keeping an eye on the internal control system, consulting with management on risk management procedures, and monitoring the performance of the internal audit function (Akpan, 2015). The annual statements must be reviewed by the audit committee before being presented to the board of directors, which is comprised of both directors and shareholders. Empirical evidence on the relationship between audit characteristics and earnings management are inconclusive. Yang & Krishnan (2005), Ayemere & Elijah (2015) find a negative significant relationship between the size of audit committee and earnings management practice. Dechow et al.'s (1996) report that companies with misrepresented financial reports scarcely have a sizeable number of auditors as a committee. Similarly, Zhou and Chen (2004) conclude that an effective audit committee reduces earnings management practices in banks. In contrast, Xie, et al., (2003) find no significant relationship between audit committee size and discretionary current accruals as proxy for earnings management. Anderson et al, (2004) argue that if the size of a team is large, individual members may be more vulnerable to the pressures and more subject to follow the others' opinion without giving another argument.

The frequency of audit committee meetings also results in lower levels of earnings management (Xie et al., 2003). According to Abbott et al. (2004), financial fraud is less likely when the audit committee meets regularly. Beasley et al. (2000) identify higher levels of earnings management when the audit committee met less frequently. Abbott et al., (2003) also provide evidence that when audit committees hold more meetings, they will discuss more financial reporting issues, and get more informed and educated on how to arrest emergent issues about earnings management. Mohd-Saleh et al. (2007) also submit that "audit committee characteristics (meeting frequency, size of audit committee, accounting knowledge and independence of the members) are effective to monitor management's discretion" (p. 158). This suggests that the regularity of audit committee meetings allows the board time to review the company's financial reporting process, monitor its internal control system, thus reducing earnings management. On the other hand, Katmon and Al Farooque (2017) find an increase in audit committee meetings gives rise to higher levels of earnings management (discretionary accruals).

Given these conflicting arguments, research hypotheses are formed as below:

Hypothesis Ho<sub>1</sub>: there is no significant relationship between board size and earnings management

Hypothesis Ho<sub>2</sub>: There is no significant relationship between board meeting frequency and



earnings management.

Hypothesis Ho<sub>3</sub>: There is no significant relationship between Audit committee size and earnings management.

Hypothesis Ho<sub>4</sub>: There is no significant relationship between Audit committee meetings frequency and earnings management.

**Corporate Governance (board size, board meetings frequency, audit committee size, audit committee meetings frequency) and corporate performance (return on security market stock)**

There are documented studies on the positive nexus between board size and corporate performance (Dwivedi & Jain, 2005; Jackling & Johl, 2009; Arora & Sharma, 2016; Bansal & Sharma, 2016; Herdjionob & Sari, 2017). However, Arora and Sharma (2016) report that board size does not have anything to do with return on equity and profitability measures of corporate governance. Also, Hassan et al. (2016) indicate that performance is unrelated to board size, whilst Edem (2015), Afrifa and Tauringana (2015), and Palaniappan (2017) show that board size is negatively connected to corporate performance.

Additionally, studies have shown a positive nexus between board meeting and firm performance (Lipton & Lorsch, 1992; Arora & Sharma, 2016; Abdul Gafoor et al., 2018; Nguyen et al., 2021; Kyei et al., 2022). Other research works have demonstrated that the number of board meetings, efficacy of boards, quality of audit work, and intensity of board activities are positively associated with higher profits (Lipton & Lorsch, 1992). For instance, it has been documented that frequent meetings combined with informal interactions can create and strengthen cohesive bonds among directors (Lipton & Lorsch 1992), and thereby promote corporate performance. However, some empirical research on the relationship between frequent board meetings and business performance yields contradictory conclusions (Vafeas, 1999; Amran, 2011; Edem, 2015). Vafeas, (1999) submit that board meetings may be expensive in terms of time spent, travel costs, refreshments, and directors' meeting allowances, which can stifle corporate performance.

In addition, literature has shown that audit committee size has a significant positive impact on firm performance. Several authors have reported the effect of audit committee size on a business's financial performance (Chan & Li, 2008; Al-Matari et al., 2014; Alqatamin, 2018; Mohammed, 2018; Dakhlalh et al., 2020). Hence, inclusion of non-executive directors in the audit committee is also considered as a mechanism for ensuring more accountability and wealth maximization of the firm. The size of the audit committee is more important to the effective discharge of its responsibilities, according to the Cadbury Committee in 1992. According to Pearce and Zahra (1992), the appropriate audit committee size enables directors to apply their skills and knowledge to serve the interests of the shareholders. The size of the audit committee and business performance was found to be positively correlated in several additional research works (Swamy, 2011; Obiyo & Torbira, 2011; Kipkoech & Rono, 2016; Husaini, 2017). However, some research indicate conflicting finding about the link between the size of the audit

committee and business success (Bozec, 2005).

There are conflicting empirical results about the relationship between audit committee meetings frequency and firm performance. Proponents of larger boards extend the same argument to audit committee meetings. Such argument is based on the notion that performance increases when there are more people in audit committees to draw experience from during their meetings (Vafeas, 2005; Lin et al., 2006). Kang and Kim (2011), and Hsu and Petchsakulwong (2010) also demonstrate that more frequent meeting by audit committee will amplify corporate performance. Anderson et al. (2004) also show the frequency of audit committee is unsympathetic to costs of debt. Moreover, Jackling and Johl (2009) find that meeting frequency enhances the monitoring of a company and can, therefore, spur its performance. Kyereboah-Coleman (2007) finds that audit committee meeting has a positive and significant relationship with corporate performance. The frequent meeting of an audit committee leads to improved processes of financial accounting that, in turn, lead to better performance (Abbott et al., 2004). However, Jensen (1993) supports the agency theory view and states that the board should be relatively relaxed as evidence of higher board activities is a sign of poor performance. Also, Bansal and Sharma (2016) and Mohid Rahmat et al. (2009) find that audit committee meeting has non-significant relationship with corporate performance, while Al-Matari et al. (2012) and Mohid Rahmat et al. (2009) report a negative relationship between audit committee meeting frequency and corporate performance.

Based on the foregoing, the following hypotheses are hereby formulated:

Hypothesis Ho<sub>5</sub>: there is no significant relationship between board size and return on security market stock.

Hypothesis Ho<sub>6</sub>: There is no significant relationship between board meeting frequency and return on security market stock.

Hypothesis Ho<sub>7</sub>: There is no significant relationship between Audit committee size and return on security market stock.

Hypothesis Ho<sub>8</sub>: There is no significant relationship between Audit committee meetings frequency and return on security market stock.

### **3. Methodology**

This study adopts a panel data research design. The panel data, also known as longitudinal data or cross-sectional time series data refers to multi-dimensional data that generally involves measurements over some period of time (Wooldridge, 2002). Data from twenty-seven (27) manufacturing businesses registered on the Nigerian stock exchange are included in the panel data set, which spans the years 2012 to 2021. The necessary information was acquired from these companies' annual reports. The Pearson's Correlation Coefficient was utilized as a test of multicollinearity. To determine explanatory power of corporate governance on earnings management and corporate performance, the regression coefficient was deployed.

### 3.1 Measurement of variables

Corporate Governance was assessed by Board size, Board Meetings Frequency, Audit Committee Size, and Audit Committee Meeting Frequency (Katmon & Farooque, 2015; Al-Farooque et al., 2019; Puni & Anlesinya, 2020).

This study utilized discretionary accruals in measuring earning management (Habbash, 2019). This study uses the cross-sectional modified Jones' model to obtain a proxy for discretionary accruals. Dechow et al. (1995) and Guay et al. (1996) argued that the modified Jones model is the most powerful model for estimating discretionary accruals among the existing models. Based on the above argument, discretionary accruals can be measured as follows:

**Equation 1:** Total accruals, as previously mentioned, is the difference between earnings and cash flows from operating activities.

$$TACC_{it} = NI_{it} - OCF_{it} \dots \dots \dots (1)$$

**Equation 2:** equation below is estimated for each firm and fiscal year combination; thus the Industry-specific parameters of the Jones model are estimated as follows:

$$TACC_{it}/TA_{it-1} = \beta_0 + \beta_1 (1/TA_{it-1}) + \beta_2 [(DREV_{it})/TA_{it-1}] + \beta_3 (PPE_{it}/TA_{it-1}) + e_{it} \dots (2)$$

**Equation 3:** Non-discretionary accruals are measured for each year and fiscal year combination using the equation as follows:

$$NDACC_{it} = \alpha_0 + \alpha_1 (1/TA_{it-1}) + \alpha_2 [(DREV_{it} - DREC_{it})/TA_{it-1}] + \alpha_3 (PPE_{it}/TA_{it-1}) \dots \dots (3)$$

**Equation 4:** The Difference between total accruals and the non-discretionary components of accruals is considered as discretionary accruals (DACC) as stated in equation as follows:

$$DACC_{it} = TACC_{it} - NDACC_{it} \dots \dots \dots (4)$$

#### Equation 5

$$DACC_{it} = \frac{TA_{it}}{A_{it-1}} - \left( \beta_0 + \beta_1 \frac{1}{A_{it-1}} + \frac{\beta_2 \Delta GE_{it} - \Delta NL_{it}}{A_{it-1}} + \beta_3 \frac{PPE_{it}}{A_{it-1}} \right) + \varepsilon \dots \dots (5)$$

$DACC_{it}$  = Discretionary accrual of company i at time t

$TA_{it}$  = Total accruals of company i determined by subtracting

Profit/loss before taxation, exceptional and extraordinary items and cash flows from operation for year t.

$A_{it}$  = Asset at the commencement of the year

$\Delta GE_{it-1}$  = Variation in Gross earnings as of time t-1 to t

$\Delta NL_{it}$  = Change in the analysis of total loans and

Advances and non-performing loan as of time  $t-1$  to  $t$  to reflect variation in Net Loans ( $\Delta NL$ )

PPE = Gross property, plant and equipment

$e$  = error term/random term

Gross Earnings (GE) = Interest Income (IINC) + Fee

Commissions (FCOM) + Foreign Exchange Income (FOREXINC) + Trusteeship Income (TINC)  
+ Investments Income (INVINC) + Share Income (SHINC) + Other Income (OINC)  
..... (ii)

Net Loan (NL) = Total Loans (TL) – Non-Performing

Loans (NPL) ..... (iii)

TACC<sub>it</sub> = total accruals for company  $i$  in year  $t$

NI<sub>it</sub> = net income before extraordinary items for company  $i$  in year  $t$

OCF<sub>it</sub> = operating cash flows for company  $i$  in year  $t$ .

TA<sub>it-1</sub> = Previous year's total assets

\_REV<sub>it</sub> = change in operating revenues for company  $i$  in year  $t$

PPE<sub>it</sub> = gross property, plant and equipment for company  $i$  in year  $t$ .

NDACC<sub>it</sub> = non-discretionary accruals for company  $i$  in year  $t$

\_REC<sub>it</sub> = change in net receivables for company  $i$  in year  $t$

DACC<sub>it</sub> = discretionary accruals for company  $i$  in year  $t$

\_1- \_3 = regression parameters.

$e_{it}$  = error term for company  $i$  in year  $t$ .

We use the absolute value because either positive or negative discretionary accruals are considered as earnings management behavior (Wartfield et al., 1995; Gabrielsen et al., 2002; Wang, 2006; Chen et al., 2007; Barth et al., 2008).

Furthermore, the study utilized return on security market stock as a market proxy of corporate performance. Although scholars have utilized accounting-based measures of corporate performance, such as return on asset (ROA), return on equity (ROE) and return on investment (ROI), this study deployed return on security market stock (RET) as a market-based performance measure. According to Al Farooque et al. (2019), "market measures reflect better on a firm's true financial performance in the sense that, unlike accounting measures, market measures cannot be manipulated through earnings management" (p. 67). Moreover, ROA is an accounting measure that can be manipulated by managers (Giroud & Mueller, 2010).

**Table 1:** Variables and Measures

Criterion variables	Label	Measurements
Discretionary accrual	DACC	the cross-sectional modified Jones(1991) model
Return on security market stock	RET	Appreciation in stock price plus dividend paid, divided by initial price of stock
<b>Predictor variables</b>		
Board size	BZ	All board members in the firm
Board meeting frequency	BM	the number of board meetings held within a fiscal year
Audit committee size	ACZ	the total number of Audit committee members
Audit committee meeting frequency	ACM	Aggregate of meetings held in a fiscal year

### 3.2: Model specification

To fulfill the study’s goal of analyzing how corporate governance structure affects levels of earnings management and company performance, the empirical form of the model is set out below:

$$DACC_{it} = \beta_0 + \beta_1 BZ_{it} + \beta_2 BMF_{it} + \beta_3 ACZ_{it} + \beta_4 ACMF_{it} + \varepsilon_{it} \dots\dots\dots 1$$

$$ROA_{it} = \beta_0 + \beta_1 BZ_{it} + \beta_2 BMF_{it} + \beta_3 ACZ_{it} + \beta_4 ACMF_{it} + \varepsilon_{it} \dots\dots\dots 11$$

Where:

$\beta_0$  = intercept

$\beta_1, \beta_2, \beta_3, \beta_4$  = represent the coefficients of regression model.

DACC = the absolute value of discretionary accruals for company *i* in year *t*.

RET = Return on security market stock

BZ = Board Size

BMF = Board Meeting Frequency

ACZ = Audit committee size

ACMF = Audit Committee Meeting Frequency

$\varepsilon$  = error term

## 4. Analysis and Discussion

### 4.1: Descriptive statistics

**Table 2:** Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Board Size	270	5.00	17.00	9.6037	2.35083
Board meeting Frequency	270	3.00	8.00	4.3370	.76719
Audit Committee Size	270	4.00	8.00	5.4963	.91557
Audit Committee Meeting Frequency	270	1.00	5.00	3.1375	.92622
DACC	270	-9.92	6.19	-3.1881	3.02365
RET	270	-538.09	604.58	3.1201	63.27745
Valid N (listwise)	270				

Table 2 provides the results of the descriptive statistics for the study variables regarding twenty-seven (27) manufacturing firm listed in the Nigerian Stock Exchange from (2012-2021). The descriptive statistics for the predictor variables indicated that, Board size ranges from 5 to 17 with an average of 9.6037. This satisfies the minimum of 5 stipulated by Securities and Exchange Commission. Board meeting frequency ranges from 3 to 8 with an average of 4.3370. This means that the boards of manufacturing companies in Nigeria hold meeting on an average of four times in a year. Audit Committee size ranges from 4 to 8 with an average of 5.4963, while Audit committee meeting frequency ranges from 1 to 5 with an average of 3.1375. This means that the audit committees of manufacturing companies in Nigeria hold meeting on an average of three times in a year.

On the other hand, the criteria variables the discretionary accruals (DACC) ranges from -9.92 to 6.19 with an average of -3.1881 which provided evidence of negative earnings management in manufacturing companies in Nigeria. Finally, return on security market stock, which measures corporate performance, ranges from -538.09% to 604.58% with an average of 3.1201% which shows efficient utilization of company's assets by management to make profits.

**Table 3:** Correlation Matrix.

Variables	BZ	BMF	ACZ	ACMF	DACC	ROA
<b>BZ</b>	1					
<b>BMF</b>	.167**	1				
<b>ACZ</b>	.176**	.264**	1			
<b>ACMF</b>	.285**	.170**	.346**	1		
<b>DACC</b>	.048	-.193**	-.169**	-.041	1	
<b>RET</b>	.269**	.169**	.193**	.161**	.117	1

Notes:

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

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



The Pearson correlation coefficients was used in determining if there is presence of multicollinearity between the variables as shown in Table 3. The result indicates that there are no signs for multicollinearity because correlation among the set of explanatory variables are mostly low (less than 0.8). Multicollinearity problem exists when correlation coefficient is more than .80 (Rockwell, 1975; Bryman & Cramer, 1997).

### Multiple Regression for Testing the Hypotheses

The regression results give insight on how corporate governance proxies explain earnings management.

#### Model 1:

$$DACC = \beta_0 + \beta_1 BZ + \beta_2 BMF + \beta_3 ACZ + \beta_4 ACMF + \varepsilon$$

**Table 4:** Impact of Corporate Governance Structure on earnings management (Discretionary accrual – DACC)

Model	Coefficients <sup>a</sup>				
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.569	1.410		1.983	.007
Board Size	-.191	.166	-.149	-1.976	.001
Board Meeting Frequency	-.627	.244	-.160	-2.564	.000
Audit committee Size	-.457	.214	-.139	-2.134	.034
Audit Committee Meeting Frequency	-.013	.213	-.224	-2.261	.012

a. Dependent Variable: DACC

The results in Table 4 indicate that earnings management is affected negatively and significantly by board size ( $\beta = -0.149$ ,  $t = -1.976$ ,  $p < 0.05$ ), board meeting frequency ( $\beta = -0.160$ ,  $t = -2.564$ ,  $p < 0.05$ ), audit committee size ( $\beta = -0.139$ ,  $t = -2.134$ ,  $p < 0.05$ ), and audit committee meeting frequency ( $\beta = -0.224$ ,  $t = -2.261$ ,  $p < 0.05$ ). Hence, the null hypotheses which state that there is no significant relationship between the latent indicators of corporate governance structure and earnings management are rejected. This implies that strong adoption of corporate governance stifles earnings management practices in the manufacturing companies of Nigeria. The greater the number of members on the board and audit committee will cause greater monitoring activity of management which puts managers on a check in manipulating financial reports. This finding is in line with agency theory which suggests that the promotion corporate governance is pivotal in narrowing information asymmetry that may come with earnings management.

Thus, this present study advocates that a large board of directors is associated with a greater expertise that strengthens its capacity to control and supervise managers' actions, and such

scenario reduces earnings management. Hence, larger boards have greater propensity to monitoring the actions of management and financial reporting than smaller boards, thus reducing earnings management. This finding supports the works of other scholars (e.g. Zahra & Pearce, 1989; Klein, 2002; Xie et al., 2003; Yu, 2008; Davila & Watkins, 2009; Patrick et al., 2015; Abbadi et al., 2016; Habbash, 2019). However, others scholars (e.g. Rahman & Ali, 2006; Ball & Shivakumar, 2008; Talbi et al., 2015) conclude that earnings management increases as board size increases. Ching et al. (2006) and Beasley (1996) also find that larger the board size is associated with greater levels of falsification of financial statements, while Osma (2008) find no association between the variables.

Also, the more frequent the meetings by board members, the greater the monitoring activity of management, which puts managers on a check in manipulating financial reports. This finding is consistent with the works of Lipton and Lorsch, (1992), Vefas (1999) and Ntim (2009) who provide evidence that board meetings is a measure of board activities and effectiveness of its monitoring ability, which can in turn impact negatively on earnings management. However, Habbash (2019) has a contrary finding and conclude that frequent board meetings are inconsequential to earnings management because directors of firms are too busy with the day-to-day office running that makes them less responsive to critical challenges, and, indeed, less attentive to monitoring tasks.

Furthermore, this study advocates that a large audit committee stifles the tendency of managers to practice earnings management. It means that when the size of an audit committee increases, there will be greater supervision of management actions and more control of managers' discretionary behaviour. With more members, the audit committee will have more diverse skills and knowledge that will be deployed to enhance monitoring. This finding is consistent with other studies (Yang & Krishnan, 2005; Ayemere & Elijah, 2015). Moreover the our finding resonate with Dechow et al.'s (1996) who find that companies with misrepresented financial reports scarcely have a sizeable number of auditors as a committee. The study also lends empirical support to Zhou and Chen (2004) who conclude that an effective audit committee reduces earnings management practices in banks. However, our finding does not align with to Xie, et al.'s (2003), Be'dard et al.'s (2004), and Katmon and Al-Farooque (2017) research which finds no significant relationship between audit committee size and earnings management.

In addition, our findings show that an increase in the frequency of audit committee meeting causes a reduction in earnings management. An audit committee without any meeting or with small number of meetings is less likely to reduce earnings management. This finding aligns with Abbott et al., (2003) who provide evidence that when audit committees hold more meetings, they will discuss more financial reporting issues, and get more informed and educated on how to arrest emergent issues about earnings management. Our finding is also in agreement with Beasley et al. (2000) and Xie et al. (2003) who find that the number of audit meeting is negatively related to discretionary accruals. Our finding also resonates with Mohd-Saleh et al., (2007) who provide evidence that "audit committee characteristics (meeting frequency, size of audit committee, accounting knowledge and independence of the members) are effective to monitor management's discretion" (p. 158) in reporting accounting information. However, our finding is diametrically opposed to that of Katmon and Al Farooque (2017) which show that agents exhibit discretionary behaviour when audit committee meetings become more frequent.

**Model 2**

$$RET = \beta_0 + \beta_1 BZ + \beta_2 BMF + \beta_3 ACZ + \beta_4 ACMF + \varepsilon$$

**Table 5:** Impact of Corporate Governance Structure on Return on security market stock  
**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-140.373	29.199		-4.808	.000
Board Size	7.181	3.446	.267	2.084	.008
Board Meeting Frequency	7.563	5.063	.192	1.994	.036
Audit committee Size	8.191	4.436	.118	1.966	.066
Audit Committee Meeting Frequency	2.947	4.403	.143	2.369	.024

a. Dependent Variable: RET

Model 2 indicates the hypothesized nexus between corporate governance and corporate performance assessed by Return on security market stock (RET). The results in Table 5 indicate that RET is positively and significantly impacted by board size ( $\beta = 0.267$ ,  $t = 2.084$ ,  $p < 0.05$ ), board meeting frequency ( $\beta = 0.192$ ,  $t = 1.994$ ,  $p < 0.05$ ), audit committee size ( $\beta = 0.118$ ,  $t = 1.966$ ,  $p < 0.05$ ), and audit committee meeting frequency ( $\beta = 0.143$ ,  $t = 2.369$ ,  $p < 0.05$ ). Hence, the null hypotheses which state that there is no significant relationship between the latent indicators of corporate governance structure and corporate performance are rejected. This implies that strong adoption of corporate governance stimulates corporate performance of the manufacturing companies of Nigeria. Our finding affirms the work of Puni and Anlesinya, (2020) who assert that some aspects of corporate governance amplify firm's performance. Moreover, our finding supports Kowalewski's (2016) conclusion that higher levels of corporate governance triggers increase in cash dividends and higher return on assets. The finding of this study also corroborates the works of previous scholars who submit that effective corporate governance creates higher shareholder value due to higher cash flow and minimization of cost of capital (Jensen & Meckling, 1976; Kyereboah-Coleman, 2007; Agyemang & Castellini, 2015; Zgarni et al., 2016).

The result reveal that return on security market stock is positively and significantly influenced by board size, board meeting frequency, audit committee size, and audit committee meeting frequency. This shows predictive power as per the expectation of agency theory, confirming the strong presence of board and audit provisions on Nigerian manufacturing firms, which yields

impact on firm performance. This finding synchronizes with the study of Al Farooque et al. (2019) demonstrates that a strong monitoring function by boards and auditors mitigates agency cost and improves firm performance in Thai firms. Studies with similar results include Esra and Allam (2015), Khaliq & Muhammad (2013) and Amer-Mohammad (2014). Their empirical results indicate that performance measures such as Return on Assets and Return on Equity are significantly related to corporate governance.

Specifically, our finding that board size improves corporate performance aligns with Arora and Sharma (2016) who report that board size improves market corporate performance (using Tobin's Q) because "larger boards are associated with a greater depth of intellectual knowledge, which in turn helps in improving decision-making and enhancing the performance" (p. 430). Similarly, other studies (Jackling & Johl, 2009; Dwivedi & Jain, 2005; Bansal & Sharma, 2016; Herdjionob & Sari, 2017) report performance and firm value improvement due to increase in board size. However, the finding of Edem (2015) reveals that the board meetings, directors' equity and board size are negatively and significantly related to ROA, while Arora and Sharma (2016) and Hassan et al. (2016) reveal that board size does not have anything to do with return on equity and profitability measures of corporate governance. On the contrary, our finding does not support those of Edem (2015), Afrifa and Taurigana (2015), and Palaniappan (2017) that demonstrate a negative nexus between board size and corporate performance.

Furthermore, results of this present study indicate that the performance of the firms will improve when board meetings are frequent. Our findings are in agreement with Lipton and Lorsch (1992), Arora and Sharma (2016), Abdul Gafoor et al. (2018), Nguyen et al., (2021), and Kyei et al., (2022) who also report a positive nexus between board meeting and firm performance. However, our finding does not support Amran (2011) and Edem (2015). This present study is also in disagreement with Vafeas' (1999) finding that board meetings may be expensive in terms of time spent, travel costs, refreshments, and directors' meeting allowances, which can stifle corporate performance.

As per audit committee size, our finding is in sympathy with prior studies (Husaini, 2017; Swamy, 2011; Kipkoech & Rono, 2016; Obiyo & Lenee, 2011) which reveal that audit committee size positively influences corporate performance by reducing asymmetry information associated with agency problems. Also, in the case of audit committee meetings, our finding is congruent with the studies of previous researchers (Vafeas, 2005; Lin et al., 2006; Kang & Kim, 2011; Hsu, & Petchsakulwong, 2010). Jackling and Johl (2009) find that meeting frequency enhanced the monitoring of a company and can, therefore, enhance its performance. Abbott et al., (2004) find that frequent meeting of an audit committee leads to improved processes of financial accounting that, in turn, lead to better performance. Anderson et al. (2004) also indicate that the costs of debt decreases when the frequency of audit committee meeting increases. On the contrary, Al-Matari et al. (2012) report a finding that is contrary to our present finding. Also, Mohid Rahmat et al. (2009) compared financially distressed and financially non-distressed companies in Bursa Malaysia and found that frequency of audit committee meetings does not matter.

## 5. Summary, Conclusions and Recommendations

This study examines the impact of corporate governance structure on earnings management and corporate performance of manufacturing listed firms in Nigeria. The study used a sample size of twenty-seven listed manufacturing firm in Nigeria from 2012 – 2021. The study adopted a panel data research design. A multiple regression statistical tool was used to test the hypotheses.

The predictor variable was measured using board size, board meeting, audit committee size and audit committee meeting. Earnings management was measured using Discretionary Accrual (DACC) measured by the cross-sectional modified Jones (1991) model. Corporate performance was measured by Return on security market stock (RET).

Results of the multiple regression analysis indicated that;

1. All the dimensions of corporate governance (board size, board meeting, audit committee size and audit committee meeting) have negative association with earning management. Hence  $H_{01} - H_{04}$  were rejected.

2. All the dimensions of corporate governance (board size, board meeting, audit committee size and audit committee meeting) have positive association with corporate performance. Hence  $H_{05} - H_{08}$  were rejected.

Based on the findings, we recommend that:

1. Manufacturing companies should increase the size of their boards and audit committees to the extent that it falls within the provisions of CAMA
2. There should be regular board and audit committee meetings.

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