



# Audit Committee Attributes and Share Price Reaction of Listed Deposit Money Banks in Nigeria

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## **ABSTRACT**

This study investigated the effect of audit committee characteristics on share price reaction of listed Deposit Money Banks (DMBs) in Nigeria. Specifically, the study sought to examine the effect of audit committee independence, expertise, size, frequency of meetings and gender diversity on share price reaction of listed DMBs in Nigeria. The study adopted the ex-post facto research design. The study used a sample of 12 DMBs from a population of 14 DMBs listed on the Nigerian Exchange Group using the filtering method. Data were sourced from annual reports and accounts of the sampled DMBs in Nigeria. The study period covered ten (10) years from 2011-2020. Pooled Auto Regressive Distributive Lag (ARDL) Model was used for data analysis. The results of the study suggested that audit committee independence, size, frequency of meetings and gender diversity have a perverse and significant effect on share price reaction of DMBs listed in Nigeria. The result of the study also established that audit committee financial expertise positively but insignificantly affects share price reaction of DMBs listed in Nigeria. The study, therefore,

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recommended that financial expertise of the audit committee members should be given utmost attention by the board since it exerts a positive effect on share price reaction. This is supported by the requirements of CAMA 2020 which states in section 404 subsection (5) that all audit committee members should be financially literate and at least one of them should be a member of a professional accounting body established by an Act of the Nigerian Parliament. The study also recommended that DMBs should strive to maintain a small audit committee size below the stipulated maximum number of 5 as stipulated by CAMA 2020 for effective performance.

*Keywords: Audit committee attributes; share price reaction; listed deposit money banks; Nigeria.*

## 1. INTRODUCTION

“Past corporate collapses exemplified by Enron, WorldCom, Arthur Andersen, Xerox and similar others have put a spotlight on the attention of corporate governance mechanisms. Following the Asian financial crisis, many emerging economies attempted to improve corporate governance to protect shareholder wealth, as poor governance was regarded as one of the main reasons for the massive decline in shareholder value during the crisis” [1]. “Consequently, many countries developed several mechanisms in order to govern the companies in an appropriate manner. The audit committee is one of such mechanisms used to ensure the firm is properly managed” [1].

“In Nigeria, there has been massive fraud and unethical practices within and among a number of firms” [2]. “The Companies and Allied Matters Act (CAMA) 2004 [3] as amended in 2020 which was enacted to ensure that the relationship among the board, shareholders and the management including other stakeholders is balanced for healthy competition, has not lived up to expectation as a result of unethical business practices by managers which has affected the financial performance and share price reaction of many firms in Nigeria. The events also resulted in the loss of hundreds of jobs and drastic drop in the share prices of most listed companies across the globe. These issues have brought questions to the practices of managers hence, a higher need to protect stakeholders’ interest has become imperative in order not to have another overwhelming loss. The cumulative effects of the ugly events led to the total overhaul of the Nigerian Code of Corporate Governance by the Securities and Exchange Commission (SEC) in 2011 with emphasis on the inclusion of an audit committee saddled with the responsibility of evaluating the business decisions and practices of the firm in the best interest of all stakeholders” [4].

“The new law was particularly instructive because the audit committees of companies were severely criticized for failure of firms in Nigeria because they are charged with the responsibility to evaluate the financial dealings of organizations in order to enable them show credibility, integrity and transparency in management operations, especially financial dealings” [5]. “The audit committee thus plays a key role in assisting the board to fulfill its oversight responsibilities in areas such as entity’s financial reporting, internal control systems, risk management systems, and the internal and external audit functions on behalf of the shareholders in order to ensure that the internal control activities are incorporated to promote wealth maximization of shareholders” [1].

“However, the need to determine the impact of audit committee characteristics on the share price of firms has become the focus of increasing attention among accountants, academics, researchers and investors, since the advent of corporate failures” [6]. CAMA 2004 as amended in 2020 aims to formulate policies that would improve firm performance through consolidating the roles and decisions of managers through effective monitoring by audit committee. CAMA 2004 as amended in 2020, also put down a series of characteristics that a firm audit committee should possess in order to ensure credibility of business decision that will enhance effective and equitable performance. Such qualities as captured by Shehu [5] and Dakhllalh, Rashid, Abdullah and Shehab, [7] include the size of the audit committee, diversity, financial expertise, and degree of their independence, number of meetings and gender diversity.

Extant literature has established a relationship between audit committee and financial performance which is an internal performance measure. The motivation for this study emanates from the paucity of studies on audit committee characteristics and market performance in Nigeria which is an external performance measure while taking into cognizance the time

effect of the relationship. This is because most of the studies on the subject matter have ignored the time effect of the relationship between the phenomenon of interest.

“Audit committee has attracted much concern all around the world, this has largely been in response to many high profile corporate collapse that have occurred over the years especially that of Enron and World com. Critics point out that Enron’s audit committee has six members of which four were finance experts; an accounting emeritus professor, an accounting professional and two top executives of other forms. In spite of this, they were unable to identify Enron’s accounting fraud neither did they recommend the right business decisions nor evaluated the businesses before the avoidable failure was made known to the various stakeholders” [8]. This became an issue of great concern which spurred researches on audit committee over the world.

The effect of the presence of an audit committee has thus, become a salient feature in the best practices of corporate governance. However, most prior studies on audit committee characteristics are concentrated on financial performance which is an internal measure of performance. There is therefore, paucity of studies on audit committee characteristics and share price reaction which is an external performance measure of firms.

Another area of concern, as espoused by extant literature, is that the few empirical studies conducted on audit committee characteristics and market performance (external performance) did not lag the independent variable (audit committee characteristics) with the dependent (market value) which is inappropriate as the independent variable can only affect the dependent variable in the subsequent year. It is more appropriate for a study of this nature to adopt the Auto regressive Distributive Lag (ARDL) Model which lags the dependent variable against the independent variable in the preceding year.

The main objective of this study is to examine the effect of audit committee characteristics on share price reaction of quoted DMBs in Nigeria while its specific objectives include to;

- i. Examine the effect of audit committee independence on share price reaction of listed DMBs in Nigeria.

- ii. Ascertain the effect of audit committee expertise on share price reaction of listed DMBs in Nigeria.
- iii. Examine the effect of audit committee size on share price reaction of listed DMBs in Nigeria.
- iv. Ascertain the effect of audit committee meetings on share price reaction of listed DMBs in Nigeria.
- v. Ascertain the effect of audit committee diversity on share price reaction of listed DMBs in Nigeria

This study is organized into five sections, including this introduction as Section One. Section Two reviews the conceptual, theoretical, and empirical literature related to the subject matter. Section Three presents the research methods while Section Four presents and discusses the empirical results. Section Five summarizes and concludes the paper.

## 2. LITERATURE REVIEW

This section reviews relevant concepts and theories that underlie investigations into the subject matter. This is followed by a review of selected empirical studies.

### 2.1 Conceptual Framework

Two concepts are considered germane to this study; there include audit committee characteristics and share price reaction. These concepts are explained below.

#### 2.1.1 Audit committee characteristics

Audit committee characteristics are discussed side by side with corporate governance mechanisms [7]. Audit committee characteristics refer to the diverse attributes of audit committee members and the committee in general; ranging from, how independent the committee is from control of the management, the level of financial expertise of members of the committee to the number of people on the audit committee among others. All firm listed in Nigeria are required by section 404 (3) of the Companies and Allied Matters Act (CAMA), 2020 to establish an audit committee. The audit committee according to CAMA 2020, shall consist of a maximum of 5 (five) members comprising of 3 (three) Shareholder Representatives and 2 (two) Directors. The committee is mandated to meet at least (3) three times in a year.

Allam, Talal and Emad, [9] made claims that “audit committee are responsible for overseeing the financial reporting process, reviewing the adequacy of a company’s financial control system and ensuring the objectivity of the external audit which is expected to give investors more confidence in the financial dealings of the organization thereby influencing its share prices in the market”.

“An ineffective audit committee may contribute to the existence of management fraud which may impair the quality of financial report and investors’ confidence, thereby lowering the share price in the market” [10]. “The audit committee is an organ located in the board of directors to improve corporate governance and to ensure the transparency and integrity of financial reports and maintain inventor’s confidence which directly influences the share price” [11].

In the context of this study, audit committee characteristics includes; Audit committee independence, financial expertise, size, meetings and gender diversity discussed below.

#### *2.1.1.1 Audit committee independence*

“Audit committee independence refers to the higher proportion of non-executive directors to executive directors in the composition of audit committee. Audit committee is a cornerstone for an effective audit committee function, crucial element in corporate reporting process and key prerequisite which adds value to audited financial statements and the performance of a firm” [12].

Amar [10] asserts that “audit committee independence is significant in ensuring the integrity of the financial reporting process. This is because management may tend to manipulate the accounts for their self-interest and the right profit not reported, whereas an independent audit committee is the one which can ensure the fairness of the financial reporting for investment decision that can spur prudent financial and market performance”. Jerubet, Chepng’eno and Tenai [13] asserts that “audit committee independence is significant in ensuring the integrity of the financial reporting process and the performance of a firm”.

#### *2.1.1.2 Audit committee expertise*

Audit committee financial expertise refers to the percentage of the committee members that are financially literate. Section 404 (5) of CAMA

2020, the Code of Corporate Governance of the Securities and Exchange Commission 2011 (SEC Code) and the Nigerian Code of Corporate Governance 2018 (NCCG 2018) requires that members of the Audit Committee should be financially literate and should be able to read and understand financial statements. By the provisions of Section 404 (5), at least one member should be a member of a professional Accounting body established by an Act of the National Assembly.

Ezeokoli et al. [8] asserted that “audit committee accounting expertise appears to be valued by investors for investment decision making and consequently the financial and market performance of the firms”. Bouaziz [14], Aanu, Odianonsen and Foyeke [15] posited “a positive and significant relationship between financial expertise of the audit committee and firm performance”. Hamdan, Sarea, and RedaReyad [16] further emphasized that “audit committee financial expertise has an impact on financial and stock performance”.

#### *2.1.1.3 Audit committee size*

Audit committee according to CAMA 2020, shall consist of a maximum of 5 (five) members comprising of 3 (three) Shareholder Representatives and 2 (two) Directors. Arguing from the point of extant literature positing a positive relationship between size as a monitoring mechanism and firm market performance, Makhoul, Al-Sufy and Almubaideen, [17] found “a positive association between size and monitoring process of the board that result in higher performance”, whereas Sharma and Kuang, [18] asserted that “audit committee with more members likely possess diverse skills and knowledge which is likely to enhance monitoring”. This finding was subsequently supported by Rahman, Meah and Chaudhory [19].

On the other hand, Vafeas [20] argued that “larger audit committee can lead to inefficient governance, because of yielding frequent meetings which leads to increased expenses. Hence, larger audit committee can negatively affect firm performance” [21].

#### *2.1.1.4 Audit committee meetings*

Audit committee meetings refers to the number of times the audit committee meets in a year. The SEC code and CAMA 2020 requires that

audit committee should meet at least three times in a years. The total number of meetings depends on the company's terms of reference and the complexity of the company's operation.

"An audit committee that meets frequently can reduce the possibility of financial fraud" [22]. "Furthermore, audit committees that meet more frequently are better informed about the company circumstances and provide a more effective oversight and monitoring mechanism of financial activities, which includes the preparation and reporting of company financial information" [23]. "Inactive audit committees with fewer numbers of meetings are unlikely to supervise management effectively" [24].

#### 2.1.1.5 Audit committee gender diversity

"Gender diversity refers to the proportion of women to men in composition of the audit committee. Previous studies claim that gender is likely to have an influence on a company's decisions [25,26]. Several feminist economists argue that women are more inclined to be neutral in moral judgments and behaviour than men" [27]. In particular, Erhardt, Werbel and Shrader [28] and Campbell and Mínguez-Vera [29] found that "gender diversity has a positive effect on company's performance". Similarly, Lückerath-Rovers [30] found that "the percentage of women in the audit committee is positively and significantly related to company performance of Dutch companies".

#### 2.1.2 Share price reaction

Share price reaction refers to the upward or downward movement of share prices of a company between a year and the subsequent year. The price of a share is not fixed, but fluctuates according to market conditions. It will likely increase if the company is perceived to be doing well, or fall if the company isn't meeting expectations. A stock also called shares or a company's equity is a financial instrument that represents ownership in a company or corporation and represents a proportionate claim on its assets (what it owns) and earnings (what it generates in profits). Stock ownership implies that the shareholder owns a slice of the company equal to the number of shares held as a proportion of the company's total outstanding shares. A share price or a stock price is the amount it would cost to buy one share in a company.

One way a company can encourage share price growth, is by giving confidence to investors about the financial dealings of the organization through an effective audit function. The attraction of investors confidence will result to share price growth due to high demand. Also, effective audit function which is the outcome of sound audit attributes enables organizations to pay dividends as dividends not only attract new investors, which will increase demand and drive the share price up, but encourage current shareholders to keep their shares rather than selling them. This is good for the company, because selloffs can cause the price of a share to fall as the market adjusts to the increased supply.

## 2.2 Theoretical Framework

This sub-section identifies relevant theories backing the study as a single theoretical standpoint cannot satisfactorily elucidate the effect of audit committee characteristics on share prices of firms, such as DMBs. The theories presented include; resource dependency theory, agency theory, and stewardship theory which are explained, seriatim, below.

### 2.2.1 Resource dependency theory

This study is anchored on the resource dependency theory of audit committee characteristics as propounded by Pfeffer and Salancik [31]. The explanation of the resource dependency theory on the relationship between audit committee characteristics and performance of firms is centered on the roles of the audit committee vis a vis the resourcefulness (characteristics) of the committee in disposing their function. From the view-point of resourcefulness, the diverse characteristics of audit committee tend to be of paramount importance. Some of the audit committee features like size, independence and expertise enhance the effectiveness of the audit committee in discharging its functions as well as improving the performance of the firm [31].

Advocacy of resource dependency theory like Bouaziz [14], argue that "bigger audit size would result in superior corporate results due to the multiple abilities, knowledge and expertise that contributed to the committee's discussion. Furthermore, Carcello, Hollingsworth, Klein, and Neal [32], assert that large audit committee board could also give the variety that would help businesses acquire critical resources and minimize environmental risks, while a small audit

committee lacks the variety of abilities and expertise provided by a big audit committee, which makes them ineffective”.

The resource dependency theory is related to this study in the sense that the study seeks to examine the effect of audit committee characteristics on share price reaction as an external performance measure of organizations. This theory also provides an explanation of the relationship between audit committee characteristics and firm performance by postulating that some of the audit committee features like size, independence and expertise enhances the effectiveness of the audit committee in discharging their functions as well as improve the performance of a firm.

### **2.2.2 Agency theory**

The agency theory, which was propounded by Jensen and Meckling in 1976, provides “an explanation to the relationship that takes place when the principal engages an agent to act on his behalf due to separation of ownership from control. Agency cost arises because of conflicting interests of the manager as the agent, and owners as the principal. These conflicts normally have implications for both the principal and the agent, and it is in an attempt to resolve the conflict that the concept of institutional business ethics and corporate governance came into existence”.

“Agency theory assumes that the interest of the principal and agent varies and that the principal can control or reduce this by giving incentives to the agent and incurring expenses from activities designed to monitor and limit the self-interest activities of the agent” [33,34]. According to Jensen and Meckling [34], “the principal will ensure that the agent acts in the interest of the principal by giving him the incentives and by monitoring his activities”.

“Among the measures established to reduce the self-serving nature of the agent is a resourceful audit committee with rich characteristics. Therefore in order to reduce information asymmetry, there is the need for governance mechanisms such as board subcommittees composed of directors with the appropriate attributes such as independence, expertise and experience to prevent or reduce the selfish interest of the agent” [35]. The audit committee and the board are thus agents of the principals, charged with monitoring the firm's performance

in order to encourage compliance with regulations, guidelines, and standards. The theory proposes that if the parties involved have different goals, access to information, and risk tolerance, the principal's wealth may be minimised.

This theory provides an explanation of the relationship between audit committee characteristics and firm performance by postulating that the diverse interest of the agent to those of the principal can be checkmated via a resourceful audit committee with rich characteristics as audit committees composed of directors with the appropriate attributes such as independence, expertise and experience to prevent or reduce fraud and adhere strictly to standards and procedures which gives confidence to both existing and potential investors thereby increasing the share price through high demand for the company's stock.

### **2.2.3 Stewardship theory**

Stewardship theory, which was propounded by Donaldson and Davis [36], suggests that “managers are concerned about the welfare of the owners and overall performance of the company; this contradicts agency theory which believes that agents are self-centered and individualistic. The stewardship theory assumes people are motivated to perform their work by the intrinsic reward they derive from their jobs”.

The theory provides an explanation of the relationship between audit committee characteristics and firm performance by postulating that the expenses incurred by the principal in monitoring the affairs of the agent in form of audit does not really influence the performance of the firm as agents are self-motivated to performing their task diligently and even without the functions of the audit committee, the agent will always seek to enhance the performance of the firm.

## **2.3 Empirical Review**

Dakhlallah, Rashid, Abdullah and Shehab [7] provided empirical evidence of “the effect of the audit committee attributes (size, independence, financial expertise, and stock owned by audit committee) on firm performance measured by Tobin's Q among Jordanian companies. The sample of 180 firms from the financial, industrial and service companies listed on Amman Stock Exchange for a period of 14 years from 2009 to

2017 were studied. They study employed the multiple regression analysis. The results of the study demonstrated that the size of the audit committee, the independence of the audit committee, and the financial expertise of the audit committee have a positive and significant effect on firm performance. While the relationship between stocks owned by the audit committee and firm performance was significantly negative”.

Olayikan [37] examined “the effect of audit committee effectiveness on the growth of firms Performance in Nigeria with emphasis on eight public quoted banks in Nigeria. The study proxied audit committee effectiveness with the size of audit committee, the frequency of meetings of audit committee and the financial literacy of audit committee members while profit before tax was the dependent variable. Using Ordinary Least Square (OLS) regression, the findings revealed that audit committee size, frequency of audit committee’s meetings and financial literacy of audit committee members have no significant effect on firms’ performance in Nigeria”.

Alqatamin [35] examined “the effect of audit committee effectiveness and company performance: evidence from Jordan. The study sample consists of 165 non-financial companies listed on the Amman Stock Exchange (ASE) over the period of 2 years from 2014-2016. The study employed the random effect model for statistical analysis based on the recommendation of the hausman specification test. The results of the study showed that audit committee size, independence and gender diversity have a significant positive effect on firm’s performance (ROA), whereas audit committee financial expertise and frequency of meetings has an insignificant positive effect on ROA”.

Mohammed [38] examined “the effect of audit committee attributes and firm performance using 74 non-financial companies listed on the Jordanian stock exchange for a period of 6 years from 2010 to 2016. Using linear regression, the result of the study found a positive and significant relationship between audit committee expertise and financial performance. The result further provided evidence that audit committee size and independence have a significant negative effect on financial performance”.

Zubair [39] evaluated “the impact of Audit Committee (AC) characteristics on the

performance of listed Deposit Money Banks (DMBs) in Nigeria. The study employed qualitative and quantitative research methods using correlation and survey research designs. Panel regression technique of data analysis was used for analysis. The population of the study included all the listed Deposit Money Banks. The secondary data was analyzed using sample size of 16 through census sampling technique. The study revealed a significant positive relationship between components of audit committee (composition) and the performance of listed deposit money banks in Nigeria”.

Ida and Asunka [40] used “a sample of 36 trading stocks on the Ghana Stock Exchange for the financial year of 2015 to examine the effect of audit committees attributes on the performance of firms listed on the Ghanaian Stock Exchange”. The study measured firm performance using share price. The pooled OLS regression model was employed for data analysis and the result revealed that the characteristics of audit committees have a significant positive effect on performance of the firms. Specifically, the number of independent members on the audit committee have positive but insignificant effect on the performance of the firm. The study also found that audit committee expertise negatively affects firm’s performance. The research recommends that corporate governance discussions shift from independence to more knowledgeable and financially literate audit committee members, and that the chairman of the audit committee of firms be given a relatively longer tenure to improve firm performance.

Zubair [39] evaluated “the impact of Audit Committees (AC) on the performance of listed Deposit Money Banks (DMBs) in Nigeria. The study employed qualitative and quantitative research methods using correlation and survey research designs”. The population of the study comprised of all the listed Deposit Money Banks. The secondary data was collected from annual reports and analyzed using a sample of 16 DMBs through census sampling technique. Panel regression technique of data analysis was used for analysis. The result of the study revealed a significant positive relationship between audit committee financial expertise and the performance of listed deposit money banks in Nigeria.

Hamdan, Sarea, and RedaReyad [16] investigated “the relationship between audit committee characteristics (namely: audit

committee size, financial expertise, and audit committee independence) and performance, which includes financial, operating and stock performance. The study sample comprised of 106 corporations from the financial sector listed in the Amman Stock Exchange Market with a total of 212 observations for a period of two years from 2008-2009. Using, simple linear regression, the results of the study showed that the audit committee size, financial expertise, and audit committee independence have positive effect on financial and stock performance”.

Uwuigbe and Olubukunola [41] examined “the effect of audit committee attributes on share price using a sample of 30 listed firms in Nigeria over a three year period. Using the multiple regression analysis, the study found that audit committee expertise is positively related to share price. The study recommended that board members’ shareholding should be regulated to ensure an optimal share price disposition”.

Aldamen, et al. [42] examined “the relationship between audit committee characteristics and firm performance during the global financial crisis era. The study was conducted on a total of 150 firms listed on the S&P300 during the period of the global financial crisis 2008-2009. The researchers used share price as the proxy for firm performances. Using multiple regression analysis, the result showed that smaller audit committees with more experience and financial expertise have a positive and significant effect on firm performance in the market (share price). The study also found that longer serving chairs of audit committees negatively affects share prices”.

Ephraim (2012) examined “the relationship between the internal corporate governance mechanism related to audit committee characteristics and the performance of the Saudi companies listed in the Saudi stock exchange (TADAWL) in 2010, excluding financial companies. The statistical results of the study are not in line with the agency theory that board of directors and audit committee might mitigate agency problems leading to reduced agency cost by aligning the interests of controlling owners with those of the company. While audit Committee size (ACSIZE) is found to have a

significant negative effect on firm performance, Audit Committee Independence (ACIND), audit committee meeting (ACMEET) was found to have a positive but insignificant effect on firm performance”.

## 2.4 Research Hypotheses

The following research hypotheses were formulated and tested in this study in line with the study objectives stated in section one;

**Ho<sub>1</sub>:** Audit committee independence has no significant effect on share price reaction of DMBs quoted in Nigeria.

**Ho<sub>2</sub>:** Audit committee expertise has no significant effect on share price reaction of DMBs quoted in Nigeria.

**Ho<sub>3</sub>:** Audit committee size has no significant effect on share price reaction of DMBs quoted in Nigeria.

**Ho<sub>4</sub>:** Audit committee meetings have no significant effect on share price reaction of DMBs quoted in Nigeria.

**Ho<sub>5</sub>:** Audit committee diversity has no significant effect on share price reaction of DMBs quoted in Nigeria.

## 3. METHODOLOGY

The research design adopted for this study is the ex post facto research design. The population of the study comprises of the 14 listed Deposit Money Banks on the floor of the Nigerian Exchange Group as at 31st December 2020. The filtering sampling technique was adopted for the study based on the criteria that the Deposit Money Banks have available data for all the study variables for 10 years from 2011 to 2020 and have filed their annual reports and accounts in Nigerian currency with Nigerian Exchange Group yearly. Consequently, Jaiz Bank and Eco Bank were not included in the sample as the former does not have complete data up to ten years (2011-2020), while the later presents their annual reports in Dollars which makes it difficult for comparison with other DMBs in Nigeria. Following the above, 12 DMBs were selected from the population based on the predetermined criteria stated above.

The study consists of both dependent and independent variables as presented Table 1.



**Table 1. Tabular summary of variables identification and measurement**

Proxy	Type	Measurement
Share Price Reaction (SHPREACT)	Dependent	The difference of average yearly share price between a year and the preceding year.
Audit Committee Independence (AUDCIND)	Independent	The percentage of non-executive directors to size of audit committee.
Audit Committee Expertise (AUDEXP)	Independent	The percentage of qualified/professional members in accounting, banking, economics and management discipline to the size of audit committee.
Audit Committee Size (AUDITSIZ)	Independent	Total number of persons on the audit committee.
Number of Audit Committee Meetings (AUDMET),	Independent	Total number of meetings by the audit committee in a year.
Audit Committee Diversity (AUDCDIV)	Independent	The proportion of female gender to male on the audit committee.

The model for this study is expressed in a linear relationship below.

$$SHPREACT = f(AUDCIND, AUDEXP, AUDITSIZ, AUDMET, AUDCDIV) \quad (1)$$

Accordingly, the panel regression model for the study is expressed as follows:

$$SHPREACT_{it} = \beta_0 + \beta_1 AUDCIND_{it} + \beta_2 AUDEXP_{it} + \beta_3 AUDITSIZ_{it} + \beta_4 AUDMET_{it} + \beta_5 AUDCDIV_{it} + e_{it} \quad (2)$$

where:

- SHPREACT = Share Prices Reaction
- F = the Function of the vector of the independent variables
- AUDCIND = Audit committee Independence
- AUDEXP = Audit committee Expertise
- AUDITSIZ = Audit committee Size
- AUDMET = Audit committee Meetings
- AUDCDIV = Audit committee Diversity
- B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub>, B<sub>4</sub>, B<sub>5</sub> = Beta Coefficient,
- e = Error term
- it = Cross sections and time series

The main technique used for data analysis is the panel regression model. The Hausman Specification test result is used to select between the fixed and random effect models. The descriptive statistics are used to examine the salient features of the data, while other tests such as normality, multicollinearity and heteroskedasticity are used to ensure that the data used conform with the requirements of regression technique.

#### 4. RESULTS AND DISCUSSION

The starting point for data analysis is an examination of the salient features of the data through descriptive statistics. This is followed by normality, multicollinearity, heteroskedasticity, and Hausman Specification tests.

##### 4.1 Descriptive Statistics

The results of the descriptive statistics are presented in Table 2. The mean value shows the average value of the data set. The maximum and the minimum report the highest and lowest values in the data set respectively. The standard deviation shows evidence of deviation from the sample mean.

**Table 2. Results of descriptive statistics (N=120)**

Variables	Mean	Minimum	Standard Deviation	Maximum	Observations
SHPREACT	-1.747792	-38.4125	8.485267	17.145	120
AUDITSIZ	5.708333	3	.8734731	8	120
AUDCIND	.571746	.3333333	.1478444	1	120
AUDMET	4.225	1	1.212418	7	120
AUDCDIV	.2506945	.1428571	.1165682	.5714286	120
AUDCEXP	.6682341	.5	.1213516	1	120

Table 2 showed that SHPREACT has a mean value of -1.747792 indicating the average value of share price reaction of the sampled DMBs during the period of study. The minimum value of SHPREACT was -38.4125, standard deviation value of SHPREACT was 8.485267 and the maximum SHPREACT into the sampled DMBs was 17.145. Also from Table 4, AUDITSIZ has a mean value of 5.7 (approximately 6), indicating the average number of members of the audit committee of the sampled DMBs during the study period. AUDITSIZ also has a minimum value of 3, standard deviation value of .8 (approximately 1) and maximum value of 8.

AUDCIND has a mean value of 57%, indicating the average level of independence of the sampled DMBs during the study period. AUDCIND also has a minimum value of 33%, standard deviation value of 14% and maximum value of 100%. AUDMET has a mean value of 4.2 (approximately 4), indicating the average number of meetings held by the audit committee of the sampled DMBs during the study period. AUDMET also has a minimum value of 1, standard deviation value of 1.2 and maximum value of 7.

AUDCDIV has a mean value of 25%, indicating the average level of gender diversity of the audit committee by the sampled DMBs during the study period. AUDCDIV also has a minimum value of 14%, standard deviation value of 11% and maximum value of 57%. Finally, AUDCEXP has a mean value of 66%, indicating the average level of audit committee expertise of the sampled DMBs during the study period. AUDCEXP also has a minimum value of 50%, standard deviation value of 12% and maximum value of 100%.

## 4.2 Normality Test

Skewness and kurtosis are employed to test for data normality in this study as presented in Table 3. The result shows that skewness and kurtosis values of all the study variables are between -1 and +1, indicating that the study variables are normally distributed.

## 4.3 Multicollinearity Test

Two tests are conducted to establish the presence or absence of multicollinearity among the independent variables, which include the correlation matrix and the variance inflation factor.

### 4.3.1 Correlation matrix

The result of the Pearson correlation analysis indicates that the highest correlation coefficient between the independent variables of the study is -0.4325 for AUDCIND and AUDITSIZ. This evidences the absence of multicollinearity between the independent variables of the study as the highest correlation coefficient between the variables is below the threshold of 0.7.

### 4.3.2 Variance Inflation Factor (VIF) and tolerance level

The result of multicollinearity test based on VIF performed on the variables of the study shows that VIF ranges between values of 1.05 to 1.29 with a mean of 1.16 which is below the threshold of 10 indicating the absence of multicollinearity among the variables of the study.

**Table 3. Result of Skewness and Kurtosis for Normality Test**

	Obs	Skewness	Kurtosis
SHPREACT	120	0.0000	0.0000
AUDITSIZ	120	0.0001	0.0101
AUDCIND	120	0.0000	0.0012
AUDMET	120	0.3938	0.0160
AUDCDIV	120	0.0000	0.1161
AUDCEXP	120	0.0876	0.8348

**Table 4. Result of correlation matrix**

	auditsiz	audcind	audmet	audcdiv	audcexp
AUDITSIZ	1.0000				
AUDCIND	-0.4325	1.0000			
AUDMET	-0.1597	0.0069	1.0000		
AUDCDIV	-0.0599	0.2049	0.0051	1.0000	
AUDCEXP	-0.1380	0.1314	-0.1115	0.2158	1.0000

**Table 5. Result of variance inflation factor and tolerance**

Variable	VIF	1/VIF
AUDITSIZ	1.29	0.775779
AUDCIND	1.29	0.776196
AUDCDIV	1.09	0.918006
AUDCEXP	1.09	0.918806
AUDMET	1.05	0.951629
Mean VIF	1.16	

**4.3.3 Heteroskedasticity test**

The result obtained from the heteroskedasticity test for this study showed a P-value of 0.0000 which is less than the critical value of 0.05, implying the presence of heteroskedasticity and unequal variance. As a result of the presence of heteroskedasticity in the study model, the robust regression test was further performed to correct the heteroskedasticity.

**Table 6. Result for heteroskedasticity test**

Variable	Chi-Sq. value	Probability value
Model	61.20	0.0000

*Note: H<sub>0</sub> (null): Homoskedastic*

**4.4 Hausman Specification Test Result**

The Hausman specification test was used in his study to choose between the results of fixed and random effect models. The result of Hausman specification test as presented in Table 7 showed a p-value of 0.0066 which is less than the significance level of 0.05 implying that fixed effect model is preferable to the random effect model.

**Table 7. Result of Hausman specification test**

Test summary	Chi-Sq. value	Probability value
Cross-section random	16.09	0.0066

*Note: H<sub>0</sub>: Random effect model is preferable to fixed effect model*

The choice of the fixed effect model by the Hausman specification test further necessitates the Wald or F test to be conducted in order to choose between the results of the pooled OLS and the fixed effect model as presented in Table 8. The Wald test result showed an F-statistics p-value of 0.1975 which is statistically insignificant at 5% level of significance, implying that the

pooled OLS model is more preferable than the fixed effect model in inferencing the study's result.

The choice of the pooled OLS model by the Wald test further buttress the appropriateness of the choice of pooled Auto-Regressive Distributive Lag (ARDL) model where the dependent variable is lagged against the independent variable. The lagging of the dependent variable is imperative since the independent variable affects the dependent variable in the subsequent year.

**Table 8. Result of Wald Test**

Test statistic	F-statistic value	Probability value
Wald test	1.50	0.1975

*Note: H<sub>0</sub>: Pooled OLS regression model is more appropriate than fixed effect model*

**4.5 Regression Results**

The results of the pooled ARDL are presented in Table 9.

Table 9 shows the pooled ARDL estimation result for the effect of audit committee characteristics on share price reaction of listed DMBs in Nigeria. The regression result showed R-square value of 0.584416, indicating that 58% of the changes in the dependent variable (share price reaction) of the sampled DMBs over the period of interest is explained by the independent variables. Table 9 also shows an F-statistic value of 26.25005 with its associated P-value of 0.000000, indicating that the regression model is statistically significant at 5% level. This means that the specified regression model provides a better fit than the intercept only model and can be used for statistical inferencing.

Furthermore, Table 9 shows that AUDCIND has a coefficient of -10.99468 and associated P-value of 0.0078, indicating that audit committee independence has a significant negative effect on share price reaction at 5% level of significance. Table 9 also reported that AUDEXP has a coefficient of 0.439181 with associated P-value of 0.6001, indicating that audit committee expertise has a positive but insignificant effect on share price reaction at 5% level of significance. The implication is that, an increase in the percentage of audit committee expertise will trigger a positive but insignificant reaction of the share prices of DMBs.

**Table 9. Regression result (Pooled ARDL Model)**

Variable	Coefficient	t-Statistic	Prob.*
SHPREACT(-1)	0.535314	7.611511	0.0000*
AUDCIND	-10.99468	-2.707977	0.0078*
AUDEXP	0.439181	0.525765	0.6001
AUDITSIZ	-2.462685	-2.799755	0.0060*
AUDMET	-0.959262	-2.160627	0.0329*
AUDCDIV	-16.76103	-3.289220	0.0013*
C	26.13900	4.266510	0.0000
R-squared	0.584416		
Adjusted R-squared	0.562153		
F-statistic	26.25005		
Prob(F-statistic)	0.000000		

Note: \*= 5% level of significance

The regression result also showed that AUDITSIZ has a coefficient of -2.462685 with associated P-value of 0.0060, indicating that audit committee size has a significant negative effect on share price reaction at 5% level of significance.

Also, AUDMET showed a perverse influence on the reaction of share prices with a coefficient of -0.959262 and a p-value of 0.0329, indicating that the number of audit committee meetings have a significant negative effect on share price reaction.

Lastly, AUDCDIV also showed a perverse influence on the behaviour of share price reaction with a coefficient of -16.76103 and a p-value of 0.0013, indicating that audit committee diversity has a significant negative effect on share price reaction of DMBs.

#### 4.6 Discussion of Findings

The findings of the study are discussed according to the study objectives as follows:

##### **Objective 1: To examine the effect of audit committee independence on share price reaction of listed DMBs in Nigeria.**

The result of data analysis for hypothesis one revealed that audit committee independence has a significant negative effect on share price reaction of listed DMBs in Nigeria. This result tallies with the findings of Mohammed [38] which found that audit committee independence has a significant negative effect on firm performance.

The result however, is inconsistent with the study of Dakhlallah et al. [7] which found that audit

committee independence has a significant positive effect on firm's market performance measured as Tobins Q. The result of hypothesis one also fails to support the findings of Ida and Asunka [40] and Hamdan, et al. [16] which revealed that audit committee independence has a positive but insignificant effect on firm performance. The result of objective one of this study further fails to support the agency theory and resource decency theory. This result however, supports the stewardship theory which postulates that monitoring the agent is a waste of time.

##### **Objective 2: To examine the effect of audit committee expertise on share price reaction of listed DMBs in Nigeria.**

The result of data analysis for hypothesis two revealed that audit committee expertise has a positive but insignificant effect on share price reaction of listed DMBs in Nigeria. The result of objective two of this study is consistent with the study of Uwuigbe and Olubukunola [41] which revealed that audit committee expertise is has a positive effect on share price. This result tallies with the findings of Olayikan [37] which revealed that audit committee expertise has a positive but insignificant effect on firm performance. The result of this study is also in consonance with that of Hamdan et al. [16] which found that audit committee expertise has a positive and insignificant effect on financial and stock performance.

The result is however inconsistent with the studies of Dakhlallah et al. [7] and Zubair [39] which found that audit committee expertise has a significant positive effect on firm's market performance measured as Tobins Q. The result

for objective two of this study also contradicts with the finding of Ida and Asunka [40] which revealed that audit committee expertise has a significant negative effect on firm performance.

The result of objective two of this study supports the agency theory and resource decency theory.

**Objective 3: To examine the effect of audit committee size on share price reaction of listed DMBs in Nigeria.**

The result of data analysis for hypothesis three revealed that audit committee size has a significant negative effect on share price reaction of listed DMBs in Nigeria. This result tallies with the findings of Aldamen, et al. [42] which revealed that smaller audit committee size has a significant positive effect on market performance measured as share price, invariably indicating that audit committee size has a significant negative effect on firm performance. The result of objective three of this study is also consistent with that of Ephraim (2012) which found that audit committee size has a significant negative effect on performance.

The result is however, inconsistent with the findings of Dakhllalh et al. [7] which revealed that audit committee size has a significant positive effect on firm's market performance measured as Tobins Q. The findings of this study further contradict the results of Olayikan [37] which revealed that audit committee size has a positive and insignificant effect on growth of firm performance. The result of objective three of this study further fails to support the agency theory and resource decency theory. This result however, supports the stewardship theory.

**Objective 4: To examine the effect of audit committee meetings on share price reaction of listed DMBs in Nigeria.**

The result of data analysis for hypothesis three revealed that audit committee meetings have a significant negative effect on share price reaction of listed DMBs in Nigeria. This result is inconsistent with the results of Olayikan [37] which revealed that the number of audit committee meetings have a positive and insignificant effect on growth of firms' performance. The result of objective four of this study further fails to support the agency theory and resource decency theory. This

result however, supports the stewardship theory.

**Objective 5: To examine the effect of audit committee diversity on share price reaction of listed DMBs in Nigeria.**

The result of data analysis for hypothesis three revealed that audit committee diversity has a significant negative effect on share price reaction of listed DMBs in Nigeria. This result is inconsistent with the study of Alqatamin [35] which found that audit committee gender diversity has a significant positive effect on firm's performance. The result of objective five of this study further fails to support the agency theory and resource decency theory.

The paucity of supporting or contrarian studies to the result of objective five of this study indicates the dearth of prior empirical studies on audit committee diversity as and firm market performance (share price reaction), hence, a contribution of this study to knowledge.

**5. CONCLUSION AND RECOMMENDATIONS**

Based on the findings of this study, the study concludes that audit committee independence, size, meetings and diversity inversely and significantly affect share price reactions of DMBs listed in Nigeria. The study has concluded that audit committee expertise positively and insignificantly affects share price reactions of DMBs listed in Nigeria. The study therefore, recommends that the attribute of financial expertise of the audit committee members should be given utmost attention by the board since it exerts a positive effect on the market performance (share price reaction) of the organization. The study further recommends that since audit committee size adversely affect share price reaction and the size is subject to a maximum number of five as stipulated by CAMA 2020, DMBs should strive to maintain a small audit committee size below the stipulated maximum number.

The study has contributed to knowledge by using the Auto Regressive Distributed Lag (ARDL) Model to ascertain the relationship between audit committee attributes and share price reaction. The choice of the ARDL model extends prior research by taking into cognizance the effect of audit committee characteristics on share price reaction which occurs in the subsequent year.

The ARDL model has thus lagged the dependent variable to adjust against the time effect.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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