Gender Diversity and Stock Returns: Evidence from Nigerian Listed Deposit Money Banks[1]

ABSTRACT

Aim: Gender diversity has gained significant and increased popularity, attention and interest worldwide. Nonetheless, empirical findings on its efficacy as a determinant of market value of banks in Nigeria are uncommon as well as inconclusive. This study examined the influences of three gender diversities (employee, top management & board), three other board mechanisms (board size, board independence & foreign diversity), and three institutional factors (bank size, age & earnings per share, EPS) on market price per share (MPS).

Study Design and Methodology: Sourcing annual panel data of a sample of 12 out of an average population of 14 listed Deposit Money Banks (DMBs) from 2004 through 2023, the study employed Panel System Generalised Method of Moments (PSGMM) to examine empirical relationships between gender diversities, board mechanisms and institutional factors on one hand, and MPS on the other.

Place and Duration of Study: This study examined the role of gender diversities, other board characteristics and firm specific factors of Deposit Money Banks (DMBs) listed on the Nigerian Stock Exchange between 2004 and 2023.

Results: In congruence with the agency, stakeholder and resource dependence theories of corporate governance and the position of earlier scholars, the findings reveal significant positive influence of top management and board gender diversities on MPS. The results also lent credence to foreign diverse boards and scale efficiency.

Conclusion: Consequently, the findings suggest policies, by the CBN in collaboration with the boards of the DMBs, that encourage gender friendly top management and foreign diverse boards as well as higher total assets base as these culminate in minimum costs associated with agency and superior market value of the banks in the sample. Thus, governance codes on gender quotas in Nigerian banks should be enacted by the CBN.

Key words: Gender Diversity, Stock Returns, Deposit Money Banks, MPS, Nigeria

1. INTRODUCTION

The need for robust corporate governance derives from expectation gap which arises when the behaviours and goals of directors and other employees fall short of their principals'. Further, the continuous turmoil in the country's banking sector demonstrates governance failure, where lapses in corporate governance not only led to substantial financial distress but also prompted regulatory interventions and dismissal of some bank executives for non-compliance with relevant codes of corporate governance (Benvolio & Ironkwe, 2022). However, boards of Nigerian quoted DMBs composed of diverse perspectives, especially gender friendly ones have been proved to boost shareholders' net worth and overall performance (Abdullahi & Lawal, 2023). Impliedly, a strong corporate governance framework is germane for endured value of the banks. In other words, robust corporate governance framework is not just a regulatory requirement but is critical for mitigating risks, improving accountability, responsibility, transparency, promoting investor confidence, and superior value.

Moreover, corporate finance scholars have argued based on empirical reasons that the persistent failure of banks including the systemically important ones have put the efficacy of corporate governance mechanisms in doubts (Shaba et al. 2016; Shaba & Maishanu, 2023). Consequently, the federal government of Nigeria and the CBN have responded by issuing more stringent corporate governance measures and policies as witnessed in the proliferation of several codes of best practices including Code of Corporate Governance for Banks and Other Financial Institutions, CBN Code of Corporate Governance for Banks in Nigeria, Code of Corporate Governance for Banks and Discount Houses and Guidelines for Whistle Blowing in the Nigerian Banking Sector and Corporate Governance Guidelines for Commercial, Merchant, Non-Interest and Payment Service Banks in 2003, 2006, 2014 and 2023, respectively (Shaba & Idris, 2024).

Empirical studies linking gender diversity with various performance metrics are very common in the extant literature. In fact, recent studies indicate that banks with diverse boards not only benefit from a broader range of perspectives but also exhibit enhanced decision-making capabilities, culminating in improved value. For instance, Zargochev (2024) examined firms across 95 countries positing that higher percentage of women on the board is associated with superior governance practices.

The imperativeness of robust corporate governance becomes particularly pronounced, given the sector's critical role in the national economy and the increasing scrutiny from both regulatory authorities and the complex expectations of the 21st century stakeholders. In addition, as gender diversity and equality become popular as a significant factor in corporate governance frameworks, it becomes imperative to examine how these dynamics affect share prices, and overall market reputation of Nigerian DMBs. However, to the best of our knowledge, there is no empirical research that exhaustively considered all the gender diversity variables in relation to market value of Nigerian listed DMBs. For instance, Abubakar (2014), Garba and Abubakar (2014), Shaba et al., (2016), Thompson et al. (2016), Jeroh (2018), Ogunmakin et al. (2020), Ogabo et al. (2021), Shaba and Yaaba (2023a), Shaba and Yaaba (2023b), Shaba and Yaaba (2024) amongst several others only used board gender diversity as a proxy for gender composition. Consequently, the objective of this study is to use PSGMM econometric technique on annual data spanning twenty years (2004-2023) to examine employee, top management and board gender diversities, board size, board independence, foreign director diversity, firm size, firm age and earnings per share (EPS) in relation to MPS of a sample of listed DMBs in Nigeria.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

This section presents the theoretical framework that underpins the relationship between gender diversity, other board mechanisms (board size, board independence & foreign director diversity), institutional factors (firm size, bank age & EPS) and the market value of the firm (MPS). Empirical relationships between the independent and dependent variables are also extensively reviewed.

2.1 Theoretical Framework

A number of theories have been propounded to explain the relationship among the stakeholders and how their conflicting views, goals, behaviours and actions should be aligned to achieve the ultimate goal of shareholder wealth maximization (Shaba & Abdulkarim, 2023). This study employed the popular agency theory, stakeholder and resource dependence theories as theoretical underpinnings.

In the main, the agency theory, propounded by Ross and Mitnick in 1973 (Mitnick, 2006) posits that in the presence of information asymmetry, the agent (company employees, managers and directors) tends to pursue interests and preferences that may be detrimental to those of their principals (Ross, 1973; Fama, 1980). The theory argues that the core of corporate governance lies with how to construct mechanisms that effectively and efficiently align these divergent behaviours (Shaba & Abdulkarim, 2023), thus, ensuring that the agents who pursue their goals also pursue the collective interests of the firm's stakeholders. One of such mechanisms is the formation of an in independent, diverse board of directors (Shaba & Yaaba, 2023a & 2023b). This is because such boards are effective in checkmating the excesses of management and are capable of bringing different perspectives to the table, thus, ensuring that the costs associated with the aforementioned relationship is minimized to the barest minimum. The suitability of this theory lies in the fact that the relationship between the owners of the sample DMBs and their management is an agency one.

Despite the acceptability of the agency theory, it has been criticized on the premise that it is narrow since it identifies shareholders and their agents as the only interested parties of a corporate entity, necessitating further examination. By expanding the spectrum of interested parties, the stakeholder theory stipulates that a corporate entity perpetually seeks to provide a balance between the interests of its diverse stakeholders to ensure that each stakeholder receives some degree of satisfaction. Earlier corporate finance scholars emphasized the role of non-market mechanisms such as the size of the board and diversity in the board structure as important to firm performance (John & Senbet, 1998) positing that the stakeholder model seeks to provide the 'voice' and 'ownership-like incentives' to critical stakeholders by encouraging employee ownership, and board representation by significant customers, financial advisers, employees, suppliers and community representatives to the corporate board (Porter, 1992; Blair, 1995). This study adopts the stakeholder theory as part of its theoretical framework because the banks in the sample are stakeholder firms who see those interested in the wellbeing of the bank beyond its owners and their agents. Despite its limitations, the stakeholder theory remains a major point of reference in this study and other corporate governance discussions.

In addition to the separation of ownership and control, the resource dependence theory introduces accessibility to resources as a critical dimension to corporate governance and firm performance. It concentrates on the appointment of critical stakeholders on the boards of other firms in order to sustain the firm's competitive advantage. The theory argues that the strength of a corporate organisation lies in the amount of relevant information it has at its disposal. This theory underscores the imperativeness of diverse boards to enable firms mobilise cross-fertilised ideas and perspectives as means of gaining access to resources critical to the success and survival of the firm (Shaba & Abdulkarim, 2023).

2.2 Governance Mechanisms and Market Value

Empirical literature providing evidence in support of the significant role of governance mechanisms in influencing firm value abounds. This section provides elaborate insights into the literature that studied the role of these mechanisms in relation to market value of the firm.

2.2.1 Gender Diversity and Firm Valuation

Positions of corporate finance and governance scholars on the influential role of women in determining firm valuation are widespread in the extant literature. Whilst some scholars posit that their presence on the board improves performance, some feel otherwise. Yet, others are of the view that variations in gender diversities are not a basis for determining performance. Adams and Ferreira (2009) argued that female directors on the board have a significant impact

on board inputs and firm performance. The authors examined 1,939 Standard and Poor's 500, Standard and Poor's MidCap and Standard and Poor's SmallCap US firms positing that gender diversity increases and decreases the market value of firms with weak and strong corporate governance arrangements, respectively.

Furthermore, Garba and Abubakar (2014), Thompson et al. (2016), Emeka-Nwokeji (2017), Shaba and Yaaba (2023a & 2023b), Abdullahi and Lawal (2023), Lawrence and Raithatha (2023), Shaba and Maishanu (2023), Oyetunji et al. (2023), and Subhani et al. (2024) argued in favour of gender-diverse boards. According to these scholars, gender-friendly boards are associated with superior valuation of the firm. Ogabo et al. (2021) and Shaba and Yaaba (2024) argued against the view that a higher number of women on the board improves performance when the authors examined a sample of 48 UK and 85 Nigerian listed firms, respectively. On the contrary, Garba and Abubakar (2014), Shaba et al. (2016), and Awotomilusi and Dare (2022) could not find any statistical evidence to demonstrate that variations in the proportion of women on the board are associated with changes in Tobin's Q and MPS, respectively.

2.2.2 Board Size and Firm Valuation

Discussions on the size of the board as a determinant of firm performance abound in the corporate governance literature. Many studies using different estimation techniques and sample sizes in different sectors and climes support the view that large boards improve the value of the firm. For instance, Belkhir (2009) found a significant positive relationship between the size of the board and firm value of a panel sample of 260 US banks and Savings-and-Loan Holding Companies (SLHCs) between 1995 and 2002. Recent board-performance studies have also provided empirical reasons to prove that larger boards are better for firm value. For instance, Adewuyi and Olowookere (2008) examined a sample of 64 nonfinancial firms listed on the Nigerian Stock Exchange and found market value to increase as board size increases. Similarly, Shaba and Yaaba (2023a), and Shaba and Yaaba (2023b), found an increase in board size to be associated with improvements in market value, Tobin's Q and MPS, of 93 Nigerian and 12 oil and gas listed firms, respectively. Other scholars who also argued in favour of large board size include Kyereboah-Coleman and Biekpe (2006d), Kyereboah-Coleman (2007), Abubakar (2014), Emeka-Nwokeji (2017) among several others. Further, these scholars posit that larger boards enable firms draw from a range of diverse fields, experiences, tribes, sex and representation by critical stakeholders that help bring cross fertilized ideas and perspectives to the board which help promote the performance of the firm as well as the wellbeing of the shareholders.

Contrary to the above are corporate governance researchers who argued based on empirical findings that smaller boards are more effective in discharging their oversight responsibilities. For instance, Lipton and Lorsch (1992), Jensen (1993), Yermack (1996), Musa (2006), Sanda et al. (2010), Vintila and Gherghina (2012), Thompson et al. (2016) and more recently, Shaba and Maishanu (2023), and Subhani et al. (2024) prefacing their arguments on the grounds that smaller boards make decisions easier and faster as well as less expensive, hence, are better for the performance of the firm.

However, Obembe et al. (2010), Hassan (2010), Awunyo-Vitor and Badu (2012), Garba and Abubakar (2014), Shaba et al. (2016), and Abdullahi and Lawal (2023) could not find any evidence to prove that the size of the board influences market value of their respective samples.

2.2.3 Board Independence and Firm Valuation

To ensure independence of the board, guarantee effective monitoring and other board oversight responsibilities in Nigeria, both the national and sector-specific corporate governance codes beginning from the first in 2003 to the present day stipulates higher proportion of non-executive directors as a percentage of the size of the board.

Taking this requirement into cognisance, many studies have provided significant empirical evidences in support of the influential role of independent boards in boosting the value of the firm. Bhagat and Black (2002), for instance, examined a sample of 957 large American public corporations and concluded that low profitability of firms increases the independence of their boards of directors, corroborating an earlier view that directors are more effective during periods of low performance and vice-versa. Further, Javed and Iqbal (2007) and Abubakar (2014) contended that the higher the proportion of outside directors, the better the performance of the firm. Similarly, the positions of Shaba and Maishanu (2023) and Shaba and Yaaba (2024) are that the more outsiders on a firm's board, the higher their market values.

Against the provisions of the various codes and the positions of the above scholars, higher board independence stiffens monitoring which reduces the managers' discretion to act and thus reduces the market value of the firm. This view is shared by Kyereboah-Coleman (2007), Adewuyi and Olowookere (2008), Garba and Abubakar (2014), Shaba et al. (2016), Thompson et al. (2016), Ogabo et al. (2021), and Shaba and Yaaba (2023a). Kyereboah-Coleman and Biekpe (2006d), Vintila and Gherghina (2012), Hassan (2010), Sanda et al. (2010), Shaba et al. (2018), Abdullahi and Lawal (2023), and Shaba and Yaaba (2023b) could not find any significant statistical evidence to demonstrate that board independence exerts any influence on market value of their respective samples.

2.2.4 Foreign Diverse Boards and Market Value

Unlike other board variables, studies connecting foreign directors and firm value in Nigeria are limited in the literature. Whilst some scholars are of the view that the presence of foreign directors on the board is associated with foreign expertise, finance and technical know-how and thus boosts performance, others opine that their presence does not help improve performance in their host countries. Scholars who hold the former view include Sanda et al. (2011), Tukur and Abubakar (2014), Abdullahi and Lawal (2023). and Shaba and Yaaba (2023a). Hitherto, Shaba and Yaaba (2024) could not find any significant positive or negative effects of foreign diverse boards on market value.

2.2.5 Firm Size and Market Performance

A number of studies provide evidence to prove that the size of the firm is an important performance determinant. However, it has an ambiguous effect on firm performance. For instance, it is argued that large firms usually enjoy economy of scale in minimising cost and monitoring top management, are more diversified, and have more capacities and resources (Himmelberg et al., 1999; Frank & Goyal, 2003). Other studies who argued in this direction include Javed and Iqbal (2007), Shaba et al. (2016), Shaba (2016) Shaba and Yaaba (2023), In contrast, large firms may be less efficient as it is harder for managers to control the efficiency of operational activities with firm growth (Himmelberg et al., 1999; Sarkar & Sarkar, 2000). Besides, small firms are more likely to be managed by their owners which minimises conflicts of interests and associated agency costs. Similarly, Vintila and Gherghina (2012), Shaba (2016), and Shaba and Yaaba (2023a) provided significant evidences to prove that smaller firms are associated with higher market value. Contrary to the significant relationships between the size of the firm and market value are studies that could not provide significant positive or negative influence of firm size on market value (see Douma et al., 2003; Kyereboah-Coleman, 2007; Sanda et al., 2010; Shaba et al., 2016).

2.2.6 Firm Age and Market Valuation

The age of the firm which represents experience is also well researched in the literature. While some argue in its favour as a determinant, others are of the opinion that it does not influence the value of the firm. It is further argued that older firms are believed to be more experienced since they receive the benefits of learning and are associated with first mover advantages (Douma et al., 2003). However, the authors warned that older firms are also susceptible to inertia, and less flexible in their ability to adapt to competitive pressures. This is because as firms grow older, their markets shrink with associated increased costs and deterioration of performance (Loderer & Waelchli, 2011). Whilst Awunyo-Vitor and Badu (2012) documented significant empirical evidence of positive influence of age on market value, Douma et al. (2003), Shaba et al. (2016), and Shaba (2016) found increase in age to be associated with lower market valuation. In contrast, Vintila and Gherghina (2012), and Shaba and Yaaba (2023a) reported insignificant relationships between the two variables.

3. DATA ISSUES AND METHODOLOGY

3.1 Data Issues

The data was culled from the annual reports and statement of accounts of the twelve banks covered in the study. The annual data spanned the period, 2004 through 2023. The study base period is informed by the issuance of the first code of corporate governance in Nigeria by the Securities and Exchange Commission (SEC) in November, 2003 which became effective in 2004. The choice of 2023 as the end year is due to the fact that as at the time of collecting data for the study, annual reports and statement of accounts of banks for 2024 were yet to be published.

3.2 Rationale Behind the Performance Variable

The MPS, determined by forces of demand and supply, is recognized and considered as an efficient measure of firm value considering that it reflects investors' perceptions of a firm's future earnings potential, growth prospects, and overall health. MPS becomes highly appealing as a performance measure because it is hardly affected by financial reporting lapses arising from variations in accounting principles and practices, tax laws and regulations unlike return on assets, return on equity amongst other performance metrics.

3.3 Methodology

The methodology is designed in the spirit of Brahma et al. (2020) with slight modifications. It is also in line with the methodologies employed by Wintoki et al. (2012), Pathan and Faff (2013), Chen, et al. (2014), and Nguyen et al. (2015). While Brahma et al. (2020) used ROA and Tobin's Q as objective functions, this study adopted share price as the dependent variable. As contained in Brahma et al. (2020), a study by Hermalin and Weisbach (1998); and Raheja (2005) also supported the dynamic modelling of this nature contending that the past objective functions of corporate governance also exert considerable influence on current performance.

The dynamic framework of the baseline equation takes the form:

$$mps_{i,t} = \alpha_0 + \beta mps_{i,t-1} + \delta gd_{i,t-1} + \sum_{k=1}^{6} \lambda_k cv_{i,t} + \mu_i + \varepsilon_{i,t} \qquad (1)$$

From equation (1), *mps* represents market price per share, *gd* is gender diversity, *cv* is control variables[1] which include some bank and board specific characteristics such as board size (*BSz*), board independence (*BInd*), foreign director diversity (*fdd*), bank size (*bs*), and earnings per share (eps). The α_0 represents a constant, β, δ, and λ_k are the parameters to be estimated, μ_i, is the unobserved fixed effect for firm *i*, and ε represents the error term. The subscripts *i*

[1] Six control variables.

and *t* connote individual banks and time, respectively. Firm fixed effect is included to capture the significant idiosyncratic characteristics of the banks in the sample as in Cumming et al. (2015), and Loy and Rupertus (2018).

To test the moderating role of gender diversity in the market value of shares, the study interacted the gender variables (i.e., gender diversity, *gd*) with market price of shares, thus the following equation ensued:

$$mps_{i,t} = \alpha_0 + \beta mps_{i,t-1} + \delta gd * mps_{i,t-1} + \sum_{k=1}^{6} \lambda_k cv_{i,t} + \mu_i + \varepsilon_{i,t} \quad (2)$$

Where *gd*mps* is the interaction term for gender diversity and market price per share.

Considering that gender diversity can occur at different levels, the study categorised it into three (i.e., employee gender diversity (*egd*), top management gender diversity (*tmgd*), and board gender diversity (*bgd*) and interacted each with *mps* to determine which category specifically drives the market value of shares. Thus, another version of equation (2) is formulated:

$$mps_{i,t} = \alpha_0 + \beta mps_{i,t-1} + \delta_1 (egd * mps)_{i,t} + \delta_2 (tmgd * mps)_{i,t} + \delta_3 (bgd * mps)_{i,t} + \sum_{k=1}^{6} \lambda_k cv_{i,t} + \mu_i + \varepsilon_{i,t} \quad (3)$$

From equation (3), (*egd*mps*) is the interaction term for employee gender diversity and *mps*, while (*tmgd*mps*) stands for interaction term between top management gender diversity and *mps*, and (*bgd*mps*)) denotes board gender diversity interacted with *mps*.

3.4 Variable Description and Estimation

While the study utilised board size and market price per share as reported by the banks in the sample, the rest variables were further processed using various equations.

Table 1: Variable Description and Measurement

Variable	Description	Estimation
mps	Market Price per Share	$= Year - end\ Market\ Price\ per\ Share$
gd	Gender Diversity	$= \frac{Total\ Number\ of\ Employees - Appointed\ Directors}{Total\ Number\ of\ Employees}(100)$
egd	Employee Gender Diversity	$= \frac{Total\ Number\ of\ Female\ Employees}{Total\ Number\ of\ Employees}(100)$
tmgd	Top Mgt Gender Diversity	$= \frac{Total\ Number\ of Female\ Top\ Mgt\ Staff}{Total\ Number\ of\ Top\ Managment\ Staff}(100)$
bgd	Board Gender Diversity	$= \frac{Total\ Number\ of\ Female\ Directors}{Board\ Size}(100)$
BSz	Board Size	$= Total\ number\ of\ board\ members\ in\ a\ year$
BInd	Board Independence	$= \frac{Total\ Number\ of\ Nonexecutive\ Directors}{Board\ Size}$
fdd	Foreign Director Diversity	$= \frac{Total\ Number\ of\ Foreign\ Directors}{Board\ Size}(100)$
bs	Bank Size	= Natural Logarithm of Total Assets
ba	Bank Age	= Number of years of listing at the NSE
eps	Earnings Per Share	$= \frac{Profit\ after\ Tax}{Total\ Number\ of\ Shares\ Outstanding}(100)$

4. ANALYSIS AND DISCUSSION OF RESULTS

This section presents, interprets and discusses both the pre-estimation diagnostics (i.e., summary statistics and correlation), and inferential results.

4.1 Summary Statistics

This section describes the data used in the study. To better understand the data set, the study included some of the raw data. From Table 2, the average stock price of the DMBs in the sample is ₦11.78 and the maximum and minimum are ₦63.4 and ₦0.5, respectively. The DMBs in the sample had 890,208, 19,032 and 3,164 employees, top management and board members respectively during the twenty-year study period. Of these totals, 372,816, 4,560 and 577 were women representing an average 42.32, 25.33 and 18.25 per cents of employee, top management and board gender diversities, respectively.

Table 2: Summary Statistics

	MPS	Nemp	FemEmp	TMgt	FTMgt	EGD	TMGD	BGD	BS	FD	WDS	NEDs	BI	FDD	TA (N'b)	BA	EPS
Mean	11.78	3725	1560	80	19	42.32	25.33	18.25	13	1	2	8	63.40	6.40	1,970	22	1.86
Median	7.47	2972	1258	63	18	43.61	25.00	17.65	13	0	3	8	62.50	0.00	886	18	0.84
Max	63.40	11791	5383	501	104	91.57	44.19	57.14	20	8	8	16	94.12	53.85	20,600	52	43.00
Min	0.50	93	38	17	1	5.37	5.26	0.00	6	0	0	4	42.86	0.00	19.4	1	-21.18
Sum		890,208	372,816	19,032	4,560				3,164	203	577	1,975			471,000		
Obs	**239**	**239**	**239**	**239**	**239**	**239**	**239**	**239**	**239**	**239**	**239**	**239**	**239**	**239**	**239**	**239**	**239**

Note: MPS = Market Price per Share, NEmp = No. of Employees, FemEmp = No. of Female Employees, TMgt = No. of Top Management Staff, FTMgt = No. of Female Top Management Staff, EGD = Employee Gender Diversity, TMGD = Top Management Gender Diversity, BGD = Board Gender Diversity, BSz = Board Size, FD = Foreign Directors, WDs = Women Directors, NEDs = Nonexecutive Directors, BInd = Board Independence, FDD = Foreign Director Diversity, BS = Bank Size, BA = Bank Age and EPS = Earnings Per Share

The mean board size is 13 and 1, 2 and 8 members are, on the average, foreign, women and nonexecutive directors, respectively. The average gender composition of 18.25% shows a considerable improvement over the average 12.69% proportion of women on the boards of Nigerian listed DMBs reported by Shaba et al. (2016). Similarly, the mean board composition of 63.4% reported by this study implies adherence to the various CBN codes of corporate governance regards board independence as well as reveals a slight improvement in board independence of 63.17% documented by Shaba et al. (2016). Moreover, the statistics reveal an average foreign diversity of a paltry 6.4% implying that most banks in Nigeria are owned by Nigerians.

Further, whilst the banks in the sample reported average total assets of ₦1.97 trillion, minimum and maximum of ₦19.4 billion and ₦20.6 trillion, the overall total was computed at ₦471 trillion. Finally, the banks in the sample earned an average, minimum and maximum of ₦1.86, (₦21.18), and ₦43 EPS, respectively.

4.2 Correlation Analysis

The correlation analysis explores a graphical approach using scatter plot & Confidence Ellipse fit lines at 0.95 confidence levels, and F-distribution probabilities. The axis borders consider Kernel density and panel option of stack cross section. The result as presented in Figure 1 shows that all the interaction terms (i.e*., gd*mps; egd*mps; tmgd*mps;* and *bgd*mps*) are highly positively correlated with *mps*. Bank size (*bs*)and earnings per share (*eps*) are moderately positively correlated with *mps*. The correlations, in this case, are not as strong as those of the interaction terms. Gender diversity (*gd* without interaction) and bank age (*ba*) return weak positive correlations with *mps*, while board size (*BSz*) and board independence (*BInd*) are negatively and weakly correlated with *mps*.

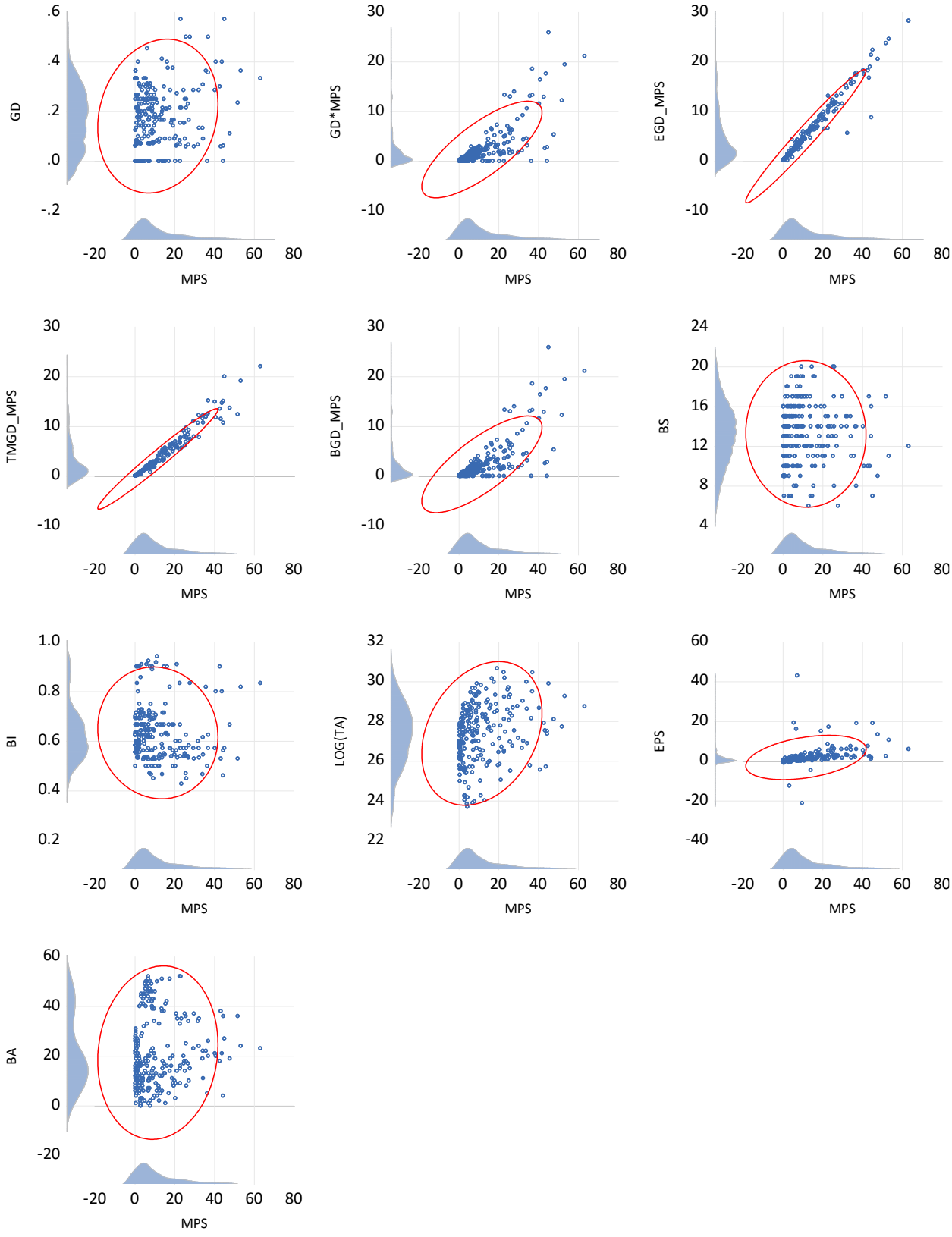

Figure 1: Correlation between MPS and the Independent Variables

4.2 Inferential Analysis

From Table 3, the Adjusted R^2 is 0.76 implying that 76% of MPS is aggregately determined by employee, top management and board gender diversities, board size, board independence,

Table 3: Estimated Results

Dependent Variable: MPS			
Method: Panel Generalized Method of Moments			
Variable	**Equation 1**	**Equation2**	**Equation 3**
C	-73.977***	'-62.795***	-28.982***
	(-2.630)	'(-2.624)	(-2.605)
mps(-1)	0.869***	0.797***	0.413***
	-17.164	'(12.881)	-3.403
gd	10.194		
	-1.51		
*gd*mps*		0.373*	
		'(1.680)	
*egd*mps*			0.319
			'(0.906)
*tmgd*mps*			1.032*
			'(1.893)
*bgd*mps*			0.206
			'(0.904)
BSz	-0.518	-0.438	-0.131
	(-1.552)	'(-1.406)	(-0.536)
BInd	8.81	4.84	3.13
	'(1.075)	'(0.672)	'(0.782)
fdd	0.756*	0.691*	0.426**
	'(-1.777)	'(1.829)	'(2.067)
bs	2.796**	2.498***	1.094**
	'(3.052)	'(3.149)	'(2.348)
ba	-0.078	-0.064	-0.028
	'(-1.334)	'(-1.240)	'(-0.672)
eps	-0.343	-0.331	-0.227
	'(-0.793)	'(-0.844)	'(-1.001)
Hansen J. statist	250.21	439	332
Instrument rank	27	26	28
R^2	0.787	0.839	0.94
Adjusted-R^2	0.76	0.818	0.932
Durbin Watson	2.329	2.283	2.265

Source: *Authors computation using EViews 12.*

Note: ***, **, and * implies significance at 1%, 5% and 10%, respectively. mps = market price per share, gd = gender diversity, gd*mps = interaction of gender diversity with market price per share, egd*mps = interaction of employee gender diversity with market price per share, tmgd = interaction of top management gender diversity with market price per share, bgd = interaction with board gender diversity with market price per share, BSz = board size, BInd = board independence, bs = bank size, ba = bank age, eps = earnings per share, and fd = foreign diversity.

foreign diversity, bank size, bank age, and earnings per share. The Durbin Watson statistics of 2.329, 2.283 and 2.265 of Equations 1, 2 and 3, respectively, suggest absence of first order serial correlation.

Overall, the findings show positive influences of gender diversities on market value of the banks in the sample. Specifically, the results show evidence of insignificant positive effect of board gender diversity on MPS implying that increase in percentage of women directors on the board though show positive influence, such is not supported by statistically significant evidence. Interestingly, when gender diversity is interacted with MPS in order to see its direct effect, the results show evidence of significant positive influences of board and top management gender diversities on market value of Nigerian DMBs.

The implication of these findings is that a bank with higher percentage of women at the top and whose workforce is gender friendly are associated with substantial and value-relevant influence on market valuation. These findings are in tandem with the agency, stakeholder and resource dependency theories of corporate governance as well as the views of earlier scholars (see Adams & Ferreira, 2009; Garba & Abubakar, 2014; Thompson et al., 2016; Emeka-Nwokeji, 2017; Shaba & Yaaba, 2023a; Abdullahi & Lawal, 2023; Lawrence & Raithatha, 2023; Shaba & Maishanu, 2023; Oyetunji et al., 2023; Subhani et al., 2024; Kolawole & Alabi, 2024). Contrary to these views are scholars who are convinced, based on statistical evidence, that higher proportion of women on the board reduces the market value of the firm (see Ogabo et al., 2021; Shaba and Yaaba (2023b), and Shaba & Yaaba, (2024). Yet, some scholars opine that the presence of women on the board is not a value-relevant determinant (see Garba & Abubakar, 2014; Shaba et al., 2016; Awotomilusi & Dare, 2022).

Further, the size of the boards of the studied banks shows insignificant relationships with market value implying that variations in board size do not lead to variations in MPS. The evidence advanced by this study corroborates the views of Obembe et al. (2010), Hassan (2010), Awunyo-Vitor and Badu (2012), Garba and Abubakar (2014), Shaba et al. (2016), and Abdullahi and Lawal (2023). On the contrary, some board-performance scholars have provided sufficient empirical evidences that the size of the board is a good corporate governance mechanism (see e.g., Lipton & Lorsch, 1992; Jensen, 1993; Yermack, 1996; Musa, 2006; Kyereboah-Coleman & Biekpe, 2006d; Kyereboah-Coleman, 2007; Adewuyi & Olowookere, 2008; Sanda et al., 2010; Vintila & Gherghina, 2012; Abubakar, 2014; Thompson et al., 2016; Emeka-Nwokeji, 2017; Shaba & Yaaba, 2023a; Shaba & Yaaba, 2023b; Shaba & Maishanu, 2023; Subhani et al., 2024).

Similarly, the estimated results provide evidence of insignificant relationship between board independence and MPS. This evidence substantiates the works of Kyereboah-Coleman and Biekpe (2006d), Hassan (2010), Sanda et al. (2010), Vintila and Gherghina (2012), Shaba et al. (2018), and Abdullahi and Lawal (2023). In contrast, researchers who argued in support of the prominent role of outside directors in relation to market value of the firm include Bhagat and Black (2002), Kyereboah-Coleman (2007), Javed and Iqbal (2007), Adewuyi and Olowookere (2008), Garba and Abubakar (2014), Shaba et al. (2016), Abubakar (2014), Thompson et al. (2016), Ogabo et al. (2021), Shaba and Maishanu (2023), Shaba and Yaaba (2023a), and Shaba and Yaaba (2024).

In contrast to the insignificant influences of the size of the board and its independence reported in this study, the proportion of foreign directors on the boards of the banks in the sample enhances their market value as measured by MPS. This finding is in tandem with the submissions of Sanda et al. (2011), Tukur and Abubakar (2014), Abdullahi and Lawal (2023). and Shaba and Yaaba (2023a).

In addition, and in line with the views of other scholars, bank size is significant and positively related with MPS signifying that Nigerian DMBs are scale efficient. This finding agrees with the views of Javed and Iqbal (2007), Shaba et al. (2016), Shaba (2016) and Shaba and Yaaba (2023c) but disagrees with those advanced by Vintila and Gherghina (2012), and Shaba (2016).

Bank age on the other hand returned insignificant negative relationship signifying the tendency for market value to deteriorate as banks get older. This finding supports the views of Vintila and Gherghina (2012), and Shaba and Yaaba (2023a). However, Douma et al. (2003), Awunyo-Vitor and Badu (2012), Shaba et al. (2016), and Shaba (2016) argued that as firms get older, their market value increases.

5. CONCLUSIONS AND POLICY PRESCRIPTIONS

Gender issues have in recent times gained momentous popularity, attention and interest worldwide. Unfortunately, there is no proportionate representation of women on corporate boards globally. Moreover, empirical findings on the efficacy of gender diversity are inconclusive. This study is an attempt at contributing to the ongoing debate on the efficacy of gender diversity on firm performance. It employed Panel System Generalised Method of Moments, used three gender variables (employees top management & board gender diversities), three other board mechanisms (board size, board independence & foreign diversity), three institutional factors (bank size, bank age & EPS), and covered twelve banks over a twenty-year period (2004–2023).

5.1 Conclusions

From the foregoing, this study draws the following far-reaching conclusions:

i. In line with the agency, stakeholder and resource dependence models and the findings of earlier scholars, this study found a positive and significant influence of top management and gender friendly workforce on MPS positing on the need to increase the employment of women in order to maximise shareholder value.
ii. Contrary to the latest CBN code of best practice, the results suggest that board size and independence hurt the value of Nigerian listed banks when MPS is used as a proxy.
iii. In congruence with prior findings, the study found significant positive effect of bank size on MPS suggesting the need to increase the total assets base of Nigerian DMBs in order to boost their stock prices.
iv. An increase in proportion of foreign directors on the boards of the sample DMBs culminates in higher share price. This finding confirms the views that foreign directors are associated with technical expertise and business acumen and thus, superior market value.
v. The findings also provided insignificant negative effect of bank age on market price per share signifying tendency of lower MPS as banks get older.

5.2 Policy Prescriptions

Consequently, the study recommends as follows:

i. The CBN and the boards of the Sample DMBs should enact policies that will encourage gender friendly work force and top management. In furtherance thereof, governance codes on gender quotas in Nigerian banks should be enacted by the CBN.
ii. The CBN should encourage the banks in the sample to abide by the minimum board size of seven as stipulated by the its latest code of corporate governance

2023 as well as minimum percentage of outside directors in order to curtail the exorbitant cost associated with managing corporate boards in Nigeria.

iii. The study also recommends policies that will usher in the appointment of more foreign directors since their presence on the boards of the studied banks culminates in superior firm value.

iv. Banks in the sample should be very flexible in their ability to adapt to competitive pressures and technology since increase in age is found to have the tendency to reduce MPS.

v. The CBN and the boards of the banks should enact policies that will increase the total assets base of DMBs since higher size maximises the prices of the banks' existing shares.

5.3 Limitations and Suggestions for Further Studies

The limitations of this study are detailed below:

i. First, the study sample was determined by data availability and not a probability criterion, as banks that were listed before 2004 and those that were delisted before 2023 were not included in the sample. Further, since the samples used are typically only based on quoted banks for which it is possible to get reliable data, the findings of this study may thus not be representative for all banks in Nigeria.

iii. The study is within the agency, stakeholder and resource dependence frameworks given the increased support for these theories in the literature. Hence, no other perspectives of interpreting the interrelationships among corporate variables are considered.

iv. The study adopted a PSGMM regression approach to examine the effect of corporate governance and gender diversity on MPS. There is also the need to examine qualitative as well as psychological features of gender diversity on market value of Nigerian DMBs. Therefore, failure to do this is an important weakness.

v. The study also used a panel sample of 12 DMBs from an average of 14 banks listed on the floor of the NSE between 2004 and 2023. Besides, the analysis did not touch on performance measures such as return on assets, return on sales, return on equity, price earnings ratio, return on capital employed, return on investment, residual income, dividend yield, growth in sales, growth opportunities and so on. The need for further studies that will use the entire population of banks and performance indicators is suggested.

viii**.** This study examined the effect of corporate governance and gender diversity on market price 0f DMBs listed in Nigeria. The need for further studies that will examine the influence of MPS on corporate governance mechanisms in Nigeria is recommended.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

We hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text to image generators have been used during writing or editing of this manuscript.

COMPETING INTERESTS

There were no competing interests of any sort.

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