

Examining the moderating role of ownership structure on corporate governance and bank sustainability: A post banking sector crisis perspective

Sharon Donnir (Corresponding Author)

¹Department of Accounting, University of Professional Studies, Accra, Ghana

Email: sharon.donnir@upsamail.edu.gh

Kingsley Tornyeva

Open University of Malaysia, Accra Institute of Technology Campus, Accra, Ghana

Email: tornyeva@yahoo.com

Timothy Ayamga

Department of Accounting, University of Professional Studies, Accra, Ghana

Email: timothy.ayamga@upsamail.edu.gh

Abstract

The aim of the study was to examine the corporate governance and corporate sustainability nexus and further examine the moderating role of ownership structure on corporate governance and bank sustainability from the post banking sector crisis perspective. The study sample constituted all the 23 banks licensed by Bank of Ghana to operate in Ghana. Data was obtained through the administration of questionnaires to key personnel of the banks. 276 key management were selected using purposive sampling techniques. The study adopted Partial Least Square Structural Equation Modelling (PLS - SEM) using SMART-PLS software in analyzing data obtained. The empirical results of the study pointed out that, corporate governance of bank has significant positive effect on bank sustainability. It further revealed that, shares ownership structure does not moderate the relationship between corporate governance and bank sustainability nexus. Implications of the study from the theoretically perspective, is the contribution it makes to literature of the stakeholder and paradox theories. Practically, in devising corporate sustainability strategies, management will use the findings of this study as a guide. The outcome will also guide policy makers in future policies on governance and sustainability especially in an era where sustainability is gaining grounds in the sector amidst the adoption of International financial reporting standards for sustainability which will be effective across all sectors in Ghana including the banking sector soon. The study is limited to the banking sector in Ghana, though sustainability is encouraged in all sectors of the economy and across the globe. It is therefore recommended that, future studies should explore other sectors of the Ghanaian economy and replicate the study in other geographical jurisdictions.

Keywords: *Corporate governance, Corporate Sustainability, Ownership Structure, Banks in Ghana, Post banking crisis*

DOI: 10.7176/EJBM/16-4-03

Publication date: May 30th 2024

1.0 Introduction

Globally, issues of climate change, energy conservation, data protection, human rights, employee occupational health and safety are issues that have emerged in the corporate world and dominated in most discourse. Sustainability persistently remain a major concern for governments and the international community, however, sustainable development is not limited by government regulations and policies, industrial activities are obviously having important role. The concept of corporate sustainability is steadily gaining recognition and increased advocacy from international organizations, governments and other stakeholders. Its prominence in the corporate

world, has resulted in a swift diversion of strategies of firms to encompass sustainability performance and disclosures. Galbreath (2013) therefore opined that environmental and social sustainability have become top most concerns for all stakeholders including shareholders. This development cut across the various sectors including the banking sector. In Ghana, sustainability practices and reporting is speedily gaining grounds most especially in the banking sector with the regulator, Bank of Ghana, promoting this course. The launch of the sustainable banking principles and sector guidance notes emphasizes the commitment of the sector to sustainability.

In addition to corporate sustainability, corporate governance remains a prominent concept for corporate entities. Though the concept emerged strongly in the wake of corporate scandals, corporate governance is very prominent among businesses and consistently heightens the interest of stakeholders. Considering the critical role and the emphasis placed on these two concepts, it is worthwhile to assess any possible relationship that exist between them. Notwithstanding the critical role played by banks in developing economies where the capital markets are not relatively strong, these banks are mostly susceptible to corporate failures and financial distress. There is no doubt that, the contribution of banks is critical to the development and growth of economies especially developing economies, therefore the sustainability of the sector is very crucial. However, the recent occurrence in the Ghanaian banking sector threatens sustainability. Though the crisis was mostly attributable to weaknesses in corporate governance mechanisms of the banks, some earlier studies on corporate governance have extensively studied the relationship with corporate performance (Sarpong-Danquah, Oko-Bensa-Agyekum & Opoku, 2022; Tornyeva & Wereko, 2012 & Kyereboah-Coleman, 2007) but relatively few works have explored the corporate governance and corporate sustainability link although corporate sustainability has rapidly evolved in the world of business.

Some empirical works have examined the corporate governance and corporate sustainability nexus in various sectors and geographical jurisdictions (Erin et al., 2022; Tjahjadi et al., 2021; Munir et al., 2019; Aras & Crowther, 2008; Disli et al., 2022; Ntim & Soobaroyen, 2013; Masud et al., 2018; Burke et al., 2019; Adegboye et al., 2020; Mahmood et al., 2018; Jangu et al., 2014; Hussain et al., 2018; Shrivastava & Addas, 2014, Walls et al., 2012; Amran et al., 2014; and Naciti, 2019). In exploring the link between corporate governance and corporate sustainability, prior studies such as Aras and Crowther (2008) carried out an investigation into the relationship between corporate governance and corporate sustainability and concluded that, some level of strength exist in the relationship. Even though the study extensively explored the concepts of corporate governance and corporate sustainability, the study emphasized the fundamental nature of the concepts to continuing operation of any corporation thereby, serving as the foundation for this study.

Subsequently, Shrivastava and Addas (2014) examined the impact of corporate governance on sustainability performance and the outcome suggests that corporate governance disclosure has strong influence on environmental disclosure as well as environmental, social and governance disclosure scores. Also, Mahmood et al. (2018) assessed the impact of corporate governance (CG) on economic, social, and environmental sustainability disclosures and drew the conclusion that, corporate governance elements enhance sustainability disclosures. Similarly, Amran et al. (2014), examined the impact of the composition of the board of directors (board size, independence and gender diversity) on sustainability reporting quality in the Asia-Pacific region while Brammer and Pavelin (2006) investigate the relationship between corporate governance practices and environmental disclosure.

Though, these studies attempted to establish the link between corporate governance and corporate sustainability, these studies have mostly focused on the disclosures on corporate sustainability of firms irrespective of their industry however, this study seeks to scrutinize corporate sustainability performance with specific focus on the banking firms in Ghana.

Some existing empirical works have further explored the corporate governance corporate sustainability nexus beyond their principles and disclosures. In the study by Naciti (2019) on corporate governance and board of directors: the effect of a board composition on firm sustainability performance, the findings revealed that, firms with more diversity on the board and a separation between board chair and chief executive officer (CEO) roles show higher sustainability performance while a higher number of independent directors leads to lower sustainability performance. In addition, Jangu et al. (2014) in their study of the impact of CG on the sustainability of firms in Malaysia in 2010 premised on agency theory show that the professionalism and size of the board and the members' composition have a significant effect on sustainability initiatives efforts. Burke et al. (2019) in their study also posit that, the board-level commitment appears to be positively related with corporate social performance.

In spite of the significant contribution to literature, these prior studies have not adequately examined the effect of moderators such as share ownership structure. This give rise to the concerns of stakeholders and heighten interest of researchers as to whether share ownership structure plays any moderating role in the corporate governance and corporate sustainability nexus. In view of that, this present study is aimed at, presenting a novel perspective by exploring the moderating role of the share ownership structures of the banks on corporate governance and corporate sustainability nexus. The study addresses the research question to what extent, does bank share ownership structure moderate corporate governance and bank sustainability in Ghana from the post banking sector crisis perspective which present significant practical and policy implications.

Future policies and directives by Bank of Ghana (BoG) on governance and sustainability performance of banks in Ghana will consider the moderating effect of ownership structure. For practical implication, the output of the study will serve as a reference framework in devising corporate governance and sustainability strategies.

2.0 Literature Review

2.1 Theoretical Review

Stakeholder Theory

According to Freeman (1984) the concept of the stakeholder theory projects that different stakeholders and their inherent contracts with the corporation and the interconnection that exist among them. Initially the stakeholder theory emphasized the social contract with stakeholders but in recent times, the theory encompasses other stakeholders whose interest are geared towards the environment. This has broaden the scope of the theory to cover the economic, social and environmental stake of the various stakeholders of the firm. Amer (2016) posit that the stakeholder theory is merely an extension of the agency view. The theoretical perspective is evident in the concept of corporate governance where measures are put in place to ensure the varied interests of all stakeholders are safeguarded including that of shareholders. Again the theory underpins the concept of corporate sustainability where economic, social and environmental dimensions of sustainability are interconnected and represent the implicit and explicit contract with different stakeholders. There is a school of thought which holds the view that, the firm has limited resources and this is likely to hinder the firm from satisfying the interest of all the stakeholders. Agitations from stakeholders are likely to emerge and divert the efforts of management from their core mandate of profit maximization and wealth creation to conflict management. However, the paradox theory addresses this limitation with the theoretical position that, though the varied stakeholders' interests may conflict but are interdependent. Therefore, there is the need for strategies and control mechanisms such as effective corporate governance.

Paradox Theory

Notwithstanding the possibility of a conflicting varied stakeholder interests proposed in the stakeholder theory, the paradox theory advocates that, these interests may conflict yet interrelate therefore the need to manage their co-existence. According to Smith and Lewis (2011), the paradox theory is based on the concept that though some elements may be conflicting though interrelated, exist concurrently and continuously over time amidst the challenges that arise. Hahn et al (2015) attest that, from the paradox perspective on corporate sustainability clearly admits several tensions spring up among different desirable, yet interdependent and in some cases conflicting sustainability objectives such as environmental protection and social well-being. Corporate sustainability presents economic, social and environmental dimensions which are different yet these strategies are mostly intertwined. With the increasing advocacy for stakeholders' interest, enhanced laws and policies to address emerging environmental and social issues such as climate change and human rights which have become global concerns, companies are compelled to integrate the multifaceted concept of corporate sustainability into their corporate strategies even though aspects of these strategies may contradict. Critics argue there is no clarity in the meaning of the paradox concept and according to (Cao et al., 2009) the concept has been applied in divergent phenomena. However, corporate sustainability clearly fit into the conceptualization of the paradox construct.

2.2 Empirical Review

Corporate Governance and Corporate Sustainability

Corporate governance and sustainability are two important factors that play a crucial role in the success and long-term viability of companies. In line with the stakeholder theory, effective corporate governance mechanisms which ensures that the varied interests of stakeholders are safeguarded to ensure continuous business operations and avoid conflicts. Audit committee is an integral mechanism of corporate governance, hence Adegboye et al. (2020) in their study on audit committee characteristics and sustainability performance in Nigerian listed banks found out that, audit committee independence and gender diversity of audit committee

have significant positive influence on the sustainability disclosure. The study focused on Nigerian listed banks and was limited to only 10 banks out of the 15 listed Nigerian banks. Data for the study were obtained from annual reports of the sampled list banks however, the data were limited to the period 2014–2016. Though the study pertained to the banking sector, the economic conditions and the regulatory frameworks of the sector in Nigeria and Ghana differ though they both Sub Saharan Africa countries. Again, the study limited its scope to audit committee though several governance mechanisms are prevalent in the sector. This study is therefore, necessitated by exploring other governance variables in addition to audit committee as well as scrutinizing the Ghanaian banking industry.

In a further study, Disli, Yilmaz and Mohamed(2022) investigated board characteristics such as board independence, gender diversity, board size and board activity, on the sustainability performance of 439 publicly-listed non-financial companies across 20 emerging countries over the period of 2010–2019 using the two-step system GMM estimation method. The outcome of the study suggest that, smaller board size, gender diverse and independent boards that convene frequently achieve better sustainability performance and concluded that board governance is an important determinant of firms' sustainability performance. The study had a wide scope made up of 20 emerging countries over the period of 2010–2019 yet the study failed to include financial institutions such as banks. Though Ghana is an emerging economy, the economy and its banking sector may have their peculiar issues and in view of that, there is dire need for a similar study to be replicated.

Hussain, Rigoni and Orij (2018) probe the corporate governance and sustainability performance with reference to the triple bottom line with agency theory and stakeholder theories serving as the theoretical foundation. The study concluded that there is the need for commencing new theorising process with theories emphasizing the dimensions of sustainability might be more affected in addition to validating the impact of corporate governance on sustainability. The study comprehensively investigated the relationship between the individual elements of corporate governance and the economic, social and environmental dimensions of sustainability. However, the study was only limited to 100 US companies from the high- performance Global Fortune 2013 list from the year 2007 to 2011. The use of general GRI framework for our measurement and reporting of sustainability performance in study where the sample is made up of firms from different sectors such as banks and financial services, chemicals and pharmaceuticals, oil and gas, food and beverages, airlines, telecommunication among others hence employing sector-specific GRI reporting framework would mitigate this limitation. These limitations give rise to the current study which specifically focuses on the banking sector and includes all firms in the sector.

Similarly, in exploring the effect of good corporate governance (GCG) on corporate sustainability performance (CSP) using the Triple Bottom Line (TBL) approach in a two-tier GCG system, Tjahjadi et al (2021) opined the board size has no significant effect on environmental sustainability performance and this is consistent with the study by Hussain et al. (2018) which also indicates that there is no significant effect of board size on environmental sustainability performance. Additionally, the findings of the study also suggested board size has positive effect on economic sustainability performance but negative effect on social sustainability performance. This supports the position of Saidat et al. (2019) which indicates that large board size are associated with some benefits such as enhanced sustainability performance. Again, literature indicate larger boards influence sustainability performance of firms (Chang et al. 2017; Ntim et al., 2013; Khan et al. 2013; Amran et al. 2014). However, the study contradicts the findings, board size positively affect environmental disclosures (Said et al., 2009). In spite of its contribution to literature, the study sample is limited to listed non-financial companies on the Indonesia Stock Exchange. With the present study, the focus is on financial companies specifically banks with the sample which captures both listed and non-listed banks.

Birindelli et al (2019) analyses the impact of women leaders on environmental performance in a sample of 96 listed banks in Europe, Middle East and Africa (EMEA) region from 2011 to 2016 and concluded that there is nonlinear relationship between women directors and the environmental performance of banks and that female chief executive officers play a strategic role in promoting this relationship. In affirming this position, Glass et al. (2016) opined that the positive influence of board gender diversity on environmental initiatives is very limited. Interestingly, Huse et al. (2009) argue that women are more actively involved in issues of strategic importance that concern stakeholders beyond shareholders because of their consideration of the needs of others. Therefore, there is much emphasis on gender diversified board in relation to sustainability policies and strategies. Also, Kassinis et al., 2016 advocate for female directors on the board and highlights their relevance in ensuring high corporate environmental performance. In contrast with the findings, Naciti (2019) study outcome suggests more diversity on the board and a separation between chair and CEO roles show higher sustainability performance. From social sustainability perspective, Ntim and Soobaroyen (2013) revealed that board diversity also enhances

social sustainability. The study limited corporate governance to board gender diversity and view sustainability solely from the environmental perspective. Hence, there is the need to explore other corporate governance mechanisms that pertain to banks and also assesses sustainability holistically from economic, social and environmental dimensions which this study addresses.

Again, in examining the effect of corporate governance elements on environmental sustainability reporting performance in South Asian countries, the empirical evidence provided by Masud et al (2018) suggest that, collectively, ownership structures (foreign, institutional, and director ownerships) and board characteristics (independence and size) influence environmental sustainability reporting performance. The study found out that environmental sustainability reporting performance has a positive association with foreign and institutional ownership, board independence, and board size. This is consistent with literature which projects that, board independence positively relates to sustainability performance and disclosures (Mahmood et al. 2018; Sharif & Rashid, 2014; and Khan et al., 2013). On the contrary, Walls et al. (2012) argue that with boards which are more independent, larger, and less diverse, environmental performance hindered. While Naciti (2019) further revealed that, a higher number of independent directors leads to lower sustainability performance. The exclusion of unlisted firms while focusing on sampled listed firms from Global Reporting Initiative (GRI) database limits the scope of the study. Though sustainability performance and disclosures basically comprise of economic, social and environmental, attention were only drawn to environmental sustainability. In view of that, the current study explores both listed and non-listed banks in Ghana and also explore sustainability from the economic, social and environmental perspectives.

Since the board plays a critical role in corporate governance, with high frequency of board meetings, it is presumed that strategic planning and performance remain a priority for the board of directors (Ricart et al., 2005). Corporate sustainability which are usually captured under corporate strategies and deliberated on at board meetings. Undoubtedly, the boards who hold regular board meetings are more likely to deliberate on issues of sustainability relating to their respective industries and consequently increase commitment to corporate sustainability strategies. Based on the theoretical perspectives of the stakeholder and paradox theories coupled with the empirical evidence of previous studies, it is hypothesized that:

H1: Corporate governance significantly and positively influences bank sustainability

Drawing from the stakeholder theory, which is an extension of agency theory, shareholders' interests are safeguarded through the control mechanisms to mitigate conflicts that result from agency problems. Fundamentally, corporate entities put in place effective corporate governance structures address agency problems to the advantage of the various stakeholders. According to Boachie (2023), corporate governance of firms are dependent on their ownership structure. Empirical evidence also proposes a link between ownership structure and firm sustainability. In line with this position, Walls et al. (2012) posit that, with ownership dynamics, shareholder activism and concentration impact environmental performance.

In the study conducted by Boachie (2023) which investigated the moderating effect of ownership on the links between corporate governance and financial performance in the context of Ghanaian banks, it was revealed that foreign ownership moderates corporate governance and profitability relationship. In relation to the conclusions drawn theoretically and empirically, it is proposed that:

H2: Share ownership structure (SOS) moderates the relationship between corporate governance and bank sustainability

In summary, several literature point out that effective corporate governance practices have the high tendencies of promoting sustainable corporate practices and demonstrate better performance economically, environmentally and socially (Disli et al., 2022; Masud et al., 2018; Burke et al., 2019; Adegboye et al., 2020; Mahmood et al., 2018; Janggu et al., 2014; Shrivastava & Addas, 2014, Walls et al., 2012; Aras & Crowther, 2008; Amran et al., 2014; and Naciti, 2019). However, literature is yet to explore the moderating role of ownership structure on corporate governance and corporate sustainability nexus. This gap in existing literature has necessitated a comprehensive study which adequately assesses the corporate governance and corporate sustainability link and additionally, explores the moderating effect of share ownership structure.

3.0 Conceptual Framework

The framework captured in figure 1 is the proposed conceptual framework. It depicts the proposed direct relationship that exist between corporate governance, the independent variable and bank sustainability the dependent variable. It further presents bank ownership structure as a moderating variable and its moderating effect on the relationship between corporate governance and bank sustainability.

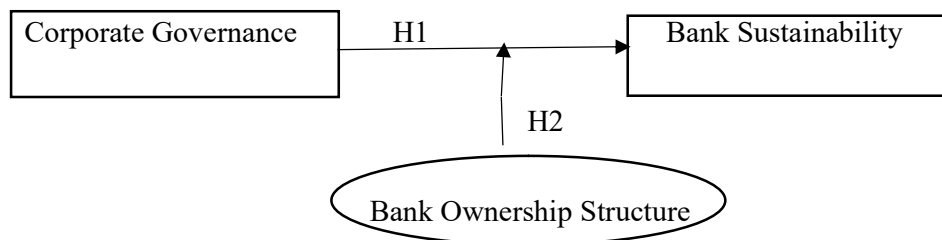


Figure 1: Conceptual Framework

4.0 Methodology

The sample constituted all the 23 banks licensed by Bank of Ghana to operate in Ghana. Data was sourced from primary sources through the administration of structured questionnaire to 302 key and senior management personnel from all the 23 banks. These key and senior management are privy to issues of governance and sustainability pertaining to the banks thereby justifying their selection using purposive sampling technique. The administered questionnaire contained series of questions that relates to the study variables: bank ownership structure, corporate governance and bank sustainability. SMART-PLS software was employed to facilitate the analysis of data gathered employing Partial Least Square Structural Equation Modelling (PLS- SEM).

4.1 Research Variables

The independent, dependent and mediating variables for the study are presented in table 4.1 with their respective indicators and operational definitions.

Table 4.1: Measurement and Operational definition of Variables

Corporate Governance (Independent Variable)

Board Composition	Directors of the board with the requisite and diverse professional qualification and expertise
Board Independence	Non-executive director chairs the board with majority of directors being non-executive directors
Board Gender Diversity	Fair representation of females on the board and their equitable role in leadership and managerial roles
Audit Committee	Non-executive director chairs the committee with majority of directors being non-executive directors and the presence of accounting and finance experts on the committee
Directors' Training	Relevant periodic training for directors

Bank Sustainability (Dependent Variable)

Economic Sustainability	Market development, economic value distribution, financial inclusion and literacy
Social Sustainability	Corporate social responsibility, employment, employee rights, development and safety
Environmental Sustainability	Investment in environmental protection, energy, waste and sanitation management

Share Ownership Structure (Moderating Variable)

Bank Share Ownership Structure Majority shares held by either government, local or foreign investors

Source: Researcher's Construct, 2023

4.2 Estimation model

$$\text{Model 1: } BS = \alpha + \beta_1 Bcom + \beta_2 Bind + \beta_3 BGend + \beta_4 AudC + \beta_5 Dtrain + \epsilon$$

$$\text{Model 2: BS} = \alpha + \beta_1 Bcom + \beta_2 Bind + \beta_3 BGenD + \beta_4 AudC + \beta_5 Dtrain + \beta_6 BoS + \epsilon$$

The model 1: bank sustainability is a function of corporate governance and, model 2: bank sustainability is a function of corporate governance and the moderating variable bank ownership structure.

Where BS is Bank Sustainability; α is the constant; β is the coefficient; *Bcom* is Board Composition; *Bind* is Board Independence; *BGenD* = Board Gender Diversity; *AudC* is Audit Committee; *Dtrain* is Directors' Training; BoS is the bank ownership structure; and ϵ is the error term.

Empirical Results and Discussion

Assessment of Reflective Measurement Model

In assessing the reflective measurement model, construct reliability and validity are tested using Cronbach's alpha (α), composite reliability (CR), and average variance extracted (AVE). According Chin (1998) proposed that the use of Cronbach's alpha (α), composite reliability (CR), and average variance extracted (AVE) to evaluate the reflective constructs. In testing the reliability of a construct, reliability should exceed 0.70 for the construct to be acceptable (Hair et al., 2011; Clum et al., 1990). Table 4.1 presents, Cronbach's alpha (α) and composite reliability (CR) exceeds the threshold of 0.70 hence establishing the consistency reliability of the study constructs. Convergent validity of the measurement model is measured using the average variance extracted (AVE) which should be greater than 0.50 to ensure convergent validity at the construct level) while the factor loadings should exceed 0.50 at the factor level (Hair et al., 2011). Table 4.1 records minimum factor loadings and AVE of 0.745 and 0.709 respectively hence the constructs exhibit convergent validity.

Multicollinearity is a situation in which two or more explanatory variables in a multiple regression model are highly linearly related. The metric variance inflation factor (VIF) is used in detecting multicollinearity issues. In this study, multicollinearity was tested and recorded a maximum VIF of 3.131 this is within the range, hence no collinearity issues. According to Becker et al. (2015), there is the tendency of collinearity issues among predictor constructs when VIF values exceeds 5, but when VIF records less values of 3 to 5, collinearity can also occur.

Discriminant validity measures constructs which theoretically should be distinct from each other to confirm whether indeed they are unrelated. Straub et al. (2004) indicate that discriminant validity comes up when there are similarities among the constructs. In assessing the discriminant validity of the study constructs, the Fornell and Larcker criterion and Heterotrait -monorait ratio (HTMT) are used. Based on the guidelines provided by Fornell and Larcker (1981), discriminant validity of the study constructs are established when each construct's AVE square root value is larger than other correlation values among the reflective latent constructs. Table 4.2 presents the study constructs squared root AVE of 0.855 and 0.842 which greater than other correlation value presented hence the constructs established discriminant validity. Again, in using the HTMT ratio, Henseler et al. (2015) proposed that the HTMT ratio threshold for conceptually related constructs should be 0.90 while conceptually distinct constructs should be 0.85. Table 4.4 indicates the HTMT ratio of 0.760 which is less than the threshold of both 0.85 and 0.90, the constructs therefore, have sufficient discriminant validity.

Table 4.1 Convergent Validity for the Measurement Model

Constructs	Items	Convergent Validity			AVE	VIF
		Factor Loading	Cronbach Alpha	Composite Reliability		
						2.257
Corporate Governance	BOC	0.863				
	BI	0.745	0.863	0.907	0.709	1.911
	AUDC	0.903				3.131
	DT	0.850				2.154
	ECOS	0.86				1.761
Bank Sustainability	ENVSP	0.838	0.817	0.891	0.732	1.757
	SOSP	0.867				1.963

Source; Fieldwork, 2023

Table 4.2 Discriminant Validity – Fornell and Larcker Criterion

	Bank Sustainability	Corporate Governance
Bank Sustainability	<i>0.855</i>	
Corporate Governance	<i>0.652</i>	<i>0.842</i>

Note: Values in Italic represent square root of AVE

Source; Fieldwork, 2023

Table 4.3 Discriminant Validity Heterotrait -monotrait ratio (HTMT)

	Bank Sustainability	Corporate Governance
Bank Sustainability		
Corporate Governance	0.760	

Source; Fieldwork, 2023

Assessment of Structural Model

In evaluating the structural model, the effect size (f^2) and coefficient of determination (R^2) values are used. The coefficient of determination measures how well a statistical model predicts an outcome which is represented by the model's dependent variable. It is mostly referred to as the R-square (R^2) and is a measure of goodness of fit. Table 4.4 presents a R^2 of 0.425, this depicts that, corporate governance accounts for 42.5 percent variations in bank sustainability. And according to Chin (1998), the recommended criteria for R^2 value of 0.67, 0.33 and 0.19 represent substantial, moderate, and weak levels of predictive accuracy respectively hence the R^2 of this study model ranges from moderate to substantial predictive accuracy.

The effect size (f^2) measure the strength of each predictor variable in explaining endogenous variables. Chin (1998), suggests that f^2 values of 0.02, 0.15, and 0.35 for the significant independent variables represent weak, moderate and substantial effects, respectively. While table 4.5 also indicates the study's f^2 of 0.740 implies very substantial strength of the significant independent variables (corporate governance) accountable for the dependent variable (bank sustainability) hence its practical significance. Chin (1998) asserts that R^2 analysis is complementary to f^2 . Therefore the outcomes of both the coefficient of determination and effect size reaffirms the stakeholder and paradox theories which highlights the presence of several stakeholders with varied stake in the firm. It further throws light on and the conflicting yet interrelated nature of these stakes and therefore the need for effective governance structures to facilitate their co-existence through effective execution. This is an indication that, the effective governance structures put in place by management of the banks, served as a strong

check on conflicts that are likely to arise due to the varied interests from economic, social and environmental perspectives pursued by various stakeholders both internally and externally. Therefore in mitigating such conflicts and their management, scarce resources of the firm are invested, thereby enhancing corporate sustainability over time. Empirically, the findings are in line with that of Adegboye et al. (2020); Disli et al., (2022) Ntim and Soobaroyen (2013); Saidat et al. (2019) and Masud et al (2018) who concluded that corporate governance influences corporate sustainability.

Table 4.4 Summary Result of the Coefficient of Determination (R2) for the Endogenous Constructs

	R Square	R Square Adjusted
Bank Sustainability	0.425	0.423

Source; Fieldwork, 2023

Table 4.5 f2 Effect

	Bank Sustainability	Corporate Governance
Bank Sustainability		
Corporate Governance	0.740	

Source; Fieldwork, 2023

Hypotheses Testing

In evaluating the structural model, the proposed hypotheses are tested with the relationships between the latent variables being evaluated. The study hypothesized in hypothesis 1 that:

Corporate governance significantly and positively influences bank sustainability

The empirical results presented in table 4.6 revealed $\beta = 0.652$, $t = 13.246$, $p < 0.001$) and this empirical evidence suggest that, corporate governance of bank has significant positive effect on bank sustainability. Therefore, the study concludes that corporate governance indicators are positively related to the bank sustainability hence, hypothesis 1 is accepted. This outcome clearly, confirm the paradox theory's position, which states that, the elements though interrelated but may conflict, however, they need to co-exist giving rise to a system of control and monitoring such as the structured corporate governance mechanisms of the banks. The effectiveness of the governance structures including the board, will eventually enhance economic, social and environmental sustainability as suggested by the outcome of this study. Consistent with some empirical studies by Adegboye et al. (2020); Janggu et al. (2014) and Burke et al. (2019) which argue that corporate governance has positive influence on corporate sustainability, it is concluded that, bank sustainability is influenced by corporate governance of the banks.

Subsequently, the study tested hypothesis 2 and it states that:

Shares ownership structure (SOS) moderates the relationship between corporate governance and bank sustainability.

Hypothesis 2 sought to ascertain the moderating effect of shares ownership structure between corporate governance and bank sustainability. The results presented in table 4.7 indicated $\beta = 0.011$, $t = 0.329$, $p = 0.743$ which implies that, shares ownership structure does not moderate the relationship between corporate governance and bank sustainability and therefore, hypothesis 2 is not accepted. This outcome suggests that, though the share ownership structure may be relevant in the governance mechanisms of the banks, it is also evident that, sustainability issues are strategic in nature and are handled by the board of directors and management. Therefore limiting the role of shareholders on the relationship between corporate governance and corporate sustainability.

Table 4.6 Direct Relationship Result

	Beta Coefficient	Standard Deviation	T Statistics	P Values
Corporate Governance -> Bank Sustainability Source; Fieldwork, 2023	0.652	0.049	13.246	0.000

Table 4.7 Moderation Analysis Result

	Beta Coefficient	Standard Deviation	T Statistics	P Values
Mod BOS -> BS Source; Fieldwork, 2023	0.011	0.042	0.329	0.743

5.0 Conclusion and Implication of the study

This paper examined the moderating effect of bank share ownership structure on the corporate governance and bank sustainability in Ghana from the post banking sector crisis perspective. Corporate governance and corporate sustainability has gained so much prominence in the corporate world. Globally, sustainability has emerged as critical global concern and in recent times, has rapidly emerged and steadily integrated into the corporate world. Over the years, although there is surge in literature on corporate governance and corporate sustainability (Erin et al., 2022; Tjahjadi et al., 2021; Disli et al., 2022; Masud et al., 2018; Burke et al., 2019; Adegboye et al., 2020; Munir et al., 2019; Mahmood et al., 2018; Jangu et al., 2014; Walls et al., 2012; Aras & Crowther, 2008; Amran et al., 2014; Naciti, 2019 ; Ntim & Soobaroyen, 2013), literature is yet to explore moderating effect of share ownership structure on the nexus as well as the post banking crisis perspective. It is therefore, imperative to enhance literature by exploring how bank share ownership structure moderates corporate governance and bank sustainability in Ghana from the post banking sector crisis perspective.

The findings of the study points out that corporate governance has significant and positive influence on bank sustainability and further reveals that bank share ownership does not moderate the relationship. In line with both theoretical and empirical literature, the findings agree with the stakeholder and paradox theories and empirically consistent with the works of Adegboye et al. (2020) and Masud et al. (2018).

The findings of the study have significant theoretical, practical and policies implications for policymakers, managers, researchers and investors of the Ghanaian banking sector. Theoretically, it contributes to the literature of the stakeholder and paradox theories. In practice, board of directors and management will be guided by the outcome of the study in devising and implementing governance and sustainability strategies. Since sustainability is gaining grounds in the sector, this study will influence future policies that target holistic and enhanced sustainability performance and reporting of the banks. It will guide any future revision and formulation of sustainability policies in the sector especially in an era where the adoption of International financial reporting standards for sustainability will soon be effective across sectors with the banking sector being inclusive.

Notwithstanding the contribution of this study, the study focuses solely on banks and limited to the Ghanaian economy. Again, study only explored the moderating effect of bank share ownership structure which limits the current study. Future studies, can be conducted in other sectors of the economy as well as other firms in the financial sector such as insurance companies. It is also recommended that, further study is replicated by exploring other moderating variables excluding share ownership structure.

Funding

The authors did not receive any financial support

Disclosure Statement

No potential conflict of interest was reported by the authors.

Reference

- Adegboye, A., Ojeka, S., Alabi, O., Alo, U. & Aina, A. (2020). Audit committee characteristics and sustainability performance in Nigerian listed banks. *Business: Theory and Practice*, 21 (2), 469 - 476. <https://doi.org/10.3846/btp.2020.10463>
- Amer, M.M. (2016). *Measuring the effect of the board of directors and audit committee characteristics on firm financial performance in Egypt* (Doctoral dissertation, Cardiff Metropolitan University). Cardiff Metropolitan University. figshare.cardiffmet.ac.uk
- Amran A., Lee S. P. & Devi S. S. (2014). The influence of governance structure and strategic corporate social responsibility toward sustainability reporting quality. *Business Strategy and the environment*, 23(4), 217 – 235. <https://doi.org/10.1002/bse.1767>
- Aras, G. & Crowther, D. (2008). Governance and sustainability: An investigation into the relationship between corporate governance and corporate sustainability. *Management Decision*, 46(3), 433 - 448. <https://doi.org/10.1108/00251740810863870>
- Becker, J.M., Ringle, C.M., Sarstedt, M. & Völckner, F. (2015). How collinearity affects mixture regression results. *Marketing Letters*, 26, 643-659. <https://doi.org/10.1007/s11002-014-9299-9>
- Birindelli, G., Iannuzzi, A.P. & Savioli, M. (2019). The impact of women leaders on environmental performance: Evidence on gender diversity in banks. *Corporate Social Responsibility and Environmental Management*, 26(6), 1485-1499. <https://doi.org/10.1002/csr.1762>
- Boachie, C. (2023). Corporate governance and financial performance of banks in Ghana: the moderating role of ownership structure. *International Journal of Emerging Markets*, 18(3), 607-632. <https://doi.org/10.1108/IJOEM-09-2020-1146>
- Brammer, S. & Pavelin, S. (2006). Voluntary Environmental Disclosures By Large UK Companies. *Journal of Business Finance and Accounting*, 33(7/8), 1168-1188. <https://doi.org/10.1111/j.1468-5957.2006.00598.x>
- Burke, J. J., Hoitash, R. & Hoitash, U. (2019). The Heterogeneity of Board-Level Sustainability Committees and Corporate Social Performance. *Journal of Business Ethics*, 154 (4), 1161-1186. <https://doi.org/10.1007/s10551-017-3453-2>
- Cao, Q., Gedajlovic, E. & Zhang, H. (2009). Unpacking organizational ambidexterity: Dimensions, contingencies, and synergistic effects. *Organization Science*, 20(4), 781–796. <https://doi.org/10.1287/orsc.1090.0426>
- Chang, Y. K., Oh W-Y, Park, J. H. & Jang, M. G. (2017). Exploring the relationship between board characteristics and CSR: empirical evidence from Korea. *Journal of Business Ethics*, 140(2), 225–242. <https://doi.org/10.1007/s10551-015-2651-z>
- Chin, W.W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*, 295(2), 295 - 336. <http://www.researchgate.net/publication/232569511>
- Clum, G. A., Broyles, S., Borden, J., Watkms, P. L. & Hayes, J. (1990). Validity and reliability of the Panic Attack Symptoms and Cognitions Questionnaires. *Journal of Psychopathology and Behavioral Assessment*, 12, 233-245. <https://doi.org/10.1007/BF00960620>
- Disli, M., Yilmaz, M.K. & Mohamed, F.F.M. (2022). Board characteristics and sustainability performance: empirical evidence from emerging markets. *Sustainability Accounting, Management and Policy Journal*, 13(4), 929-952. <https://doi.org/10.1108/SAMPJ-09-2020-0313>
- Erin, O., Adegboye, A. & Bamigboye, O.A. (2022). Corporate governance and sustainability reporting quality: evidence from Nigeria. *Sustainability Accounting, Management and Policy Journal*, 13(3), 680-707. <https://doi.org/10.1108/SAMPJ-06-2020-0185>
- Fornell, C. & Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <http://www.jstor.org/stable/3151312>
- Freeman, R.E. (1984), *Strategic Management: A Stakeholder Approach*, Pitman, Boston, MA.
- Galbreath, J. (2013). ESG in focus: The Australian evidence. *Journal of Business Ethics*, 118, 529-541. <https://doi.org/10.1007/s10551-012-1607-9>
- Glass, C., Cook, A. & Ingersoll, A. R. (2016). Do women leaders promote sustainability? Analyzing the effect of corporate governance composition on environmental performance. *Business Strategy and the Environment*, 25(7), 495-511. <https://doi.org/abs/10.1002/bse.1879>
- Hahn, T., Pinkse, J., Preuss, L. & Figge, F. (2015). Tensions in corporate sustainability: Towards an integrative framework. *Journal of Business Ethics*, 127(2), 297–316. <https://doi.org/10.1007/s10551-014-2047-5>
- Hair, J. F., Ringle, C. M., and Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139 –152. <https://doi.org/10.2753/MTP1069-6679190202>

- Henseler, J., Ringle, C.M. & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Huse, M., Nielsen, S.T. & Hagen, I.M. (2009). Women and employee-elected board members, and their contributions to board control tasks. *Journal of Business Ethics*, 89(4), 581-597. <https://doi.org/10.1007/s10551-008-0018-4>
- Hussain, N., Rigoni, U. & Oriji, R. P. (2018). Corporate governance and sustainability performance: Analysis of triple bottom line performance. *Journal of business ethics*, 149, 411-432. <https://www.jstor.org/stable/45022497>
- Jangu, T., Darus, F., Zain, M.M. & Sawani, Y. (2014). Does good corporate governance lead to better sustainability reporting? An analysis using structural equation modeling. *Procedia-Social and Behavioral Sciences*, 145, 138-145. <https://doi.org/10.1016/j.sbspro.2014.06.020>
- Kassinis, G., Panayiotou, A., Dimou, A. & Katsifaraki, G. (2016). Gender and environmental sustainability: A longitudinal analysis. *Corporate Social Responsibility and Environmental Management*, 23(6), 399 - 412. <https://doi.org/10.1002/csr.1386>
- Khan, A., Muttakin, M. B. & Siddiqui, J. (2013). Corporate governance and corporate social responsibility disclosures: evidence from an emerging economy. *Journal Business Ethics*, 114(2), 207–223. <https://doi.org/10.1007/s10551-012-1336-0>
- Kyereboah-Coleman, A.(2007). Relationship between corporate governance and firm performance: An African perspective. [Doctoral dissertation, Stellenbosch University]. Stellenbosch University. <https://scholar2.stb.sun.ac.za/handle/10019.1/696>
- Mahmood, Z., Kouser, R., Ali, W., Ahmad, Z. & Salman, T. (2018). Does corporate governance affect sustainability disclosure? A mixed methods study. *Sustainability*, 10(1), 207. <https://doi.org/10.3390/su10010207>
- Masud, M. A. K., Nurunnabi, M. & Bae, S.M. (2018). The effects of corporate governance on environmental sustainability reporting: Empirical evidence from South Asian countries. *Asian Journal of Sustainability and Social Responsibility*, 3, 1-26. <https://doi.org/10.1186/s41180-018-0019-x>
- Munir, A., Khan, F. U., Usman, M., & Khuram, S. (2019). Relationship between corporate governance, corporate sustainability and financial performance. *Pakistan Journal of Commerce & Social Sciences*, 13 (4), 915 – 933. <http://hdl.handle.net/10419/214258>.
- Naciti, V. (2019). Corporate governance and board of directors: The effect of a board composition on firm sustainability performance. *Journal of Cleaner Production*, 237, 117727. <https://doi.org/10.1016/j.jclepro.2019.117727>
- Ntim, C. G. & Soobaroyen, T. (2013b). Corporate governance and performance in socially responsible corporations: New empirical insights from a neoinstitutional framework. *Corporate Governance an International Review*, 21(5), 468–494. <https://doi.org/10.1111/corg.12026>
- Ntim, C. G., Lindop, S., & Thomas, D. A. (2013). Corporate governance and risk reporting in South Africa: A study of corporate risk disclosures in the pre-and post-2007/2008 global financial crisis periods. *International Review of Financial Analysis*, 30, 363–383. <https://doi.org/10.1016/j.irfa.2013.07.001>
- Ricart, J. E., Rodríguez, M. A., & Sánchez, P. (2005). Sustainability in the boardroom. *Corporate Governance. The International Journal of Business in Society*, 5(3), 24 –41. <https://doi.org/10.1108/14720700510604670>.
- Said, R., Zainuddin, Y. H. J. & Haron, H. (2009). The relationship between corporate social responsibility disclosure and corporate governance characteristics in Malaysian public listed companies. *Social Responsibility Journal*, 5(2), 212-226. <https://doi.org/abs/10.10520/EJC193734>.
- Saidat, Z., Silva, M., & Seaman, C. (2019). The relationship between corporate governance and financial performance: Evidence from Jordanian family and nonfamily firms. *Journal of Family Business Management*, 9(1), pp. 54 –78. <https://doi.org/10.1108/JFBM-11-2017-0036>
- Sarpong-Danquah, B., Oko-Bensa-Agyekum, K., & Opoku, E. (2022). Corporate governance and the performance of manufacturing firms in Ghana: Does ownership structure matter? *Cogent Business & Management*, 9(1), 2101323. <https://doi.org/10.1080/23311975.2022.2101323>
- Sharif, M. & Rashid, K. (2014). Corporate governance and corporate social responsibility (CSR) reporting: an empirical evidence from commercial banks (CB) of Pakistan. *Quality & Quantity*, 48(5), 2501–2521. <https://doi.org/10.1007/s11135-013-9903-8>

- Shrivastava, P., and Addas, A. (2014). The impact of corporate governance on sustainability performance. *Journal of Sustainable Finance & Investment*, 4(1), 21-37. <https://doi.org/10.1080/20430795.2014.887346>
- Smith, W.K. & Lewis, M.W. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of management Review*, 36(2), 381 - 403. <https://doi.org/10.5465/amr.2009.0223>
- Straub, D., Boudreau, M. & Gefen, D. (2004). Validation Guidelines for IS Positivist Research. *Communications of the Association for Information Systems*, 13(1), 24. <https://doi.org/10.17705/1CAIS.01324>
- Tjahjadi, B., Soewarno, N. & Mustikaningtyas, F. (2021). Good corporate governance and corporate sustainability performance in Indonesia: A triple bottom line approach. *Heliyon*, 7(3), <https://doi.org/10.1016/j.heliyon.2021.e0645>
- Tornyeva, K., & Wereko, T. (2012). Corporate governance and firm performance: Evidence from the insurance sector of Ghana. *European Journal of Business and Management*, 4(13), 95–112. 2222-2839.
- Walls, J. L., Berrone, P. & Phan, P. H. (2012). Corporate governance and environmental performance: Is there really a link? *Strategic Management Journal*, 33(8), 885–913. <https://doi.org/10.1002/smj.1952>