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Investigating the Impact of Corporate Governance on Financial Performance of Commercial Banks in Ghana

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ABSTRACT

As a popular mechanism, corporate governance is broadly recognized to align individual interests with organizational objectives, thus improving organizational performance. Nevertheless, the specific pathways through which corporate governance influences performance remain underexplored in the context of Ghanaian banks. With the data of seven listed Ghanaian banks over the period 2012-2022, this study examines the effect of corporate governance on bank performance, with bank size and ownership serving as moderating variables. Return on assets (ROA) is employed as a proxy for performance, while board size, board gender diversity, and the proportion of non-executive directors represent corporate governance indicators. Bank growth, interest coverage, asset tangibility, and bank size are included as control variables. Using panel data, the study applies a fixed-effects model to test the hypotheses. The findings reveal that board gender diversity exerts a significant positive effect on ROA, while board size and the proportion of non-executive directors show no significant impact at the 5% level. Moreover, neither bank size nor ownership significantly moderate the relationship between corporate governance variables and bank performance. The study suggests that banks should increase female representation on boards, while regulators such as the Bank of Ghana may place less emphasis on bank size when enforcing corporate governance practices.

Keywords: Corporate Governance, Bank Ownership, Panel Data Analysis, Board Gender Diversity, Return on Assets
JEL Classifications: G38, G32, C23, G34, L25

1. INTRODUCTION

Adherence to corporate governance principles is critical for enhancing organizational efficiency, transparency, and long-term sustainability. Strong corporate governance structures provide effective oversight of management, mitigate agency problems, and promote sound decision-making, which collectively improve firm performance (Ehikioya, 2009). In Ghana, the recent wave of financial sector crises, including bank collapses and fraud scandals linked to unethical practices among top management, has raised concerns about the adequacy of corporate governance frameworks. These events have strengthened the discourse on governance reforms, particularly in the banking sector, as the country struggles to align with global standards for financial stability and market confidence.

Weak governance structures depict banks to reputational and operational risks. Tornyeva et al. (2012) highlighted how insufficient board oversight and poor governance culture increase the risk of mismanagement and the appointment of unsuitable executives. Also, Jackson (2012) noted that the presence of unfit or compromised individuals on boards exacerbates governance challenges. Furthermore, empirical studies such as Carter et al. (2007) and Afolabi (2013) demonstrate that ineffective governance practices undermine shareholder value and firm performance, while robust board composition and diversity can enhance decision-making and operational efficiency (Gul et al., 2011).

The role of corporate governance is mainly critical in the banking sector, given its systemic importance to economic development and financial intermediation. Banks in Ghana account for a significant portion of total financial assets, and their stability is essential for sustaining investor confidence and public trust (IMF, 2014; Ghana Statistical Service, 2014). Nevertheless, despite the introduction of the Bank of Ghana's Corporate Governance Directive in 2018, empirical evidence concerning corporate governance practices to bank financial performance remains limited and inconclusive. International studies reveal mixed findings, with some reporting positive relationships between governance and performance, while others find insignificant or negative effects (Drobetz et al., 2011). These inconsistencies highlight the need for context-specific research in emerging markets like Ghana, where regulatory environments, ownership structures, and market dynamics differ from developed economies.

This study addresses this gap by examining the impact of corporate governance on the financial performance of Ghanaian banks, with an emphasis on the moderating roles of bank size and ownership structure. Corporate governance is operationalized through board size, the proportion of non-executive directors, and board gender diversity, while financial performance is measured using return on assets (ROA), a key indicator of managerial efficiency. The study utilizes panel data from seven listed commercial banks in Ghana over the period 2012-2022, applying a fixed-effects modeling approach to capture firm-specific variations.

By examining the interaction between corporate governance and bank characteristics, this study contributes to the ongoing discourse on governance reform in Ghana's banking sector. The findings are expected to inform regulatory policies, support bank management in strengthening governance frameworks, and enhance investor confidence. In particular, this study might give understandings for policymakers, the Bank of Ghana, shareholders, and other stakeholders seeking to foster a strong and well-governed banking sector proficient of sustaining long-term economic growth.

This paper is organized as follows. The next section explains the literature review, followed with research method and design. After that, a section on the results and findings reports and discusses the results of the data. Finally, the last section concludes this study.

2. LITERATURE REVIEW

2.1. Corporate Governance

Corporate governance research has its roots in agency theory, which began in the 1970s as a response to the issue of the separation of ownership and control in large corporations. Agency theory discusses that conflict of interest is inherent between a principal (shareholder) and an agent (management) that produces many serious agency problems, including those of managerial opportunism and agency costs (Jensen and Meckling, 2019). Corporate governance is the system of rules, practices, and processes by which companies are directed and controlled (Al-Adeem and Al-Khonain, 2020; Garzón Castrillón 2021; Ofuani et al., 2018). The above, therefore, means that corporate governance consists of the relationships between the various stakeholders of the firm, such as the shareholders, management, the board of directors, employees, customers, suppliers, and regulators.

Moreover, corporate governance's ultimate aim is to achieve transparency, accountability, fairness, and integrity in the organization's decision-making which would protect the shareholders' interest and also enhance sustainable value creation (Solomon, 2020). Corporate governance, according to the definition of Bhatia and Gulati (2021), is a structure that looks after the management and controls of any organization. It outlines the rights and duties of all the parties that have a stake in the organization, such as the board, managers, shareholders, etc, as well as principles and methods of decision-making in the organization. The framework also offers the venue that will help in making clear the organization's objectives, adopting the best strategies that will foster these objectives, and methods that will be put in place to measure performance or progress. Other essential principles according to Das (2022) of corporate governance are transparency and disclosure, accountability, responsibility, integrity, and fairness.

2.1.1. Board size

Board size refers to the number of directors comprising the board (Pfeffer, 2019). Larger boards are associated with a higher level of monitoring and advisory capabilities, along with a pool of vast expertise and resources (Boivie et al., 2016). However, some studies have argued that smaller boards may be more efficient in the process of decision-making and oversight due to better communication and coordination (Ofuani et al., 2018). The relationship between board size and financial performance is non-linear, with an optimum board size, beyond it, performance may decline (Obeitoh et al., 2023). Normally, the measure of board size is the total count of directors serving on the board.

2.1.2. Board independence

Board independence is the presence of non-executive or outside directors to the management of the company or large shareholders (Garzón Castrillón 2021). Several studies indicate that independent directors improve the monitoring of the board, thus reducing agency conflicts, while other studies have shown that it is an important link to the improvement in financial performance. For example, in the banking sector, Macharia (2017) documents a positive relationship between board independence and financial performance. An independent director is expected to provide an objective point of view and unbiased perspective that would lead to sound and excellent decisions, which guard the interests of all stakeholders (Das, 2022). Some studies have also, however, reported insignificant or negative relationships, suggesting that the benefits of board independence could depend on other factors, such as board expertise and industry knowledge (Alobari et al., 2019). The independence of the board is, therefore, captured in the form of the proportion of independent directors to total directors on the board.

2.1.3. CEO duality

CEO duality involves a CEO who doubles up as the chair of the board of directors. The issue of CEO duality has been a source of debate in most corporate governance literature since it has the potential to create a concentration of power and influence on one man, thus potentially undermining board independence and its monitoring role. A negative relationship between CEO duality and financial performance has been confirmed in some studies on the banking sector, reflecting a mechanism in which the separation of CEO and board chair enhances board monitoring and accountability functions (Ofuani et al., 2018). However, other studies have indicated mixed or insignificant results, implying that the effects of CEO duality on performance depend on other governance mechanisms and contextual factors (Duru et al., 2016). The variable is usually constructed as a binary, taking the value of 1 for a CEO duality of 1 and 0 otherwise.

2.1.4. Institutional ownership

Institutional ownership implies the percentage of ownership of a company's shares by institutional investors, which may include mutual funds, pension funds, and investment firms. The institutional investors are vested with more resources, professional knowledge, and incentives to exercise control over the corporate governance mechanism. Several studies have established positive relationships between institutional ownership and financial performance in the banking industry (Panda and Leepsa, 2019; Hussain et al., 2022). It is believed that institutional investors play an active role in the corporate governance mechanism, leading to more transparency and accountability in the corporate decision-making process. On the other hand, certain studies have reported the relationship to be insignificant or even negative, implying that the effect of institutional ownership could be contingent on factors like the type of institutional investor and their investment horizon (Kyereboah-Coleman, 2007; Klapper et al., 2004). Institutional ownership is generally quantified as the percentage of institutional investors' stake in the shares of a company.

2.1.5. Foreign ownership

Foreign ownership is the percentage of foreign investors who own shares in a company. The company will be either owned by foreign institutional investors or even foreign individuals or foreign companies. While foreign ownership may assure additional capital, expertise, and benefits of diversification, it may also bring challenges related to cultural differences, regulatory environments, and information asymmetries. However, some of the studies have revealed mixed results of foreign ownership concerning financial performance in the banking sector. Some have indicated a positive relationship that has been related to potential knowledge transfer, improved governance practices, and access to global markets (Al-Adeem and Al-Khonain, 2020). However, other studies have reported insignificant or negative relationships, which would imply the existence of challenges that would arise from cultural and regulatory differences and possibly surpass the foreign ownership benefits (Van Bergen and Parsell, 2018; Obeitoh et al., 2023). The percentage of shares held by foreign investors is the standard measure used to show the extent of foreign ownership.

2.2. Financial Performance

There are many various ways of measuring financial performance. Still, all measures should be taken in aggregation. The line items that can be used are revenues from operations, operating income, cash flow from operations, and total units of sales. Bank performance is a measure of how well a bank is doing, mainly its profitability index and its income statement. It is understood that to know how well a bank is doing, the first approach is to look at a bank's income statement as this describes the sources of income and expenses that will affect the bank's profitability. Also, look at the bank's profitability as a measure of its return on asset (ROA) (Malahim and Khatib, 2018; Ene and Bello, 2016). Santos and Brito (2012) identified that superior financial performance, which can be represented by profitability, growth, and market value, underpins corporate governance practice in organizations.

Profitability measures a firm's past ability to generate returns, while growth demonstrates its past ability to increase its size (Gwaison and Maimako, 2021). Increasing size, even at the same profitability level, will increase its absolute profit and cash generation. Their research shows that larger firm size can bring economies of scale and market power, leading to enhanced future profitability. On the other hand, the market value represents the external assessment and expectation of firms' future performance, which must correlate with historical profitability and growth levels while incorporating future market changes and competitive moves. The non-financial performance facets are customer satisfaction, employee satisfaction, environmental performance, and social performance. But the study focuses on the financial performance aspect (profitability).

George (2014) defined it as success in meeting pre-defined objectives, targets, and goals within a specified time target. Some of the aspects that would need to be factored in include the time frame and its reference point in defining performance. It may be possible to differentiate between past and future performance. Moreover, it has been proved that past superior performance does not guarantee the future as superior.

2.3. Underpinning Theories

2.3.1. Agency theory

Concerning the idea of corporate governance, there is a concept known as Agency Theory, which was developed in 1976 by Jensen and Meckling. The fundamental postulation of the theory is that in a corporation, shareholder's managerial principals are delegated the authority to decide on behalf of managers or managerial agents for all (Jensen and Meckling, 2019). The leading assumptions of this theory are that agents may act in their self-interests and not those of the shareholders giving rise to agency costs. However, in explaining Jensen and Meckling's (2019) view, there is a fundamental difference in the information asymmetry between the principals and agents, contractually agreed risks, and the dissimilar incentives at the two levels.

Furthermore, in the context of this study, the Agency Theory will adopted to explain the effects of corporate governance mechanisms to redress agency problems as well as the impact it has on the financial performance (FP) of the commercial banks in Ghana. As postulated by the theory, Board independence, executive compensation, and ownership structure act as the governance mechanisms to ensure that managers' and shareholders' interests are in tandem, and therefore, are important variables in the study, as noted by Hong et al. (2016). For instance, there is evidence that increased board independence actually improves monitoring and overseeing and minimizes managerial egoism and thus increases corporate financial performance.

Similarly, various research works have endeavored to use the Agency Theory to analyze the connection between CG and the FP of commercial banks. in different industries and countries. For example, Macharia (2017) and Kipkosgei (2016) have researched the extent to which corporate ‘governance influences the issues of financial performance with seeming evidence. Likewise, Christian (2016) employing agency theory argued that the adoption of effective management control had a positive and significant influence on the economic return on MFIs. These findings acknowledge that, in the case of Alobari et al.’s (2019) study of board size and profitability, there is no evidence to conclude that a ‘bigger board’ leads to higher profit because the number of shareholders negatively affects profit before tax.

Although the Agency Theory has been widely used in exploring human behaviour, it has not gone without criticism, especially on the assumptions of rationality and self-interest. According to Mrabure and Abhulimhen-Iyoha (2020), the theory fails to incorporate bona fide stakeholders like the employees and creditors who are impacted by the manager’s actions. Moreover, it also has another failure on the grounds of its subject area: it concentrates mainly on the aspect of monitoring and controlling the corporate body but does not pay much attention to the aspect of strategic management and value addition. Panda and Leepsa (2017) also stated that excessive reliance on control mechanisms may harm managerial innovation and ultimately the opportunities for growth in the long run. At the same time, however, many objections are made to this approach, it remains popular because it has a solid justification for addressing the subject of corporate governance mechanisms and agency relationships. The reason for maintaining it is the ability to help define and describe the principal-agent relationships within organizations.

Concisely, although the Agency Theory has been criticized in various aspects, especially on its assumptions and very focus, it is still a key paradigm for analyzing the corporate governance effects, especially the efficiency of the financial performances of commercial banks in Ghana, as this study establishes. The empirical analysis of the application of this concept has provided useful findings about the efficiency of governance structures, together with their impact on performance.

2.3.2. Stewardship theory

Furthermore, Stewardship Theory as an alternative view to the Theory of Agency shall equally be used in this study. Donaldson and Davis (1991) argued in Stewardship Theory that managers are stewards of the company and will act in the best interests of shareholders, emphasizing that CG is pivotal in aligning manager-shareholder interests (Donaldson and Davis, 1991). By contrast, whereas Agency Theory assumes that the managers may act out of self-interest as opposed to the interests of the shareholders, Stewardship Theory suggests that the managers are more likely to do what is responsible and ethical out of a sense of duty and loyalty to the organization (Davis et al., 2018; Mann and MacLeod, 2015).

In this regard, the Stewardship Theory indicates how the governance mechanisms lead to the promotion of managerial stewardship behavior, hence the impact on the financial performance of the commercial banks. Board leadership structure, organizational culture, and incentive alignment are the key variables of the theory central to explaining how managerial stewardship performance affects financial performance. For instance, stewardship theory suggests that centralizing the authority of the CEO and board chair in one person will work in the best interests of the organization in the form of good leadership and effective decision-making.

In the same way, prior studies have also applied Stewardship Theory to investigate corporate governance and financial performance. For instance, Kyere and Ausloos (2021) results showed a neutral cause; they argue that it does not matter whether the CEO and chairperson’s roles are combined, or otherwise; the result of financial performance remains constant whatever the board choice. Similarly, Chen (2019) found evidence that supports the positive relationship between stewardship-oriented governance structures and firm performance.

Moreover, critics of Stewardship Theory suggest that it could lack the ability to explain managerial opportunism and agency conflict, especially in those contexts where the incentives are ill-aligned or information asymmetry is rife (Chrisman, 2019; Lohse, 2016). Haynes et al. (2019) further question the managerial altruism assumption and posit that self-interest may still prevail in driving managerial behavior, albeit to a reduced level compared to what the Agency Theory suggests. The theory contributes a lot to the corporate governance dynamics, reflecting a culture of trust, collaboration, and shared responsibility within the banking industry. Used in empirical research, it helps to discuss governance mechanisms within a broader context, and in this way, will be applied to further examine its application to the financial performance of commercial banks in Ghana.

2.4. Corporate Governance and Bank Performance

This section of the study will undertake a review of the existing empirical literature on the relationship between corporate governance and bank performance and will show that the area has been explored and documented with a web of interconnections between governance mechanisms and performance indicators. Following ROA and CIR that were used by Gyamerah et al. (2020) the effect of corporate governance practices was examined on Ghanaian banks for the period covering 2005 to 2015. Larger board size, CEO duality, and foreign ownership were significantly and negatively related to performance, but with differences in each; CEO duality was significantly related to CIR, but not to ROA, while the impact of foreign ownership was significant for bank ROA only. On the other hand, the two measures of board independence enhanced both the performance indexes while audit committee independence did not affect the two. Based on the above presentation, Mahamah (2022) undertook a quantitative study to establish the moderating effect of corporate governance practices, and credit risk management on the financial performance of the Ghanaian banks. This study established that both corporate governance and credit risk management impacted the banking industry with the board structure, and risk management highly correlated with profitability. According to Klapper and Love (2004), the provision of good governance, investor ptection and risk management improves the financial performance of the firm.

Also, Musah and Adutwumwaa (2021) analyzed the impact of corporate governance mechanisms on the financial performance of rural banks in Ghana employing ROA and ROE as performance indicators. The results thereby affirmed the studies' unconfirmed positive correlation between CEO duality and both ROA and ROE. Similarly, the size of the board of directors had an overall positive effect on these measures of business performance where board size was an effective predictor, though marginally so for ROA. Board independence remained a positive and significant determinant of financial performance while sentiments on gender diversity on board are negative and statistically significant on both ROA and ROE. Furthermore, Anyigbah et al. (2021) analysing the effect of executive compensation on banking performance, investigated nine failed Ghanaian banks between 2012 and 2018, which led to tremendous depositor and shareholder losses. Lan and Firth's work underlined that one of the most important precursors of failure in these banks was the absence of reasonable corporate governance practices, especially directors' remuneration. Conclusions showed poor compliance with the norms of setting and implementing executive remuneration policies and poor procedures for both executives and non-executives. Further, the research also reported that some of the banks had either inadequately formed compensation committees or none at all. While also giving a call to better compensation practices to support sound corporate governance, this research has mooted different questions related to governance, especially in the banking industry.

So, the empirical review synthesis of the formulated research questions reveals how the complex correlation between corporate governance mechanisms and bank performance in Ghana has surfaced in the cumulative of the established empirical studies. Studies summarize that all sorts of board arrangements like independent committees, appropriate board size, CEO duality, executive remuneration, etc critically affect financial performances like ROA and ROE. As an example, board independence, which is otherwise considered positive for performance, has two such variables that are CEO duality and lack of board gender diversity. Besides, the importance of the right risk management practices also accentuates the importance of sound corporate governance structures. Insights from this paper therefore require finer appreciation and specific interventions to corporate governance in the banking sector to enhance financial stability and operational robustness.

2.4.1. Bank size as a moderator in governance-performance relationships

The moderating role of bank size in the relationship between corporate governance and financial performance has emerged as a critical area of study in banking literature. Owiredu and Kwakye (2020) have used the annual reports and financial statements from 2007 to 2016 of the banks operating in Ghana to understand the impact of corporate governance on their financial performance. Their empirical work used random effects and established that board size has a positive relationship with the performance of the banks focusing on Return on Asset and Return on equity. Furthermore, results in terms of hypothesis 7 also revealed a statistically significant positive correlation between the dependent variable and foreign ownership in the context of ROE. However, the same study revealed a positive but insignificant correlation between board independence, and test of institutional ownership, on the one hand, and both the ROA and ROE on the other. Combined with the previous literature, this research also provides evidence for the proposition that a higher level of corporate governance is necessary for the increased financial performance of the banking sector focusing on the key aspects of board of directors and ownership concentration (Tornyeva and Wereko, 2012). These results are in congruence with existing debates in banking scholarship concerning the effectiveness of governance structures in propelling financial performance and operational effectiveness.

Diversified board expertise is therefore analyzed by Danso et al. (2023) concerning the firm performance of 128 public companies in Ghana, Kenya, and Nigeria, firm size and age are also incorporated. They were able to establish that corporate board diversity of professional backgrounds greatly influences Return on Assets (ROA) thus showing that board diversity improves performance. Nevertheless, using the measure of total accruals and the variable Tobin's Q for evaluating the firm performance, the coefficients are not statistically significant. Furthermore, the results reveal a negative moderating effect of both the size and age on the relationship between expertise diversity and firm performance whereby young and small firms gain more from board expertise diversity than large and old firms. According to the study, agency, resource dependence, and convergence theories should be integrated, as are reveal the importance of strategic board composition for the improvement of financial performance, especially for relatively young and small businesses. According to the authors, the self-interested Governance Theoretical argument suggests that corporate executives should pay special attention to the board expertise diversity to achieve the right financial returns, though the benefits might be tapering off as the firm size, and market maturity increase. Also, Kamil and Appiah (2022) examine the role of board gender diversity on the cost of debt in developing economies for 17 non-financial firms listed in Ghana for the period 2007-2017. Using routine data, mainly ordinary least squares, two-stage least squares, and a generalized method of moments, this study establishes the cost of debt as positively related to board gender diversity. However, the moderation of firm size by gender diversification is inversely related to the cost of debt, which means that firms with gender-diverse boards can access capital at a lower cost. This indicates that in countries where corporate governance is pursued less stringently the size and gender balance of the firms' board of directors is fundamental in defining the financing conditions of the firm. The authors mention some limitations and note that both the method used and the focus area enable the identification of important practical realistic implications, namely, intensified gender diversity on boards proves beneficial for shareholders of large nonmanufacturing firms in terms of savings on debt costs.

Taken together, the reviewed empirical works underscore the prominent moderating function of bank size in the link between governance and performance within the banking space. Owiredu and Kwakye (2020) reveal that analyzing Ghanaian banks and their financial information using hypotheses 1 and 2, shows the size of the board of directors, and foreign ownership has a positive effect on financial performance in return on assets and return on equity. However, Danso et al. (2023) state that the effectiveness of board expertise also increases ROA and their empirical analysis demonstrates that size and age negatively condition this effect. Finally, Kamil and Appiah (2022) uncover that firms with gender-diverse boards will not only have a better cost of debt but especially the largest firms, again underlining the concept of board composition concerning financing factors. Altogether, these research findings point to the significance of the regulators and policymakers to develop specific governance frameworks that respond to the size of the banks to enhance the performance and effectiveness of the operations of the banking institutions.

2.4.2. Ownership type as a moderator in governance-performance relationships

The issue of how the ownership structure affects corporate governance effectiveness in banking institutions has attracted considerable interest in the financial literature, especially concerning its implications for performance. For example, Arouri et al. (2011) investigated the influence of Ownership structure and board characteristics on the performance of the banking industry within GCC nations. In their research work, they discovered that while the banking industry benefited from the influence of foreign ownership, concentrated ownership had the opposite effect. Interestingly, the results further revealed that institutional ownership together with other governance variables including CEO duality and the board's size could not influence performance in the quoted firms. The above results have evidence for enhancing the internal control systems of the GCC banks to enhance the performance and efficiency of the governance systems. The study will argue that governance strategies differ because of the ownership profiles in the region.

To provide more context to this discourse, more recent work by Boachie (2023) undertook an analysis of the following moderated relationship: the moderating role of ownership structure in the link between corporate governance and financial performance among 23 Ghanaian sampled banks. In the empirical analysis, the study utilized the panel data with 414 observations for 18 years and revealed that audit independence, CEO duality, and non-executive directors have a significant positive effect on the bank's performance. What is more important to notice, is that while foreign-invested companies were also affected by the existence of governance practices, the impact was even more pronounced. Therefore, this paper emphasizes the implication of ownership structure towards corporate governance of Ghanaian banks especially for the foreign-owned ones.

A distilled empirical research study by Adjei-Mensah et al. (2015) focused on the impact of executive pay and ownership cost on the loan portfolio of 26 banks in Ghana over the period between 2003 and 2011. They found out that the efficiency in the management of non-performing loans was high among banks with considerable director shareholding and institutional ownership. There was also better loan quality amongst the publicly listed banks. Surprisingly, the magnitude of executives' remuneration did not adversely affect the loan monitoring process, even though aspects such as equity ratio, depreciation of the exchange rate, and higher net interest margins had negative effects on loan quality. This gives credit to the ownership structure in enhancing the performance of loans. The findings of the study when moderation analysis of the selected variable of ownership type is investigated for the banking sector regarding the governance-performance relation enlighten us on the impact of the types of ownership structure on the effectiveness of corporate governance. Arouri et al. (2011) and Boachie (2023) have provided support in their respective papers for the moderated nature of the ownership effects stating that although foreign ownership has a positive effect on performance with good corporate governance practices concentrated ownership reduces this positive effect. Further, the study by Adjei-Mensah et al. (2015) shows that institutional ownership had a positive relationship with efficient control over loans; therefore, structures of ownership fundamentally influence governance performance. Taking together, these works stress the importance of the specificity to ownership characteristics, thus reiterating the message that good governance in the banking industry depends on understanding the implications of the ownership types for the appropriate governance strategies at different organizations.

2.5. Firm Characteristics and Financial Performance

2.5.1. Firm size and financial performance

The relationship between firm size and financial performance with special reference to corporate finance literature has well researched on the topic of firm size and its effect on financial performance. Large banks are generally able to take advantage of economies of scale whereby they can offer better production efficiency and gain better performance (Andoh et al., 2023). Abor (2005) posited that Ghana's larger banks borrow cheaply in the capital markets and hence their ability to command higher profitability than those of the small banks. Nonetheless, Boachie (2023) opines that the relationship may not be a straight line since the larger the bank is the more prone it is to bureaucracy hence it might not be as flexible as it should be in responding to market forces.

2.5.2. Ownership type and financial performance

It is important to note that the kind of ownership structure that dominates different countries also influences the firm's financial performance. In a cross-section analysis of the performances of the identified foreign-owned and locally-owned banks in Ghana, Agyei-Mensah (2019) discovered that there is a significant difference in the profitability ratios and operational efficiency between the two categories of the banks. This superior performance has been blamed on improved risk management, improved technological adoptions, and improved corporate governance mechanisms among others. On the other hand, Boateng et al. (2015) show that state-owned banks have some strength of government support and a strong customer base their analysis reveals poor performance because of political interference and less focus on profit-oriented goals rather than business volume.

2.5.3. Asset tangibility and financial performance

Asset tangibility and financial performance are significant research areas of paradigms within the banking literature. The evidence suggests that banks with greater tangible resources may secure better collateral in borrowing, resulting in decreased borrowing costs and, accordingly, higher financial performance (Boateng, 2018). However, Musah et al. (2020) opine that in the current banking sector, other forms of capital including brand name, customers, and technology are perhaps even more valuable than tangible capital. The analysis of the Ghanaian banks unveiled their findings that frequent investment in technology and human capital yielded a better financial return than the bigger physical asset treasure of the banks.

2.5.4. Interest coverage and financial performance

Based on the empirical findings made so far, the interest coverage ratio which measures the capacity of a bank to meet required interest has been pointed out as a key measure of the financial performance level. In their study, Anarfi et al. (2016) observed a positive causality link between Ghanaian commercial banks' interest coverage ratios and financial performance. Lenders with high-interest coverage exhibit better cash flow management capabilities and better asset turnover. However, as Gyamfi Gyimah et al. (2021) suggest, high interest cover namely at levels above the industry average might be seen as being too conservative which can reduce business exposures and possibilities as well as general profitability.

2.5.5. Interrelationships between firm characteristics

Just as an author may engage several related factors while writing a book, these firm characteristics are not independent of each other but rather may affect each other in determining financial performance. For example, Malahim and Yusri Al Khatib (2018) concluded that the tangibility ratios and better interest coverage are higher for larger banks leading to higher returns on each other. Likewise, ownership type affects the size of a bank, and its management impacts or concerns with tangible assets and interest coverage (Amoako-Tuffour et al., 2022).

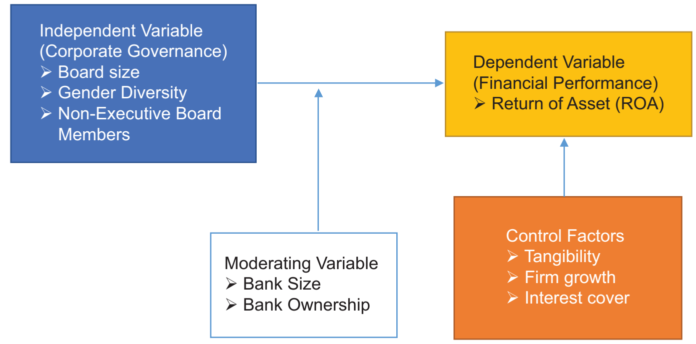
The literature thus shows the various linkages between the antecedent attributes of firms and financial performance in the banking industry in Ghana. Some of the most used self-test variables, like size and foreign ownership, have positive correlations with self-test measures of financial performance, albeit not always. Variables like asset tangibility and interest coverage help to explain the organizational performance and risk management of a bank. Knowledge of these relationships and their interactions is essential for bank managers, the regulator, and policymakers to formulate strategies for improving the financial performance of the commercial banks in Ghana.

2.6. Conceptual Framework

The conceptual framework for the study is designed to illustrate the hypothesized relationships between corporate governance characteristics, and financial performance of commercial banks in Ghana. The framework integrates insights from the theoretical and conceptual literature review to guide empirical analysis and hypothesis testing. The conceptual framework is shown in Figure 1.

According to Agency Theory, corporate governance is critical for improving performance of organizations. This is because institutionalization of corporate governance helps to align the interests of managers with those of the owners, promoting decisions that enhance performance. Thus, from Figure 1, corporate governance indicators, namely board size, non-executive directors on board and gender diversity of the board are expected to improve performance of banks. However, the banks are not the sames, in terms of size and ownership. Therefore, from Figure 1, the study also estimated the moderating roles of bank size and ownership type in the relationship between corporate governance indicators and performance of banks.

Figure 1: Conceptual framework



3. RESEARCH METHODOLOGY

A research approach is a comprehensive strategy or technique that an investigator uses to investigate a particular research topic or subject (Snyder, 2019). The type of study problem, the goals of the investigation, and the resources at hand all influence the research methodology. It guides the whole process of conducting research, including data collection, analysis, and interpretation, and serves as a framework for it. The literature now uses three basic types of study methodologies. They consist of mixed, qualitative, and quantitative research methods (Alavi et al., 2018). The goal of the qualitative research technique is to analyse and understand the variety and complexity of human experiences, behaviours, and social occurrences. It is a flexible and diverse method that puts context and human interpretation ahead of statistical analysis and numerical facts. In the social sciences, psychology, anthropology, education, and other fields where comprehending social dynamics and human behaviour is vital, qualitative research is widely used (Alavi et al., 2018; Jager et al., 2017).

Qualitative research offers numerous benefits, but it also has restrictions and disadvantages. In qualitative research, the way researchers interpret their findings is crucial. Due to subjectivity, researchers could unintentionally impose their opinions on the data. Qualitative research frequently uses small sample sizes, which makes extrapolating results to a wider population challenging. Furthermore, Shannon-Baker (2016) asserts that the focus should be on understanding particular situations rather than generalizations. Qualitative research requires extensive data collection and processing, which can take a lot of time. Interviewing, transcribing, and data processing may all take a lot of time. According to Shorten and Smith (2017), the interpretive nature of qualitative research makes it challenging for other researchers to precisely replicate findings. This may affect the reliability of the research. It is also asserted that statistical analysis and quantitative result comparison may be challenging when dealing with qualitative research as it does not yield numerical data. Particularly in face-to-face interviews or group settings, participants in qualitative research may provide socially preferred answers, which might lead to inaccurate or inadequate data (Hesse-Biber, 2015). Because of this, the qualitative method is unsuitable for the current investigation. Neither is the mixed method as it contains a qualitative component which is not appropriate for the objectives of the current study.

This study relied on the use of the qualitative research approach to aid in the investigation of the impact of corporate governance on the financial performance of commercial banks in Ghana. Watson et al. (2017) define the quantitative research method as the process of characterizing and explaining the processes that the observations may reflect via the use of numerical values derived from the observations. This method makes use of approaches as well as empirical statements, which are descriptive statements regarding the meaning of the instances in actual terms as opposed to assertions about the ought of the situations. Additionally, it makes use of empirical assessments to determine the degree to which a policy or program satisfies a norm or standard. Lastly, a mathematical analysis is performed on the given numerical data. According to Chu and Ke (2017), quantitative research is an empirical approach to study that is methodical in gathering and analysing numerical data. This kind of study is widely used in business and marketing, as well as in the social and scientific disciplines.

The availability of a platform for the objective analysis of the data is one of the elements that led to the selection of the quantitative research technique. Quantitative research is an excellent technique for many research challenges because of its many advantages. This ensured objectivity in the investigations of this study and provide much-needed credibility to the findings made after the analysis of the study. According to Fetters and Freshwater (2015), for precise comparisons between groups or scenarios, this approach is perfect. Researchers can determine the statistical significance of discrepancies by quantitatively examining their extent. Investigating outcomes that can be measured, quantified, and reported quantitatively is another area in which quantitative research excels (Ahmad et al., 2019), making it ideal for areas of research where precise measurement and numerical data are required as in the case of the current study. Large-scale data collection and processing in quantitative research can be more effective than in qualitative techniques. Many volunteers can be used in surveys and studies to save time and money. Additionally, quantitative data may be graphically represented using charts, graphs, and tables, which facilitates understanding and analysis of the results for audiences and researchers (Fetters and Freshwater, 2015). It facilitates evidence-based decision-making by providing empirical information and statistical analysis. These justifications served as the foundation for the decision to analyse the objectives of this study using a qualitative research approach.

3.1. Research Design

The overall strategy a researcher selects to logically and coherently combine the various study components and guarantee that the research issue is satisfactorily addressed is known as the research design (Wright et al., 2016; Hathcoat and Meixner 2015). It directs the processes for measurement, data collecting, and analysis. At the beginning of each good research endeavour, the researcher selects a framework of methodologies and procedures to be used and exploited throughout the study effort. Academics utilize a variety of research designs, including exploratory and descriptive, as well as explanatory, correlational, experimental, and diagnostic (Schoonenboom and Johnson, 2017). The explanatory research design was applied in the current study to analyse the goals of the investigation. The method known as explanatory research design was created to look at phenomena that had not previously been well examined or understood. Its main goal is to give information on where to get a little bit of information.

By using this approach, the researcher has a broad view and may use research as a tool to guide them toward probable difficulties more quickly. Determining the purpose and subject of an investigation is its aim. Sovacool et al. (2018) define explanatory research as a research technique that examines the reasons behind events in the absence of substantial proof. It can help you anticipate future occurrences, get a deeper grasp of a subject, and figure out how or why a particular phenomenon occurs. According to Toyon (2021), explanatory research design may also be defined as a "cause and effect" paradigm that addresses hitherto unseen patterns and trends in the available data. This leads to the popular perception of it as a kind of causal inquiry. Enhancing comprehension of a certain topic is one of the most important aspects of explanatory study (Kaushik and Walsh, 2019). Moreover, it enables the investigator to get a comprehensive comprehension of the subject matter and modify subsequent research inquiries to enhance the outcomes of the investigation (Sovacool et al., 2018). This makes the explanation research design ideal for investigating the impact of corporate governance on the performance of commercial banks in Ghana.

3.2. Population and Sampling

The population is the full set of people, things, or events that the researcher is interested in and that share certain common features (Hasan 2014; Sutton and Austin, 2015). This research will be conducted in commercial banks, particularly those that have published audited financial reports and have been in operation for 10 years or more. According to Nkrumah (2018), there are reportedly about 27 commercial banks in Ghana.

However, the study sampled some of the banks in Ghana. Two categories of sampling strategies utilized in research are probability and non-probability sampling processes (Pace, 2021). All objects in the population have an equal chance of being selected when using probability sampling methods; this is not the case when employing non-probability sampling techniques (Campbell, 2020 et al.; Lamm and Lamm, 2019). The study used convenience sampling techniques in sampling the banks in Ghana for the study. The choice of the convenience sampling strategy in this study was determined by a number of factors, such as data availability and accessibility. The study conveniently sampled banks that are listed on Ghana Stock Exchange. This is because, banks listed on Ghana Stock Exchange are mandated by law to publish their audited financial statements annually, making it possible to access data from those banks. The banks conveniently sampled were Absa, Ecobank, GCB, National Investment Bank, Soceite General, Agricultural Development Bank, and Access Bank.

3.3. Source of Data

Data for this study came from secondary sources. Among these materials were the annual financial statements and management reports of the chosen Ghanaian commercial banks over the period of 2012-2022. Key financial indicators were picked from the audited financial statements to compute the variables needed for the study. From the financial statements, the study computed Return on Assets (ROA), which was used as proxies to measure the financial performance of the commercial banks was sourced from the published financial statements of the commercial banks. The same data retrieval process was performed to collect data on other bank-specific factors like tangibility, bank size, bank growth and interest cover. However, data on corporate governance like board size, proportion of non-executive directors, and gender diversity of the board were collected from the annual management reports of the banks over the period 2012-2022.

The acquired data were inspected to identify and address outliers as well as to find and fix data errors. To identify and fix data inconsistencies, this study employed summary statistics, such as mean, minimum, and maximum values for each variable. Based on the summary statistics, any outliers that resulted from typing mistakes made when transferring data from the financial statements to Excel were suitably fixed by cross-referencing the relevant sources. A manual search of the database revealed missing data. In the research, the mean observation of these figures served as a representation of the missing observations. The mean observation from 2 years before and following the year when the missing data was recorded was used to fill in the missing observation.

3.4. Variables of Study

The variables that were used in the study were classified into four distinct categories dependent, independent, moderating variables and control variables. Descriptions of these variables are briefly given below:

3.4.1. Dependent variable

The dependent variable of the study is the financial performance of the commercial banks in Ghana. This metric is measured as the Return on Assets (ROA). The return on assets variable is measured as how profitable the commercial banks can be in relation to their total assets, measured as

$$ROA = \frac{Net\ Profit}{Total\ Assets}$$

3.4.2. Independent variable

The independent variable in this study was corporate governance. Corporate governance had three indicators as follows;

1. Board size – This is taken to refer to the total number of individual members serving on the board of directors of the commercial banks
2. Proportion of non-executive directors – The ratio of non-executive members serving on the board of directors to the total number of directors on the board
3. Gender diversity – The is the ratio of number of females on the board to the total number of the board.

3.4.3.Control variables

The study employed four control variables to aid in the model calibration. The variables were bank size, tangibility, bank growth and interest cover.

1. Bank size – This is the natural log of the total assets of the commercial bank
2. Interest cover – This is how well a bank can pay the interest due on outstanding debt. It is measured in this study as the ratio of bank's earnings before interest and taxes to its interest expenses during a given period
3. Tangibility – This is the ratio of total asset less total liability and intangible asset to the total asset
4. Bank growth opportunity – This is measured as price earnings ratio which is the ratio of share price to profit per share.

3.5. Model Specification

The study investigated the impact of corporate governance on the financial performance of commercial banks, using Fixed Effect Model (FEM). FEM statistical method commonly used in panel data analysis, where data is collected across multiple entities over time. The FEM controls for unobserved variables that do not change over time but may influence the dependent variable. This is done by using only the within-group variation (Cochrane, 2001). The general form of FEM is given in Equation 1.

$$Y_{i,t} = \beta_0 + \sum_k \beta_k X_{k,i,t} + \bigcup_i + t_i + \varepsilon_{i,t} \qquad \textit{Eqn } 1$$

Where $Y_{i,t}$ is the dependent variable of a bank i in year t; X is the vector of the independent variables; U_i is the time-invariant unobservable company-specific effects; t_i is a time-fixed effect and ε is the error term. Therefore, based on Equation 1, the study specified the effect of corporare governance indicators on the indicator of performance as shown in Equation 2.

$$ROA_{i,t}=\beta_0+\beta_1 BordZ_{i,t}+\beta_2 BoardGen_{i,t}+\beta_3 Non\text{-}ExD_{i,t}+\beta_4 BankZ_{i,t}+\beta_5 Tan_{i,t}+\beta_6 IntCov_{i,t}+\beta_7 BankG_{i,t}+f_i+t_i+\gamma_{i.t} \qquad \textit{Eqn } [2 \text{ objective } 1]$$

Where ROA is Return on Assets; BoardZ is board size, BoardGen is gender diversity of the board, Non-ExD is the proportion of non-executive directors on the board. Als, BankZ is banks size, Tan is tangibility, IntCov is interest cover and BankG is bank's opportunity for growth. Also, the study introduced moderators, namely bank size and bank ownership type into equation 2 to determine whether bank size and bank ownership have many significant role in the relationship between corporate governance and return on asset. Ownership was measured either state-owned banks or privately owned-banks where privately owned banks was coded as 1 and state-owned banks was used as reference category. The study interacted bank size with each of the indicators of corporate governance like BankZ*BoardZ, BankZ*BoardGen and BankZ*Non-ExD to represent interaction of bank size and board size, interaction of bank size and gender diversity of board of directors and interaction of bank size and non-executive directors respectively. Also, the study interacted ownership with each corporate governance indicator as OWN*BoardZ, OWN*BoardGen and OWN*Non-ExD which presented interaction between ownership and board size, interaction between ownership and gender diversity of the board and interaction between ownership and non-executive directors on the board respectively. The moderating models were specified as shown in Equation 3 ans Equation 4 for moderating od bank size and ownership type respectively.

$$ROA_{i,t}=\beta_0+\beta_1 BordZ_{i,t}+\beta_2 BoardGen_{i,t}+\beta_3 Non\text{-}ExD_{i,t}+\beta_4 BankZ_{i,t}+\beta_5 Tan_{i,t}+\beta_6 IntCov_{i,t}+\beta_7 BankG_{i,t}+B_8 BankZ*BoardZ_{i,t}+B_9 BankZ*BoardGen_{i,t}+B_{10} BankZ*Non\text{-}ExD_{i,t}++f_i+t_i+\gamma_{i,t} \quad Eqn\ [3\ \text{objective 2}]$$

$$ROA_{i,t}=\beta_0+\beta_1 BordZ_{i,t}+\beta_2 BoardGen_{i,t}+\beta_3 Non\text{-}ExD_{i,t}+\beta_4 BankZ_{i,t}+\beta_5 Tan_{i,t}+\beta_6 IntCov_{i,t}+\beta_7 BankG_{i,t}+B_8 OWN_i+B_9 OWN*BoardZ_{i,t}+B_{10} OWN*BoardGen_{i,t}+\beta_{11} OWN*Non\text{-}ExD_{i,t}+f_i+t_i+\gamma_{i,t} \quad Eqn\ [4\ \text{objective 3}]$$

3.6. Data Analysis Technique

The data analysis was purely quantitative. STATA version 17.0 was used as software for all the quantitative analyses. The data analysis for the study was in two parts. Firstly, the study made use of a summary analysis where measures of central tendencies (mean), measure of dispersion (standard deviation) were conducted on each study variable. Again, the study employed FEM to estimate the impact of corporate governance on the financial performance of commercial banks in Ghana as well as the moderating roles of banks size and ownership type in the relationship between corporate governance and return on asset. Before the estimation, the study performed correlation analysis, multicollinearity and heteroskedasticity to ensure that the data was free from problem of multicollinearity and heteroskedasticity.

4. RESULTS AND DISCUSSION

The study used minimum values, maximum values, mean and standard deviation values to describe the study variables over the period 2012-2022 as shown in Table 1.

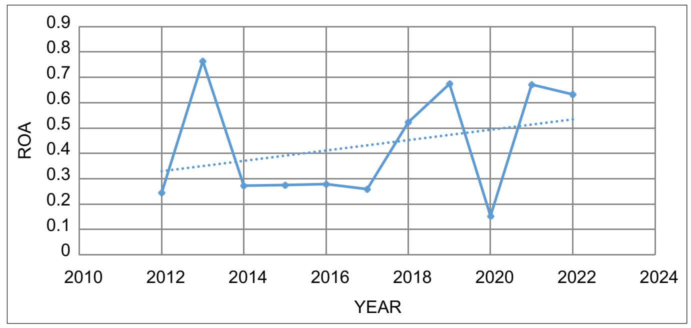
The descriptive results in Table 1 show that return n asset had the lowest value as 0.15 and increased to 0.76 within 2012-2022. However, return on asset averaged at 0.4 with standard deviation of 0.17. According to. return on asset of at least … gives an indication high managerial efficiency. The management of the banks on the average generated 0.4 returns from every asset, indicating a good performance of the banks. Th pattern of ROA of the sampled banks over 2012-2022 is shown in Figure 2 above.

From Figure 2, ROA recorded the lowest values in the year 2020 and the highest values in the years 2013. COVID-19 pandemic was on it peak in the year 2020 and this slowed down economic activities globally, possibly accounting for the lowest ROA in the banking sector in that year. However, in 2013, Ghana's economy was experiencing robust growth, driven by sectors like oil and gas, agriculture, and services, which boosted overall business activity which could possibly account for higher ROA.

Table 1: Summary statistics of study variables

Variable	obs	Mean	Std. dev.	Min	Max
ROA	77	0.4139183	0.1694456	0.1531886	0.7638862
Firmgrowth	77	3.577876	2.1778	−0.30721	8.298507
TANG	77	0.2940667	0.1542607	0.0772802	0.6034672
Intcov	77	15.38669	2.756319	6.139074	17.78503
FIRMSZ	77	11.42506	5.070263	5.160153	17.23038
GenD	77	0.3584416	0.096451	0.2	0.5
BShare	77	9.032762	2.945313	6.153189	14.6321
BSize	77	0.8915831	2.411653	1.609438	11.91175
NonEx	77	0.4363636	0.094464	0.3	0.6

Figure 2: Pattern of ROA over 2012-2022



4.1. Correlation Analysis

The study analyzed the correlation analysis of the study variables, using pairwise correlation analysis with Bonferroni-Adjusted significance level at 5%. The correlation analysis are shown in Table 2.

From the correlation analysis in Table 2, all the corporate governance indicators have significant positive relationship with return on asset. For example, gender diversity and return on asset have significant positive relationship (r = 0.7568*) and this relationship significant at 5%. This implies that if banks have more females on their board, the return on asset will increase. On the other hand, when the banks have reduce the number of females on their boards, the return on asset will decrease. Also, non-executive directors and return on asset have significant positive relationship (r = 0.4935*). Therefore, the more banks have non-executive directors on their board, the higher the return on asset. On the other hand, the lower the number of non-executive directors on the board, the lower the return on asset. Finally, board size and return on asset have significant positive relationship (r = 0.6588*). Therefore, an increase in the board size significantly increases return on asset. On the other hand, a decease in the board size significantly decreases return on asset.

4.2. Diagnostic Test

4.2.1. Multicollinearity test

Multicollinearity can cause the standard errors of the coefficients to be larger than they would be otherwise, making it difficult to determine if predictors are statistically significant. Moreover, with the problem of multicollinearity, coefficients of correlated predictors can become very sensitive to changes in the model or the data, leading to inconsistent and unreliable estimates. Therefore, it is important to check is the data set has problem of multicollinearity

Table 2: Pairwise correlation analysis

Variables	ROA	Firmgrh	TANG	intcov	FIRMSZ	GenD	NonEx	BSize
ROA	1.0000							
firmgrowth	0.7945	1.0000						
TANG	−0.1046	−0.1202	1.0000					
intcov	0.2042	0.1840	−0.0747	1.0000				
FIRMSZ	0.8106	0.7218	−0.2497	−0.2067	1.0000			
GenD	0.7568	0.6226	−0.2896	0.1729	0.7072	1.0000		
NonEx	0.4935	0.4135	−0.0598	0.0504	0.4494	0.3702	1.0000	
BSize	0.6588	0.6795	−0.4125	0.3643	0.6416	0.5768	0.4224	1.0000

and if so, deal with it before the model estimations. The study test for the multicollinearity problem using Variance Inflation Factor (VIF) and the results are shown in Table 3.

From Table 3, the VIF score for each predictor is <4.0. Therefore, the predictors are not strongly correlated and there is no serious multicollinearity problem in the data set.

4.2.2. Test for heteroskedasticity

Heteroskedasticity is a situation where the variance of the errors in a regression model is not constant across all levels of the independent variables. This can lead to inefficient estimates and unreliable hypothesis tests; hence, the need fto check for heteroskedasticity and address if it is present in the data set. The study test for heteroskedasticity problem, using Brusch-Pagan/Cook-Weisberg test. The Brusch-Pagan/Cook-Weisberg test results shows that Chi-square (1) = 2.74 with P = 0.0979. Therefore, according to the test result, there is no heteroscedasticity problem in the data set. However, the study still used robust standard error to make the parameter estimates more consistent and efficient.

Hypothesis 1: Corporate Governance and Return on Assets

This section of the analysis tested hypothesis 1 where the null hypothesis says that corporate governance variables like gender diversity, board size and non-executive directors do not have statistically significant impact on return on assets. The study tested this hypothesis using fixed effect model where the standard errors were robust. The results are shown in Table 4.

From the estimated results in Table 4, only gender diversity has statistically significant positive impact on return on assets (Coeff. = 0.3726; Std. Err = 0.04484; P = 0.000). Remaining indicators of corporate governance, namely board size (Coeff. = −0.008; Std Err = 0.0085; P = 0.373) and non-executive directors (Coeff. = 0.2454; Std Error = 0.1016; P = 0.052) do not have statistically significant impact on return on assets. Therefore, the study rejects the null hypothesis that gender diversity does not significantly impact return on assets in favor of the alternative hypothesis that gender diversity significantly impacts return on asset. However, the study accepts the null hypothesis that board size and non-executive directors do not significantly impact return on asset. Gender diversity brings different viewpoints and ideas, fostering innovation and better problem-solving, leading to higher return on assets. Also, gender diversity leads to balanced and informed decisions, leading to more effective strategies. The findings is consistent with other studies. For example, Brahma

Table 3: Variance inflation factor for multicollinearity problem

Variable	VIF	1/VIF
FIRMSZ	2.10	0.164065
BSize	3.77	0.265514
Firmgrowth	2.98	0.335629
GenD	2.67	0.374854
Intcov	2.52	0.397464
TANG	1.36	0.732602
NonEx	1.33	0.750151

et al. (2021), drawing on critical mass theory by measuring gender diversity as levels of female representation in the boardroom, found a positive and significant relationship between gender diversity and firm performance. However, Marinova et al. (2016) found that there is no relation between board diversity and firm performance. Also, the findings on board size and non-executive directors are not consistent with previous studies (for example, Alobari et al., 2019). Alobari et al. (2019) found a negative correlation between the board size and profitability, which means that increasing the board size has an unfavorable impact on profitability. Also, Salau and Salau (2020) showed that a positive and significant significant relationship existed between board size and ROA. Also, presence of women in corporate governance is positively associated with firm financial performance (Amin et al., 2022).

Also, from the estimated results in Table 4, the firm growth, interest cover and firm size have significant positive impact on return on assets. A unit increase in firm growth significantly increases return on assets by 0.0159 units while a unit increase in interest cover significantly increases 0.0151. Also, a unit increase in firm size significantly increases return on assets by 0.0211. Therefore, it can be said that firm size increases return on asset more than firm growth and interest cover.

Hypothesis 2: Moderating Role of Firm Size in the Relationship Between Corporate Governance and Return Assets.

The part of the analysis focused on the moderating effect bank size on the relationship between corporate governance indicators and return on asset. The perform this analysis, the study interacted bank size with each of the three indicators of corporate governance, as FIRMZ*GenD, FIRMZ*BSize and FIRMZ*NonEx and the results based on fixed effect model with standard error as robust are summarized in Table 5.

From Table 5, the FIRMZ*GenD, FIRMZ*Bsize and FIRMZ*NonEx do not have statistically significant impact on

Table 4: Impact of corporate governance on return on asset

Variables	Cof	Robust std. err.	t	P>{t}	(95% conf. interval)
firmgrowth	0.0159348	0.0026045	6.12	0.001*	0.0095618, 0.0223078
TANG	0.061328	0.069708	0.88	0.413	−0.1092413, 0.2318974
Intcov	0.0150738	0.003923	3.84	0.009*	0.0054746, 0.0246729
FIRMSZ	0.0211001	0.0038934	5.42	0.002*	0.0115732, 0.0306269
GenD	0.372641	0.0448378	8.31	0.000**	0.2629269, 0.482355
BSize	−0.0081784	0.0084974	−0.96	0.373	−0.0289707, 0.012614
NonEx	0.2454445	0.1016878	2.41	0.052	−0.0033766, 0.4942657
_cons	−0.3018901	0.0421479	−7.16	0.000**	−0.4050223, −0.1987579
No. of obs.	77				
No. of groups	7				
Overal R-square	0.8458				
F (6,6)	98.4542				
p-value	0.000				
Sigma_u	0.04047055				
Sigma_e	0.06041322				
Rho	0.30975464				

Dependent Variable=ROA, **Significant at 1% and *Significant at 5%

Table 5: The role of firm size in the relationship between corporate governance and return on asset

ROA	Cof	Robust std. err.	t	P>{t}	(95% conf. interval)
firmgrowth	0.016539	0.0023192	7.13	0.000**	0.0108643, 0.0222138
TANG	0.0491645	0.0782527	0.63	0.553	−0.1423131, 0.2406421
intcov	0.015149	0.0039936	3.79	0.009*	0.005377, 0.2406421
FIRMSZ	0.016828	0.0100196	1.68	0.144	−0.0076891, 0.0413451
GenD	0.2212061	0.1548726	1.43	0.203	−0.1577534, 0.6001657
BSize	0.0039212	0.0116366	0.34	0.748	−0.0245525, 0.0323949
NonEx	0.0282424	0.1799484	0.16	0.880	−0.4120756, 0.4685604
BankZ*BoardZ	0.0088623	0.0127379	0.70	0.513	−0.0223062, 0.0400308
BankZ*BoardGen	−0.000846	0.0006651	−1.27	0.250	−0.0024734, 0.0007814
BankZ*Non-ExD	0.0192382	0.0203619	0.94	0.381	−0.0305857, 0.069062
_cons	−0.258235	0.1328722	−1.94	0.100	−0.5833614, 0.0668915
No. of obs.	77				
No. of groups	7				
Overall R-square	0.8424				
F (6,6)	77.584				
p-value	0.0000				
Sigma_u	0. 04258056				
Sigma_e	0.06137831				
rho	0.32490563				

return on asset. This implies that bank size does not have significant moderating role in the relationship corporate governance indicators and return on asset. Therefore, the null hypothesis is accepted. Larger banks usually have more complex structures and operations, requiring robust governance to manage risks and ensure accountability. Effective governance in these banks can lead to better decision-making and ultimately enhance ROA. But the findings from this study say otherwise. The findings is not consistent with previous studies like Li and Chen (2018) who observed that gender diversity on the board has a positive impact on firm performance if and only if the value of firm size is less than some critical value. In addition, we also find that firm size may undermine the positive impact of board gender diversity on firm performance.

Hypothesis 3: Moderating Role of Bank Ownership in the Relationship Between Corporate Governance and Return Assets

Part of the analysis focused on the moderating effect bank ownership on the relationship between corporate governance indicators and return on assets. The perform this analysis, the study interacted bank size with each of the three indicators of corporate governance, as OWNERSHIP*GenD, OWNERSHIP*BSize and OWNERSHIP*NonEx and the results based on fixed effect model with standard error as robust are summarized in Table 6.

The estimated results in Table 6 also revealed that ownership of banks (that is, either government owned banks or privately owned banks) does not significantly moderate the relationship between corporate governance indicators and return on asset. This implies that the impact of corporate governance indicators on return on asset does not significantly differ between government owned banks and privately owned banks in Ghana. Private banks often prioritize profit maximization and efficiency, leading to stronger corporate governance practices that can enhance ROA. On the other hand, state-owned banks, however, may focus on broader social objectives, which can dilute the emphasis on profitability and impact ROA negatively. Therefore, the expected ownership structure significantly influenced the relationship between corporate governance indicators and ROA but this was not so. The findings contradict the finding by the effect of gender diversity on ROA is more pronounced in

Table 6: Moderating role of ownership type

Variables	Cof	Robust std. err.	t	P>{t}	(95% conf. interval)
Firmgrowth	0.0149277	0.0034796	4.29	0.005	0.0064135, 0.0234419
TANG	0.0451182	0.0676012	0.67	0.529	−0.1202958, 0.2105323
Intcov	0.0063182	0.0049643	1.27	0.250	−0.005829, 0.0184654
FIRMSZ	0.0134297	0.0047055	2.85	0.029	0.0019157, 0.0249437
GenD	0.24519	0.1005479	2.44	0.051	−0.0008418, 0.4912217
BSize	0.004901	0.0087467	0.56	0.596	−0.0165013, 0.0263034
NonEx	0.1551355	0.1108574	1.40	0.211	−0.1161227, 0.4263938
OWN	0.1559828	0.1579465	0.99	0.362	−0.2304983, 0.5424638
OWN*BoadGen	0.0526346	0.1912003	0.28	0.792	−0.4152158, 0.5204849
OWN*BoardZ	−0.0165027	0.0069447	−2.38	0.055	−0.0334959, 0.0004904
OWN*Non-ExD	0.1362591	0.1965713	0.69	0.514	−0.3447335, 0.6172516
_cons	−0.1314687	0.0392055	−3.55	0.015	−0.2274011, −0.0355364
No. of obs.	77				
No. of groups	7				
Overall R-square	0.8533				
F (6.6)	71.563				
p-value	0.000				
Sigma_u	0.0398955				
Sigma_e	0.06056066				
Rho	0.30263873				

privately owned companies' family ownership is a moderator (Amin et al., 2022).

5. CONCLUSION

Corporate governance is a critical mechanism for aligning personal determinations with organizational goals, ensuring effective management, accountability, and sustainable performance. In the context of Ghanaian banks, this study examined how corporate governance affects financial performance, measured by return on assets (ROA), and the moderating effects of bank size and ownership type. Corporate governance was assessed through three key indicators: board size, board gender diversity, and the proportion of non-executive directors, while controlling bank-specific factors such as tangibility, interest cover, and bank growth. The study utilized audited financial statements of seven commercial banks from 2012 to 2022 and employed a fixed-effects model based on Hausman's Specification Test.

The study found several key findings. First, among the corporate governance indicators, only board gender diversity demonstrated a statistically significant positive impact on ROA, suggesting that greater female representation on boards enhances bank performance. In contrast, board size and the proportion of non-executive directors did not exhibit a significant effect. Among the control variables, bank growth, interest cover, and bank size significantly improved ROA, while tangibility was not statistically significant. Second, the study found that bank size, although positively related to ROA, does not significantly moderate the relationship between corporate governance indicators and financial performance. This implies that the effect of corporate governance on ROA remains consistent regardless of whether a bank is large or small. Third, ownership, whether a bank is state-owned or privately-owned—was not found to significantly moderate the relationship between corporate governance indicators and ROA. This indicates that the benefits of effective corporate governance, particularly gender-diverse boards, apply uniformly across different ownership structures in the Ghanaian banking sector.

Based on these findings, the study proposes some recommendations to enhance bank performance through corporate governance. First, since board gender diversity significantly improves ROA, banks should consider appointing more female directors to strengthen governance effectiveness and performance. Second, given that bank size does not moderate the effect of governance on ROA, regulators and stakeholders, including the Bank of Ghana, should ensure consistent governance practices in both small and large banks. Finally, since ownership type does not change the governance–performance relationship, both state-owned and privately-owned banks should prioritize effective governance practices, with particular consideration to gender diversity on boards.

While this study makes a novel contribution by incorporating the moderating roles of bank size and ownership type, it is not without its limitations. The main limitation was the limited number of observations, which prevented the use of dynamic panel models such as the Generalized Method of Moments (GMM). Future research should consider expanding the sample size and employing dynamic models to capture potential lagged effects of governance on bank performance.

In conclusion, this study highlights that corporate governance, particularly board gender diversity, plays a vital role in enhancing bank performance in Ghana. The findings highlight that effective governance should be a strategic importance for all banks, irrespective of size or ownership structure, to ensure sustainable growth and financial stability.

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