

RURAL AND COMMUNITY BANKS' FINANCIAL PERFORMANCE UNDER THE INFLUENCE OF CORPORATE GOVERNANCE SYSTEM IN THE NORTHERN PART OF GHANA

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Abstract: The purpose of the study was to investigate the influence of corporate governance characteristics on the financial performance of Rural and Community Banks in the northern sector of Ghana. The study was quantitative in nature employing the explanatory research design in fulfilling its objectives. Descriptive statistics and panel data regression were applied to data gathered from sixteen rural and community banks over the years ranging from 2007 to 2019. It was found that board composition has a positive but insignificant influence on the return on asset and return on equity of rural and community banks in the northern part of Ghana. Board Committee has a positive and significant influence on the return on asset and return on equity of rural and community banks in the northern part of Ghana. CEO duality negatively and significantly influences ROA and ROE. In connection with the findings, we encourage rural and community banks to constantly evaluate their board composition and committees to determine what to put in place to strengthen them, while putting in place measures to separate CEO and chairmanship positions. The study will enlighten policymakers and management of rural and community banks in the northern sector of Ghana on how effective their board composition, board committee, and CEO duality have been while controlling for bank size and age.

Keywords: corporate governance, financial performance, community and rural banks.

I. INTRODUCTION AND BACKGROUND

Corporate governance concerns have gained considerable attention over the years because of their possible impact on business performance in both developed (Kowalewski, 2016; Lattemann, 2014) and emerging economies (Liedong and Rajwani, 2017). The failure of several US companies, the failure of some Ghanaian banking institutions, and banking mergers and acquisitions have shown that countries need to have a solid, resilient banking structure with appropriate corporate governance (Appiah et al., 2017). Better financial performance is frequently emphasised as one of the major

advantages of effective organisational mechanisms and structures. Mechanisms for corporate governance are crucial to guaranteeing competitiveness and sustainability (Ehikioya, 2009). For this reason, adequate ethics of corporate management compliance among banks is required (Kafidipe et al., 2021). The banking system is an essential sector based on trust, emphasising the necessity of corporate governance in business. In the Ghanaian context, rural and community banks, as a composite of the banking sector, play a critical role in the development of the country. The northern sector of Ghana is still underdeveloped, and the main activity is farming; it is dominated by rural and community banks. For this reason, we argue in favour of more studies on the boards of rural and community banks in the northern sector of Ghana, as corporate governance can be a sure way of improving the financial performance of rural and community banks towards the development of the northern sector of Ghana.

Corporate governance is defined as the systems, procedures, processes, and structures that control and manage corporations (Aboagye and Otiekku, 2010). Higher corporate governance will lead by preventing and regulating the expropriation of owners, ensuring more reliable decision-making, and thereby improving business performance. Corporate governance processes have been developed with a view to meeting needs, protecting stakeholders' rights, and ensuring their rights in reviewing, monitoring, and holding the management responsible for its actions (Coleman and Wu, 2020). If systems for corporate governance are lacking or weak, external investors will probably divert their capital to companies with appropriate corporate governance mechanisms to safeguard shareholder wealth (Puni and Anlesinya, 2020). Drawing on this, the present study argues that with appropriate corporate governance mechanisms, shareholders' wealth from rural and community banks can be protected. The rural and community banks are part of the broader class of microfinance institutions in Ghana (Aboagye and Otiekku, 2010). Rural and community banks are financial entities created for particular purposes to promote access by rural residents to institutional credit and banking services.

Corporate governance in Ghana has gotten more attention because of efforts made by different groups and the Commonwealth Corporate Governance Association (CEGA) (Appiah et al., 2017). In particular, among listed businesses in Ghana, legislation that promotes corporate governance and formal corporate governance structures and institutions is relatively undeveloped. The laws include the Companies Code 1963 as replaced by the Companies Act, 2019 (Act 992), and the Securities Industry Act 1993 (PNDC 333), as amended by the Security Industry Act, 2016 (Act 929), which provides for the management of all exchanges of stock, investors, securities dealers, and collective investment schemes authorised by the Securities Authority.

With respect to theoretical debates on corporate governance and performance, there is no uniformity in the empirical literature. The empirical corporate governance literature and literature on financial performance have shown conflicting outcomes with researchers using different variables on corporate governance (Bhagat and Bolton, 2013; Borlea et al., 2017; Cavaco et al., 2016; Fiador, 2013; Gaur et al., 2015; Makhoul et al., 2014; Bhagat and Black, 2002; Brown and Caylor, 2006; Bruno and Classens, 2007; Finegold et al., 2007; Hutchinson, 2002). While the positive relationships between corporate governance and business performance were identified by Bhagat and Black (2002), Gaur et al. (2015), Makhoul et al. (2014), and Kafidipe et al. (2021), the negative link was observed by Amartey et al. (2019), Cavaco et al. (2016), Fiador (2013), and Hutchinson (2002). Borlea et al. (2017) discovered no link between various performance metrics and different corporate governance variables. This study contributes to the debate on corporate governance and financial performance, with specific emphasis on rural and community banks in the northern sector of Ghana. The literature points to the fact that most of the studies have not focused much on rural and community banks in Ghana, which creates a gap the present study seeks to fill. The study, therefore, aims to examine the influence of the corporate governance system on the financial performance of rural and community banks in northern Ghana. Specific emphasis is given to the influence of the corporate governance system on return on asset and return on equity.

II. THEORETICAL AND CONCEPTUAL REVIEW

The corporate governance literature is influenced by some theories. The study focuses on agency theory and stewardship theory. A discussion of these theories is provided below. The study also reviews corporate governance, financial performance, and rural and community banks in Ghana.

a) Agency Theory

The agency theory forms the basis for the corporate governance system (Lan and Heracleous, 2010). The way owners and managers work together is a good example of the theory (Berle and Means, 1932). Following the agency theory, Cyert and

March (1992) made an illustration of the political philosophy between a master, who is assigned socially legitimate control over some activities, and a servant, who controls the information upon which the master executes his authority. The agency theory implies that unless the companies ensure appropriate governance structures to protect shareholders' interests, the actions of managers to work towards shareholder return maximisation will be avoided (Jensen and Meckling, 1976). The theory also states that managers, who are assigned corporate resources and are held accountable to them, will only act in a way that increases the value of shareholders rather than increasing their shares of the economic residual (Phan and Yoshikawa, 2000). Nguyen (2009) made a crucial point concerning the agency theory assumption that the principal and the agent are parties with different interests, yet both contribute towards utility development. Because of information asymmetry, the agent may act against the interests of the principal.

Agency theory pronounces shareholders, who represent the principals, to be firm owners. However, they are not required to necessarily involve themselves in the day-to-day running of the firm's operating activities. They rather ensure that the decision-making authority is well delegated to directors known to be the agents (Amartey et al., 2019). There is rather an assertion that agents will act in their interests to have an impact on the interests of the principals, as a result of the division of responsibility that occurs between control and ownership. This particular situation is even worsened as a result of the development of modern companies that have a huge number of separated shareholders whose delegated decision-making and multiple tasks have resulted in managers' involvement in moral hazard and adverse selection, raising the cost of agency (Dao et al., 2017).

The agency theory has been questioned by Rowe (1981). According to Rowe, incompatibility is the assumption that human duty and freedom are logically incompatible with causal determinism. As a consequence, the theory would be unappealing to compatibilists and would tend to be controversial. Ogeden (2002) further states that the agency theory is an oversimplification of the implicit conflict of interest in employer-employee relationships and that it is ineffective in dealing with the nuances and inconsistencies surrounding the use of accounting evidence in assessing and managing employee performance. Notwithstanding these criticisms, the theory is important to the study as it identifies the cause of the ineffectiveness of corporate governance. Put differently, the conflicting views of managers and owners may render the board ineffective, which can have detrimental effects on the company's performance. In the relationship between corporate governance and financial performance, good relationships between agents and principals matter.

b) Stakeholder Theory

The stakeholder theory is broadly functioning in further studies all over the world. The theory is also noted as the pivot among governance theories. Stakeholders are generally defined as persons capable of affecting or being affected by the attainment of the firm's goals (Freeman 1984). In other words, stakeholders are explained to be those persons or groups whose persistent involvement in the organization's operations is crucial to its survival (Naseem et al., 2017). Stakeholder theory was built and examined to establish the characteristics and qualifications of a real stakeholder in the form of a definition. The stakeholder theory reveals that a basic issue in identifying a stakeholder relates to the values and moral philosophies possessed by a firm. According to Sousa (2012), there is an ethical duty to account for individual and group preferences, which goes beyond their fiduciary duties to the shareholders.

The stakeholder theory defines a firm as a system with a reciprocated act of dependency, where the interests and expectations of the various stakeholders can be put in jeopardy in different ways, with their total satisfaction being crucial to keeping the balance of the ensemble (Pulido, 2018). Clarkson (1994), in contributing to the stakeholder definition, argued that an organisation has features that provide the organization, with the necessary legal and market infrastructure. The theory specifies that a corporate entity always works to ensure a balance or harmony in the preferences of its numerous and diverse stakeholders, purposely seeing to it that every stakeholder receives the maximum satisfaction in terms of interest (Abrams, 1951). The theory also makes it clear that better financial performance over a long-run period can be achieved by the proper ways that a firm uses in running its relationship with other related parties (Donaldson and Preston, 1995). Due to a firm's duty to be accountable to a wide range of people or groups than just its shareholders, the Stakeholder theory has taken dominance in corporate governance.

Since stakeholders are such a large and varied group, it has been said that one of the biggest problems they face is that a company's management cannot please all of them at once, especially when they have very different needs. According to Argenti (1993), organisations that aim to help all stakeholders are not only at a strategic disadvantage but also

unmanageable. The theory is significant to the study since it emphasises the impact of corporate governance on listed firms' financial results. As a result, it is important that managers do their best to satisfy stakeholders to strengthen the relationship between corporate governance and the financial performance of companies. In other words, board of directors should strategise to meet the needs of stakeholders while ensuring good financial performance.

c) Overview of Corporate Governance

The OECD (2004) defined corporate governance as the procedures and processes that a company uses to take direction and control. The rights and responsibilities which are disbursed among the various contributors to a firm, including the board, managers, stockholders, and other stakeholders, are well shown by corporate governance and laid down rules and procedures meant for making decisions. Rezaee (2009) also identified corporate governance as a procedure upon which shareholders encourage the act, where management works towards attaining shareholders' interests, which in turn contributes to better performance of the capital market. While La Porta et al. (2000) also look at corporate governance as a collective mechanism meant for safeguarding the interests of external investors from expropriation by insiders constituting the managers and controlling shareholders.

Corporate governance is also a way for stakeholders (financial providers) to make sure they get good returns on their investments. The system of corporate governance completely separates the owners and managers of a firm. Giannakopoulos et al. (2016) made the assertion that the importance of corporate governance in recent businesses is clearly shown in the currently growing research, which points out the ways corporate governance can, in a proactive way, be executed.

Kyereboah-Coleman and Biekpe (2008) reported that corporate governance has gained trust in Ghana. Other new steps have been laid down to counter corporate governance practices in Ghana. There is a stronger indication of its recognition in Ghana as a result of the growing number of firms embracing corporate governance. Danmak (2003) noted that there exist different types of corporate governance mechanisms aside from the internal control mechanisms that assist in the regulation of potential conflicts that occur among shareholders and managers. The external corporate governance mechanisms focus on better performances in the managerial labour market, the corporate control market, and government regulations (Coles et al., 2001). Here, it is the duty of the national government to establish, enforce, and improve mechanisms that effectively support external governance activities. From the sector of financial markets, a well-designed corporate governance system is set to encourage the efficient mobilisation of capital, management of risks, and realization of opportunities for investment (Banks, 2004).

d) Financial Performance

The power of a corporation to handle and deploy its resources so as to achieve its financial objectives is referred to as financial performance (Isami et al., 2020). The goal of performance appraisal is to encourage workers to meet organizational goals and objectives while also adhering to business norms expressed in the corporate culture, resulting in desired behavior and work performance (Hassan, 2010).

An evaluation of rural and community banks' financial performance from the Bank of Ghana (2001) report highlighted some banking crises due to fraud and embezzlement of funds, management incompetence, ineffective directors on the board, negligence, inappropriate procedures implemented during accounting processes, deviations from regulations pertaining to steps for granting loans or credits, increased operational costs owing to losses, corruption, and poor procedural steps in loan recovery. The above-mentioned Bank of Ghana (BoG) factors resulted in the closure of 23 rural and community banks in 2007 (Aboagye and Otioku, 2010) and 70 community banks (MFI) in 2016 (Aboagye and Otioku, 2010).

To assess financial performance, investors, market analysts, and researchers explicitly employ proxies such as net interest margin, loan-to-assets ratio, and return-on-assets (ROA) ratio, return on equity, Tobin's Q, and leverage, among others (Musah et al., 2019). Studies such as Appiah et al. (2017), Kafidipe et al. (2021), Musah and Adutwumwaa (2021), among others, have used return on asset and return on equity as measures of financial performance of banks. The study employs return on asset and return on equity as proxies for financial performance of selected rural and community banks. These measures are used because the study seeks to identify how corporate mechanisms are able to influence the profitability of rural banks through their assets and capital.

e) Rural and Community Banks in Ghana

The first rural bank emerged in the central area of Nyarkrom in 1976 (Musah and Adutwumwaa, 2021). Around 1980 and 1984, there were around 106 rural banks in Ghana, since many communities wanted to establish their own rural bank (Awo and Akotey, 2019). Founded in 1981, the ARB Apex Bank was created by rural bank managers and directors to encourage collaboration and information exchange in order to improve the financial performance of rural banks in Ghana (Owusu-Antwi et al., 2015). The Ashanti, Eastern, Brong Ahafo, and Central regions have the biggest number of rural banks in the nation, with a total of 140 rural banks operating in the country.

Rural and community banks have different ownership structures, management structures, and operational aspects (Awo and Akotey, 2019). They are community-owned and community-operated unit banks, excluding huge commercial banks. This provides them with geographic benefits, allowing them to better control moral hazards as well as adverse selection. The main roles of rural and community banks, according to the Bank of Ghana (2006), are:

1. To gather savings in rural areas and direct them into the supply of loans to rural microenterprises, agro-based businesses, and cottage sectors.
2. Act as catalysts for the establishment and expansion of microenterprises in rural areas, allowing for faster rural industrialization and general improvement of the economy of the country.
3. Monetize rural villages by instilling a formal banking culture in the population.

f) Conceptual Framework

Guided by the purpose of the study and preliminary literature, the study presents a simple conceptual framework made up of dependent, independent variables and control variables. The dependent variable is financial performance measured in terms of return on asset and return on equity. The independent variables have to do with board composition, board committees, and CEO duality. The control variables chosen are bank size and age. These variables are chosen because of their crucial roles in the survival of rural and community banks. Figure 1 is a display of the conceptual framework.

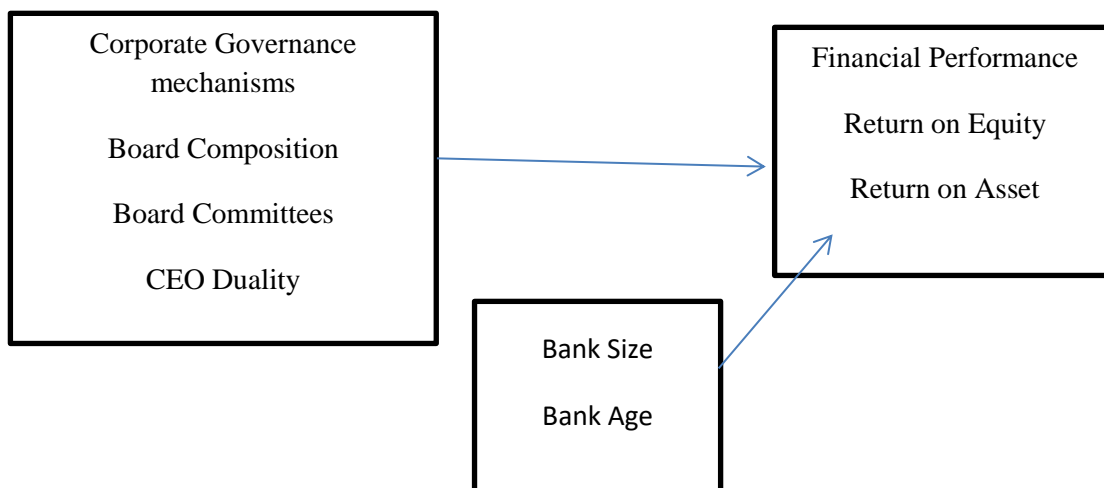


Figure 1 Conceptual Framework

Source: author's construct (2023)

III. EMPIRICAL REVIEW

Puni and Anlesinya (2020) pronounced the corporate governance system to entail all the mechanisms designed to control and direct managers and lessen the conflict of interest associated with its cost. Investors, business practitioners, regulators, and scholars all hold considerable interest in the governance mechanisms of modern firms. The mechanisms can generally be categorised as either internal or external. The internal mechanisms deal with the roles and functions of the ownership structure, the size of the board of directors, CEO duality, board composition, board committees, and the compensations of directors and executives, among others.

a) Board Composition and Financial Performance

Board composition is a part of corporate governance that makes sure there is a good balance of power on the board and that no one person or group of people makes most of the decisions. According to Goel et al. (2022), board composition is the sum of all outside directors appointed to the board during the course of a specific time period, divided by the size of the board. Since it may affect board discourse and the ability to regulate top management decisions and outcomes, board composition is a topic of discussion in corporate governance circles. Although there is no perfect formula, board composition has grown to be a major concern for corporate governance. In fact, non-executive and independent directors are seen as one of the most important factors for ensuring corporate responsibility and the expansion of the company (Tasman and Susanti, 2020).

According to Kyere and Ausloos (2020), too many non-executive directors might undermine the advising function of boards since executive directors promote information sharing between directors and management and provide knowledge that non-executive directors would find challenging to compile. Empirical research has shown that companies that submit false financial report information are inevitably going to have a weak board of directors that is overrun by insiders (Dalton et al., 2009). Many countries have strengthened recommendations for board composition and organisational independence (Puni and Anlesinya, 2020). The study looked at the size of the board and its impact on financial performance, as well as the board makeup in terms of insiders and outsiders on corporate boards. In the Pennsylvania restaurant business, inside directors had a substantial positive link with company success, according to a research by Song et al. (2017). Outside directors in India are found by Arora and Sharma (2016) to have a deeper level of intellectual expertise needed to improve performance. The outside or independent directors of listed Ghanaian companies bring a lot of essential expertise, experience, and information to the board that helps the board make better decisions and increase openness and accountability, which enhances the board's performance. This, however, runs counter to what Cavaco et al. (2016) and Fiador (2013) found. The conclusions of Guo and Kumara (2012), who showed a negative and significant effect, are in conflict with Gaur et al. (2015) findings, which indicated a positive and significant influence of board size on financial success. Based on the positive effect of the presence of both inside and outside directors on the financial performance of firms, we can infer that both inside and outside directors of a corporate board as well as board size play crucial roles in enhancing the financial performance of firms. We, therefore, hypothesized as follows;

H₁: Board composition positively and significantly connects with financial performance of rural and community banks in the northern part of Ghana.

b) Board Committee and Financial Performance

The audit committee's operative mechanism is used to address departmental dispute created by the division between corporate ownership and regulator. According to Kajola (2008), the audit committee is a subcommittee of the company's board of directors. The audit committee was established as the most effective mechanism for corporate governance, with the aim of improving the company's financial information's credibility and efficiency, and also raising public confidence in the financial statements (Oteng-Abayie et al., 2018; Tasman and Susanti 2020). In terms of financial statements and internal regulation, the audit committee has a special role of operating independently with no interruptions from the administrator, resulting in a reasonable assurance of secured interests and profits of the shareholders.

The Remuneration Committee's (RC) key focus is to advise and assist the board on matters concerning the remuneration of the board and senior management to be able to encourage and keep staff members. This will help the firm to recruit and retain the best resources accessible to boost shareholder value. The involvement of CEO and/or associated directors on the remuneration committee, according to academics and policymakers, facilitates shortcomings in CEO compensation systems, while deviating from shareholders' interests (Conyon, 2006). The crucial implication is that remuneration committees' ability to carry out its oversight duties is dependent on the CEO's freedom from the board of directors (Chancharat et al., 2012). In the absence of an impartial remuneration commission, CEOs will write and sign their work contracts, according to Ezzamel and Watson (2002). Of course, if the CEO controls the contracting mechanism, the pay-setting process will hasten the company's failure (Bebchuk and Fried, 2004).

According to the theory of agency, a board has to have a good balance of within and outside members to guarantee it continues to be impartial, independent, accountable, transparent, and fair. To help the board fulfil its duty to nominate and present newly appointed directors and incumbent directors to the annual general meeting for approval and reappointment,

the board establishes a nominating committee (Puni and Anlisinya, 2020). One of the key roles of the nominating committee is to conduct an annual evaluation of the board's composition and succession planning for the CEO and other senior positions (Puni, 2015). Agents must act with integrity, good faith, competency, duty of care, and loyalty free from conflict of interest and opportunism to ensure the principal's interest is always maintained (Borlea et al., 2017)). This can be attained if majority shareholders do not attempt to manipulate or influence the appointment, recruitment, or selection of board members. The qualifications, experiences, and competence of candidates for senior management positions, as well as the independence and availability of members of supervisory boards, must be taken into account throughout the appointment and selection process for better board performance. Puni (2015) found no evidence of positive relationship between nomination committee and financial performance. We however argue that for the board to have access to the breadth and depth of knowledge it needs to effectively carry out its duties towards better financial performance, it is important to increase the number of independent outside directors on the nomination committee (Goel et al., 2021). The nomination committee must have the requisite knowledge and skills for better decision making and strategic planning. Drawing on the above, it is hypothesised as follows;

H2: Board committees are positively and significantly connected to financial performance of rural and community banks in the norther sector of Ghana.

c) CEO duality and Financial Performance

The CEO and chairman both have different meanings and roles. The CEO is the most influential person in an organisation and is responsible and accountable for the general management of the organisation (Naseem et al., 2017; Appiah et al., 2017). A chairman of a firm is also the leader of the board, who is responsible for and held accountable for the firm's general functions (Tricker, 2012). The chairman sees to it that the board is well-conducted to properly execute its general obligations. An individual in the position of chairman is required to exercise behaviours of the highest integrity, decency, and honesty while focusing on establishing a clear objective in relation to the organization's values, culture, and behaviors. CEO dualities exert high power or authority over a CEO or chairperson, in the sense of giving an individual the power and mandate to set board meeting agendas in his or her favor, thereby ignoring intense monitoring (Tuggle et al., 2010; Tasman and Susanti, 2020). Coles et al. (2001) asserted that CEO duality causes a huge fall in the financial performance of a firm because organisations that practise CEO duality are likely to suffer bankruptcy, which destroys the organization's strength of survival.

Amartey et al. (2019) recommended that division among chairperson and CEO roles will better ensure independent boards. In conclusion, agency theory affirms that in a situation where a CEO is at the same time the Chairperson of the Board of a firm (CEO duality), there is a persistent fall in effectiveness in terms of monitoring the board over management. This encourages the division of the CEO-chairperson role. The following hypothesis is therefore provided:

H3: CEO duality negatively and significantly influences the financial performance of rural and community banks in the northern part of Ghana.

IV. RESEARCH METHODOLOGY

a) Research Method/Strategy

The research uses the quantitative research method to analyze the impact of corporate governance on the performance of rural and community banks in the northern sector of Ghana. Using the quantitative research method implies that the study employed numeric data to analyze and hence provide answers to the questions the research seeks to address. Quantitative research aims to quantify data through the use of statistical analysis (Roy, 2016).

b) Research Design

While employing the quantitative research method, the study uses the causal or explanatory research design to explore the relationship between corporate governance mechanisms and financial performance. The causal research design helps explain the cause and effect of variables and compares how one variable has effect on the other.

c) Population and Sampling

The study's population has to do with rural and community banks in the northern sector of Ghana. The northern part of Ghana is defined as consisting of Upper West Region, Upper East Region, North East Region, Northern Region, and

Savannah Region. According to the ARB Apex Bank, there are currently 144 Rural and Community banks in Ghana. Sixteen (16) of them are found in the northern part of Ghana. All the 16 rural and community banks were sampled for the study. The 16 rural and community banks were selected due to data availability for the selected variables in the year range, and for the purpose of generalizability.

d) Data Collection Procedure

The study employed panel data from 2007 to 2019 to analyse the effect of corporate governance on the financial performance of rural and community banks in the northern part of Ghana. Data on 16 rural and community banks over a period of 13 years was used for the study, resulting in 208 observations. One of the characteristics of panel data is that it combines cross-section and time series data to provide highly useful data. According to Gujarati (2007), data in panel form can quantify and detect impacts that are difficult to detect in time series data. The data source for the study is secondary. The secondary data for the study was gathered from the audited financial statements provided by Apex Bank and some rural and community banks in the northern part of Ghana. In Ghana, the ARB Apex Bank performs the functions of a central bank as well as a regulator for rural and community banks. A letter of request was sent to Apex Bank and, in some cases, individual rural and community banks to furnish us with audited financial reports. In certain cases, banks were able to provide figures directly from their system, which were confirmed by their financial reports.

e) Model Specification

The present study employs two panel data models as provided by Nyakurukwa (2022) and Musa and Adutwumwaa (2021). Panel data models are formulated to examine the objectives of the study. Model 1 determines the impact of board composition, board committees, and CEO duality on the return on asset of rural and community banks while controlling for banks' size and age. The model is formulated as follows:

$$ROA_{it} = \alpha + \beta_1 BCOMP_{it} + \beta_2 BCOMM_{it} + \beta_3 CD_{it} + \beta_4 BSIZE_{it} + \beta_5 BAGE_{it} + \varepsilon_{it} \dots\dots\dots(1)$$

Where:

ROA refers to Return on Asset; BCOMP represents board composition made up of inside directors, independent outside directors; BCOMM represents board committee made up of audit committee, nomination committee and remuneration committee; SIZE refers to bank size; BAGE refers to bank age; β_0 = is the constant term or the intercept; β_1 , β_2 , β_3 , β_4 , and β_5 are the coefficient of the selected independent variables and ε_{it} refers to residual or the error term

Model 2 examined the effect of board composition, board committee and CEO duality on return on equity of rural and community banks while controlling for bank size and age. The model is formulated as follows;

$$ROE_{it} = \alpha + \beta_1 BCOMP_{it} + \beta_2 BCOMM_{it} + \beta_3 CD_{it} + \beta_4 BOM_{it} + \beta_5 SC_{it} + \varepsilon_{it} \dots\dots\dots(2)$$

Where ROE refers to return on equity.

f) Description of Variables

Return on Asset

The efficiency of registered firms in the present study was quantified with Return on Asset (ROA) and is the dependent variable of the study. Authors that used a similar measure of performance in their studies on corporate governance practices include Zabri et al. (2016); Roy (2016). This makes using Return on Asset to measure performance in the present study valid and reliable. Return on Asset (ROA) is mathematically explained to be the net income before interest expense for a particular financial year, divided by the total value of assets for the period, as used by Orzalin and Mahmood (2018). For this study, ROA is computed as follows:

$$ROA = \text{Net Income before Interest Expense} / \text{Total Value of Assets}$$

The ROA is used for estimating the profit of a company in relation to its overall assets. According to Epps and Cereola (2008), ROA is used to identify the sum total of gains acquired as a results of capital assets invested, which includes company's profitability as well as shareholders and the general stakeholder's efficiency.

Return on Equity

The return on equity (ROE) is a financial performance indicator that is computed by dividing net income by shareholders' equity. Since shareholders' equity equals a company's assets less its debt, the return on net assets is referred to as ROE. The return on equity (ROE) is a measure of a company's profitability and efficiency in making profit. Since it assesses the level of profit the bank produced on its equity investment, return on equity was utilized as a measure of financial performance in the research. Return on Equity equation was provided as follows:

$$\text{ROE} = \text{Net Income} / \text{Shareholder Equity}$$

Board Composition

This measures the number of non-executive directors on the board of listed companies in Ghana. This corporate governance mechanism had been included in the earlier studies of authors such as Gokah (2016); Darko et al. (2016); and Gyamerah and Agyei (2016). Based on this, using board composition in the model is valid and reliable as it can play a crucial role in the corporate governance of rural and community banks. According to Ahulu and MacCarthy (2019), the number of NED or outsider directors on the board is a metric for calculating board composition. The study follows the equation below in computing board composition.

$$\text{NED} = \text{Number of Non-Executive} / \text{Number of Directors on the Board}$$

Board Committee

This measures the presence of the board committee of selected rural and community banks. This is a dummy variable represented by 1 when there is the presence of audit, nomination and remuneration committee and by 0 when at least 1 is not present. These corporate governance mechanisms had been included in the earlier studies of authors such as Gokah (2016), Darko et al. (2016) and Gyamerah and Agyei (2016). Based on this, using audit, nomination and remuneration committees as measurement of board committee in the model (as used by Puni and Anlesinya, 2020) is valid and reliable.

CEO Duality

These measures the tendency of the CEO being the same person as the board chairman in selected rural and community banks. CEO duality is dichotomous and takes value 1 when both chairman and CEO's positions are occupied by the same individual and 0 when it is the otherwise, as used by Ayadi et al. (2019) as a measurement tool.

Bank Size

Firm size (SIZE) is the natural logarithm of total assets in the current year. Existing literature shows that firm size may harm company performance if the size is correlated with growth exhaustion (Ntim, 2013). On the other hand, size may have a positive impact on financial performance whenever it is correlated with less diversification and less financial constraints (Luxi et al., 2013).

Leverage

Although it has been shown that leverage is significant in explaining financial institution performance, its effect on profitability is unclear. One could anticipate a negative coefficient on this variable since lower capital ratios reflect a particularly riskier position (Kyere and Ausloos, 2020). However, it is possible that larger equity levels might result in a reduction in the cost of capital, improving bank profitability (Akpan, 2015). Numerous studies indicate that financial institutions with more capital outperform their less capitalised counterparts. Leverage of Rural and Community banks was calculated using the formula below.

$$\text{Leverage} = \text{Total assets} / \text{Total shareholders' equity}$$

g) Data Analysis

The coefficients of independent variables are calculated using the ordinary least squares method (OLS). The OLS was chosen because it fits the requirements of the Classical Linear Regression Model (CLRM), which is accurate (Brooks, 2014). More specifically, Petra (2007) claims the OLS outperforms other estimators. This is especially true when the time dimension is short and the cross-section is small. As a result, because the facts above are consistent with this study, the OLS was used. The variables were also subjected to other tests, such as random and fixed-effect tests. When it comes to fixed-

effect models, there is one common fixed parameter that all studies estimate, but when it comes to random-effect models, there is no common fixed parameter and studies estimate distinct parameters (Petra, 2007). It is therefore reasonable to assume that studies for fixed-effect models are sufficiently comparable and that there is a common effect, but for random-effect models, studies are diverse, and it is not reasonable to assume that there is a common effect. However, Brooks (2014) distinguished the fixed-effect model from the random-effect model by stating that for the varied units of the intercepts that they derive from, the random-effect model has a common mean. The Hausman-Test is used to determine if the fixed-effect or random-effect model should be used. According to Brooks (2014), the Hausman-Test is used to measure the efficiency of the random effects model, showing if a fixed effects model rather than a random effect model is the better option. If the Hausman-Test p-value is significant, the fixed effects model will be used; if it is not, the random-effects model will be used. Data analysis is done using E-Views and XL Stats.

V. DATA PRESENTATION AND ANALYSIS OF FINDINGS

a) Descriptive Statistics

Table 1 provides summary statistics for panel data variables studied from 2007 to 2019. In all eight (8) variables are made use of in the study, including Return on Asset, Return on Equity, Earning per Share, Board Committee, Board Meeting, CEO Duality, Board Composition and Shareholder Concentration. The mean, minimum, maximum observations, as well as the standard deviation (SD) are projected.

Table 1: Descriptive Statistics of Variables

Variables	Observation	Mean	Standard Dev.	Minimum	Maximum
ROA	208	0.03340	0.0378	-0.1054	0.3644
ROE	208	0.2549	0.4694	-4.3990	3.5912
BSIZE	208	7.8567	1.0867	4.0237	15.9911
BCOMM	208	0.9109	0.29	0	1
BAGE	208	15	1.3318	8	31
CD	208	0.0909	0.29	0	1
BCOMP	208	9.4677	1.5532	7	12

Source: author's calculation (2023)

Table 1 demonstrates that ROA is on average lower than ROE. The average ROA is 0.03340, with a standard deviation of 0.0378 and low and maximum values of -0.1054 and 0.3644 respectively. This means that rural and community banks may make 3.397 percent profits on their total assets on average. ROA has a mean of 0.0340 and a standard deviation of 0.0378 showing a closely studied performance. The average ROE is 0.2549, with a degree of variability measured using a standard deviation of 0.4694. Given that the least and highest values recorded for all rural banks are -4.3990 and 3.591 respectively, ROE appears to be dispersed around the mean. This means that rural banks may earn a 25.5 percent return on investment for their shareholders on average.

The average board committee members of the studied rural and community banks is 9, made up of audit committee, nomination committee and remuneration committee, indicating that board committee size of rural and community banks is not bad implying their conformity to good corporate governance practices. BCOMM had a minimum value of 0.00 and a maximum value of 1.00. The value of a CD ranges from 0.00 to 1.00. There is a mean of 0.091 and a standard deviation of 0.29. According to the descriptive research, about 9% of rural banks have one individual serving as CEO and board chairman at the same time. The findings indicate that rural banks in Ghana have implemented solid corporate governance procedures to guide their operations. The separation of the CEO and the board chairman is required by good corporate governance practice, and many of the rural banks studied have done so. The purpose of this separation is to improve board oversight of management to guarantee that they operate in the best interests of shareholders. The mean for BCOMP was 9.468 with a standard deviation of 1.553. This means that on average, 9 directors serve on the boards of rural and community banks in the northern part of Ghana, with the smallest number of directors serving on the board being 7 and the greatest number being 12.

The average size of rural and community banks is 7.857. The mean score is associated with a degree of variability measured using a standard deviation of 1.087. The minimum total assets of selected rural and community banks has a natural log of 4.0237 and the maximum total assets stands at 15.991. Compared to bank age, the average age is 15 years with standard deviation of 1.332. Selected rural and community banks have ages ranging from 8 to 11 years, indicating selected rural and community banks have existed for long.

b) Test of Multicollinearity

Before beginning the regression analysis, it is important to first perform a correlation analysis to see whether there is any multicollinearity among the regressors. The correlation coefficients show how two variables are related linearly. The correlation matrix has a threshold of 0.50 for the purposes of this investigation. The findings of the correlation matrix are shown in Table 2.

Table 2: Correlation Matrix

Variables	ROA	ROE	BCOMM	BCOMP	CD	BSIZE	BAGE
ROA	1						
ROE	0.4037*	1					
BCOMM	0.3859*	0.1701*	1				
BCOMP	0.2309*	0.041	0.1321	1			
CD	0.1268	0.0416	-0.116	0.0652	1		
BSIZE	0.0826	0.0403	0.2301*	-0.3121*	-0.1362	1	
BAGE	-0.1072	-0.073	0.0571	0.0081	0.2321*	0.0241	1

Source: author's calculation (2023)

The correlation among the variables is shown in Table 2. The results show that the dependent variables (ROA and ROE) are weakly correlated with the independent and control variables (BCOMM, BOM and CD). According to the correlation statistics, return on assets (ROA) and return on equity (ROE) have a positive 0.4037 correlation. ROA and BCOMM (0.3859) have a positive and significant connection. This means that the greater the BCOMM, the better the bank's performance (ROA). The correlation between CD and ROA is positive (0.1268) but not statistically significant. BCOMM is linked to ROA and ROE in a positive way. This is a significant link. BCOMM and BCOMP have a significant positive relationship (0.0826). BCOMP have a positive relationship with ROA looking at the coefficient of 0.231, and the relationship is significant.

The correlation data in Table 2 shows that all the variables have weak correlations with one another justifying the absence of or little collinearity issues. Multicollinearity is a collinearity condition caused by the combined effects of two or more variables. We further test for evidence of multicollinearity among the explanatory factors using Variance Inflation Factor (VIF).

The variance inflation factor estimates how much the estimated coefficient's variance is inflated due to multicollinearity. The VIF values of the variables based on the test are presented in Table 3. The rule of thumb for testing for multicollinearity is that any number more than 5.00 indicates strong multicollinearity (Kutner et al., 2004). The test outcome is shown in Table 3.

Table 3: Variance Inflation Factor Results

Variables	VIF	1/VIF
BCOMM	1.26	0.7918
BCOMP	1.50	0.6680
CD	1.06	0.9445
SIZE	1.47	0.6794
BAGE	1.42	0.7044
Mean VIF	1.342	

Source: author's calculation (2023)

The variance inflation factor (VIF) values of all explanatory variables, as well as the mean value, are all less than the threshold (5). This shows that there is very little or no multicollinearity issues between the variables. The findings of the

multicollinearity test back up the correlation matrix results in Table 2, indicating that multicollinearity is not an issue in this study. As a result, in a panel regression model, all explanatory variables may be included at the same time.

c) Effect of Corporate Governance Mechanisms on ROA

This section deals with the influence of selected corporate governance mechanisms on return on asset as a measure of financial performance using the Hausman Test. The result of the Hausman Test is provided in Table 4.

Table 4: Hausman Test for Board Effects on ROA

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	0.7710	5	0.0423

Source: author's calculation (2023)

The p-value of 0.0423 in Table 4 above is lower than the level of significance of 0.05, indicating that the null hypothesis is rejected. This means that the individual effects are fixed. As a result, the fixed effect model is effective and is used for the model involving ROA. The result of the cross section fixed effect regression is shown in Table 5.

Table 5: Fixed Effect Regression Results for ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.3210	0.1325	2.4230	0.0199
BCOMM	0.0245	0.0064	3.8000	0.0005
BCOMP	0.1889	0.4241	0.4454	0.6584
CD	-0.3652	0.1135	-3.2164	0.0025
BIZE	0.0478	0.3119	0.1533	0.8789
BAGE	0.1258	0.0481	2.6185	0.0122
	R-squared		0.7491	
	Adjusted R-squared		0.6416	
	F-statistic		4.1777	
	Prob (F-statistic)		0.0001	

Source: author's calculation (2023)

As shown in Table 5 above, BCOMM connects positively with ROA with a coefficient of 0.02. This suggests that 1% rise in BCOMM will lead to about 0.02% increase in ROA. The p-value of 0.00 associated with the t-statistic of 3.80 is less than the significant value of 0.01. Therefore there is a statistically significant positive effect of BCOMM on ROA as a proxy for financial performance. This implies that improvement in BCOMM leads to an improvement in return on Asset of rural and community banks. We therefore accept H_1 that there is a significant and positive influence of board composition and financial performance of rural and community banks in the northern part of Ghana. Similarly, Puni and Anlesinya (2020) found a significant positive influence of audit committee on ROA. This finding is supported by the theory of agency and stakeholders which basically emphasize the importance of board in improving the financial performance of firms.

BCOMP also relates positively with ROA as indicated by a coefficient of 0.19. The coefficient implies that 1% rise in BCOMP causing about 0.19% proportionate rise in ROA. This effect is insignificant as the p-value of 0.66 associated with the t-statistic (0.45) is greater than the level of significance of 0.05 and even 0.1. This implies that board composition has little or no evidence of positive effect on ROA as a proxy for financial performance of rural and community banks. This contradicts H_2 that there is a significant and positive effect of board composition on the financial performance of community and rural banks in the northern part of Ghana. Inconsistent with this finding, Foeda (2016) finds a negative and significant effect of board composition on financial performance of a company.

CD however connects negatively with ROA with a coefficient of -0.37. This suggests that every 1% rise in CD will result in about 0.37% reduction in ROA. The p-value of 0.003 associated with the t-statistic of -3.22 is less than the significant value of 0.01. Therefore, there is a statistically significant negative impact of CD on ROA. This implies that chief executive officer also acting as chairman of the board of a rural and community banks in the northern part of Ghana leads to a reduction

in return on asset. This is supported by the finding of Tuggle et al. (2010) and Tasman and Susanti (2020) who find significant negative influence of CEO duality on financial performance. The finding of the study also supports H₃ which states a negative and significant relationship between CEO duality and financial performance. This finding however contradicts the finding of Musah and Adumtwumwaa (2021) who shows a favorable but statistically insignificant relation between CEO duality and ROA. It does not also confirm the basic premise of the theory of agency and stakeholders.

Bank size relates positively with return on asset looking at the coefficient of 0.048. This is an indication that every 1% increase in bank size leads to an increase return on asset by 0.048%. The effect on bank size on return on asset is however insignificant with a p-value (0.88) higher than the significant value of 0.05. Bank size therefore has little or no evidence of positive effect on return on equity. Bank age however has a significant positive effect on return on asset, looking at the coefficient of 0.136 and p-value of 0.012 less than 0.05. This effect is significant at 5% level. Every 1% increase in bank age results in about 0.136% proportionate increase in return on asset.

Estimation for the ROA equation depicts that the independent variables explain about 75% of variations in ROA as indicated by the coefficient of determination represented by the R-squared of 0.75 in the Table 4.5. The adjusted R squared of 0.64 indicates that about 64% of the variation in ROA as a proxy for financial performance is explained by the impact of an additional independent variable. The F-statistic is 4.18 and the probability of F-statistic is 0.000, less than the 0.01 significant level, meaning the overall result is statistically significant at 1% level.

d) Effect of Corporate Governance Mechanisms on ROE

This section focuses on the influence of selected corporate governance mechanisms on return on equity as a measure of financial performance of rural and community banks. The results of the Hausman test are provided in Table 6.

Table 6: Hausman Test for Board Effects on ROE

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	0.5810	5	0.0352

Source: author's calculation (2023)

The p-value of 0.97 in Table 6 above is lower than the level of significance of 0.05, indicating that the null hypothesis is rejected. This means that the individual effects are fixed. As a result, the fixed effect model is effective and is used for models involving ROE. The result of the cross section random effect regression is shown in Table 7.

Table 7: Board effects on ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.4273	0.1396	3.0610	0.0039
BCOMM	0.0246	0.0068	3.6288	0.0008
BCOMP	0.3285	0.4468	0.7353	0.4664
CD	-0.3349	0.1196	-2.7996	0.0078
BFSIZE	0.1030	0.3286	0.3135	0.7555
BAGE	0.1306	0.0480	2.7233	0.0094
		R-squared	0.6885	
		Adjusted R-squared	0.6692	
		F-statistic	3.2561	
		Prob(F-statistic)	0.0058	

Source: author's calculation (2023)

As shown in table 7 above, BCOMM connects positively with ROE with a coefficient of 0.02. This suggests that 1% increase in BCOMM will lead to about 0.02% proportionate improvement in ROA. The p-value of 0.0008 associated with the t-statistic of 3.63 is less than the significant value of 0.01, suggesting that this effect is significant at 1% level. Therefore, there is a statistically significant positive effect of BCOMM on ROE. The finding suggests that as the board committee of rural and community banks becomes more effective; it will lead to an improvement in ROE. We accept H₁. Puni and Anlesinya (2020) however found that the existence of board committees broadly had an adverse effect on financial performance.

BCOMP similarly relates positively with ROE as indicated by a coefficient of 0.33. The coefficient implies that every 1% increase in BCOMP will lead to about 0.33% proportionate rise in ROE. This effect is however insignificant as the p-value of 0.47 associated with the t-statistic (0.73) is greater than the level of significance of 0.1. H2 is therefore rejected. Therefore, there is a statistically insignificant positive effect of BCOMP on ROE. This implies that larger board composition of rural and community banks in the northern part of Ghana have not enough evidence of improving return on equity as a measure of financial performance. Gokah (2016) similarly found insignificant effect but the effect was negative.

CD however associates negatively with ROE with a coefficient of -0.33. This suggests that 1% increase in CD will lead to about 0.33% proportionate decrease in ROE. The p-value of 0.008 associated with the t-statistic of -2.80 is less than the significant value of 0.01, suggesting that this effect is significant at 1% level. Therefore, there is a statistically significant negative effect of CD on ROE. The finding suggests that as the chief executive officers of rural and community banks also holds the position of chairmanship of the board; it will lead to a reduction in return on equity. CEOs are therefore requested to work closely with the board to create value if banks can benefit from their duality. This is consistent with Duru et al.'s (2016) Generalized Method of moments analysis of US firms which showed that CEO duality (or joint leadership structure) significantly decreases firm performance. This finding nevertheless contradicts that of Puni and Anlesinya (2020) who discovered that CEO duality had no effect on financial performance.

Bank size has a positive effect on return on equity with a coefficient of 0.103. This implies that every 1% increase in bank size leads to about 0.103% proportionate increase in return on equity, all things being equal. There is, however, little or no evidence of significant effect, looking at the p-value of 0.755. Bank age, however, has positive significant effect on return on equity of rural and community banks. Every 1% increase in bank age results in about 0.131% increase in return on equity.

Estimation for the ROE equation depicts that the independent variables explain about 69% of variations in ROE as indicated by the coefficient of determination (R-squared) of 0.69. The adjusted R squared of 0.67 indicates that about 67% of the variation in ROE is explained by the impact of an additional independent variable. The F-statistic is 3.26 and the probability of F-statistic is 0.006; less than the 0.01 significant level, meaning the overall result is statistically significant at 1% level.

VI. CONCLUSIONS AND RECOMMENDATIONS

The issue of corporate governance mechanisms affecting the financial performance of community and rural banks has been thoroughly investigated. The research concludes that the independent variables chosen for this research have a connection with the financial performance of the community and rural banks in Ghana. This is confirmed by the overall results of the fixed effect regression model being statistically significant. Board composition has a positive but insignificant influence on ROA and ROE. The Board Committee has a positive and significant influence on all selected financial performance indicators of rural and community banks. CD negatively and significantly influences ROA and ROE.

When it comes to implementing effective corporate governance, the boards and top management of rural and community banks in the northern part of Ghana should be aware of how CEO duality, board composition, and board committees relate to financial performance. In taking advantage of improving their financial performance through a corporate governance system, management should also be aware that the number of years a bank has been in existence has an effect on financial performance. According to the data, banks that have effective corporate governance have a significant advantage in enhancing their financial performance. In order to attract new investors and depositors, this research suggests that banks maintain an effective corporate governance system with a focus on the separation of chairmanship from CEO positions. Boards and shareholders should strengthen their audit committees, nomination committees, and remuneration committees. Finally, the board and shareholders should give cognizance to a balance of executive and non-executive directors serving rural and community banks.

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