

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ART AND SOCIAL SCIENCES

DEPARTMENT OF ACCOUNTING AND FINANCE



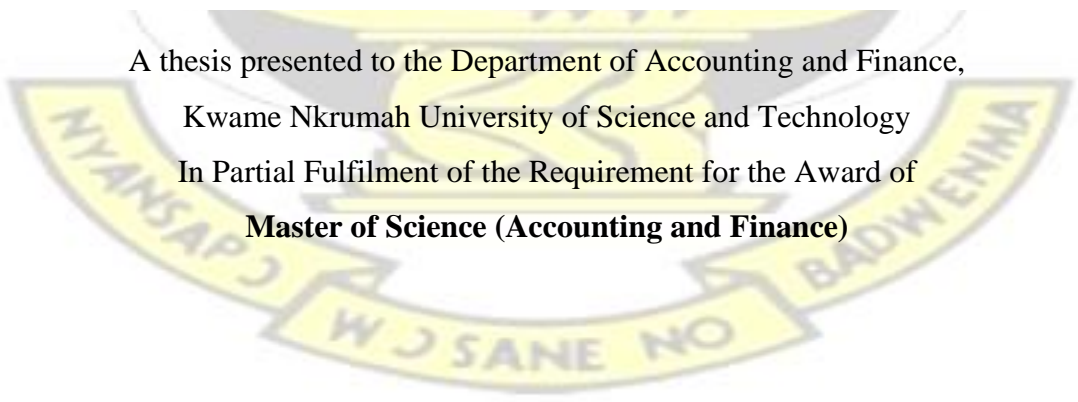
CORPORATE GOVERNANCE MECHANISMS AND FINANCIAL PERFORMANCE:

EVIDENCE OF QUOTED AND UNQUOTED FIRMS IN GHANA

By

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A thesis presented to the Department of Accounting and Finance,  
Kwame Nkrumah University of Science and Technology  
In Partial Fulfilment of the Requirement for the Award of  
**Master of Science (Accounting and Finance)**

November, 2023

## DECLARATION

I hereby declare that this submission is my work towards the award of a Master of Science degree and that, to the best of my knowledge and belief, it contains no material previously published by another person nor material to a substantial extent that has been accepted for the award of any degree in the University or any other educational institutions except where due acknowledgment has been made in the thesis.

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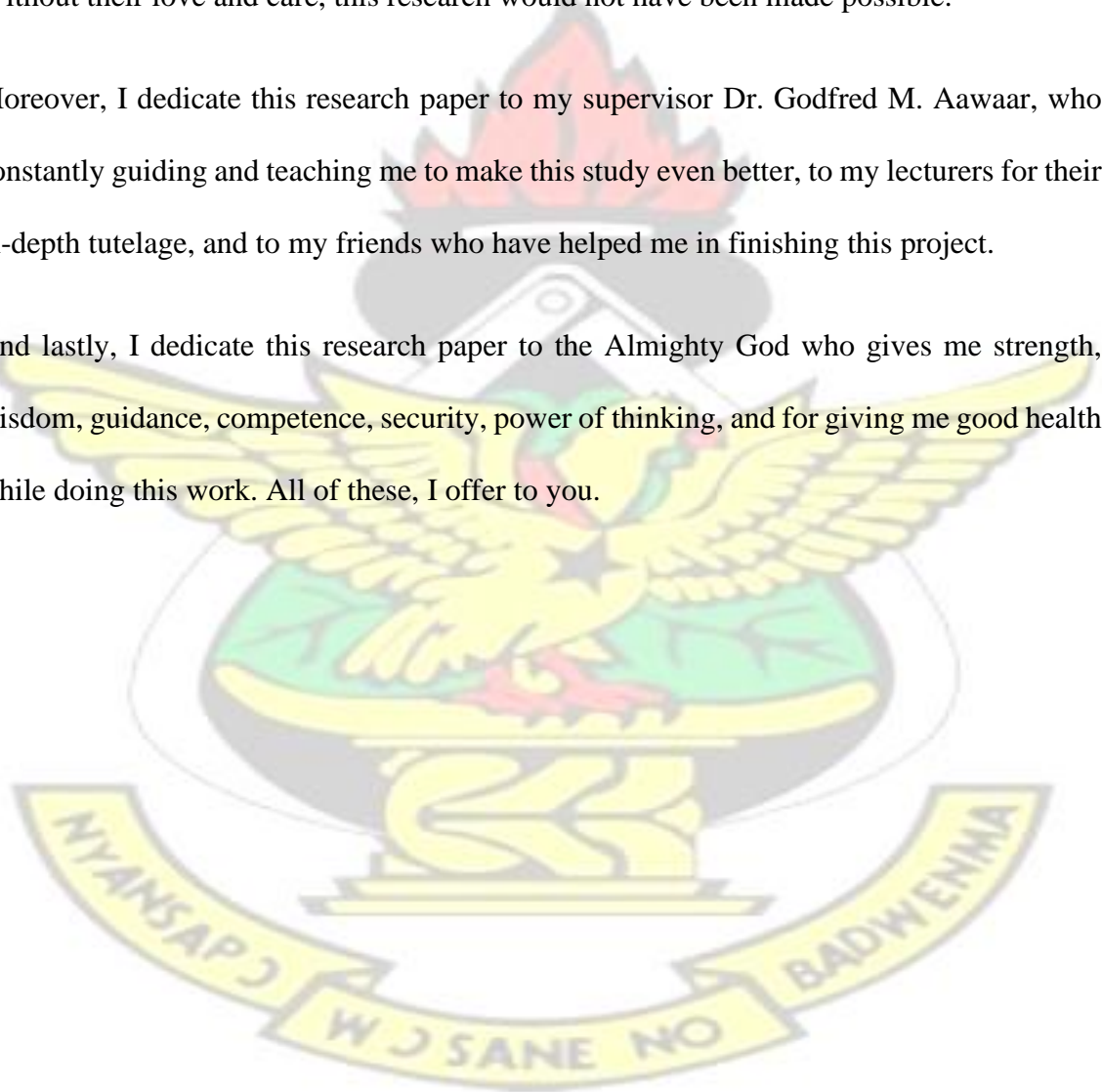
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## DEDICATION

This work is sincerely dedicated to my family especially my supportive wife who continually encouraged me in conducting this study. She has never left my side throughout the process and gave me strength and hope when I thought of giving this up. The entire family provided me a great sense of enthusiasm and perseverance in continuing this work. Without their love and care, this research would not have been made possible.

Moreover, I dedicate this research paper to my supervisor Dr. Godfred M. Aawaar, who constantly guiding and teaching me to make this study even better, to my lecturers for their in-depth tutelage, and to my friends who have helped me in finishing this project.

And lastly, I dedicate this research paper to the Almighty God who gives me strength, wisdom, guidance, competence, security, power of thinking, and for giving me good health while doing this work. All of these, I offer to you.



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## ABSTRACT

The global impact of corporate governance practices has increased in response to the collapse of large multinational corporations. The objective of this study is to examine the influence of corporate governance procedures on the financial performance of both publicly listed and privately held companies in Ghana. The research used a purposive selection methodology to choose a sample of 32 companies, consisting of 15 publicly traded organizations and 17 privately held enterprises. The data collection spans a duration of 9 years, namely from 2014 to 2022. The research used a panel quantile regression (PQR) methodology to examine the findings. The findings indicate that companies with a more diverse board of directors have improved financial performance. The study further emphasizes the need of having a diverse board in order to improve financial performance. It also warns against the possible negative consequences of CEO duality. In order to improve corporate governance and resolve the potential risks associated with CEO dualism, it is advisable for organizations to consider the separation of these responsibilities and establish comprehensive mechanisms for oversight and accountability.

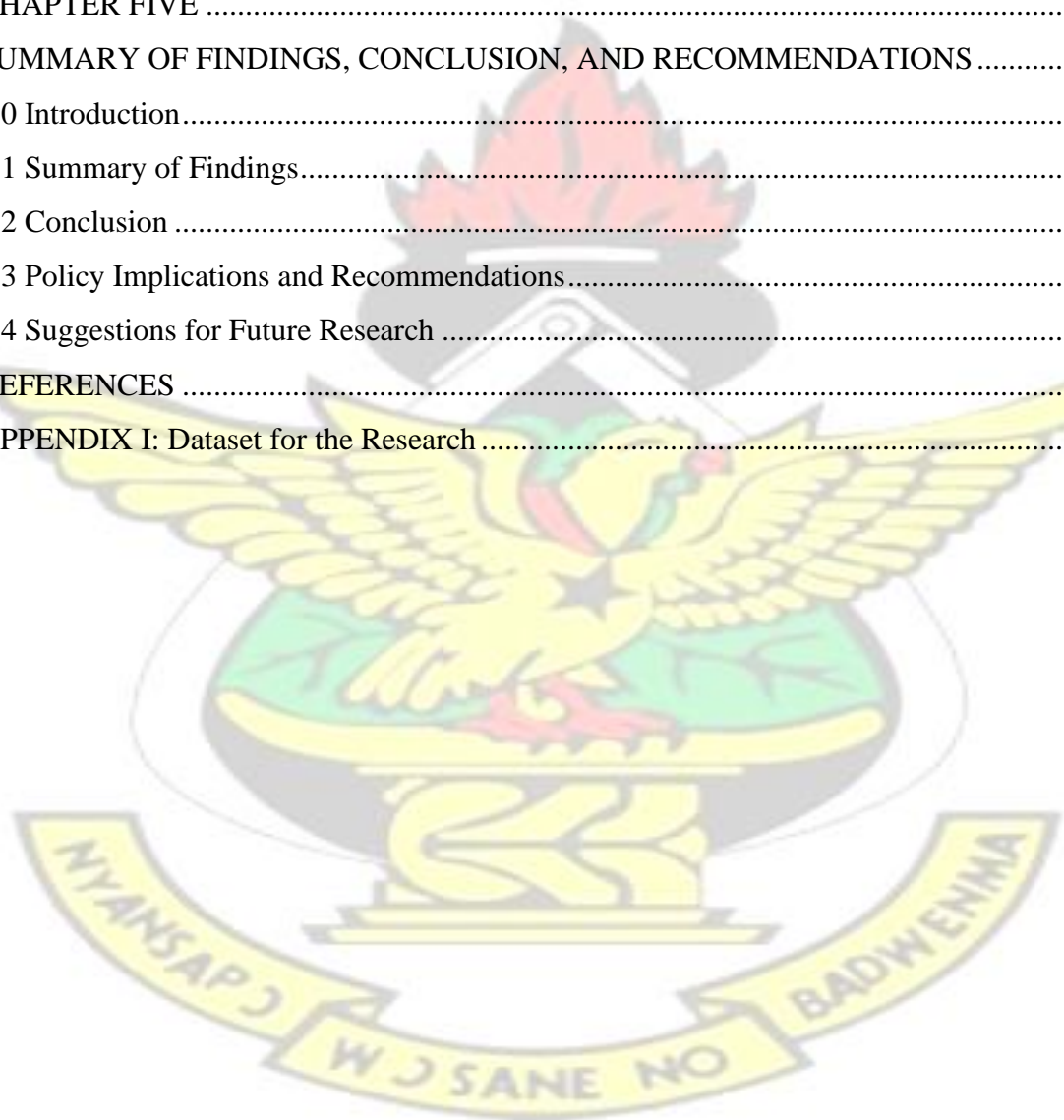


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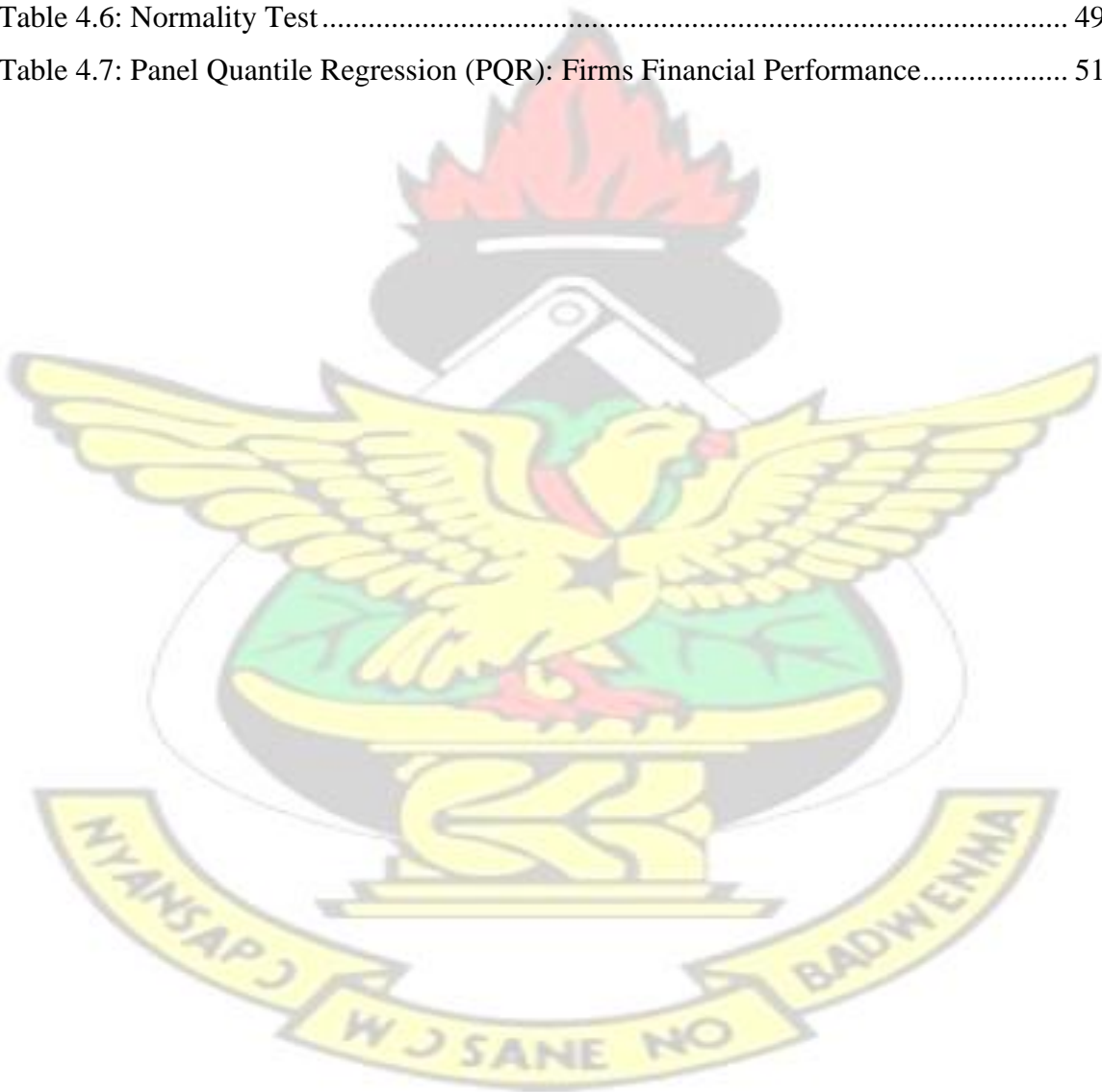
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## LISTS OF ABBREVIATION

CEO	Chief Executive Officer
COVID-19	Coronavirus 2019
CG	Corporate Governance
PQR	Panel Quantile Regression
SEC	Security and Exchange Commission



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

The fall of large multinational corporations like WorldCom, Enron, and Parmalat has increased the importance of firm governance mechanisms around the world as governments try to win back the trust of investors by reducing the frequency with which such scandals occur (Boshnak, 2021). It ensures the sustainability and competitiveness of firms through transparent, accountable and reliable operations to enhance financial stability and investment among corporate bodies (Alhares and Al-hares, 2020). Corporate governance mechanisms prevent corporate misconduct through consistent adherence to the regulatory framework and other acceptable practices towards corporate performances (Boshnak, 2021).

Corporate governance approaches include the following: the number of board members, the diversity of those members' backgrounds, whether or not the CEO reports directly to the board, the percentage of shareholders who are also board members, and the frequency of board meetings (Puni and Anlesinga, 2020). It contains codes or legislations such as the Corporate Governance code of UK, Sarbanes-Oxley Act, Corporate Governance Development Principles and the Organizations of Economic Co-operation guidelines as well as other Guidelines for Best Practices such as Security and Exchange Commission (SEC) Code in Ghana (Puni and Anlesinga, 2020).

The mechanisms of corporate governance are encouraged for implementation by corporate bodies as such contribute towards the formation of capital and an efficient reporting of transactions (Boshnak, 2021). Adherence to these mechanisms enhance the valuations of firms and boost their

operations leading to profitability. According to Puni and Anlesinga (2020), adherence to the mechanisms of corporate governance result into better shareholders treatment and performance of companies and the confidence of investors and market liquidity.

Financial performance has been highlighted through empirical review as a major benefit that emanates from the adoption and adherence of structures and mechanisms of corporate governance within companies. According to Agyemang and Castellini (2015), companies that attach relevance to good corporate governance and adhere to its mechanisms, show higher value of shareholders as a result of reduction of cost of capital and higher value of shareholders. The theoretical viewpoint considers corporate governance mechanisms as enabling firms to enhance their performance. The agency theory considers corporate governance mechanisms as helping firms to minimize agency conflict and enhance their performance (Puni and Anlesinga, 2020). According to stewardship theory, performance of companies rises through goodwill and trust between shareholders and executives. It is evidenced from the theoretical viewpoint that adherence to corporate governance result into sustainable performance of firms. The financial performance of organizations is positively influenced by the adherence to corporate governance processes, since it is a necessary component for the long-term viability of firms (Alhares and Al-hares, 2020).

Corporate governance mechanism and corporate best practices result into an enhanced performance of companies (Boshnak, 2021). Failure to adhere to corporate governance mechanisms by companies would make rational investors to rather direct their equity funds that are having sufficient structures to implement corporate governance practices and mechanisms (Puni and Anlesinga, 2020).



The divergent and conflicting objectives of shareholders and executives of companies make rational shareholders to clamor for good corporate governance mechanisms (Puni and Anlesinga, 2020). The need for management efficiency in utilizing companies' resources in a transparent and accountable manner devoid of conflict of interest and agency cost require for consistence adherence to corporate governance mechanisms. The prevalence of corporate crises and the imperative of maintaining stakeholder confidence in corporate entities serve as the impetus for selecting the subject of investigating how publicly traded and privately held businesses in Ghana might benefit from implementing sound corporate governance practices.

## **1.2 Statement of the Problem**

The term "corporate governance" is used to describe the systems, practices, and policies that allow for the management and regulation of businesses. Corporate governance initiatives including gender diversity on boards, board independence, board size, and CEO duality all aim to make businesses more open and accountable to their stakeholders, which in turn should improve their performance (Alhares and Al-hares, 2020). However, the inability to comply with the mechanisms of corporate governance has contributed towards the under-performance, scandals and collapse of companies both in developed and emerging nations. Prominent multinational corporations such as Enron, WorldCom, DKM, and the merged banks in Ghana have had significant challenges due to their failure to adhere to corporate governance systems and other established best practices (Puni and Anlesinga, 2020).

The Cadbury Committee in the United Kingdom, the Sarbanes-Oxley Act in the United States, the OECD principles for Corporate Governance, the Basel Committee report, the Security and Exchange Commission Act of Ghana, and the Company Act of Ghana Act 163 provide guidelines

and regulations pertaining to corporate governance and ethical conduct for companies. However, these are not effectively implemented towards sustainable performance and as a result, making it difficult for stakeholders to build confidence and invest their funds in companies.

Previous research has examined several corporate governance systems, including board gender, board independence, board size, and CEO duality, and has generally shown a favourable association between these factors and business performance (Agyemang and Castellini, 2015; Kukah et al., 2016). However, the vast majority of these investigations were done in first world countries but with gradual interest being shown in developing economies in recent times (Sharma and Arora, 2016; Gupta and Newalka, 2015; Ciftci et al., 2019; Teixeira and Carvalho, 2023; Hazaea, Al-Matari, Farhan, and Zhu, 2023). The studies (Yeboah, Addai, and Appiah, 2023; Osei et al., 2023; Asiedu and Mensah, 2023; Siddiqui, YuSheng, and Tajeddini, 2023; Ledi and Ameza-Xemalordzo, 2023) conducted in Ghana were focused on quoted firms.

There are empirical studies (Al-Faryan and Abdulaziz, 2017; Ovbiebo and Ukori, 201; Cardoni, and Kiseleva, 2023) that did not make use of the proper models created to ascertain the association between corporate governance mechanisms (board gender, board independence, board size, and CEO duality) and company financial performance. However, empirical analyses that would have considered the mechanisms of corporate governance and the inference for better comprehension were unable to investigate the impact of corporate governance on the financial performance of quoted and unquoted firms in Ghana (Hazaea et al., 2023; Puni and Anlesinga, 2020; Agyemang and Castellini, 2015). Robust analysis on these mechanisms requires that the variables will be considered and with long time series data.

The research is prompted by the need to investigate the impact of corporate governance measures, namely board gender, board size, and CEO duality, on the financial performance of both listed and unquoted firms in Ghana. The study also used a Panel Quantile Regression (PQR) technique to find the impact at different levels of corporate governance on firm performance. The study seeks to provide new findings and to draw inferences that will help to bridge the gaps on the research area.

### **1.3 Objectives of the Study**

This study aims to examine the influence of corporate governance standards on the financial performance of Ghanaian companies, encompassing both publicly listed and privately owned entities. This research has specific objectives, which is:

- i. To examine the impact of board gender diversity on the financial performance of Ghanaian companies that are publicly traded and unlisted.
- ii. To investigate the impact of CEO dualities on the financial performance of Ghanaian public and unquoted companies.
- iii. To find out how the size of a company's board of directors affects the financial success of listed and unlisted firms in Ghana.

### **1.4 Research Questions**

- i. What effect does board gender diversity have on the firm financial performance of quoted and unquoted Ghanaian companies in Ghana?
- ii. What effect does CEO duality have on the firm financial performance is of quoted and unquoted companies in Ghana?

- iii. What impact does board size have on the financial success of Ghana's publicly traded and unlisted companies?

### **1.5 Significance of the Study**

The purpose of this study is to better understand corporate governance practices and their possible effects on the financial performance of Ghanaian business firms.

The study will give new information about how companies are run and how well they do financially from the point of view of a growing country. This research will add to what is known by looking at how company governance systems affect financial success in different types of economies.

In practice, board of directors, shareholders, management, prospective investors and financial analyst are the key parties to benefit from this study. With specific reference to board of directors since this study seeks to examine the impact board composition on firm performance, the findings of this study will help to identify board composition attributes that are capable of enhancing firm performance. This will enable the board to assess the existing board composition and make changes when necessary.

The study's results will broaden our understanding of the topic. It will provide light on the link between corporate governance and financial results. The research will help policymakers and academics in Ghana create better corporate governance policies. This research will help enhance the long-term viability and bottom-line results of Ghanaian businesses by adding to the existing body of literature on corporate governance methods.



## **1.6 Scope of the Study**

From a geographical perspective, the scope of this study is confined to both listed and unquoted enterprises operating inside the borders of Ghana. The study also looks at how corporate governance systems and the financial success of businesses in Ghana are related.

## **1.7 Summary of Methodology**

The study used an explanatory research design. The data utilized in this study consists of secondary sources, including yearly financial reports obtained from the firms, as well as information obtained from the Bank of Ghana and the Ghana Statistical Services. The dependent variable is firm performance. The independent variables include board gender diversity, CEO, duality and board size. The study applies the panel data approach as a result of its uniqueness and suitability for the study. A regression technique is used to study the effect of the explanatory variables on the dependent variable. The study employed a purposive selection technique to choose a total of 32 Ghanaian enterprises between 2014 and 2022.

## **1.8 Limitations of the Study**

The study on corporate governance is of much relevance to nations. However, the study is limited to only the Ghana with data from both quoted and unquoted companies. The scope of this study is restricted to firms located in Ghana.

Furthermore, the study only uses accounting performance metrics, namely ROA and NPM, as the primary indicators of business success. Despite being representative, there may be selection bias.



Despite the aforementioned restrictions, the study's quality and goal remain uncompromised. The study's contributions significantly enhance the understanding of a research topic that has not been extensively explored.

## **1.9 Organization of the Study**

This is one of the five chapters that make up the research. The four remaining chapters are organised as follows.

The second chapter reviews the works of other researchers that are already in existence. Specifically, it looks at the various CG theories underpinning the study and a review of empirical studies of prior research works related to the study. It focuses on a review of the empirical literature on corporate governance (CG) and its influence on the performance of firms, as well as the conceptual underpinning of the research.

Chapter three provides an overview of the study methodology, encompassing the research design and the research population. This chapter presents the sources of data, the process of determining the empirical research model, the specification of study variables, and the methodologies employed for data analysis.

Chapter four covers the presentation and discussion of findings that are consistent with the study's aims. Descriptive and inferential statistics on CG systems, as well as their impact on financial performance, are presented in this chapter.

Finally, chapter five of the research covers the summary of the results in the study and offers readers with comprehensive conclusion and recommendations to the research findings. Additionally, this chapter offers guidance on potential avenues for future study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter make available an evaluation of relevant research on the subject of the "relationship between corporate governance mechanisms and financial performance: evidence of quoted and unquoted firms in Ghana." There are five (5) major sections within the chapter. Section 2.1 provides a review of the conceptual literature review. Section 2.2 addresses the theoretical literature, including theories such as the agency theory, and resource dependency theory. Section 2.3 examines empirical studies pertinent to the topic. Section 2.4 describes the study's conceptual structure. The concluding portion (section 2.5) provides a summary of the relevant literature and its gaps.

#### **2.1 Conceptual Literature Review**

A conceptual review provides a summary of the fundamental ideas at play in a certain area of inquiry. Important concepts, variables, and factors related to the subject are taken into account.

##### **2.1.1 Concept of Corporate Governance**

The term "corporate governance" refers to an idea grounded in theory that focuses on the most effective means of managing and guiding a company's operations and assuring its investors that their money will be returned to them. The term "corporate governance" (Awodiran, 2019) refers to the systems and procedures in place to guide and administer a company. Accountability, boards, disclosure, investor engagement, and other factors that affect company performance are all under

the purview of corporate governance (Ndum and Oranefo, 2021). According to Naciti (2019), the adoption of corporate governance is essential for resolving the inherent conflicts that exist between the many stakeholders that are present inside firms. These conflicts, known as agency problems, arise due to divergent goals and preferences among stakeholders, coupled with limited access to information pertaining to each other's actions, knowledge, and preferences. The implementation of the corporate governance concept leads to the effective administration and guidance of corporate matters, with the aim of improving performance through the establishment of accountability, transparency, and fairness. These measures ultimately contribute to the optimization of long-term stakeholder value (Azzoz and Khamees, 2016).

Corporate governance pertains to the mechanisms employed to guarantee that providers of financial resources receive a satisfactory return on their investment. This is achieved by the implementation of optimal management practises and the effective utilisation of available resources by enterprises, with the ultimate goal of maximising shareholder value (Odunayo, 2019). Awodriran (2019) posits that an absence or insufficient implementation of corporate governance practises is a contributing factor to organisational instability. In order to achieve optimal resource utilisation, it is imperative for organisations to implement the principles of corporate governance and adhere to best practises. The implementation of the corporate governance concept has a significant role in fostering financial development and stability, as well as enhancing the integrity and confidence of enterprises (Ciftci et al., 2019).

Corporate governance is a comprehensive concept that encompasses the mechanisms by which stakeholders, who possess a vested interest in the success of organisations, can ensure that managers and other individuals in positions of authority adopt measures or employ systems that safeguard the interests of the stakeholders (Awodiran, 2019). Gupta and Newalka (2015) posit

that the adoption and enforcement of rules and procedures facilitate the fulfilment of responsibilities by different stakeholders within an organization, hence contributing to the attainment of the company's goals. The notion has been associated with the incidence of financial crises and collapses in many regions of the globe, resulting in adverse consequences for shareholders' rights as a result of bankruptcy and liquidation procedures.

The notion of corporate governance and its implementation are discussed by the OECD (2015) as means to enhance the economic value of enterprises and instill trust in rational investors. The problems around conflict of interest, information asymmetry, and agency cost have emerged as significant considerations for stakeholders of organizations. According to Rostami and Kohansal (2016), the application of the corporate governance framework successfully addresses these challenges.

### **2.1.2 Corporate Governance in Ghana**

In Ghana, the Companies Code of 1963 (Act 179) and the Securities Industry Law of 1993 (PNDCL 333), as changed by the Securities Industry (Amendment) Act of 2000 (Act 590), both recognise the need to help Ghanaian businesses run at their best. This acknowledgment has been implemented subsequent to the business scandals that resulted in the demise of some corporations in Ghana. Konadu et al. (2021) assert that the occurrence of corporate scandals in recent years may be attributed to the lack of adherence to corporate governance principles, including openness, accountability, and the implementation of effective governance procedures. The aforementioned circumstances have led to a decline in trust within the corporate structure, causing sensible investors to exhibit reluctance in allocating their excess capital towards company investments.



The Security and Exchange Commission of Ghana introduced the Code of Best Practises in 2010, and it placed a high priority on businesses adhering to these best practises to ensure long-term success (Tornyeva and Wereko, 2012). This was done to win back the confidence of logical investors. The Security and Exchange Commission of Ghana introduced the Code of Best Practices in 2010 to enforce compliance among firms in Ghana. This code aims to address issues such as agency problems, conflicts of interest, and information asymmetry, which have been commonly associated with the operations of quoted firms in Ghana.

### **2.1.3 Pillars of Corporate Governance**

Corporate governance refers to a structured framework aimed at enhancing the performance of corporations by overseeing the actions of management, hence ensuring their responsibility towards stakeholders, in accordance with established regulations (Gouiaa and Kostyuk, 2020). The subject of corporate governance has attracted considerable interest due to its impact in initiating or aggravating financial crises, as demonstrated by recorded instances of managerial failures or malfeasance within companies. Companies thoroughly analyse the fundamental principles of corporate governance throughout all aspects of their operations. According to Rostami and Kohansal (2016), a thorough comprehension of the correlation between corporate governance pillars and business sustainability requires an analysis of how corporate governance pillars impact every aspect of company sustainability.

Hussain (2016) posits that the fundamental components of corporate governance are transparency, leadership, accountability, stakeholder management, and fairness, among other factors. The pillars under consideration are regarded as facilitating the expansion and enduring efficacy of corporations, hence conferring advantages onto stakeholders and equity holders. The failure to



uphold the principles of corporate governance has resulted in a compromised foundation inside many prominent corporations, such as WorldCom and Enron, which subsequently had significant corporate scandals.

Accountability necessitates that corporate executives carefully evaluate the potential negative impact of their actions on the operations of the firm they represent, since they will be held responsible for any ensuing repercussions (Dabor, 2015). Additionally, responsibility encompasses the concepts of answerability and culpability. Accountability include not just instances of shortcomings, but also instances of achievements. Shareholders maintain a significant interest in the concept of responsibility, particularly in corporations of concern, since they are profoundly concerned about identifying the individuals responsible for any potential blame.

Transparency constitutes an additional fundamental element of corporate governance. Transparency refers to the state or quality of being open and forthcoming, characterised by the absence of concealed or undisclosed information. Transparency plays a pivotal role in the realm of corporate governance as it guarantees the ability for an external observer to scrutinise all acts undertaken by a corporation at any particular point in time (Oketooyin, 2019). The use of transparency measures has significantly contributed to the prevention of fraud, particularly in cases of substantial magnitude. When shareholders perceive a high level of trustworthiness in a firm, they demonstrate a willingness to allocate their excess funds towards investment in such organisation. Additionally, it ensures the provision of essential disclosures, effectively communicates its choices to all relevant stakeholders, and adheres to pertinent legal obligations. Tukur and Bilkisu (2014) assert that transparency necessitates the execution of each transaction in an impartial and equitable way, devoid of personal biases, in order to foster lucidity among all involved parties. Transparency necessitates that all individuals involved in a transaction must

ensure that their actions are free from any external influence that might potentially impact the operations of firms (Tukur & Bilkisu, 2014). The level of management is a crucial aspect of corporate governance that necessitates the careful consideration of employee welfare and the optimal utilisation of available resources by company management.

#### **2.1.4 Corporate Governance Principles**

The primary objective of corporate governance is to provide a conducive atmosphere characterised by trust, openness, and accountability. This environment is essential for promoting enduring investment, ensuring financial stability, and upholding company integrity. Consequently, it facilitates the advancement of robust economic growth and the creation of more inclusive communities. The Organisation for Economic Co-operation and Development (OECD, 2015) asserts that the principles of corporate governance play a crucial role in aiding policymakers to evaluate and improve the legal, regulatory, and institutional framework related to corporate governance. The primary objective of this examination is to facilitate economic efficiency, advance sustainable growth, and guarantee financial stability. The formulation of principles is founded on the acknowledgement that legislation on corporate governance have a substantial impact on achieving broader economic objectives related to investor confidence, capital creation, and allocation (OECD, 2015). Organisations are faced with several issues arising from both internal and external origins. In light of their purpose to cater to the demands of individuals, organisations inevitably encounter environmental and stakeholder-related influences. One effective approach to addressing potential issues is to incorporate concepts that are capable of effectively resolving anticipated concerns.

The principles of corporate governance encompass multiple dimensions, including the establishment of a strong framework to ensure effective corporate governance, the protection of shareholders' rights and equitable treatment, the consideration of institutional investors, stock markets, and other intermediaries, the acknowledgment of stakeholder involvement, the promotion of disclosure and transparency, and the delineation of board responsibilities (OECD, 2015). In order to ensure the rights and fair treatment of shareholders, as well as the effective execution of important ownership tasks, it is imperative that the corporate governance framework fosters the promotion of transparent and equitable markets, as well as the efficient allocation of resources. The concept necessitates the presence of coherence with the rule of law and the provision of robust oversight and enforcement mechanisms. The principles seek to assure that shareholders' rights are protected and that shareholders, especially minorities and international investors, are treated fairly within the corporate governance framework. All shareholders must have access to adequate remedies in the event of a violation of their rights. It is important to realise that the corporate governance system should provide effective incentives all along the investment chain and make it easier for stock markets to work in a way that supports responsible company management.

### **2.1.5 Mechanisms of Corporate Governance**

The field of firm governance focuses on establishing a harmonious equilibrium between economic and social objectives, as well as between the interests of individuals and the community (Udeh and Tambou, 2017). There are several systems of corporate governance, with often examined factors include board gender diversity, CEO duality, board size, and board committees. These methods are necessary for firms to achieve their objectives by effectively and efficiently using existing resources.

Oketooyin-Gbadebo (2019) asserts that corporate governance procedures serve to match the activities of managers with the choices entrusted to them by shareholders, as facilitated by the board of directors. These mechanisms are designed to address the principal-agent conflict, sometimes referred to as the agency issue. The authors of the study conducted by Ovbiebo et al. (2019) argue that corporate governance mechanisms, such as the board of directors, audit committees, audit quality, and institutional ownership, play a crucial role in mitigating information asymmetry within corporations. These systems are meant to limit the power of managers and make company governance work better.

According to Adekoya (2012), corporate governance structures have the potential to reduce the negative effects of information asymmetry and conflicts of interest. The concept of agency cost necessitates that corporations implement mechanisms to avoid such costs. Through the examination of the corporate governance framework, organisations may strategically evaluate all facets of their operations, therefore fostering enhanced engagement among all stakeholders involved in corporate affairs and facilitating the pursuit of predetermined goals.

Elsayed and Abdalla (2021) classified corporate governance practises as internal or external. Internal governance systems are determined by organisational internal variables such as the structure and characteristics of the board of directors, the makeup of board committees, and ownership arrangements. External governance mechanisms encompass external factors that guarantee enterprises are managed in a manner that upholds the interests of shareholders and other stakeholders. These mechanisms include many elements, such as country legal systems and takeover regulations.



The factors to be taken into account encompass several elements such as board size, CEO duality, board committees, independent board participation, among others (Kukah et al., 2016). These methods are seen as the means by which to address conflicts of interest that may arise due to information asymmetry and to establish responsibility inside corporate entities.

#### **2.1.6 Board Size**

One of the most important components of good corporate governance is the size of the board of directors. According to Abdulrahman (2017), an element that should be carefully addressed for the benefit of enterprises is the board size, which is defined as the number of directors on an organization board. In most cases, the board of commissioners serves as the primary internal control mechanism tasked with overseeing the activities of senior management. The subject of corporate board governance has been extensively examined from many perspectives in earlier studies (Akanmidu, 2017).

Smaller boards are more efficient on average, as stated by Liu and Tsai (2015), who found a positive association between board size and productivity. In an analysis of companies operating in seven European markets, Fernandez (2015) looked at how the number of board members correlated with the company's success. Mukhtar's (2016) research aimed to analyse the connection between business success on the Egyptian Stock Exchange and specific director and ownership characteristics. The size of the board of directors, government ownership, and company performance were all shown to be significantly correlated with one another.



### **2.1.7 Chief Executive Officer (CEO) Duality**

Shrivastav and Kalsie (2016) state that this corporate governance method requires CEO-chairman separation during board meeting. The board of directors is often headed by a chairman who assumes many responsibilities, including presiding over meetings, supervising the recruitment and termination procedures of CEOs, and assessing CEO remuneration. It is imperative for the chairman to possess independence in order to effectively fulfil their leadership responsibilities with objectivity. The Chief Executive Officer (CEO) may possess self-interests, which can potentially lead to conflicts of interest. The separation of the chairman and CEO positions reduces the risk of one person dominating the board. Based on the principles of agency theory, it is likely that CEOs who also serve as chairs will make decisions that put their own interests first. This could hurt the business by making it harder to maximise shareholder value (Jenter and Kanaan, 2015).

The existence of duality within corporate governance can lead to a heightened occurrence of conflicts of interest, as the Chief Executive Officer (CEO) is tasked with determining board meeting agendas and holds the power to shape the board director selection process. Based on the research conducted by Jenter and Kanaan (2015), it was concluded that the existence of CEO duality has an adverse effect on the board's ability to effectively supervise executives.

### **2.1.8 Board Gender Diversity**

Gender diversity, as defined by Liao and Tang (2015), is defined as the presence of women on corporate boards. Gender diversity is giving equal weight to the experiences and perspectives of women and men on boards (Al-Amarneh et al., 2017). With more women on the board, businesses may benefit from increased productivity, better decision-making, and a more positive public

image. Diverse boards, including women, have been shown to improve a company's bottom line (Brahma et al., 2021).

### **2.1.9 Firm Performance**

The importance of performance should not be underestimated when organisations aim to establish sustainable operations. The absence of performance might pose challenges to the achievement of sustainability. The operational expenses of firms consist of fixed and variable cost components, necessitating the generation of revenue that exceeds these costs in order to achieve performance. Corporate leaders are obligated to develop policies that will lead to long-term, sustainable performance. Organisations should incorporate optimal methodologies and various elements that will lead to the effective use of existing resources, minimising any kind of wastage.

Performance in previous studies is evaluated through the assessment of financial and marketing metrics. The former utilises performance measurement factors, such as Return on Assets and Return on Capital Employed. The pertinent financial indicators in this particular context are return on equity, net profit margin, and gross profit margin. The measuring of marketing performance factors is conducted through the use of Tobin's Q and other relevant metrics for marketing performance measurement. Awodiran (2019) posits that the utilization of Return on Asset (ROA) is often regarded as a metric for assessing the effectiveness of managerial practices in optimizing available resources.

Ahmed and Hamdan (2015) posit that the return on equity may be determined by the division of the income before interest expense for a specific fiscal period by the total shareholders' equity for that corresponding period. The assessment of business performance using return on equity has been widely accepted as a dependable metric for corporate stakeholders (Odunayo, 2019).

## **2.2 Theoretical Literature Review**

### **2.2.1 Agency Theory**

Agency theory explains the connection between the principle, usually the shareholder, and the agent, usually the management. The agent must operate in the owners' best interests and perform fiduciary duties. Berle and Means (1932) explored how corporate board oversight decreases when management (as agents) is prominent on the board. Agency theory emphasises board diversity's role in monitoring, according to Carter et al. (2010). Carter et al. (2010) said board diversity increases autonomy. As managerial influence affects the firm's value, Fama and Jensen (1983) advise the board of directors to remain independent to appropriately supervise. Director independence is necessary. Bonazzi and Islam (2013) found that external directors are better at overseeing management and protecting owners' interests.

Agency theory requires protecting shareholders' interests because they are partly owners of a corporation (Fama and Jensen, 1983). This is done by separating the board of directors' fiduciary duties from those of corporate leaders' stewardship. Jensen and Meckling (1976) believe that agency theory originates from an economic perspective that focuses on the distribution of risk between two primary entities, namely principals and agents.

The agency theory provides guidance for both publicly traded and privately held organisations in addressing the challenges posed by conflicts of interest and information asymmetry. The reduction of agency costs has been found to boost the performance of firms.

### **2.2.2 Resource Dependence Theory**

The objective of this theoretical framework, as formulated by Pfeffer (1973) and further expanded upon by Pfeffer and Salancik (1978), is to emphasise the significant functions fulfilled by the board of directors, specifically in facilitating companies' access to resources and influencing their overall performance. Human resources, financial resources, technological resources, and any other resources necessary for successful business operations have been outlined. The idea is concerned with the many functions of the board of directors as one of the primary resources for businesses that acquire more resources via their interconnections with the external environment (Hillman et al., 2000).

### **2.3 Empirical Literature Review**

The study conducted by Puni and Anlesinya (2020) examined the relationship between corporate governance structures and firm performance within developing economies. The study employed a dataset comprising of 38 publicly listed companies in Ghana, spanning the time period of 2006 to 2018. The research employed a quantitative approach and using panel data analysis techniques. The study identified a distinct correlation between corporate governance and the financial performance of businesses, as evaluated by the ROA metric.

Altawalbeh (2020) conducted study on the link between corporate governance mechanisms and the performance of firms operating in the Jordanian setting. The study collected data from a sample of Jordanian businesses using a panel data technique and a 366-year observation panel data set. Based on the research findings, it can be concluded that both board meetings and government ownership exert a favourable and statistically significant influence on the performance of the enterprises under investigation.



Helmi and Boshnak (2021) studied Saudi Arabia from 2017 to 2019. The study examined how corporate governance affects company success in 210 publicly listed organisations. The study found a significant unfavourable relationship between board size and firm performance, as measured by return on assets. However, the study found no association between board size and company performance, as measured by ROE.

The study conducted by Bace (2017) investigated the impact of corporate governance on the performance of banks in Saudi Arabia from 2010 to 2015. The researcher assessed the performance of banks using the metric of return on equity (ROE), while evaluating corporate governance by considering several aspects such as board size, number of board committees, and the proportion of independent directors in relation to the overall number of directors. The researcher found a link between the number of board members and the success of Saudi banks. However, he found an opposite link between the number of autonomous directors and the number of committees.

The study done by AlHares and Al-Hares (2020) examined the influence of corporate governance structures on the disclosure of risk. The researchers utilised data from a sample of 130 banks located in the North Africa and Middle East region. The study employed a quantitative research technique and conducted descriptive analysis to examine the period from 2012 to 2019. The research discovered a significant positive association between the degree of bank-risk disclosure and many factors, including ownership structure, supervisory board, and control mechanisms.

The Bhattra (2017) research examined corporate governance and financial performance. Research was conducted on 13 Nepalese commercial banks from 2010 to 2015. The researcher examined how board size, audit committee composition, and independent director levels affected return on



equity and nonperforming loan ratios. The study found that the size of the board hurts commercial banks in Nepal performance.

The study by Azzoz and Khames (2016) examined how corporate governance factors affect profit quality and management. The research sample included all 73 Amman Stock Exchange-listed banking enterprises from 2007 to 2012. The research found that the size of the board, executive director duality, and property rights return are positively and significantly correlated.

Alhassan et al. (2015) did a study on the factors that affected the financial success of Saudi Arabian banks traded on the stock market from 2007 to 2012. The researchers employed three corporate governance methods, specifically board size, board composition, and board meeting, as well as two company factors, namely firm size and leverage. The findings of their study revealed that business size is the sole statistically significant variable that is correlated with financial success.

Tolossa and Guluma (2021) analyse how corporate governance regulations affect business performance, concentrating on managerial overconfidence. As measures of internal and external corporate governance, this study looked at the independent board, dual board leadership, shareholder concentration, debt financing, and product market competitiveness. The study found that there was a statistically significant link between the number of owners, the competition in the product market, and the success of the company, as measured by ROA and TQ. Total quality (TQ) goes down with dual leadership, and both return on assets (ROA) and TQ go down with debt financing.

Oketooyin and Gbadebo (2019) use empirical analysis to explore how corporate governance frameworks affect Nigerian non-financial firms. Secondary data from public accounts and Nigerian Security Exchange Factbooks was analysed using panel regression. The study studied the

link between board size, directors' ownership, block holding, debt, and return on assets and equity. From 1990 to 2017, the analysis was done. The study found that the independent factors affect return on equity more than assets.

TuAnh et al. (2021) investigate the effect of corporate governance structures on business performance in Vietnam. This research investigates the relationship between corporate governance structures and business performance in Vietnam. A correlation exists between the knowledge competency of CEOs, gender diversity within the firm, and the size of the board of directors and firm success, according to the results of an analysis of a dataset of 101 manufacturing businesses listed on the HOSE. On the other hand, firm age is negatively associated with firm performance.

In their study, Wicaksono et al. (2023) investigated the relationship between the classification of institutional shareholders based on their origin country (domestic, developed, and developing) and their status on the stock exchange (listed and unlisted), and the level of environmental disclosure in Indonesian companies. The dataset used in the study consisted of 474 non-financial firms listed on the Indonesian Stock Exchange (IDX) from 2017 to 2019. To measure the extent of environmental disclosure, the researchers employed an environmental disclosure checklist. They used panel regression analysis to examine the association between the percentage of shares held by institutional shareholders categorized by origin country and stock exchange status, and the level of environmental disclosure. The findings of the study indicate that there is a positive and significant relationship between the extent of environmental disclosure and institutional investors from domestic and developed countries, as well as listed and unlisted institutional investors.

In a separate study, Yeboah et al. (2023) focused on investigating the importance of audit firm industry specialization and audit report time lag (ARL) in the context of audit fees. Specifically, they examined the moderating effect of audit time lag on the relationship between audit firm industry specialization and audit fees. The study utilized a dataset comprising 100 Ghanaian firms, both quoted and unquoted, from 2008 to 2018. The results of their analysis revealed that audit firm industry specialization has a significant positive impact on audit fees and a significant negative effect on ARL. Furthermore, the interaction between audit firm industry specialization and ARL displayed a negative association with audit fees. This implies that specialization in a particular industry significantly reduces the premium paid for audit fees, provided that these specialized auditors can produce the financial report within a short time frame.

Asiedu and Mensah (2023) conducted a study that established a causal relationship between corporate governance (CG) and firm performance, with financial reporting quality (FRQ) acting as a mediator. Their findings demonstrated a direct positive impact of CG on firm performance, as well as an indirect effect mediated by FRQ. In another investigation by Siddiqui, YuSheng, and Tajeddini (2023), the focus was on exploring the influence of corporate governance and corporate reputation on the disclosure of corporate social responsibility (CSR) and firm performance. Their study revealed a significant association between CSR disclosure and corporate reputation. Furthermore, the research emphasized the role of CEO integrity, ownership concentration, and corporate reputation in facilitating CSR disclosure and enhancing firm performance.

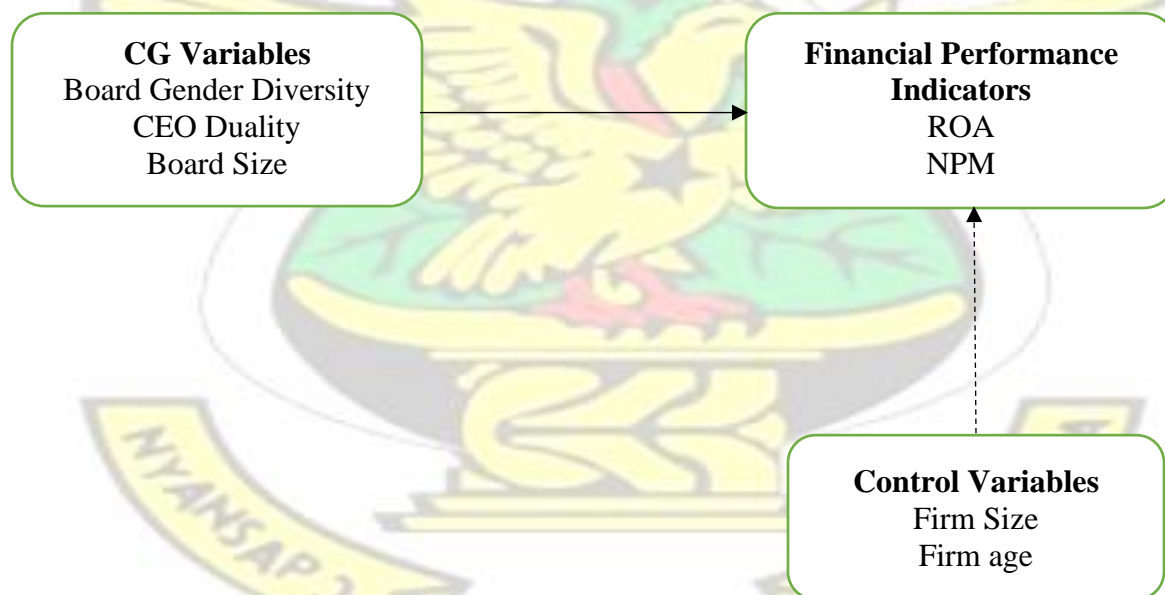
Ledi and Ameza-Xemalordzo (2023) conducted a study exploring the correlation between corporate governance, corporate social responsibility (CSR), and the performance of manufacturing companies, with a particular focus on corporate image. Their findings revealed that corporate governance has a significant impact on stimulating CSR performance, suggesting a

strong interconnection between the two. Moreover, the research demonstrated that effective corporate governance practices not only enhance corporate image but also have a positive influence on overall firm performance. Furthermore, the study emphasized a noteworthy positive relationship between CSR, corporate image, and performance within the manufacturing sector.

## 2.4 Conceptual Framework

This study evaluates board size, CEO duality, and board diversity as independent factors in corporate governance. In contrast, this study measures corporate success by return on assets and net profit margin. Control variables are firm size and age. Figure 2.1 shows the conceptual framework utilised to attain study goals.

**Figure 2.1: Conceptual Framework**



**Source: Author's Construct (2023)**

The primary objective of firms is financial performance, and this is to be overseen by the management of the organization; and ultimately on the shoulders of firm board of directors. Figure



2.1 offers the structure of this study. On the left-hand side, the investigation chronicled some corporate governance variables (board size, CEO duality, and board diversity) in relation to firm financial performance on the right-hand side diagram. The third chart down entails the control variables of the research.

## **2.5 Summary of the Chapter**

This chapter critically reviewed the relevant literature and theoretical frameworks pertaining to firm governance and its impact on financial performance, in alignment with the key goals of the study. Based on the comprehensive analysis conducted and illustrated in Figure 2.1, the study has developed both theoretical and conceptual frameworks. The diagram depicting the conceptual framework illustrates the interplay between corporate governance tools and their impact on financial performance. According to the paradigm, company-level variables, such as business size and age, may exert control over financial performance.



## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

The chapter is entirely devoted to the research techniques that were employed to accomplish the study's objectives. The chapter is divided into five sections, starting with the research design (section 3.1). Section 3.2 discusses the data that is used in the research. The methodology of the study is discussed in section 3.3 while the model specification is spelled out in section 3.4. The variable description and measurement are discussed in section 3.5. Section 3.6 concludes with a chapter summary.

#### **3.1 Research Design**

The quantitative research method is used in this research because positivism is the overarching philosophy that guides this investigation. The quantitative approach promotes the collection of objective data, rigorous measurement, and the application of statistical tools in data analysis in order to generalize conclusions to large populations. However, this technique has been criticized for failing to provide an objective explanation why the observed circumstances occurred. The choice of research technique relies mostly on the nature of the subject and the researcher's resource availability (Saunders et al., 2009; Bryman and Bell, 2003). The quantitative technique includes data gathering methods such as the utilization of primary and secondary data, as well as descriptive and statistical conclusions in analyzing the study's findings and outcomes. This study use the explanatory research method to shed light on the connection between corporate governance procedures and the financial success of businesses.

### **3.2 Data**

Secondary data is employed in the study. The main sources of information are the companies' audited annual reports. The study involves the extraction of variables from financial reports that undergo annual audits. Secondary data is utilized in research due to the inherent limitations of primary data in terms of objectivity and measurability. Furthermore, secondary data has the advantage of being readily available, reasonably cost-effective, and expeditiously obtainable. The duration of the study ranges from 2014 to 2022. This is to use more recent data for the study. The data is gotten from the website of the Ghana Stock Exchange (GSE) as well as the individual companies' websites. A purposive sampling technique is used to sample 32 firms (15 quoted and 17 unlisted) for a period of 9 years. Purposive sampling was used because the sample selection was done according to the firm with the available data.

### **3.3 Methods**

A technique called "panel data analysis" is used to assess the internal and external determinants of credit risk of selected rural banks in Ghana. Panel data is the type of research data that is gotten from various observations over time on various cross-sectional units like people, families, firms, or governments (Torres-Reyna, 2007; Wooldridge, 2010). As a result, the data used in this study includes panel data from 30 firms across a 9-year period from 2014 to 2022. The adoption of panel data regression approach in this work is supported by two key reasons: (i) because the data obtained contained both time and cross-sectional qualities, the study is to examine determinants of firms across time (time series) and among the sampled banks (cross-section), and (ii) panel data regression produces superior findings since it increases the sample size and avoids the issue of degree of freedom.

When it comes to analyzing panel data, there are two main techniques to consider. That is fixed effects (FE) and random effects (RE). The fixed effect model investigates the relationship between a predictor and an outcome variable that are both contained within a single entity. It is assumed that each entity has its own set of characteristics that may or may not have an impact on the predictor variables in the model (Torres-Reyna, 2007). For example, the policies of a particular bank may have an impact on its credit risk issues, but this impact may not necessarily be reflected in the performance of other similar banks in the same industry. This FE model takes into account the impact of time-variation factors with the goal of determining the net consequence of the analysis on the outcome variable and the need to account for this in the control strategy. As a consequence, the assumption that the entity's error term and the predictor variable are related has been advanced (Torres-Reyna, 2007).

The random effect model, on the other hand, is a distinct case of the fixed-effect model. It is employed in the analysis of panel data when one assumes random variations across firms that remain uncorrelated to the independent variables (Torres-Reyna, 2007). Thus, the individual characteristics which may or may not have an impact on the predictor variable must be specified.

The Hausmann specification test is used in this study to determine if random effects or fixed effects are the optimum estimating strategy. Because of the trade-off between fixed and random effect models in panel research, this test is critical (Torres-Reyna, 2007). The null hypothesis in the Hausmann test is given as "the differences in coefficients are not systematic." When the chi-square value is less than 0.05, the fixed effect model is used for the alternate hypothesis, and when the chi-square value is larger than 0.05, the random effect model is used for the null hypothesis. Furthermore, while the Hausmann test supports the random effect model, an additional test, the Breusch-Pagan Language multiplier test, aids in determining if the random effect or pooled

ordinary least square (OLS) model is preferable to the study (Torres-Reyna, 2007). The null hypothesis in this situation is phrased as "no significant changes across units." When the chi-square value is less than 0.05, suggesting a significant difference across units, the random effect model is preferred for the alternative hypothesis. However, when the chi-square value is more than 0.05, the pooled OLS is favored. This signifies that the data is examined using an OLS regression.

### 3.4 Model Specification

The study used a panel quantile regression (PQR) analytical approach. Prior studies by Stancu et al. (2021) and Raifu and Aminu (2023) both employed this methodology. The following is a mathematical formulation of the quantile regression model:

$$Q(\tau | X) = \alpha + X\beta(\tau) + \varepsilon$$

In this equation,  $\alpha$  represents the intercept term, whereas  $Q(\tau|X)$  is the  $\tau$ th quantile of the conditional distribution of  $Y$  given  $X$ . The matrix  $X$  represents the independent variables, while the vector  $\beta(\tau)$  denotes the quantile regression coefficients at the quantile level  $\tau$ . Additionally, the error term is represented by  $\varepsilon$ .

Thus, the empirical model is expressed as follows:

$$FP_{it} = \gamma + \beta_1 BSIZE_{it} + \beta_2 BDIV_{it} + \beta_3 CEOD_{it} + \beta_4 FSIZE_{it} + \beta_5 AGE_{it} + \varepsilon_{it} \dots \dots (3.1)$$

In model (3.1), the symbol  $\gamma$  represents a constant in the given context, while  $FP$  denotes the firms' financial performance that is quantified by ROA and NPM. The symbols  $\beta$  and  $\varepsilon$  are utilized in this context as the parameters and error term, respectively. The variables " $i$ " and " $t$ " represent the individual firm and time effect, accordingly. The acronym  $BFSIZE$  represents board size;  $BDIV$



stands for board diversity, and CEOD represents CEO duality. The symbols FSIZE and AGE are control variables.

### **3.4.1 Diagnostic Testing**

The research conducts the following diagnostics test; heteroscedasticity test, stationery test, and multicollinearity test.

#### **3.4.1.1 Heteroscedasticity test**

A fundamental postulation in linear regression is that the errors' variance remains constant across all data (Muthusi, 2017). When the mistakes exhibit constancy, they are denoted as homoscedastic. In order to fulfil the regression assumption and establish confidence in the outcomes, it is imperative that the findings exhibit a consistent variance.

Normally, residuals are plotted to measure this hypothesis. However, in this study, the Breush-Pagan test was used to test the heteroscedasticity in the regression model and check that the error terms were normally distributed. The null hypothesis is stated as “variances of residuals are constant”. At the point when the probability value is more than 0.05, it implies that the residuals are homoscedastic, and this would prove the absence of heteroscedasticity in the study.

#### **3.4.1.2 Multicollinearity**

Multicollinearity refers to a statistical phenomenon that occurs when there is a substantial correlation between two or more independent variables in a multiple regression analysis (Drury, 2007). If the correlation is 1 or -1, estimating the regression coefficients is impossible and unreliable. According to Muthusi (2017), multicollinearity is not a concern, but severe



multicollinearity is since it increases the gap between the evaluated coefficients and makes the evaluations more susceptible to slight errors in the model. As a result, the coefficients are flimsy and difficult to understand. The Variance Inflation Factor (VIF) was consequently employed in the study to assess for multicollinearity issues in the regression variables. Collinearity occurs when the VIFs values exceed 10. When the VIFs values are less than 10, however, collinearity is not a concern, and there is no major collinearity in the data to impede the regression analysis.

#### **3.4.1.3 Stationarity test**

A panel data is regarded as stationary if a temporal shift does not alter the pattern of the distribution. The mean, variance, and covariance are among the fundamental characteristics of the distribution that remain consistent across time. Because most forecasting methods assume stationarity in a distribution, stationarity is crucial. For instance, the stationarity assumption is required for auto-covariance and auto-correlation. The presence of non-stationarity can lead to erratic outcomes, such as t-ratios that deviate from the expected t-distribution or inflated r-squared values attributed to variables that lack a strong association. Consequently, the use of the unit root test is applied to assess the stationarity of the data.

#### **3.5 Variables Description and Measurement**

The definitions of the independent, control, and the dependent variables are presented in the following sub-sections.

### 3.5.1 Dependent Variables

The dependent variable in this study is the financial performance of the business, which is assessed by the return on assets and net profit margin. The subsequent paragraphs offer a comprehensive elucidation of these methods.

#### 3.5.1.1 Return on assets

The Return on Assets (ROA) is a widely employed financial ratio that serves as a metric for evaluating a company's profitability. The Return on Assets (ROA) metric quantifies the profitability of a firm by expressing its net income as a proportion of its total assets (Khrawish, 2011). The assessment of a firm's management performance in terms of profit production from its limited resources is a crucial factor in determining its efficiency and effectiveness (Asare, 2015). According to Wen (2010), a greater return on assets (ROA) indicates that management is proficient and adept at generating money from the business's assets, leading to improved overall firm performance.

According to Asare (2015), a greater ROA indicates that management is efficient and capable of transforming assets into revenue, resulting in a bigger bank profit. The ROA is one of the key accounting-based performance measure. The decision to consider ROA relies mainly on the fact that ROA have been employed by prior researchers for firms' performance measurement (Nguyen et al, 2021; Shahzada et al, 2021; Wu, 2021; Kapil and Mishra, 2019). In this research, ROA is measured as follows:

$$ROA = \frac{\text{Profit after Tax}}{\text{Total Assets}}$$

### **3.5.1.2 Net Profit Margin**

Net Profit Margin is a financial metric that measures the profitability of a company's operations by examining the proportion of each dollar of revenue that results in net profit (Nguyen et al, 2021; Shahzada et al, 2021). It's a critical indicator of a company's efficiency in managing its costs, generating revenue, and translating it into profits. The net profit margin is expressed as a percentage and helps investors, analysts, and stakeholders evaluate a company's ability to generate profits from its core business activities. The formula for calculating the net profit margin is:

$$NPM = \frac{\text{Operating Profit}}{\text{Total Revenue}}$$

### **3.5.2 Independent Variables**

This section considers the measurement of the independent variables employed in the study. The factors under consideration are as follows: board size, CEO duality, and board gender diversity.

#### **3.5.2.1 Board Size**

Board size pertains to the numerical representation of directors serving on a company's board. The topic of corporate governance has been extensively studied due to its perceived impact on a company's profitability and decision-making procedures (Jensen, 1993). The determination of board size often involves the computation of the aggregate count of individuals serving as directors on a company's board, encompassing both executive and non-executive directors.

Studies has demonstrated that board size may have both beneficial and bad implications on a company's success. Several studies have demonstrated that bigger boards may lead to more varied viewpoints and better decision-making, which can lead to higher financial performance (Neralla,

2021; Tessema, 2019; Pamburai et al, 2015). On the other hand, some studies have indicated that bigger boards may contribute to slower decision-making, higher conflicts of interest, and inferior performance (Jensen, 1993).

The appropriate board size may vary based on the size and complexity of the firm. Smaller organizations may benefit from smaller boards that can make faster decisions, while bigger companies may need larger boards to accommodate the spectrum of skills required to manage the company's operations (Hillman et al., 2000). Therefore, the size of the board plays a crucial role in corporate governance and can potentially impact a company's performance positively or negatively. The assessment conducted in this research is predicated upon the aggregate count of directors comprising a business's board, inclusive of the company secretary.

#### **3.5.2.2 CEO Duality**

The term "CEO duality" refers to the situation in which a company's top executive also serves as its board chairman. The adoption of this practise is prevalent among several organisations, however, it has been a topic of contention within the corporate governance literature due to its potential impact on firm performance. According to Areneke (2018), the existence of CEO duality might potentially lead to conflicts of interest, since the Chief Executive Officer may have a propensity to put their personal interests above the interests of the organisation. On the other hand, a number of experts argue that CEO duality might enhance decision-making efficiency by enabling a more centralised decision-making process (Kapil & Mishra, 2019). Scholars utilise a binary variable to evaluate the existence of CEO duality. A value of 1 indicates that the CEO simultaneously holds the position of chairman, while a value of 0 indicates that separate



individuals complete the positions of CEO and chairman. The present study employed an approach that was similar in nature to assess the phenomena of CEO duality.

### **3.5.2.3 Board Diversity (Gender)**

Board diversity, especially gender diversity, is a major issue in corporate governance. Several research have examined how board gender diversity affects business performance and decision-making (Nel et al., 2020; Sarpong-Danquah, 2018). Board gender diversity may be measured by the proportion of female board members, the presence of at least one female board member, and board committee gender makeup. The most used gender diversity statistic is the percentage of women on the board (Nel et al., 2020; Sackey et al., 2019; Sarpong-Danquah et al., 2018; Fauzi and Locke, 2012). Research suggests that gender diversity on boards may improve corporate performance and decision-making. For instance, Adams and Ferreira (2009) discovered that board gender diversity was positively connected with company value and profitability, especially in businesses with strong development potential. Another research by Sarpong-Danquah et al. (2018) demonstrated a favourable correlation between board gender diversity and business success. Yet, some researches have shown contradictory or ambiguous results about the effect of board gender diversity on firm performance (Nel et al., 2020). Several scholars have claimed that the influence of board gender diversity may rely on contextual variables, such as the cultural and institutional norms of the company's operating nation or area (Fauzi and Locke, 2012). In this study, the number of females on a company board is the measure of board diversity.

### **3.5.3 Control Variables**

This study examines how governance forms affect financial success. In this study, the phrase "corporate governance mechanisms" is utilised to refer to the composition and leadership of the

board. In the realm of corporate performance review, two key measures have significance: net profit margin and return on assets (ROA). The present analysis acknowledges the significant endogeneity of the determinants of corporate governance, as previously indicated by Nguyen et al. (2015) and Wang and Shailer (2015). Hence, it is imperative to address and minimise any potential bias that might result from the exclusion of additional factors relevant to the business level.

Therefore, it is crucial to take into account latent variables by employing alternative observables or empirical indicators. According to Bennedsen et al (2008), there exists a correlation between board size and many discernible attributes of firms, including firm size, company age, and industry affiliation. Additionally, there are also latent elements that may influence business performance. The causal relationship between board size and performance is a topic of much debate, particularly when attempts are made to control for observable factors that influence board size. Previous scholarly research in the field of corporate finance has acknowledged several empirical constructions and factors that may potentially influence corporate governance and its financial performance. The factors that are considered to be of utmost importance and frequently included in research include the size of the business, the age of the firm, the level of financial leverage, and the inclusion of year and industry dummies.

Based on existing scholarly sources, it is posited that larger organisations possess greater capacity and a wider range of diversification opportunities, leading to a more robust financial standing compared to smaller counterparts (Black et al., 2014; Al-Najjar, 2015). According to Caprio, Croci, and Del Giudice (2011), the measurement of company size in this research is established by employing a natural logarithm conversion on the absolute book value of the market capitalization of the firm.

Furthermore, in order to address the potential influence of fluctuations in market value among the selected businesses, the research integrates company age as a logarithmic representation of the cumulative number of incorporations for each firm from its initial listing in the capital market. The available body of literature suggests that a relationship may be observed between the age of a business and the occurrence of the "life-cycle effect". Black et al. (2014) propose that ageing may have a detrimental impact on the financial success of a corporation. This phenomenon can be attributed to the tendency of older organisations to have lower rates of growth and a reduced likelihood of possessing intangible assets in comparison to their younger counterparts. Moreover, according to Hansen (1992), there is a negative correlation between a company's level of innovation and its size and age. According to the findings of Mishra et al (2001), the duration of a firm's existence has the capacity to impact its performance, in conjunction with its governance framework.

**Table 3.1: Summary of Variable Descriptions and Measurements**

Notation	Variable	Measurement	Expected Sign
<b>(A) Dependent Variables</b>			
ROA	Return on Assets	$\frac{\text{Profit after Tax}}{\text{Total Assets}} \times 100\%$	na
NPM	Net Profit Margin	$\frac{\text{Operating Profit}}{\text{Total Revenue}} \times 100\%$	na
<b>(B) Independent Variables</b>			
BSIZ	Board Size	Total number of board members	-/+
BDIV	Board Diversity (Gender)	Number of female directors on a company board	+
CEOD	CEO Duality	Dummy variable: 1 = CEO is the same as the board chairman, 0 = CEO is different from the board chairman	-
<b>(C) Control Variables</b>			
FSIZE	Firm size	Natural logarithm of total assets	+
AGE	Firm age	The total number years the firm has been in existing since its listing in the capital market	+

Source: Author's Construction, 2023

### 3.6 Summary of Chapter

This chapter described the study's methodology. It begins with research design, and follow through with data, methodology, model specification, estimation strategy, to justification of variables and data. The study used firms' annual data. The study uses panel regression technique for the analysis.





## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

#### 4.0 Introduction

This chapter presents results and discussions on the subject of "Corporate Governance Mechanisms and Financial Performance: Evidence of Quoted and Unquoted Firms in Ghana"

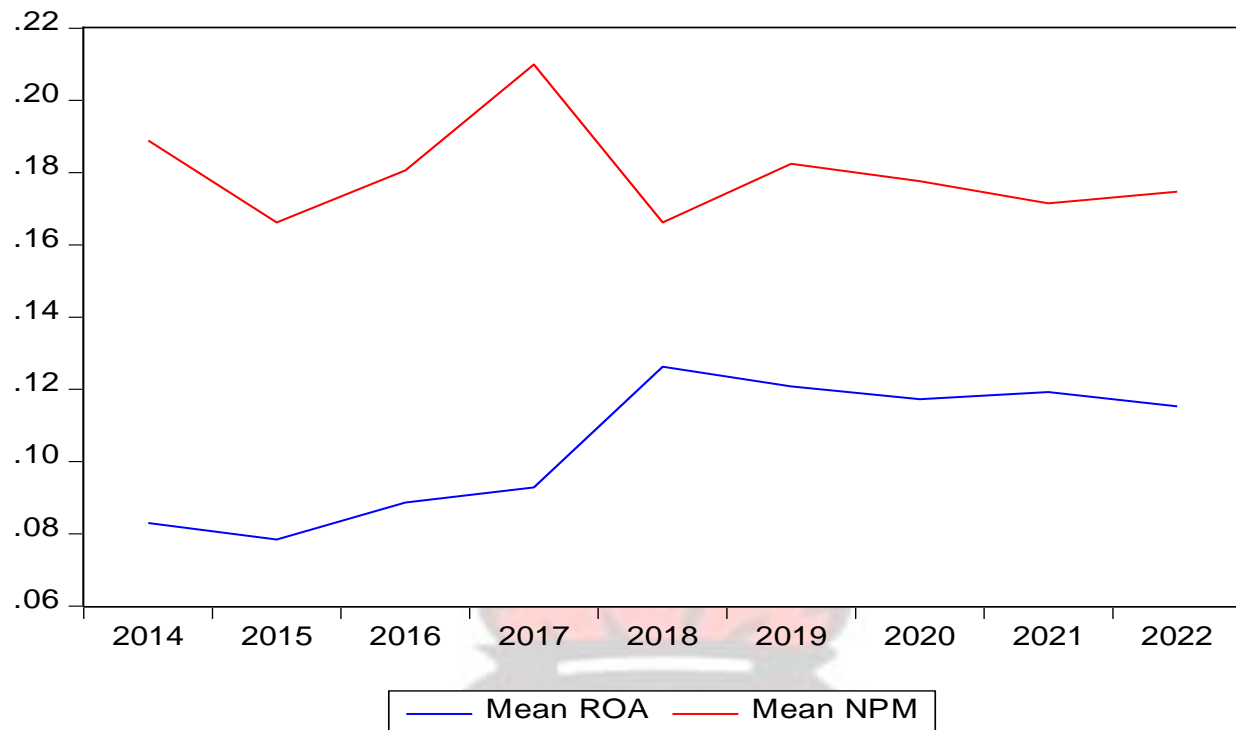
There are five major themes within the chapter. Section 4.1 presents the preliminary analysis of the data, including descriptive statistics of the study variables, trend analysis of firms' financial performance, and correlation analysis. Section 4.2 presents results from the diagnostics test for regression models. The regression findings on the corporate governance practices that affect financial performance in Ghanaian businesses are presented in Section 4.3. Section 4.4 of the conclusion gives a summary of the chapter.

#### 4.1 Preliminary Analysis of Data

This component of the study presents a preliminary investigation and evaluation of the research data.

##### 4.1.1 Trend analysis of firms' financial performance

Figure 4.1 offers an analysis of the trend in firms' financial performance over the study period.



**Figure 4.1: Trend analysis of firms' financial performance**  
**Source: Author's Computation, 2023**

The analysis of average financial performance over time revealed intriguing patterns. As depicted in Figure 4.1, the average return on assets (ROA) exhibited an upward trend from 2014 to 2018, followed by a decline from 2019 to 2022. This indicates a positive trajectory in firms' ROA during the initial five years of the study, followed by a decrease in the subsequent years. This decline could potentially be attributed to the disruptive impact of the COVID-19 pandemic on businesses. Similarly, the mean net profit margin (NPM) displayed a comparable upward trend for the initial four years, followed by a decline post-2017. It is plausible that similar factors contributed to both the initial increase and subsequent decrease in the net profit margin. In summary, these findings underscore the dynamic nature of financial performance, with periods of both enhancement and deterioration observed throughout the study period.

#### 4.1.2 Descriptive Statistics of the Study Variables

Table 4.1 presents the descriptive data pertaining to the factors under investigation in the study. The presented statistics offer a concise overview of the measures of central tendency, variability, and range for the variables within the dataset. This information can be valuable in understanding the inherent features of the data.

**Table 4.1: Summary of Descriptive Statistics**

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	288	0.104621	0.1371218	0.0010512	0.9309575
NPM	288	0.1798059	0.1712625	0.0049614	1.600043
BSIZE	288	9.083333	3.43785	3	18
BDIV	288	0.1370984	0.7856504	-12.85207	0.46875
CEOD	288	0.3125	0.4643192	0	1
FSIZE	288	6.600542	1.152548	4.340127	10.66051
AGE	288	39.71181	23.18604	12	122

*Notes:* ROA = return on assets; NPM = net profit margin; BSIZE = board size; BDIV = board diversity; CEOD = CEO duality; FSIZE = firm size; AGE = number of years since incorporation  
**Source: Author's Computation, 2023**

In Table 4.1, it is evident that the average Return on Assets (ROA) for the sample companies stands at roughly 10.46%, and it is accompanied by a standard deviation of approximately 13.71%. This indicates that, on average, these firms achieve a return of approximately 10.46% on their assets. This standard deviation underscores a significant level of variability in ROA among these companies. Nevertheless, the result encompasses a minimum ROA of about 0.10% and a maximum of 93.10%.

Additionally, the mean Net Profit Margin (NPM) for the sample firms is approximately 17.98%, accompanied by a standard deviation of around 17.13%. This implies that, on average, these

companies retain nearly 18% of their revenue as profit after covering their expenses. Within this context, the minimum NPM observed is approximately 0.50%, while the maximum reaches a substantial 160.00%.

Regarding board size, the average consists of approximately 9.08 members. This suggests that the typical company within the sample maintains a relatively sizable board of directors. The smallest board in the research consists of 3 members and the largest board has 18 members.

Furthermore, the average board diversity score is around 0.14, signifying that, on average, the boards of these companies exhibit a relatively low level of gender diversity. Notably, an unusual occurrence is the presence of a minimum diversity score of roughly -12.85. Conversely, the highest diversity score reaches 0.47, indicating that at least one firm within the research sample maintains a more diverse board.

The average CEO duality score amounts to 0.31. This average suggests that, on the whole, companies within the sample tend to feature CEO duality. In other words, in approximately 31% of the cases, a single individual holds both the positions of CEO and board chair.

Table 4.1 also illustrates that the average firm size stands at GH¢6.6 million. Within the dataset, the smallest firm's size is approximately GH¢4.34 million, while the largest firm's size reaches around GH¢10.66 million.

Lastly, the average age of these companies, in terms of years since incorporation, is approximately 39.71 years. The youngest firm within the dataset has been operational for 12 years, whereas the oldest has an impressive track record of 122 years.



### 4.1.3 Correlation Analysis

The correlation matrix is presented in Table 4.2. These correlations unveil initial insights into how the variables interrelate with financial performance metrics like return on assets and net profit margin.

**Table 4.2: Correlations Matrix**

Variable	ROA	BSIZE	BDIV	CEOD	FSIZE	AGE
ROA	1.0000					
BSIZE	-0.2644***	1.0000				
BDIV	0.0424	-0.0411	1.0000			
CEOD	-0.2381***	0.3307***	-0.0841	1.0000		
FSIZE	-0.2069***	0.2830***	0.0076	0.1304	1.0000	
AGE	0.1061*	0.1648***	-0.0521	0.2133***	0.0548	1.0000

Variable	NPM	BSIZE	BDIV	CEOD	FSIZE	AGE
NPM	1.0000					
BSIZE	0.0020	1.0000				
BDIV	0.0002	-0.0411	1.0000			
CEOD	-0.1247**	0.3307***	-0.0841	1.0000		
FSIZE	0.0106	0.2830***	0.0076	0.1304 **	1.0000	
AGE	-0.0525	0.1648***	-0.0521	0.2133***	0.0548	1.0000

*Notes:* ROA = return on assets; NPM = net profit margin; BSIZE = board size; BDIV = board diversity; CEOD = CEO duality; FSIZE = firm size; AGE = number of years since incorporation  
 \*\*\*, \*\*, \* signifies p-value less than 1%; 5%; and 10% significance level; respectively

**Source: Author's Computation, 2023**

From Table 4.2, board size has a noteworthy negative correlation of -0.2644 with return on assets (ROA). This implies that larger boards often correspond to lower ROA. However, the correlation between board size and net profit margin (NPM) is extremely weak, with virtually no clear linear relationship.

There exists an insignificant, yet positive correlation between board diversity and both ROA (0.0424) and NPM (0.0002). This suggests that diverse boards might have a positive influence on firm performance, but this effect is not strong enough to reach statistical significance.

Additionally, CEO duality has an adverse relationship with ROA (-0.2381) and NPM (-0.1247). This suggests that companies with a dual-CEO structure have a reduced average ROA and NPM.

Furthermore, ROA displays a significant negative correlation with firm size (-0.2069), implying that larger firms tend to have lower ROA. In contrast, the correlation between firm size and NPM is very weak (0.0106), indicating only a minimal linear connection.

There is a weak positive correlation (0.1061) between ROA and the number of years since incorporation. This suggests a slight inclination for older companies to exhibit higher ROA. However, NPM displays a weak negative correlation (-0.0525) with firm age, indicating that older companies might have slightly lower NPM.

## **4.2 Diagnostic Test**

The findings of the different diagnostic analyses carried out on the study data are presented in the preceding sub-sections. These include the test for data stationarity, multicollinearity, heteroscedasticity, and data normality.

### **4.2.1 Unit Root Test**

The objective of stationary testing is to determine whether data is integrated in the same or distinct orders. Certain variables exhibit stationarity at the stationary level, while others exhibit stationarity at the first difference level or lack integration at the same order, according to the results of the

stationary test. The stationary examination utilises the Augmented Dickey-Fuller (ADF) and Levin-Lin-Chu (LLC) tests. Table 4.3 displays the possible outcomes of each unit root.

**Table 4.3: Results of stationary test**

Variables	ADF - Fisher		LLC test	
	Level	1 <sup>st</sup> difference	Level	1 <sup>st</sup> difference
ROA	105.511***	151.646***	-31.0012***	-15.5341***
NPM	70.6197	146.454***	-3.21674***	-21.7411***
BSIZE	56.3431	102.669***	-7.89948***	-17.2397***
BDIV	65.0868**	91.3383***	-70.5016***	-49.6539***
FSIZE	89.1747***	99.3353***	-9.20455***	-21.8329***
AGE	1.22427	5.42640	0.83357	-0.99179

*Notes:* ROA = return on assets; NPM = net profit margin; BSIZE = board size; BDIV = board diversity; FSIZE = firm size; AGE = number of years since incorporation

\*\*\*, \*\*, \* signifies p-value less than 1%; 5%; and 10% significance level; respectively

**Source: Author's Computation, 2023**

Table 4.3 demonstrates that the ADF probability value for ROA, NPM, BSIZE, BDIV, and FSIZE is less than the alpha value of 5% at the level and at first difference. It indicates that some data are stationary at the level, while others are stationary at the first difference. Moreover, the LLC test at the level reveals that the values for ROA, NPM, BSIZE, BDIV, and FSIZE are less than the alpha value of 5%, indicating that the data are stationary at the level. The findings of unit root testing indicate that, with the exception of firm age (which is not stationary at a level), there is no integration between the majority of the variables, so the GLS technique is considered to be the most suitable approach for investigating the correlation between corporate governance procedures and the financial performance of firms.

#### 4.2.2 Test for multicollinearity

The use of the variance inflation factor (VIF) is employed to assess the presence of multicollinearity among the predictors, and the outcome is displayed in Table 4.4.

**Table 4.4: Test for multicollinearity**

Variable	VIF	Tolerance (1/VIF)
BSIZE	1.21	0.823854
BDIV	1.01	0.991060
CEOD	1.16	0.859259
FSIZE	1.09	0.917912
AGE	1.06	0.943455

*Notes:* VIF = variance inflation factor; BSIZE = board size; BDIV = board diversity; CEOD = CEO duality; FSIZE = firm size; AGE = number of years since incorporation

**Source: Author's Computation, 2023**

Table 4.4 displays the VIF and tolerance values, which indicate that the model does not suffer from severe multicollinearity. This suggests that the independent variables can be included in the regression analysis without a major concern about multicollinearity affecting the results.

#### 4.2.3 Heteroscedasticity Test

The results of a heteroscedasticity test, especially the Breusch-Pagan/Cook-Weisberg test, are displayed in Table 4.5. Heteroscedasticity pertains to the condition in which the variability of the residuals, or errors, in a regression model is not uniform across all levels of the independent variables. Heteroscedasticity has the potential to contravene a fundamental premise of linear regression, namely the need of constant variance in the errors (homoscedasticity).



**Table 4.5: Heteroscedasticity Test**

Test	$\chi^2$	Prob > $\chi^2$
Breusch-Pagan/Cook-Weisberg test	38.12***	0.0000

*Notes: \*\*\*, \*\*, \* signifies p-value less than 1%; 5%; and 10% significance level; respectively*  
**Source: Author's Computation, 2023**

Table 4.5 shows that the test value for the Breusch-Pagan/Cook-Weisberg test is 38.12, and the probability (Prob > 2) for this is 0.0000. Since the p-value is less than the significance level of 5%, there is a lot of evidence to say that the null hypothesis about homoscedasticity is absent. The test results show that the regression model has heteroscedasticity. This means that the residuals are not spread out in the same way across all levels of the independent variables.

#### 4.2.4 Test for Data Normality

Normality testing outcomes, as determined by the Jarque-Bera test, are displayed in Table 4.6. To determine if a regression model's residuals (the gaps between observed and projected values) have a normal distribution, this test is applied.

**Table 4.6: Normality Test**

Test	Value	Prob > $\chi^2$
Jarque-Bera test	6662.828***	0.0000
Skewness	4.146777	
Kurtosis	25.05567	

*Notes: \*\*\*, \*\*, \* signifies p-value less than 1%; 5%; and 10% significance level; respectively*  
**Source: Author's Computation, 2023**

According to the findings shown in Table 4.6, the Jarque-Bera statistic of 6662.828, along with a probability value of 0.00000, provides compelling evidence to reject the hypothesis that the data adheres to a normal distribution. This finding suggests that the distribution of the variable being

analyzed is likely skewed or has heavy tails, indicating potential deviations from the assumptions of normality.

Upon evaluating the various assessments conducted on the assumptions underlying panel regression methods, it becomes evident that some assumptions have not been met, hence rendering the use of GLS regression unsuitable. The present study employed the Panel Quantile Regression (PQR) methodology, enabling the examination of several quantiles of the research variable rather than just focusing on the mean (Raifu and Aminu, 2023). This method is beneficial in cases when the conditional distribution of the data exhibits asymmetry or does not follow a normal distribution.

#### **4.3 Corporate Governance Mechanisms and Ghanaian Firms Financial Performance**

Table 4.7 offers the findings from a Panel Quantile Regression (PQR) examination of the effect of corporate governance systems on businesses' financial performance, with an emphasis on return on assets (ROA) and net profit margin (NPM) at the 25th, 50th, and 75th percentiles, respectively. The Pseudo  $R^2$  represents the goodness-of-fit of the quantile regression models for each quantile level. Thus, the models have relatively low Pseudo  $R^2$  values, suggesting that the independent variables explain a modest portion of the variation in return on assets and net profit margin at each quantile level.

**Table 4.7: Panel Quantile Regression (PQR): Firms Financial Performance**

Variables/ Quantile	ROA			NPM		
	0.25	0.50	0.75	0.25	0.50	0.75
BSIZE	-0.0054388*** (0.0011018)	-0.0070622*** (0.000657)	-0.0103003*** (0.0013975)	0.000143 (0.0006175)	0.0004375 (0.0007208)	0.000959 (0.000781)
BDIV	-0.0002169 (0.001111)	0.0024358*** (.0006362)	0.0059344*** (0.0013179)	0.0006175 (0.0014813)	0.0043525*** (0.0006966)	0.0060281**** (0.000717)
CEOD	-0.0411555*** (0.0073467)	-0.0395296*** (0.0048306)	-0.0213548** (0.0098289)	-0.0360615*** (0.0105941)	-0.0069108 (0.0052668)	-0.0131694*** (0.0060414)
FSIZE	-0.008252*** (0.003046)	-0.0113255*** (0.0018913)	-0.0109609 (0.0045004)	0.0033112 (0.0040037)	0.0010994 (0.0020484)	-0.0008868 (0.0020749)
AGE	0.0009289*** (0.0001904)	0.0014864*** (0.0000924)	0.0017948*** (0.2219265)	-0.0001279 (0.0001953)	-0.0002779*** (0.0001005)	-0.0001122 (0.0000898)
_cons	0.1320659*** (0.0192297)	0.1733016*** (0.0127086)	0.2219265*** (0.0329165)	0.1213239*** (0.0283155)	0.1594361*** (0.0138128)	0.1837673*** (0.0143733)
Number of obs	288	288	288	288	288	288
Pseudo R <sup>2</sup>	0.0764	0.2494	0.1682	0.0477	0.0054	0.0055

Notes: ROA = return on assets; BSIZE = board size; BDIV = board diversity; CEOD = CEO duality; FSIZE = firm size; AGE = number of years since incorporation. Standard errors in parentheses

\*\*\*, \*\*, \* signifies *p*-value less than 1%; 5%; and 10% significance level; respectively

Source: Author's Computation, 2023

According to the findings presented in Table 4.7, it can be noticed that the coefficient associated with board size exhibits a negative and statistically significant relationship across all quantiles, namely 0.25, 0.50, and 0.75. This finding implies that, irrespective of the specific quantile level, an expansion in board size is linked to a decline in return on assets (ROA). In other words, board size negatively affects return on assets. In contrast, board size improves net profit margins, although this effect is not statistically significant across quantiles. This shows that board size increases net profit margins independent of quantile. The analysis found that board size affects Ghanaian companies' return on assets. However, its influence on these enterprises' net profit margin is negligible. Helmi and Boshnak (2021) also found a statistically significant but weak adverse relationship between board size and firm performance, as measured by return on assets. Bhattra (2017) found that board size hurts Nepalese commercial banks' financial performance. In contrast, Bace (2017) found a positive association between board size and Saudi bank profitability. Also, board diversity is not statistically significant at the 0.25 quantile, but it becomes statistically significant and positive at the 0.50 and 0.75 quantiles. This suggests that, at higher quantiles (0.50 and 0.75), firms with more board diversity tend to have higher return on assets. However, for NPM, it is observed that the coefficient for board diversity is statistically significant and positive at all quantiles (0.25, 0.50, and 0.75). This implies that greater board diversity is associated with higher net profit margins (NPM) across all quantiles. From the analysis, it can be deduced that board diversity has significant effect both on Ghanaian firms return on assets and net profit margin. This result resonates with Oketooyin and Gbadebo (2019) as their research observed that board diversity positively affects firms return on equity. At the same time, the result is in line with finding reported by TuAnh et al. (2021) who report a positive relationship between gender diversity and firm performance.



The study further reveals that the presence of CEO duality has a negative impact on return on assets, with statistical significance shown across all quantiles (0.25, 0.50, and 0.75). This finding indicates that companies that have CEO duality, wherein a single individual occupies both the CEO and board chair roles, have worse return on assets (ROA) across all quantiles. In a similar vein, the presence of CEO duality has a detrimental impact on net profit margins, with statistical significance shown across all quantiles. This finding suggests that the presence of CEO dualism is linked to decreased net profit margins (NPM) at all levels of quantiles. Based on the study conducted, it can be inferred that the presence of CEO duality has a negative impact on the return on assets and net profit margin of enterprises in Ghana. The aforementioned assertion is in opposition to the conclusions drawn by Azzoz and Khames (2016), whose study identified a favourable and ethical correlation between the presence of a dual executive director role and the level of return on property rights.

The analysis reveals that business size exhibits a negative impact on return on assets, with statistical significance detected at the 0.25 and 0.50 quantiles. However, this relationship loses statistical significance at the 0.75 quantile. This observation implies that bigger enterprises have a negative association with return on assets (ROA) at the lower quantiles (0.25 and 0.50). However, this correlation becomes less pronounced at the higher quantile of 0.75. Moreover, the coefficient associated with company size has a positive direction, however it lacks statistical significance across all quantiles. This suggests that there is not a statistically significant correlation between the size of a corporation and its net profit margins across all quantiles. Based on the study conducted, it can be inferred that there exists a positive relationship between business size and return on assets, whereas conversely, a negative relationship is observed between firm size and net

profit margin. Alhassan et al. (2015) found that firm size significantly affects financial performance.

Additionally, it is observed that the age of a corporation has a favourable impact on its return on assets (ROA), and this relationship is statistically significant across all quantiles. This observation indicates that there is a positive relationship between the age of businesses and their return on assets (ROA) at all levels of quantiles. In contrast, the age of a business has a detrimental impact on NPM, with statistical significance seen at the 0.25 quantile. This suggests that younger firms generally exhibit higher NPM at the 0.25 quantile. However, this relationship loses statistical significance at the 0.50 and 0.75 quantiles. Based on the findings of the investigation, it can be inferred that the age of a corporation has a favourable impact on its return on assets, while simultaneously exerting a negative influence on its net profit margin. According to the study conducted by TuAnh et al. (2021), a negative correlation was shown between the age of a corporation and its performance.

#### **4.4 Chapter Summary**

This chapter examines how corporate governance affects Ghanaian companies' finances. The findings and descriptive statistics in this chapter give an overview of the research methodology. Additionally, it includes an examination of the relationship between variables through correlation analysis, as well as the testing and analysis of a regression model including the research variables.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS**

#### **5.0 Introduction**

This chapter is a synopsis of chapter four. There are four separate sections. A summary of findings is presented in section (5.1). Section (5.2) contains the study's conclusion. Policy implications and recommendations are presented in section (5.3). The final component (section 5.4) of this study presents recommendations for potential areas of further investigation.

#### **5.1 Summary of Findings**

The study observed that board size has an adverse and significant effect on return on assets, indicating that an increase in board size decreases ROA, indicating that companies with larger boards' reports lower ROA. However, board size positively affects net profit margins but is insignificant, suggesting larger boards have higher net profit margins.

The study found that board diversity is statistically significant and positive at higher quantiles (0.50 and 0.75), suggesting higher return on assets. Similarly, board diversity has a positive net profit margin, indicating that greater diversity is associated with higher profit margins.

The research indicates that CEO duality negatively impacts return on assets (ROA) and net profit margins in firms. It is statistically significant at all quantiles (0.25, 0.50, and 0.75), indicating that firms with CEO duality tend to have both lower ROA and NPM.

## **5.2 Conclusion**

The present study investigates the intricate correlation between corporate governance variables and the financial performance of enterprises during a ten-year period spanning from 2014 to 2024. The investigation was conducted using a sample of 32 businesses. The information pertaining to corporate governance processes and financial performance is obtained from the annual reports of the respective businesses. The study used a Panel Quantile Regression (PQR) technique to analyze the results. The study found that a larger board is associated with a lower return on assets but a higher net profit margin. The research further observed that firms with more diverse boards tend to exhibit superior financial performance, as indicated by higher ROA and NPM. Finally, the research established that firms with CEO duality experienced lower financial performance. The research underscores the significance of board diversity in enhancing financial performance and caution against the potentially detrimental effects of CEO duality.

## **5.3 Policy Implications and Recommendations**

The study's findings suggest the following recommendations:

The research observed that board size has an adverse effect on return on assets but a positive impact on net profit margin. It is, thus, recommended that companies should carefully assess and optimize their board size. While larger boards may have certain advantages, such as higher net profit margins, it's crucial to recognize the adverse impact on return on assets. To strike a balance, organizations should consider right-sizing their boards, ensuring that the composition aligns with their specific needs and strategic goals.



This study highlights the favourable influence of board diversity on financial success. Hence, it is advisable that governments and organisations proactively advocate for the promotion of diversity within board compositions, taking into account variables such as gender, ethnicity, and competence. The inclusion of diverse boards can contribute to a broader spectrum of viewpoints and experiences, hence facilitating improved decision-making processes and perhaps resulting in increased returns on assets and net profit margins.

The research highlights the negative consequences of CEO duality on both return on assets (ROA) and net profit margins (NPM). It is therefore recommended that companies should carefully consider the implications of having a single individual hold the job of CEO and board chair. To strengthen corporate governance and mitigate the risks associated with CEO duality, organizations should consider separating these roles and implementing robust checks and balances.

#### **5.4 Suggestions for Future Research**

Future investigation can delve deeper into the causal mechanisms underlying the relationships observed in this study. For instance, why does an increase in board size lead to lower return on assets, and what specific factors drive the positive impact on net profit margins? Investigating the causal pathways and identifying mediating variables can provide valuable insights.

Conducting longitudinal studies over extended periods can help assess how these relationships evolve over time. Such research can uncover whether the observed effects of board size, diversity, and CEO duality persist or change as organizations adapt to evolving corporate governance practices and external factors.

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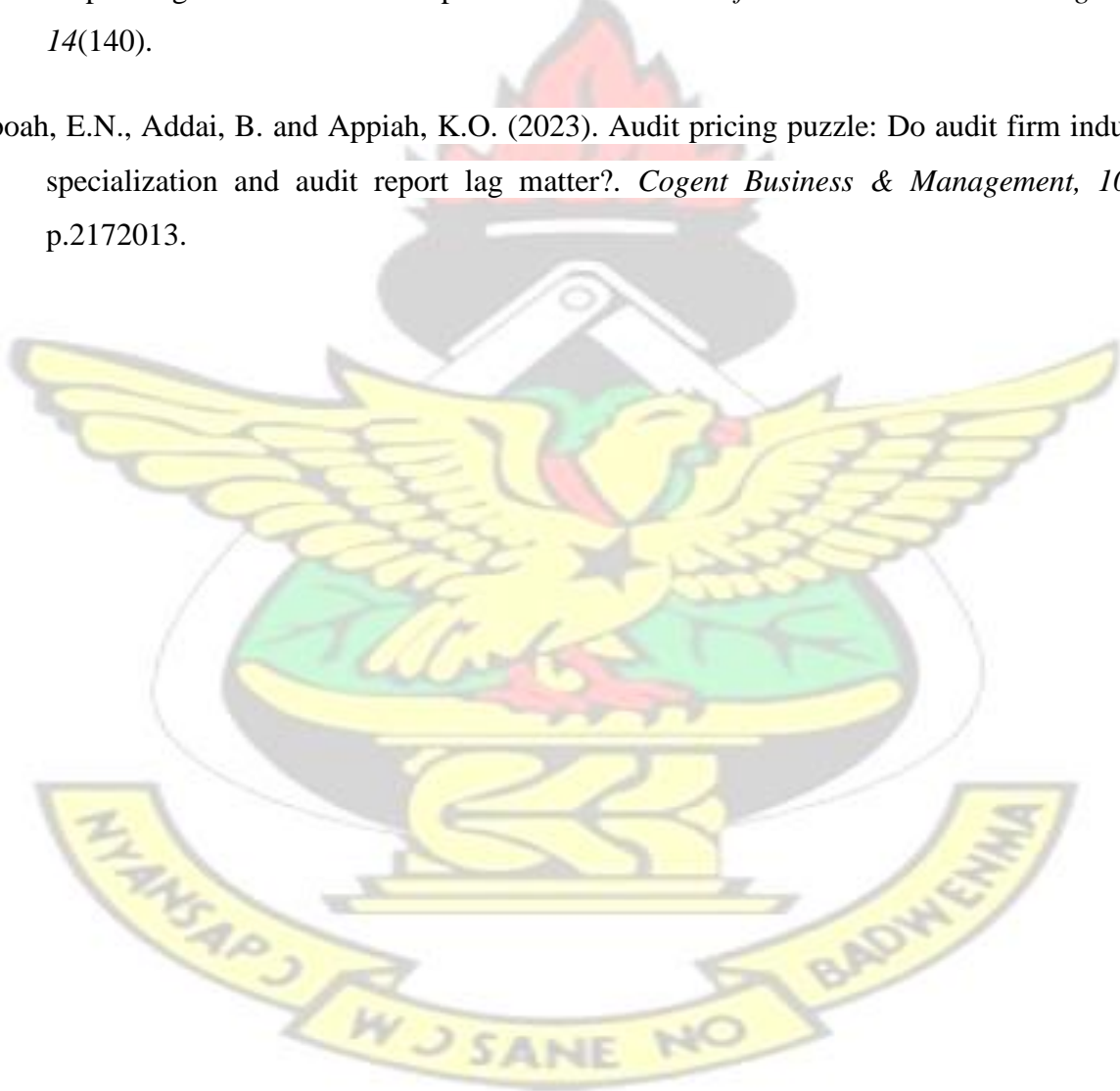
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## APPENDIX I

### Dataset for the Research

COMPANY	CODE	YEAR	ROA	NPM	BSIZ	BDIV	CEOD	FSIZE	AGE
FIRM1	1	2014	0.083568	0.17	8	0.375	0	6.958294	19
FIRM1	1	2015	0.060603	0.16	7	0.408163	0	6.995955	19
FIRM1	1	2016	0.061865	0.18	7	0.408163	0	6.934786	19
FIRM1	1	2017	0.058873	0.17	3	0	0	6.11872	19
FIRM1	1	2018	0.188006	0.023727	3	0	0	5.509254	19
FIRM1	1	2019	0.172025	0.017062	3	0	0	5.547835	19
FIRM1	1	2020	0.17044	0.017383	3	0	0	5.583695	19
FIRM1	1	2021	0.175993	0.017473	4	0	0	5.605359	19
FIRM1	1	2022	0.177736	0.018904	5	0.32	0	5.656156	19
FIRM2	2	2014	0.014501	0.017999	4	0.375	0	6.257226	29
FIRM2	2	2015	0.094937	0.19	4	0.375	0	6.279323	29
FIRM2	2	2016	0.126584	0.17	4	0.375	0	6.217728	29
FIRM2	2	2017	0.114179	0.16	4	0.375	0	6.23962	29
FIRM2	2	2018	0.111327	0.18	4	0.375	0	6.297633	29
FIRM2	2	2019	0.121441	0.182768	3	0.444444	0	6.299429	29
FIRM2	2	2020	0.124931	0.185835	3	0.444444	0	6.301997	29
FIRM2	2	2021	0.121754	0.188045	3	0.444444	0	6.343331	29
FIRM2	2	2022	0.124694	0.190486	3	0.444444	0	6.378244	29
FIRM3	3	2014	0.008543	0.15	5	0.32	0	6.155029	24
FIRM3	3	2015	0.009721	0.16	5	0.32	0	6.150135	24
FIRM3	3	2016	0.008159	0.12	5	0.32	0	6.127853	24
FIRM3	3	2017	0.006318	0.11	5	0.32	0	6.418449	24
FIRM3	3	2018	0.013409	0.15	5	0.32	0	6.498453	24
FIRM3	3	2019	0.014824	0.165444	5	0.32	0	6.512898	24
FIRM3	3	2020	0.012866	0.154509	4	0	0	6.588285	24
FIRM3	3	2021	0.012551	0.140101	4	0	0	6.60116	24
FIRM3	3	2022	0.012922	0.140862	4	0	0	6.607598	24
FIRM4	4	2014	0.110901	0.19	7	0.244898	0	6.317136	59
FIRM4	4	2015	0.160755	0.16	7	0.244898	0	6.256426	59
FIRM4	4	2016	0.156235	0.15	7	0.244898	0	6.066823	59
FIRM4	4	2017	0.153509	0.136065	8	0.21875	0	6.092007	59
FIRM4	4	2018	0.144613	0.131338	8	0.21875	0	6.120917	59
FIRM4	4	2019	0.133358	0.116212	8	0.21875	0	6.163271	59
FIRM4	4	2020	0.125511	0.115016	8	0.21875	0	6.198206	59
FIRM4	4	2021	0.179773	0.17	4	0	0	6.876326	53
FIRM4	4	2022	0.173672	0.16	4	0	0	6.941248	53
FIRM5	5	2014	0.136229	0.18	4	0	0	7.216364	53
FIRM5	5	2015	0.19596	0.19	4	0	0	7.28876	53



FIRM5	5	2016	0.179745	0.17	5	0	0	7.335104	53
FIRM5	5	2017	0.165058	0.16	5	0	0	7.368088	53
FIRM5	5	2018	0.127861	0.135538	5	0	0	7.477701	53
FIRM5	5	2019	0.126145	0.128952	6	0	0	7.505615	53
FIRM5	5	2020	0.13029	0.11089	6	0	0	7.545184	53
FIRM5	5	2021	0.128129	0.10238	6	0	0	7.577952	53
FIRM5	5	2022	0.125342	0.098132	6	0	0	7.600223	53
FIRM6	6	2014	0.071731	0.16	15	0.124444	0	8.273353	37
FIRM6	6	2015	0.05286	0.12	15	0.124444	0	8.306248	37
FIRM6	6	2016	0.045384	0.11	15	0.124444	0	8.125971	37
FIRM6	6	2017	0.055967	0.15	15	0.124444	0	8.207659	37
FIRM6	6	2018	0.042205	0.166483	15	0.124444	0	8.157134	37
FIRM6	6	2019	0.036025	0.176042	13	0	0	8.273383	37
FIRM6	6	2020	0.037901	0.1889	13	0	0	8.293274	37
FIRM6	6	2021	0.038757	0.195298	13	0	0	8.308744	37
FIRM6	6	2022	0.03317	0.176188	13	0	0	8.382365	37
FIRM7	7	2014	0.159289	0.18	5	0	0	4.340127	42
FIRM7	7	2015	0.2098	0.19	5	0	0	4.49849	42
FIRM7	7	2016	0.151042	0.16	6	0	0	4.636097	42
FIRM7	7	2017	0.110972	0.206437	6	0	0	4.819044	42
FIRM7	7	2018	0.144742	0.16	7	0	0	4.760897	42
FIRM7	7	2019	0.130453	0.161432	7	0	0	4.822168	42
FIRM7	7	2020	0.126109	0.15544	7	0	0	4.838849	42
FIRM7	7	2021	0.124305	0.156598	8	0	0	4.850033	42
FIRM7	7	2022	0.119328	0.155371	8	0	0	4.870404	42
FIRM8	8	2014	0.057847	0.1	9	0.444444	0	4.626566	14
FIRM8	8	2015	0.108984	0.17	9	0.444444	0	4.680888	14
FIRM8	8	2016	0.083585	0.16	9	0.444444	0	4.751017	14
FIRM8	8	2017	0.106207	0.18	9	0.444444	0	4.632994	14
FIRM8	8	2018	0.083104	0.095649	9	0.444444	0	4.771837	14
FIRM8	8	2019	0.04395	0.045985	9	0.444444	0	4.658965	14
FIRM8	8	2020	0.035924	0.049447	9	0.444444	0	4.690196	14
FIRM8	8	2021	0.095112	0.088646	9	0.444444	0	4.546913	14
FIRM8	8	2022	0.047855	0.045985	9	0.444444	0	4.584964	14
FIRM9	9	2014	0.227607	0.15	8	0.21875	0	4.834999	58
FIRM9	9	2015	0.170995	0.13	8	0.21875	0	4.919502	58
FIRM9	9	2016	0.259195	0.17	7	0.244898	0	4.984766	58
FIRM9	9	2017	0.219612	0.16	7	0.244898	0	5.005382	58
FIRM9	9	2018	0.257831	0.18	7	0.244898	0	5.093117	58
FIRM9	9	2019	0.265262	0.230358	7	0.244898	0	5.128751	58
FIRM9	9	2020	0.2482	0.268183	7	0.244898	0	5.195595	58

FIRM9	9	2021	0.290109	0.263716	7	0.244898	0	5.164293	58
FIRM9	9	2022	0.218636	0.243553	7	0.244898	0	5.266229	58
FIRM10	10	2014	0.069101	0.01391	10	0.42	1	8.015104	58
FIRM10	10	2015	0.11674	0.021122	10	0.42	1	8.084693	58
FIRM10	10	2016	0.229476	0.043709	13	0.142012	1	8.214289	58
FIRM10	10	2017	0.427429	0.087628	13	0.142012	1	8.346243	58
FIRM10	10	2018	0.228664	0.04767	13	0.142012	1	8.532541	58
FIRM10	10	2019	0.213662	0.692114	14	0.132653	1	8.538764	58
FIRM10	10	2020	0.203029	0.613266	14	0.132653	1	8.575868	58
FIRM10	10	2021	0.189123	0.490457	14	0.132653	1	8.60915	58
FIRM10	10	2022	0.18388	0.45512	14	0.132653	1	8.635594	58
FIRM11	11	2014	0.174771	0.16	9	0	0	5.276567	58
FIRM11	11	2015	0.143569	0.12	9	0	0	5.31003	58
FIRM11	11	2016	0.131729	0.11	9	0	0	5.387566	58
FIRM11	11	2017	0.161591	0.15	9	0	0	5.474203	58
FIRM11	11	2018	0.118263	0.15	9	0	0	5.622606	58
FIRM11	11	2019	0.115641	0.142414	11	0	0	5.635484	58
FIRM11	11	2020	0.110471	0.142579	11	0	0	5.661586	58
FIRM11	11	2021	0.107725	0.134143	10	0	0	5.680248	58
FIRM11	11	2022	0.109738	0.13426	10	0	0	5.684845	58
FIRM12	12	2014	0.235351	0.18	6	0.277778	0	7.622391	60
FIRM12	12	2015	0.19758	0.17	8	0.21875	0	7.755461	60
FIRM12	12	2016	0.237932	0.18	8	0.21875	0	7.794337	60
FIRM12	12	2017	0.249511	0.19	6	0.277778	0	7.862768	60
FIRM12	12	2018	0.201077	0.16	6	0.277778	0	7.93075	60
FIRM12	12	2019	0.208412	0.153777	8	0.375	0	7.942237	60
FIRM12	12	2020	0.224356	0.152204	8	0.375	0	7.944944	60
FIRM12	12	2021	0.220631	0.153518	8	0.46875	0	7.956417	60
FIRM12	12	2022	0.216784	0.150756	8	0.46875	0	7.974798	60
FIRM13	13	2014	0.136668	0.15	6	0.277778	0	5.664729	34
FIRM13	13	2015	0.10841	0.15	7	0.408163	0	6.021536	34
FIRM13	13	2016	0.129914	0.1	7	0.408163	0	6.390178	34
FIRM13	13	2017	0.114485	0.007257	7	0.408163	0	5.802692	34
FIRM13	13	2018	0.927507	0.16	7	0.408163	0	5.708425	34
FIRM13	13	2019	0.924127	0.016104	7	0.244898	0	5.719302	34
FIRM13	13	2020	0.910161	0.015568	7	0.244898	0	5.727965	34
FIRM13	13	2021	0.912469	0.014479	7	0.408163	0	5.739322	34
FIRM13	13	2022	0.930958	0.014629	7	0.408163	0	5.740915	34
FIRM14	14	2014	0.160826	0.16	9	0.197531	1	6.573133	56
FIRM14	14	2015	0.204858	0.18	9	0.197531	1	6.571792	56
FIRM14	14	2016	0.183717	0.17	11	0.165289	1	6.648314	56

FIRM14	14	2017	0.231383	0.18	11	0.165289	1	6.715593	56
FIRM14	14	2018	0.123676	0.19	11	0.165289	1	7.028246	56
FIRM14	14	2019	0.115419	0.191572	11	0.165289	1	7.069879	56
FIRM14	14	2020	0.113679	0.196711	11	0.165289	1	7.092187	56
FIRM14	14	2021	0.11087	0.19245	11	0.165289	1	7.106154	56
FIRM14	14	2022	0.109877	0.191444	11	0.165289	1	7.113426	56
FIRM15	15	2014	0.012577	0.12	8	0.375	1	9.002554	53
FIRM15	15	2015	0.007326	0.004961	8	0.375	1	6.08126	53
FIRM15	15	2016	0.01644	0.15	9	0.444444	1	6.159634	53
FIRM15	15	2017	0.016183	0.15	9	0.444444	1	6.209987	53
FIRM15	15	2018	0.009632	0.1	8	0.375	1	6.333798	53
FIRM15	15	2019	0.009496	0.099435	8	0.21875	1	6.379519	53
FIRM15	15	2020	0.010371	0.104423	8	0.21875	1	6.390732	53
FIRM15	15	2021	0.009363	0.107877	8	0.21875	1	6.472279	53
FIRM15	15	2022	0.009353	0.098843	8	0.21875	1	6.51273	53
FIRM16	16	2014	0.017337	0.18	8	0.21875	0	8.816362	13
FIRM16	16	2015	0.01804	0.17	8	0.21875	0	8.844971	13
FIRM16	16	2016	0.010358	0.18	10	0.18	0	8.977489	13
FIRM16	16	2017	0.013108	0.19	10	0.18	0	9.283443	13
FIRM16	16	2018	0.001363	0.16	10	0.18	0	10.48761	13
FIRM16	16	2019	0.001069	0.153126	12	0.277778	0	10.59646	13
FIRM16	16	2020	0.001065	0.158254	12	0.277778	0	10.6205	13
FIRM16	16	2021	0.001085	0.156891	13	0.260355	0	10.63394	13
FIRM16	16	2022	0.001051	0.159338	13	0.260355	0	10.66051	13
FIRM17	17	2014	0.142297	0.15	4	0	0	6.231607	16
FIRM17	17	2015	0.001133	0.15	4	0	0	6.034395	16
FIRM17	17	2016	0.012965	0.1	4	0	0	5.968307	16
FIRM17	17	2017	0.091918	0.17	4	0	0	5.310492	16
FIRM17	17	2018	0.353807	0.16	4	0	0	4.998804	16
FIRM17	17	2019	0.359495	0.158781	3	0	0	5.011621	16
FIRM17	17	2020	0.285439	0.152223	3	0	0	5.123342	16
FIRM17	17	2021	0.257285	0.150268	3	0	0	5.175596	16
FIRM17	17	2022	0.232238	0.14071	3	0	0	5.227318	16
FIRM18	18	2014	0.043562	0.16	8	0.21875	1	5.782369	12
FIRM18	18	2015	0.041178	0.15	8	0.21875	1	5.933634	12
FIRM18	18	2016	0.027658	0.16	8	0	1	6.196477	12
FIRM18	18	2017	0.018155	0.12	8	0	1	6.301972	12
FIRM18	18	2018	0.01513	0.115852	18	0.444444	1	6.481701	12
FIRM18	18	2019	0.014585	0.114327	14	0.244898	1	6.515384	12
FIRM18	18	2020	0.014377	0.107511	14	0.244898	1	6.53273	12
FIRM18	18	2021	0.013925	0.107352	14	0.244898	1	6.556154	12



FIRM18	18	2022	0.014283	0.111792	14	0.244898	1	6.565768	12
FIRM19	19	2014	0.010616	0.16	18	0.444444	0	5.713181	21
FIRM19	19	2015	0.012542	0.18	18	0.444444	0	5.853007	21
FIRM19	19	2016	0.010592	0.17	18	0.444444	0	5.994275	21
FIRM19	19	2017	0.009705	0.180983	18	0.444444	0	6.125916	21
FIRM19	19	2018	0.008226	0.185209	18	0.444444	0	6.211764	21
FIRM19	19	2019	0.008212	0.188785	10	0	0	6.235961	21
FIRM19	19	2020	0.007933	0.196792	10	0	0	6.274441	21
FIRM19	19	2021	0.008338	0.206814	10	0	0	6.285207	21
FIRM19	19	2022	0.008179	0.208524	10	0	0	6.299357	21
FIRM20	20	2014	0.112762	0.19	11	0.396694	0	6.703802	84
FIRM20	20	2015	0.096847	0.16	11	0.396694	0	6.722746	84
FIRM20	20	2016	0.102495	0.15	11	0.396694	0	6.700147	84
FIRM20	20	2017	0.189708	0.16	11	0.396694	0	6.572004	84
FIRM20	20	2018	0.148423	0.122336	11	0.396694	0	6.778985	84
FIRM20	20	2019	0.144487	0.120795	11	0.396694	0	6.794956	84
FIRM20	20	2020	0.134277	0.12309	11	0.396694	0	6.837363	84
FIRM20	20	2021	0.136277	0.12454	11	0.396694	0	6.845816	84
FIRM20	20	2022	0.132076	0.122066	11	0.396694	0	6.8685	84
FIRM21	21	2014	0.044966	0.015321	13	0.142012	1	6.476515	46
FIRM21	21	2015	0.045126	0.16	12	0.375	1	6.550812	46
FIRM21	21	2016	0.05913	0.18	12	0.375	1	6.647929	46
FIRM21	21	2017	0.049462	0.17	12	0.375	1	6.760248	46
FIRM21	21	2018	0.049622	0.18	12	0.375	1	6.880712	46
FIRM21	21	2019	0.049681	0.173083	12	0.375	1	6.902831	46
FIRM21	21	2020	0.050624	0.166491	12	0.375	1	6.905257	46
FIRM21	21	2021	0.049473	0.164831	12	0.375	1	6.930043	46
FIRM21	21	2022	0.049747	0.167333	12	0.375	1	6.954784	46
FIRM22	22	2014	0.043449	0.12	8	0	1	6.406695	21
FIRM22	22	2015	0.031267	0.11	8	0	1	6.631423	21
FIRM22	22	2016	0.042667	0.15	16	0.21875	1	6.702963	21
FIRM22	22	2017	0.044898	0.15	16	0.21875	1	6.814405	21
FIRM22	22	2018	0.032591	0.075483	10	0.18	1	6.975246	21
FIRM22	22	2019	0.030084	0.071862	9	0.197531	1	7.034467	21
FIRM22	22	2020	0.017855	0.069862	9	0.197531	1	7.289911	21
FIRM22	22	2021	0.019332	0.074251	9	0.197531	1	7.291218	21
FIRM22	22	2022	0.018908	0.07272	9	0.197531	1	7.304108	21
FIRM23	23	2014	0.006696	0.15	6	0.277778	0	8.813126	12
FIRM23	23	2015	0.007896	0.17	7	0.244898	0	6.012806	12
FIRM23	23	2016	0.009647	0.16	7	0.244898	0	6.12484	12
FIRM23	23	2017	0.026999	0.180071	12	0.152778	0	6.227802	12



FIRM23	23	2018	0.019845	0.17	12	0.152778	0	6.480048	12
FIRM23	23	2019	0.01743	0.132902	12	0.152778	0	6.537846	12
FIRM23	23	2020	0.018604	0.117884	12	0.152778	0	6.544221	12
FIRM23	23	2021	0.018908	0.122305	12	0.152778	0	6.625397	12
FIRM23	23	2022	0.017913	0.103472	12	0.152778	0	6.65515	12
FIRM24	24	2014	0.117934	1.600043	8	0.21875	0	5.698754	28
FIRM24	24	2015	0.062076	0.804394	8	0.21875	0	5.895457	28
FIRM24	24	2016	0.083897	1.147237	9	0	0	6.064213	28
FIRM24	24	2017	0.063088	0.690924	9	0	0	6.192836	28
FIRM24	24	2018	0.358609	0.537528	9	0	0	5.432575	28
FIRM24	24	2019	0.282666	0.596078	10	0	0	5.519098	28
FIRM24	24	2020	0.329638	0.541294	10	0	0	5.461649	28
FIRM24	24	2021	0.237165	0.463905	10	0	0	5.56322	28
FIRM24	24	2022	0.268235	0.533016	10	0	0	5.568671	28
FIRM25	25	2014	0.022719	0.2442	13	0.426036	0	6.182195	28
FIRM25	25	2015	0.018244	0.22812	10	0.32	0	6.328824	28
FIRM25	25	2016	0.013534	0.19	8	0.375	0	6.544532	29
FIRM25	25	2017	0.013163	0.17	8	0.375	0	5.825263	29
FIRM25	25	2018	0.012657	0.16	8	0	0	5.963644	29
FIRM25	25	2019	0.017051	0.18	8	0	0	6.142037	29
FIRM25	25	2020	0.015816	0.17	8	0	0	6.182195	29
FIRM25	25	2021	0.080885	0.006469	8	0	0	5.231791	29
FIRM25	25	2022	0.019585	0.19	14	0.244898	0	6.53505	29
FIRM26	26	2014	0.001614	0.015998	14	0.244898	1	6.671567	29
FIRM26	26	2015	0.001737	0.014444	14	0.244898	1	6.760996	58
FIRM26	26	2016	0.001928	0.023979	16	0.304688	1	6.942578	58
FIRM26	26	2017	0.002094	0.015164	16	0.304688	1	6.738694	58
FIRM26	26	2018	0.021786	0.122468	14	0.244898	1	6.635723	58
FIRM26	26	2019	0.023174	0.093312	13	-12.8521	1	6.507274	58
FIRM26	26	2020	0.011797	0.1	9	0.197531	1	8.030322	28
FIRM26	26	2021	0.024256	0.17	9	0.197531	1	8.206442	28
FIRM26	26	2022	0.014563	0.16	10	0.32	1	8.57572	28
FIRM27	27	2014	0.024907	0.17	9	0.197531	0	8.558002	28
FIRM27	27	2015	0.023273	0.18	9	0.197531	0	8.634402	28
FIRM27	27	2016	0.021374	0.19	13	0.142012	0	8.76922	28
FIRM27	27	2017	0.019012	0.16	13	0.142012	0	8.988142	28
FIRM27	27	2018	0.020784	0.15	13	0.142012	0	6.122003	28
FIRM27	27	2019	0.023517	0.188034	14	0.132653	0	6.178052	28
FIRM27	27	2020	0.024141	0.197264	15	0.124444	0	6.19207	28
FIRM27	27	2021	0.023476	0.191785	16	0.21875	0	6.205949	28
FIRM27	27	2022	0.023921	0.192995	17	0.207612	0	6.223908	28

FIRM28	28	2014	0.158379	0.15	6	0	0	7.430557	48
FIRM28	28	2015	0.095836	0.1	6	0	0	7.54822	48
FIRM28	28	2016	0.097722	0.17	9	0	0	7.912107	48
FIRM28	28	2017	0.078403	0.16	9	0	0	7.894242	48
FIRM28	28	2018	0.068386	0.18	9	0	0	7.906609	48
FIRM28	28	2019	0.067891	0.153301	8	0	0	7.903702	48
FIRM28	28	2020	0.067692	0.153679	8	0	0	7.931799	48
FIRM28	28	2021	0.068422	0.168986	7	0	0	7.941794	48
FIRM28	28	2022	0.067303	0.156542	9	0	0	7.951596	48
FIRM29	29	2014	0.020523	0.16	12	0.375	1	6.222165	122
FIRM29	29	2015	0.014899	0.15	10	0.32	1	6.2947	122
FIRM29	29	2016	0.014906	0.16	10	0.32	1	6.378522	122
FIRM29	29	2017	0.01508	0.12	10	0.32	1	6.475433	122
FIRM29	29	2018	0.010475	0.11	9	0.197531	1	6.544849	122
FIRM29	29	2019	0.008991	0.093887	16	-0.25	1	6.557466	122
FIRM29	29	2020	0.008934	0.093961	16	-0.25	1	6.56322	122
FIRM29	29	2021	0.009023	0.093542	16	-0.25	1	6.569333	122
FIRM29	29	2022	0.009376	0.096553	16	-0.25	1	6.57452	122
FIRM30	30	2014	0.023569	0.17	8	0	1	5.814827	26
FIRM30	30	2015	0.016743	0.16	8	0	1	6.078042	26
FIRM30	30	2016	0.021226	0.18	8	0	1	6.141422	26
FIRM30	30	2017	0.021848	0.17	8	0	1	6.165687	26
FIRM30	30	2018	0.026578	0.18	8	0	1	6.214096	26
FIRM30	30	2019	0.022667	0.19	8	0	1	6.280349	26
FIRM30	30	2020	0.023921	0.16	8	0	1	6.295888	26
FIRM30	30	2021	0.025002	0.15	8	0	1	6.36663	26
FIRM30	30	2022	0.027101	0.17	8	0	1	6.474406	26
FIRM31	31	2014	0.02349	0.167156	9	0	1	6.54658	26
FIRM31	31	2015	0.022082	0.165814	9	0	1	6.577538	26
FIRM31	31	2016	0.021621	0.166353	9	0	1	6.5976	26
FIRM31	31	2017	0.021489	0.16388	9	0	1	6.602791	26
FIRM31	31	2018	0.069375	0.16	7	0.244898	1	6.193302	36
FIRM31	31	2019	0.063646	0.18	7	0.244898	1	6.218745	36
FIRM31	31	2020	0.053233	0.17	8	0.21875	1	6.230219	36
FIRM31	31	2021	0.025224	0.18	8	0.21875	1	6.278533	36
FIRM31	31	2022	0.092881	0.19	8	0.21875	1	6.416676	36
FIRM32	32	2014	0.180126	0.16	8	0.21875	0	6.239484	36
FIRM32	32	2015	0.156643	0.15	8	0.21875	0	6.17906	36
FIRM32	32	2016	0.283177	0.16	7	0	0	6.029083	36
FIRM32	32	2017	0.10032	1.550479	7	0	0	6.901063	36
FIRM32	32	2018	0.099078	0.519078	8	0.21875	0	6.907819	36

FIRM32	32	2019	0.101713	0.529633	8	0.21875	0	6.908854	36
FIRM32	32	2020	0.103086	0.536695	8	0.21875	0	6.91433	36
FIRM32	32	2021	0.100235	0.54037	7	0	0	6.931656	36
FIRM32	32	2022	0.097917	0.542089	7	0	0	6.931555	36

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