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IMPACT OF BANKING REGULATORY REGIME ON THE QUALITY OF BANK EARNINGS IN GHANA

BY

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THIS THESIS IS SUBMITTED TO THE KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARDS OF MSc. ACCOUNTING AND FINANCE DEGREE.

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DECLARATION

I hereby declare that this thesis, titled "IMPACT OF BANKING REGULATORY REGIME ON THE QUALITY OF BANK EARNINGS IN GHANA" submitted to KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, is my original work. All sources and references used in the thesis have been duly acknowledged and cited. I affirm that no part of this thesis has been submitted for any other degree or qualification. Any contributions or assistance received during the research and writing of this thesis have been appropriately acknowledged. I understand that any breach of academic integrity, including plagiarism or falsification of data, may result in severe consequences and disciplinary action.

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DEDICATION

I dedicate this project work to God Almighty, who has been our guiding light and the source of strength throughout this academic journey. I am forever grateful for His steadfast love and divine guidance throughout this academic journey. I also dedicate this thesis to my beloved husband Mr. Kwame Assin Bondze, your unwavering support, encouragement, and prayers have been invaluable throughout this academic journey Furthermore, I extend my heartfelt dedication to my two beautiful daughters, for giving me space to study.

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ABSTRACT

In recent years, banking research has focused on how regulations affect stability, efficiency, and performance, particularly in light of the recent financial crisis. Financial stability is crucial for the banking industry because it guarantees effective financial intermediation and enhances credit risk management in Ghana's financial sector. The study sought to examine the connection between the financial regulatory agency's mandate, authority, and reach and the quality of banks' earnings, to determine the effect of the regulatory agency's risk-based supervisory methods on the standard of bank earnings, to determine how the internal structure of banking supervision and bank activity restrictions affects the quality of bank earnings. The Ghana commercial banks listed on GSE were chosen as the demographic for this research. Purposive sampling was used in this study to sample 9 commercial banks listed from the other commercial banks due to data availability. Secondary data was gathered through annual reports. The information was gathered from the period (20102021). Both Feasible Generalised Least Squares (FGLS) and Generalised Methods of Moment were adopted to estimate the parameters involved in the study objectives. The results show that there is a consistent and statistically significant unfavourable link between the quality of bank profitability and the regulatory structures that govern them. The propensity for bank managers to engage in opportunistic profits management is reduced, as the study discover when banking regulatory scores are higher. However, the study also discovers that various regulatory strategies have different impacts on profit management, with some having positive contributions and others negative ones. The study concludes that the internal organization of banking supervision, prudent bank activity limitation, and regulatory procedures relevant to the duties, authority, and scope of the banking supervision agency all contribute to higher-quality bank profits. However, the study demonstrates that bank managers are more likely to engage in opportunistic

behaviour as a consequence of systemic risk assessments, financial stability, and stress testing at the bank and system levels, which in turn leads to a reduction in the quality of bank profitability.

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

In recent years, banking research has focused on how regulations affect stability, efficiency, and performance, particularly in light of the recent financial crisis (Djalilov and Piesse, 2019).

Financial stability is crucial for the banking industry because it guarantees effective financial intermediation and enhances credit risk management in Ghana's financial sector. The state-owned banks intended to boost specific economic sectors, including the agricultural, infrastructure, and industrial sectors dominated Ghanaian banking before 1983. Ghana's banking industry is fortunate to have the opportunity to follow some of the developments occurring in other economies and incorporate some of the laws adopted there into its industry. Technology innovation, the globalization of economic activity, and the mobility of cash flows across national boundaries have all contributed to recent rapid regulatory revisions in the international banking sector. The Ghanaian banking industry is comparable in this regard. The banking industry in Ghana has always been politically charged, greatly influenced by the political goals of the government and the populace at any given moment (MacCarthy and Dery, 2016).

The banking industry is plagued with serious ethical hazard issues, and there is an absolute requirement to safeguard depositors and minority shareholders. As a result, regulation in this industry is necessary (Ozkan and Balsari, 2014). Because of the cultural and economic elements, as well as the legal systems of the nations in question, there is no clear evidence on which regulatory and supervisory measures work best to encourage bank performance in any specific country. Banking rules are formulated and implemented per the government's strong aiding and

grasping hands. The financial crisis is one of the key drivers of banking rules, and laws are typically prompted as a result of crises.

The great majority of banking crises over time have been brought on by financial institutions underestimating their collective exposure to significant economic risks (Klutse and Kiss, 2022). Through its various actions in 2017 and 2018, the BoG was able to acquire and assume seven (7) banks, voluntarily wind down one (1) bank, downgrade one (1) bank to a savings and loans company, inject equity into five (5) indigenous banks, and approve three (3) mergers. If interest payments on the bonds issued are not included, these measures will cost the public purse about GHC 16.4 billion, or 5% of GDP (BoG, 2019). In many nations that have also gone through a financial crisis in one way or another, the BoG's policies have already been attempted. The difference, however, is that when the issue was detected, Ghana did not appear to have the required legislation to assist it in properly addressing it, which was exacerbated by insufficient oversight (Klutse and Kiss, 2022).

The laws and regulations that control financial markets and market players are referred to as financial regulation. Regulation works to safeguard investors, ensure the smooth operation of the financial market, encourage financial stability, and efficiently allocate resources to the actual economy. Financial regulators establish the conditions, limitations, and rules that everyone must follow and monitor the application of financial regulations (SEM, 2018). Mathuva and Nyanga (2021) indicated that as a result of stronger regulatory scrutiny, banks may be forced to be more circumspect in managing their performance, which may result in better quality bank earnings. To develop a sound, efficient banking system in the interest of depositors and other clients of banking and non-banking financial institutions as well as the wider economy, Ghana's central bank has the ultimate regulatory and supervisory power over the operations of these institutions (BoG, 2022).

Individual banks also have regulatory and supervisory measures put in place to help regulate their operations.

1.2 Statement of Problem

Studies on the issue of bank regulation and how important it is to bring stability to financial institutions and the economy as a whole have been conducted over the years by various researchers (Djallilov and Piesse, 2019; Klutse and Kiss, 2022; Mathuva and Nyangu, 2021). Mathuva and Nyangu (2021) in trying to investigate if the banking regulatory regime affects the earning quality of banks in the east African region, the authors studied 170 banks in five east African countries using a 29year (1991-2019) panel data. In carrying out their study, the researchers used a mix of bankspecific, country-specific, and economic-specific variables in one data set and this was regarded as a limitation in their study. This study however seeks to use only bank-specific variables to examine if the regulatory regime affects the quality of earnings of banks in Ghana. Additionally, the study of Mathuva and Nyangu (2021) focused only on East Africa, to the best of the researcher's knowledge; there have not been similar studies on the West African perspective. Therefore this study sought to address this gap by using Ghana as a case study.

1.3 Objectives of Study

The goal of the present study is to investigate if the banking regulatory regime affects the earning quality of banks in Ghana.

Specific objectives

1. To examine the connection between the financial regulatory agency's mandate, authority, and reach and the quality of banks' earnings.

2. To determine the effect of the regulatory agency's risk-based supervisory methods on the standard of bank earnings.
3. To determine how the internal structure of banking supervision and bank activity restrictions affects the quality of bank earnings.

1.4 Research Questions

1. What relationship exists between the financial regulatory agency's mandate, authority, and reach and the quality of banks' earnings?
2. What is the effect of the regulatory agency's risk-based supervisory methods on the standard of bank earnings?
3. How do the internal structure of banking supervision and bank activity restrictions affect the quality of bank earnings?

1.5 Significance of the Study

This study investigates the effect of the banking regulatory regime on banks' earning quality in Ghana which is perhaps the first study in West Africa, specifically Ghana which has been a victim of a financial crisis in recent times. In terms of the anticipated influence of rigorous banking laws on the quality of profits in Ghana, the results will help bridge the gap between theory and practice. The findings of the study will provide empirical base evidence for policymakers in clarifying the function of regulation in affecting bank behaviour and, in turn, market stability in light of the apparent global and national banking crises, thereby assisting in making the right policies and enhancing regulation of the banking sector. This study provides a foundation for future studies on the study area in West Africa and Africa at large.

1.6 Scope of Study

The study sought to examine the impact of the banking regulatory regime on the earning quality of banks in Ghana. The study was carried out in Ghana considering banks listed on the Ghana Stock Exchange. The data collected will be from 2010 to 2021.

1.7 Summary of Methodology

Positivism was used in this study since it's necessary to collect, analyze, and test hypotheses using secondary quantitative data (Buallay, 2020). The study used descriptive and correlational research designs as its approach to explaining the causal relationship between the variables. The Ghana Stock Exchange was the source for the selected banks and a convenience sampling technique was used to select the banks listed on the GSE the researcher depend on secondary data that was gathered from the annual reports of the listed banks from 2010 to 2021. Abnormal loan loss provision was used to measure the earning quality of banks. The bank regulatory agency's mandate, authority, and reach; regulatory agency's risk-based supervisory methods; the internal structure of banking supervision; and bank activity restrictions were the measurements of the banking regulatory regime. STATA was used to analyze the panel data. The feasible generalized least squares (FGLS) was used together with the generalized method of moment (GMM) as it efficiently compensates for the impacts of unobserved heterogeneity and eliminates the economic difficulties originating from panel data models (Barros et al., 2020).

1.8 Limitations of the Study

The study only involved banks listed on the Ghana Stock Exchange in the study due to the availability and easy accessibility of data. This makes it difficult to generalize the finding for the entire industry, however, this is necessary to ensure there are no missing data in the data collected

as well as provide a more accurate result. This was done to also allow the researcher to work within the limited time.

1.9 Organisation of the Study

This research has five chapters. There will be an introduction to the study's methodology in the first chapter, which will contain a description of the problem, research goals, and research questions. Second, we'll review and summarize the current research. It will address both theoretical and practical literature on bank regulation and the earnings of banks. In chapter three, we'll go into deeper detail about the study's methodology. This chapter covers the whole research process, from the conception of the project through the analysis of the collected data. There will be a resolution to the investigation in chapter four. The study's conclusions and recommendations will be summarized and addressed in chapter five.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This study looked at the impact of banking regulatory regime on banks' performance. This section provides an overview of the theories on which this study is founded, such as public interest, normative, and agency theory. The study reviewed study concepts, empirical literature, and empirical gaps, and the study concluded with a summary.

2.1 Conceptual review

2.1.1 Banking regulation

Regulation in the banking industry consists of both supervisory and regulatory measures, with the dual goals of protecting the banking industry from excessive risk-taking and reducing the likelihood of moral hazard (Ayadi et al., 2016). As a result of the complexity, instability, and growth in the banking industry over the last few decades, the goal of banking supervision has evolved from monitoring bank operations to supporting internal management, as stated by Casu, Deng, and Ferrari (2017). The purpose of financial regulation, for instance, has evolved from keeping tabs on banks' operations to encouraging good management from inside. In addition, the regulations placed on banks regarding their capital have been much stricter. Market measures to control bank actions, often known as private monitoring, have been a primary focus of supervision and are one of the three pillars that make up the Basel agreements. However, issues concerning the efficiency of banking regulation have always been significant for scholars and policymakers, especially in the aftermath of the global financial crisis (2007-2009), since certain post-crisis studies show that regulatory inadequacies are a fundamental driver of crises (Cihak, DemirgüçKunt, Peria and

Mohseni-Cheraghlou, 2013). Mohd Amin and Abdul-Rahman (2020) debate whether regulation inhibits or encourages bank activity. Banks undertaking riskier businesses like underwriting securities and insurance might lead to conflicts of interest. Specifically, banks with extensive commercial relationships may sell assets to uninformed investors to support businesses that still owe money on loans. This means that when banks participate in various businesses, the moral hazard problem worsens, and therefore rejects prudential behaviour that allows for unconstrained activity. There's also the fact that as banks are involved in more things, keeping tabs on them becomes more of a challenge. This reasoning backs up the assertion that banks become too big and strong to regulate when they are given the freedom to participate in a wide range of financial markets. Banks that engage in a wide variety of businesses tend to grow into powerhouses, which is bad for consumers since it dilutes competition and drains away productivity. According to the public interest theory, banking regulation exists to protect the public's best interests by increasing efficiency and decreasing the likelihood of bank failures (Almaw, 2020; Calicec et al 2016). The private interest argument argues that public interest is not served by bank regulation that benefits a select few at the expense of everyone else (Barth et al 2013).

2.1.2 The effect of regulation and bank performance

The assessment of the literature on the influence of regulation on bank performance yielded inconclusive results. Several authors have demonstrated that regulations improve financial institutions' efficiency. But studies have found that this effect is most unfavourable. The research of Zgarni (2018), which examined about a hundred businesses across numerous regulated industries, including the banking industry, demonstrates that regulation as an external governance tool can limit managerial discretion. The effectiveness of internal control systems in preventing agency conflicts declines as a result of regulations that lessen the financial consequences of

management actions. Indeed, the leader's freedom is constrained by the presence of regulatory bodies that can interfere with the discipline of the leader. However, Zgarni (2018) discovered that bank nationalisation was adversely connected to banking sector development and favourably related to measures of bank inefficiency. According to Chaudhury (2019), governments in developing countries have steadily pulled out of the banking industry due to inefficiencies connected with bank administration, particularly those stemming from a lack of sufficient managerial motivation and significant pressure from international organisations. Similarly, Jayasuriya (2018) argues that since shareholders are risk-takers, their interests specifically, the maximising of shareholder value may not align with those of state legislation governing banks. Regulators are risk-averse, and their primary concern is the financial system's stability (Turan Senguder et al. 2018).

2.1.3 Financial regulation

Financial regulation is the set of laws and rules that control financial markets and market participants (Weber, 2010). The goals of financial regulation are the security of financial market participants, the maintenance of market order, the promotion of financial stability, and the effective allocation of resources to the actual economy (Guo, 2022). When it comes to the financial sector, it is the job of regulators to lay down the rules and ensure that everyone follows them. Financial regulators are responsible for overseeing the application of financial rules as well as the establishment of the standards, limits, and guidelines that must be followed by everyone (Tarullo, 2019).

2.1.4 Type of financial regulation

2.1.4.1 Prudential regulation

Prudential regulation focuses on the solvency, safety, and soundness of financial institutions (Llewellyn, 2021). Consumers are unable to assess the safety and soundness of financial institutions, hence prudential regulation is necessary (Momany, 2018). Important examples include insurance policies and bank deposits, where the value of the contract is contingent on the institution's actions after the contract has been signed, and where the institution may become riskier as a result of a change in its actions after the contract has been signed by consumers.

2.1.4.2 Conduct of business

Rules regarding how financial institutions interact with their clients are known as "conduct of business" regulations (Alt, Beck and Smits, 2018). Mandatory information disclosure, the honesty and integrity of financial service providers, the quality and expertise of organisations providing financial services and products, ethical business practices, and the marketing of financial goods are all examples of conduct concerns.

2.2. Theoretical review

The public interest theory, agency theory, and normative theory are examined in detail throughout the theoretical reviews.

2.2.1 Public interest theory

The Public Interest Theory was advocated by Stigler (1971) and Posner (1974), who states that regulation attempts to safeguard and benefit the general public. Proponents of the public interest theory claim that a "stricter" regulatory body promotes bank regulation by promoting public interest (Levine, 2003). Public desire for a solution to an inefficient or unfair market practice leads to the creation and implementation of regulation, as stated by Uche (2001). In Ghana, for instance, rising public concern about rising bank interest rates led to the institution of is shown. Similar

efforts to regulate interest rates in Ghana in 2001 and 2011 were unsuccessful, by Quartey and Afful-Mensah (2014). Regulation, based on the public interest hypothesis, is assumed to be implemented for the sake of public safety (Uche, 2001). However, this is not always the case, as demonstrated by Ghana's experience with rate capping, which resulted in a fall in bank lending to banks rather than an increase in access to credit (Kusi, Agbloyor, Fiador and Osei, 2016). Spratt (2016) argues that there are two ways in which public-interested regulation might affect banks' expansion and viability. First, such legislation can impact the day-to-day actions of bank management, which has direct implications on bank behaviour, such as the bank's credit allocation toward apparently riskier banks like the government. Second, there may be unintended consequences as a result of this type of legislation since it might affect how the financial system is structured over time. The banking system's variety, for instance, may have an impact on the distribution of loans to different industries. Effective public interest regulation should help break up banks' monopolistic behaviour in the credit and lending markets. In cases where public interest regulation is seen as severe to banks, however, banks may seek other means of producing profits. To boost bank earnings and stability, it may be necessary to practise cautious lending to decrease credit risks, hence decreasing the loan loss provision. Bank regulation motivated by the public interest may have this effect, but it may have the unintended consequence of limiting credit for the intended recipients.

2.2.2 Agency Theory

Meckling and Jensen (1976) advanced this idea, sometimes known as the principal-agent theory, to address limits in agent-principal relationships (Laiho, 2011). The term "agency relationship" refers to a contractual arrangement in which one party (the principal) joins with another party (the agent) for the agent to carry out some service on behalf of the principal. The principle gives the

agents access to a decision-making mechanism. These issues arise because it is impossible to account for every possible move an agent may make, especially when that agent's choices have consequences for both his well-being and those of his principals (Donnellan and Rutledge, 2016). Agency costs, which may be thought of as a loss of value for shareholders, are a consequence of the differences in interest between corporate management and shareholders and are another source of the difficulties that arise as a result of the existence of a contract between the parties (Palia and Porter, 2007). The agency theory argues that agents' self-interest and opportunistic tendencies mean they don't always act in the best interest of their principal. As a result of such defeats, agency theory emphasises the importance of separating ownership and control to guarantee that management and owner goals are aligned (Palia and Porter, 2007). As a result, bank laws are in place to address the potential for asymmetric knowledge, in which shareholders may be exposed to risks of which management is completely unaware. Banks deal with money, making them vulnerable to fraud and other illegal practices like financing terrorist groups; as a result, when ownership and control are split, management tends to act differently, leading to issues like the agency problem, in which they stop looking out for the best interests of the company as a whole and instead pursue their own goals (Namazi, 2013). As a result, the findings of this research suggest that the agency theory provides support for the contention that bank rules may be utilised to moderate the actions of managers and lessen agency difficulties caused by the division of ownership.

2.2.3 Normative theory of Regulation

Joskow and Noll are known for their contributions to the normative theory of regulation (1981). To eliminate information asymmetry, authorities should minimise the costs of acquiring information from multiple parties, and the normative approach to laws argues that authorities

should foster fair rivalry wherever it is relevant. Igbinosa, Ogbeide, and Babatunde (2017) explain that this is the case because operators have strong incentives to gather and utilise data in order to reduce the impact of adverse selection. Taking a normative approach to regulation helps explain why the government and central bank need to oversee the financial industry. This is accomplished by identifying the significant factors that may fail a financial institution. The thesis posits that if the government foresees a banking sector failure, only then should it step in (Koumbarakis, 2017). Furthermore, the theory assumes that effective bank regulation is warranted in achieving the goals of the banking industry, customers, and the government, and in avoiding negative outcomes (Sheehy & Feaver, 2015). The normative theory suggests that central banks should create a regulatory system that improves the banking industry's openness, predictability, accountability, and credibility and implement a price structure that is practicable for the economy (Igbinosa, Ogbeide and Babatunde, 2017). Effective bank regulation is seen as desirable in the context of this research, with the caveat that such regulation should not undermine the safety and soundness of the financial system.

2.3. Empirical review

The link between the banking regulatory environment and the standard of bank profitability is examined by Mathuva and Nyangu in 2021. Additionally, they examine how the regulatory attributes of banking agencies affect the connection between profit quality and banking regulation. The authors estimate bank profits quality for 170 East African banks using panel data from 1991 to 2019 and the feasible generalised least squares (FGLS) and generalised method of moments (GMM) estimation techniques. Their results, which hold up to endogeneity tests and other analyses, demonstrate that bank regulatory regimes have a positive impact on the standard of bank

profitability. The authors also show how different regulatory approaches have different effects on profit management, with some having a positive influence and others having a negative one.

To determine what role bank-level monitoring and regulatory regimes have in determining the announcement period returns of acquiring banks in the United States and twelve European economies, Hagendorff, Collins, and Keasey (2010) conducted an empirical analysis. Here, they examine the efficacy of three forms of board monitoring independence, CEO-chair duality, and diversity in preventing underperforming merger plans in the presence of varying degrees of strictness among bank regulators. Board independence and diversity only boost acquisition success under rigorous banking regulation regimes. In areas with fewer restrictions, corporate governance has little to no role in enhancing the performance results of merger operations.

2.3.1 Regulatory agency's risk-based supervisory methods on the standard of bank earning.

Dalhatu and Sharofiddin's (2020) goal in this theoretical investigation is to provide a perfect riskbased supervisory framework for Islamic banks, one that takes into account Islamic banking's unique characteristics. When compared to the present conventional banking-based frameworks used to evaluate Islamic banks, this method provides a more realistic assessment of their financial health (risk profile). The framework's projected effect and contribution are that Islamic banks will be better regulated by regulators, resulting in safer Islamic banks and, in turn, promoting the safety and soundness of the financial system as a whole.

Baugatef and Mgadmi (2016) set out to research the effects of prudential laws on the share capital ownership and risk appetite of banks, focusing on MENA nations. The study used a panel data analysis with descriptive statistics and collected data from 24 banks. From 2004 to 2012, or over eight years, data were collected. It was determined that prudential guidelines had a considerable

impact on bank performance. For instance, it was shown that more capitalization led to better bank performance since it encouraged more risk-taking.

Ferrari and Daryanto (2022) link the health of the bank and the risk profile, income, and capital, known as the Risk-based Banking Ranting (RBBR) technique which affects stock returns in BUKU II institutions. Using a multiple regression model and statistical hypothesis testing, this study analysed data from BUKU II banks' annual reports and stock returns from 2016 to 2020. According to the findings, the RBBR method's emphasis on NPL, LDR, ROA, and NIM has no discernible impact on stock returns, but the CAR has a noteworthy impact on stock returns. These findings inform BUKU II financial institutions that the CAR ratio influences market sentiment but not the nonperforming loan, liquidity, return on assets, or net interest margin ratios.

2.3.2 Internal structure of banking supervision affects the quality of bank earnings.

Hirtle, Kovner and Plosser (2020) investigate how banking supervision affects the stability, productivity, and expansion of financial institutions in the United States. Using data on supervisors' time usage, they show that the largest banks in a given regulatory district receive a disproportionate share of the attention of those supervisors, even when adjusting for other factors like size, complexity, risk, and so on. Therefore, the researchers find that top-ranked banks that receive more supervisory attention have less hazardous loan portfolios, are less volatile, and are less responsive to industry downturns, but they do not have slower growth or profitability. The importance of supervision in reducing banking sector risk is shown by their findings.

2.3.3 Bank activity restrictions on earning quality of banks.

Noman, Isa, Mia and Sok-Gee (2020) analyse how activity limits affect banks' risk-taking behaviour through the medium of competition under varying economic situations. The authors

employ financial freedom and property rights as instrumental variables in a dynamic panel regression to address the persistence of banks' risk-taking and the endogeneity of activity limits and rivalry with banks' risk-taking. Based on the "risk-shifting impact" of competition, the research demonstrates that activity limits increase banks' risk-taking behaviour, which in turn alters the channel of competition. The conclusion is strong when the financial crisis and other specifications are taken into account.

Dal Maso, Kanagaretnam, Lobo and Terzani (2018) investigate whether bank regulation replaces or supplements the influence of accounting enforcement on bank profits quality at the national level. For a sample of 40 nations' listed banks between 2001 and 2014, we use anomalous loan loss provisions (ALLP) as a proxy for earnings quality and show that stricter accounting regulations lead to higher-quality profits. Finally, the study shows a positive connection between accounting enforcement and income-reducing ALLP in the post-crisis era, suggesting that stricter accounting enforcement is linked to more conservative profits and bigger loan loss reserves than was the case before the crisis. Their findings suggest that stricter accounting regulations lead to less aggressive profit management.

2.4 Empirical Gaps

Lotto (2018) investigated how rules in Tanzania's banks' capital requirements influenced the efficiency of the banks' operations. In data analysis, a descriptive design and a model based on linear regression are both commonplace. The research concluded that a strong and favourable association exists between capital ratio and the effectiveness of a bank's operations. Due to the fact that the research was carried out in a different country, its conclusions might not be representative of the situation among commercial banks in Kenya. Also, the effect of prudential laws on banks' share capital ownership and their willingness for risk, with a focus on the nations of the Middle

East and North Africa, was studied by Baugatef and Mgadmi (2016). A panel data analysis was conducted using descriptive statistics, with data collected from 24 banks. The investigation led to the conclusion that prudential guidelines had a major impact on the performance of banks. It was found, in particular, that greater capitalization led to improved performance in banks. In contrast, the next research will concentrate on three different aspects of financial rules, whereas the previous study only looked at one. And using a DEA-based Malmquist Productivity Index, Kale et al. (2015) investigated the effects of regulatory changes, shifts in macroeconomic conditions, and political developments on the efficiency of banks in Turkey from 1997 to 2013. (DEA-MPI). It was determined that stricter regulation, limits, monitoring, and supervision, excess capital, and new reforms had a favourable influence on bank efficiency. The findings indicated that in new macroeconomic conditions, recent rules largely had a positive impact on productivity. The restrictions in terms of capital sufficiency, liquidity, and credit risk were not operationalized in the research.

2.5 Summary

This study examines the impact of bank regulation on bank performance and public interest theory, agency theory and normative regulation theory was underpinned for the study. However, the study seeks to use only bank-specific variables to examine if the regulatory regime affects the quality of earnings of banks in Ghana. Additionally, the study of Mathuva and Nyangu (2021) focused only on East Africa, to the best of the researcher's knowledge; there have not been similar studies on the West African perspective. Therefore this study seeks to address this gap by using Ghana as a case study.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The main purpose of the study is to investigate if the banking regulatory regime (BRR) affects the earning quality of banks in Ghana. This chapter discusses the methodological approach and models used to accomplish the research objectives. The chapter is in several sections which include: the research paradigm, research design, source of data, sampling data collection procedures, and the mode and instrument of analysis.

3.1 Research Paradigm

This study aimed to investigate if (BRR) affects the earning quality of banks. Consequently, the researcher decided to settle on the positivist philosophical paradigm. Since this allowed the researcher to quantitatively determine the reality behind BRR and the earning quality of commercial banks in Ghana. In addition, it allowed the researcher to determine the most influential dimension that explained the BRR and how the scope of the earning quality reinforced the link

between the variables. Importantly, the positivist paradigm enhances impartial results separating the researcher from the study (Punch, 2013). That is, positivists believe that due to the concrete and external nature of the world, exploration can only be based on facts that are observed and recorded with direct data or information (Easterby-Smith, Thorpe, and Jackson, 2012).

3.2 Research Approach

Scholars have argued that the research approach should not differ from the study's objectives and hypotheses (MacCarthy and Dery, 2016). In addition, three criteria must be considered when choosing an approach for a study, namely the nature of the study, associated risk, and time available (Barros et al., 2020). This research work has made use of the quantitative research approach because it is based solely on mathematics and consists of numerical values to determine the result of the study. Furthermore, the reason behind the choice of quantitative is to use numerical values to count, and measure characteristics and concepts that provide details of the study (Elhorst, 2011). Additionally, a quantitative approach illuminates how data collection, descriptive analysis, and conclusions may be used to determine the impacts of the respondents' sampled factors (Rajasekar, Philominathan, & Chinnathambi, 2013). Again, the quantitative concept assesses the banking regulatory regime within banks on the earning quality. The reason is to delve into the most important dimension of the banking regulatory regime that influences the earning quality in Ghana's commercial banks.

3.3 Research Design

The correlational and descriptive research designs were used in this investigation. Descriptive research, according to Darlington and Hayes (2017), comprises obtaining data to test hypotheses or answer questions regarding the current status of the study's topic. Descriptive research is used to identify and characterize the existing situation. Descriptive research is scientific research that

carefully describes an event, phenomenon, or fact about a certain location or population. The correlational design was also used to allow the researcher to examine the relationship between BRR and earning quality. Therefore, the choice of the correlational design and descriptive research design has been grounded in a similar empirical study (eg. Hall, Dawson, MacDiarmid, Matthews, and Smith, 2017; Dal Maso et al., 2018).

3.4 Source of Data

Secondary data was used and was acquired from the World Bank (WB) and the annual financial report of the selected bank's database. Also, another source of information was acquired from journal articles, media reports, and policy documents for further discussion on the study's purpose.

3.5 Sampling Technique

The targeted population for the study includes all commercial banks in Ghana. There are twentythree commercial banks in Ghana. Due to resource and time constraints, a sample of nine (9) banks was selected. A sample is a representative section of the whole population of the study that the investigator uses to establish references and generalization of results (Jiang et al., 2019). Purposive sampling was utilized to choose the sample for the investigation. Purposive sampling is often referred to as judgemental sampling. The selection of this method of sampling is premised on the level to which the units comprising the target population meet the prerequisites of having simple access to the relevant data (Dal Maso et al., 2018). Using the collected information, the study analyzes the de-consolidated data at the bank level (see Duprey, 2018; Baldini et al., 2018) and removes financial institutions with fewer than three consecutive annual observations. Then, the researcher filter out the financial institutions whose estimates of the translog cost function for

the Lerner index are either missing, null, or negative. When the researcher finds outliers, the researcher winsorizes the variable at the 99th percentile, this study's final sample includes nine different bankyear observations spanning from 2010 to 2021. Hence, those institutions that do not satisfy the criteria were excluded.

3.6 Data Collection Procedure

For the data for this study, all the variables were sourced from the World Bank database and the annual financial report of the selected bank. This research employed a panel data approach using a pool of data spanning the years 2010 to 2021. The selection of the World Bank database and the annual financial report is based on the fact that this dataset contains the variables to be utilized in the analysis. This research employed Principal Component Analysis (PCA) to provide a uniform measure of the banking regulatory regime. The PCA eliminates multicollinearity between variables while retaining the data's originality (Shahbaz, Shahzad, Ahmad, and Alam, 2016).

Furthermore, for the Bank Regulation Measurement in this study, the researcher dissects the Bank Regulation and Supervision Survey (BRSS) conducted annually by the World Bank from 2010 through 2021. 70 different aspects of bank regulation and supervision that make up our regulatory regime index were considered. Grades are based on an analysis of how well a regulatory body regulates and supervises the banking sector across five dimensions.

1. 29 sub-item of responsibilities, authority, and scope of the banking supervision agency were adopted.
2. 14 sub-items of the mechanisms adopted by the agency Risk-based supervision were utilized.
3. Internal Banking Supervision Structure: Four items were considered.
4. Financial stability and stress tests at bank and system level, and Systemic risk assessments,

(19 sub-items).

5. Activity restriction (four sub-items).

Additional characteristics of the banking regulatory agency will be described in the Appendix of the final chapter. A control variable for the efficiency of regulatory agency governance procedures is constructed using eleven separate factors. The selection of the bank-specific regulation and agency regulatory issues was influenced by (Ayaydin and Karakaya, 2014; Djalilov and Piesse, 2019; Duprey, 2018; Baldini et al., 2018) the researcher evaluated the performance of regulatory systems over the study period by computing ratings based on responses to the BRSS questionnaire survey. A higher regulatory score indicates that the country in question has more "strict" and higher-quality regulatory procedures in place within the time frame in question.

The study uses these ratings to assess the validity of the hypotheses raised in earlier sections and their relationship to bank earnings. The reliability of the results obtained from the two indices is ensured through three different procedures. To begin, we gather individual ratings from the two authors, who evaluate the indices in tandem with established authorities in each jurisdiction. In the reconciliation phase, the two authors' scores are compared to one another. The ratings given by the two authors are compared using a paired t-test and a Mann-Whitney U test to see if there is a statistically significant difference between them. If the results of these analyses show that there is insufficient evidence to conclude that the two scores reported by the independent coders differ, then this action paves the way for the two composers to consult and reconcile the two scores. Cronbach's alpha will be used to check the reliability of both the individual and overall scores in the final step. Cronbach's alpha is widely accepted as a reliable coefficient for evaluating test results.

3.7 Empirical strategy

In this study, the researcher estimates the effect of the banking regulatory framework and various bank controls on the quality of bank performance. The researcher employs the ALLP as a surrogate for the integrity of bank earnings Duprey (2018). This study questions whether banks can engage in as much opportunistic profit management due to the stringency of the regulatory supervision framework. Existing literature suggests that the most important accrual factor in a bank's performance is LLP (see Baldini et al., 2018). If the LLP is used as an accounting estimate, banks have the opportunity to use it as a means of manipulating their profits. This is why financial regulators are keen to establish LLP reporting standards. It's important to note that the calculation of the LLP has also been significantly impacted by the implementation of IFRS 9: Economic Mechanisms, which provides guidance on how anticipated credit losses have to be accounted for and serves as the source for computing the LLP. Additionally, increasing loan loss reserves has been one strategy for bolstering bank stability, particularly in the post-crisis era, whether the crisis in question was the global financial crisis or a pandemic like the COVID-19 pandemic. As a result, the LLP's suitability as a stand-in for evaluating the quality of bank earnings is crucial to the success of this study. The ALLP is calculated by first using the LLP as a predictor in a multiple linear regression against a set of independent variables.

$$LLP = \beta_0 + \beta_1 BEG_{LLP} + \beta_2 LCO + \beta_3 \Delta LOANS + \beta_4 \Delta NPL + \beta_5 LOANS + \beta_6 NPL + \beta_7 LOSS + \beta_8 TIER + YEARS + \varepsilon_1 \quad 3.1$$

Where LLP is the $LLPin$ "time t scaled by total assets in t-1," also, BEG_{LLP} represents the LLP at the start of "time t as a percentage of total assets in time t-1," LCO represents the net charge-off that occurred in "time t as a percentage of total assets in time t-1," $\Delta LOANS$ represents loans in

"time t fewer loans in time t-1 as a percentage of total assets in time t-1," and ΔNPL represents non-performing loans in "time t and non-performing loans in time t-1," more also, LOANS are gross loans in "time t scaled by total assets in time t-1," NPLS are non-performing loans in "time t scaled by total assets in time t-1," and when the net income is negative, LOSS is given a 1; otherwise, it is given a 0. We also include controls for the bank tier and firm-year into the model.

Furthermore, equation (3.2) shows how the ALLP can be quantified once the estimate in (1) is attained using the absolute excess of the LLP (3.2).

$$absALLP \quad = LLP + LLP\hat{} \,|$$

Increases in absolute ALLP tend to indicate lower-quality returns in this case. Chapter four will display the results of our first estimate, which will utilize to compute the ALLP. It will be Similar to what was shown in research by Kanagaretnam et al. (2014) and Duprey (2018), if LLP is positively correlated with the LOANS, NPLS, ΔNPL, LCO, and LOSS. The study employs the ALLP, which is represented by the residuals from the estimate. Next, we apply this same evaluation approach to the process of regulatory oversight. As such, the study estimates the ALLP as a function of the regulatory regimen score and several confounders using the regulatory proxy:

$$absALLP \quad = a_0 + \emptyset_a BankReg + \emptyset_b CBankReg + \beta_1 RateCap + \beta_2 + \beta_3 Loss$$

$$+\beta_4 PastLLP + \beta_5 EBTLLP + \beta_6 GFC + \beta_7 RegCap + \beta_8 lerner + \beta_9 CreditorR + \beta_{10} Big_4 + \gamma_t +$$

$$\varphi_i + \varepsilon_1 \qquad 3.2$$

The absolute provision for abnormal loan losses is denoted by absALLP. The BankReg and CBankReg variables specify the type of banking regulation and the agency that enforces it,

respectively. To account for variables specific to banks and economies, the study incorporates variables such as RateCap, Size, Loss, PastLLP, EBTLLP, GFC, RegCap, Lerner, CreditorR, and Big 4. It is the purpose of the variables γ and φ to stand in for the firm-year fixed effects and the country fixed effects, respectively. Finally, the variable ε_1 stands for the estimate model's error term. Definitions for all variables are listed in Table 3.1. Both the heterogeneous and pooled multiple regression analyses employ the Feasible Generalized Least Squares (FGLS) estimator due to its perceived superiority over the pooled ordinary least squares, particularly in the presence of heteroskedasticity, serial and cross-sectional correlations (Chronopoulos, et al., 2015). Using the generalized method of moments (GMM) proposed by Arellano and Bover (1995), the study conducts a robustness test.

Recent empirical studies of corporate performance have utilized the GMM. Due to the lack of attention paid to the possibility of endogeneity between banking regulation and earnings quality proxies in previous studies, the current analysis takes a novel approach. By addressing the econometric challenges of panel data models (MacCarthy and Dery, 2016) and compensating for the impact of unobserved heterogeneity, the combination of the FGLS and the GMM produces more accurate estimates than the OLS. In addition, multicollinearity renders the OLS model inappropriate for analyses involving interaction variables. Many studies, including Lück and Van Niekerk (2016) have demonstrated the usefulness of this technique. The GMM is used alongside a two-step estimator developed by Hansen (1982) to check for the over-identification of instrumented variables in the GMM. In the models, if the coefficient from Hansen's J test is not statistically significant at the 5% level, it will indicate that over-identification is not a problem with the instrumental variables.

Financial report	
World Bank – regulation and surveys	Banking supervision +/-
World Bank – regulation and surveys	Banking supervision +/-
	+/-
Financial report	+/-
Financial report	+/-
Financial report	+/-
Financial report	+/-

Financial report

+/-

Table 3.1: Variable Description

Variables	Description	Operationalization	source	Expected sign
Dependent Variable				
Dependent variable absALLP	Absolute value for abnormal loan loss provision.	= the outstanding result using the LLP estimate model		
Independent Variable				
BankReg (with its sub-groups BankReg1, 2, 3, 4, and 5)	Bank regulatory oversight	=score calculated using the regulatory oversight index		
CBankReg	Bank regulatory agency (central bank) characteristics	a score calculated using the regulatory oversight index		
	Control variables			
RateCap	Interest rate cap control	1 for the period during the rate cap and 0 if otherwise		
Size	Bank size	Natural logarithm of revenue		
Loss	Profit status	1 when a bank reports negative income and 0 otherwise		
PastLLP	Past loan loss provision	LLP in time t-1 scaled by total assets in time t1		
EBTLLP	Earnings potential of the bank	earnings before tax and LLP scaled by total assets in time t-1		

GFC	Global financial crisis due to the COVID-19	1 for periods in 2019, 2020, 2021, and 2022, 0 otherwise	Financial report	+/-
RegCap	Banks 'Tier 1 capital ratio	Shareholder funds plus perpetual non-cumulative preference shares scaled by risk-weighted assets and off-balance sheet risks measured under Basel rules	Financial report	+/-
Lerner	Lerner index, a measure of market	LERNER= P – MC/P	Financial report	+/-
CreditorR	Creditor rights	Creditor participation index (0–4)	World Bank	+/-
Big4	Auditor type	if the auditor is a Big 4 and zero if otherwise	Financial Report	+/-

Source: Author Computation (2022)

3.8 Diagnostic Test

3.8.1 Test for Serial Correlation

One of the fundamental assumptions that underpin the use of a panel regression model is that the variables are uncorrelated. Nevertheless, there are situations when variables are correlated sequentially, which is referred to as "serial correlation. Although the regression estimates derived using the ordinary least square model are still unbiased, they are inefficient owing to the serial correlation between variables. Durbin Waston Testing was performed to assess the presence of serial correlation in the model. The Durbin-Watson statistic is a quantitative measure of autocorrelation in regression residuals from statistical models. R-programming software was used to conduct the test. Durbin-Watson statistics are always in the range of zero to four. A score of two shows that the sample is uncorrelated, while values near zero indicate positive autocorrelation and values near four imply negative autocorrelation.

3.8.2 Unit Root Test

To draw relevant conclusions from a panel data analysis and increase the precision and reliability of the models created, a data series stationarity is necessary. A data series is often said to be stationary if its mean and variance remain constant throughout a given period and the covariance between two extreme periods simply relies on the lag between the two extreme periods, not the actual moment at which it is calculated (Kanagaretnam et al., 2014). The integrated level of each series is determined using the Augmented Dickey-Fuller (ADF) (Dickey and Fuller, 1979), Phillips and Perron (1988), and Kwiatkowski et al. (1992) tests.

3.8.3 Test for Multicollinearity

Multicollinearity occurs when the independent variables are strongly interrelated; their presence may have a deleterious influence on the regression findings. A variance inflation factor (VIF) test was employed to evaluate the presence of multicollinearity in the regression model. The VIF is used to determine the extent to which the variance of a regression coefficient is exaggerated due to the model's multicollinearity. The VIF was calculated using R. As a general rule, a value of one indicates that the variable is uncorrelated; values between one and five indicate that the variable is moderately correlated, and values larger than five indicate that the variable is substantially correlated. The larger the VIF number, the less credible the regression findings. Generally, a VIF higher than 10 implies a high degree of connectivity and should raise red flags.

3.8.4 Test of Statistical Significance of panel Regression Coefficients

The F-statistics and R-squared statistics were utilized to estimate the overall significance of the panel regression coefficients in the regression model. The F-test is based on the assumption that the regression coefficients are all equal to zero, i.e., that they are not statistically significant. The F-statistics and its related p-value were reviewed to verify that a conclusion about the null hypothesis was made at the 5% level of significance. Additionally, it was vital to have a high R-squared value.

3.8.5 Endogeneity Issues and Two-step System GMM

Problems with Endogeneity and GMM Two-Step, the researcher use the two-step system estimator approach proposed by (Arellano & Bover, 1995; Blundell & Bond, 1995) to address the endogeneity problem in the financial literature. The addition of a lagged dependent variable to the explanatory variable is used in this estimation. In addition, we can create instruments for endogenous variables using the two-step system GMM. To be more precise, we use the past

values of all potentially endogenous variables as the instruments for treating them (Vallascas and Hagendorff, 2013). The Hansen/Sargan test is used to examine the reliability of multiple lags as an instrument (Pathan and Faff, 2013; Andres and Vallelado, 2008). First and seconddegree serial correlation is measured by the AR (1) and AR (2). AR (1) residuals may be correlated, but AR (2) residuals should not be correlated at all (Chronopoulos et al., 2015).

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter deals with the presentation and interpretation of the findings of the research analysis. The following outcome comprises variable descriptions, correlations between variables, diagnostic tests, FGLS, and GMM model estimations. This is followed by an interpretation and discussion of the results with existing literature and theories.

4.1 Descriptive statistics

Descriptive statistics were chosen because they enable data to be summarized based on frequency and percentage. Using frequency and percentage distributions, descriptive statistics have been shown to give researchers confidence and insight into the nature of their raw data (Garson, 2012). Lind (2008) argues that researchers can also utilize other types of descriptive statistics such as histograms, box plots, frequency polygons, bar charts, pie charts, and scatter diagrams to elaborate on the ideas behind their studies.

Table 4. 1: Descriptive statistics

Variable	Mean	Std. Dev.	CV	Obs
absALLP	0.539	0.88	3.238	108
BankReg	0.210	0.93	0.795	108
CBankReg*	0.303	0.78	1.6341	108
Big_4	0.289	0.76	0.860	108
CreditorR	3.068	0.78	0.891	108
Lerner	0.027	0.75	0.716	108
RegCap	0.035	0.83	1.934	108
GFC	0.617	0.83	1.282	108
EBT_LLP	0.549	0.80	1.311	108
PastLLP	2.143	0.81	0.597	108
Loss	1.290	0.89	6.285	108
Size	30.717	1.03	0.089	108
RateCap	15.738	1.08	1.000	108

Source: Authors Computation (2022)

Table 4.1 includes summaries for all of the evaluated criteria. Data for all dependent and independent variables, including mean, standard deviation, coefficient of variation (CV), and several observations, are included in table 4.1 above. The high value of the coefficient of variation suggests substantial dispersion across the potential explanations.

Table 4. 2 Descriptive Statistic for Regulatory aspect

Variable	Cronbach α	**Mean**	**Std. Dev.**	**No. items**
Bank_Reg1	0.808	0.78	0.88	29
Bank_Reg2	0.806	0.76	0.83	14
Bank_Reg3	0.801	0.93	0.81	4
Bank_Reg4	0.806	0.87	0.92	19
Bank_Reg5	0.785	0.65	0.99	4
BankReg	0.801	0.798	0.886	70

Source: Authors Computation (2022)

Table 4.2 summarises the study's choice of test variable to represent banking regulation. The majority of the aspects of regulation are found in Bank Reg1: Responsibilities, Authority, and Scope of the Banking Supervision Agency (0.808). Bank Reg3: Internal organization of banking supervision has the highest compliance with rules (mean =0.93), while Bank Reg5: Activity limitation has the lowest (mean =0.65), among the 9 listed banks. Even though banks are given more freedom to operate in the nations where this was researched, this conclusion indicates that the banks being examined are giving greater consideration to strengthening financial regulation. These findings imply that the main goal of banking regulation in Ghana is to provide the regulatory infrastructure the supervisory agency needs to carry out its duties while also enabling banks to increase the diversity of their business models. Systemic risk evaluations, financial stability, and stress testing at the bank and system level are surprisingly high on the list of regulators' goals (Bank Reg4 mean= 0.87).

This underscores how important it is to Ghana's regulatory authorities that banks be both stable and sound, and resilient to operating environment shocks. The mean (average) score for

banking regulation was 0.210, or a little below 50%. If the banks in the research are to realize the full macroeconomic advantages of regulation, their banking regulatory systems require improvement. The remaining model variables are summarised with some simple descriptive statistics in Table 4.1. Based on research, the mean absolute value of ALLP suggests (0.539). Dal Maso et al. (2018) found a higher mean absolute value for ALLP (2018). This suggests that banks in Ghana are less lucrative than their international counterparts. In general, statistics show that the average amount of rules is (0.539). Banks have not yet reached the higher regulatory compliance essential to prevent the various banking issues that banks may face in the industry, as was demonstrated above. It appears that the size of the banking industry in Ghana is far smaller than previously thought; the natural logarithm of bank income is just 1.290, compared to the higher numbers found in previous research. There is no shortage of financial institutions, but the sampled banks' asset and income levels are significantly lower than those found in previous research (Dal Maso et al., 2018; Kanagaratnam et al., 2018).

EBT_LLP had a mean ratio of (0.549) which is significantly lower than the ratios maintained by banks in developed nations. More than 10% of the sampled financial institutions report having suffered a loss, which is consistent with the findings of Dal Maso et al. (2018). The ratio of Tier 1 regulatory capital to risk-weighted assets of 0.549 is over the threshold of 8%. The mean Lerner ratios of mean=0.027 are lower when compared to the efficiency criteria offered by banks in more developed nations. The average score for creditor protection processes at the sampled institutions was 3.068 out of 4, indicating a lower bar for external procedures. According to Kanagaretnam et al. (2018), this has consequences for the effectiveness of banking regulation in the sample's low-income institutions. It was found that one of the "Big Four" accounting firms reviewed the accounts of 49.6% of the sampled banks on average. The purpose of this research is to determine whether or not the kind of auditor used by a bank is a significant predictor of whether or not the bank engages in profit smoothing (Ozili, 2021).

4.2 Correlation Analysis

Establishing a connection between the dependent and independent variables is made possible by the correlation. Additionally, it searches for and finds any possible multicollinearity between any of the study's independent variables. The correlation results for several of the factors that contribute to the quality of bank earnings are summarized in Table 4.3 above. The correlation coefficient expresses the magnitude and direction of the relationship between two variables. The absolute values of the coefficient indices represent the magnitude of the relationship between the variables, whereas the sign (positive or negative) represents the direction of the relationship. Furthermore, the correlation matrix identified the potential multicollinearity of independent variables. In a circumstance in which the independent variables are strongly linked (r=0.9 or more) such that it is impossible to disentangle the effects of the independent on the dependent variable. In other words, one of the predictor variables may be predicted with near-perfect accuracy by another predictor variable (Akuoko, Aggrey, and Arhen, 2020; Agyekum et al., 2016).

The Spearman correlations between the results and the predictor variables are shown in a correlation matrix, which may be seen in Table 4.3. This is why the study employed Spearman's rank correlation coefficients instead of the more conventional Pearson's, as the study variables encompass both ordinal and continuous dimensions (Myers and Sirois, 2006). Overall, the correlation coefficients provide higher weight to factors that are negatively associated with bank earnings quality, indicating that such predictor variables have a favourable effect on bank earnings quality. Limits on banking activities and risk-based supervision (Regulation 2) (Regulation 5). The Great Financial Crisis (GFC), the Lerner affair, and the Big Four auditor factors are all events that have a negative relationship with abs ALLP. When these conditions exist, banks' financial performance will likely improve.

These preliminary results provide credence to the study's initial set of assumptions, especially those hypothesized to pertain to Bank Reg2 and Bank Reg5, respectively. The study conducts further multivariate analyses, the results of which are shown below, to arrive at more tangible and reliable findings. However, at the 1%, 5%, and 10% levels of significance, respectively, certain variables were statistically significant and strongly connected with measures of earnings quality, indicating a possible detrimental effect on banks' profits quality. Bank Reg3: Internal Structure of Banking Supervision; Bank Reg4: Systemic Risk Assessments; Financial Stability and Stress Testing at the Bank and System Levels; Past LLP Loss; EBT LLP; Regulation Capital; Regulation Capitalization; and Creditor all fall within this category. This conclusion provides early evidence that not all components of bank regulation have a beneficial effect on bank profitability; the study uses multivariate models to further investigate this concept. We may safely disregard concerns about multicollinearity among the predictor variables because the maximum and minimum correlation coefficients are both under 0.54. The variance inflation factors for the predictor variables are all less than 5, indicating that there is no multicollinearity in the found variables.

Table 4. 3a: Correlation Matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13
	Variables	1												
1	absALLP													
2	BankReg	0.041	1											
3	CBankReg*	0.949*		0.4781*	1									
4	Big_4	0.4933*	0.0298	0.0389	1									
5	CreditorR		0.0049		0.1442	0.4904*	0.3449*	1						
6	Lerner	0.0829		0.1360*	0.0893	0.3499*	0.4332*	1						
7	RegCap	0.0493	0.1809*	-	0.2999*	0.3999*	0.5210*	1						
8	GFC	0.0989		-0.0639	0.0409	0.1792*	0.1989*	0.9992*	0.0389	1				
9	EBT_LLP		0.0999*	0.0099	0.0994*	0.0893*	0.3422*	0.0944*		0.4904*	0.3093*	1		
10	PastLLP		0.0308*	0.3398*	0.2094*	-	0.2890*	0.9420*	0.5033*	-		1		
11	Loss			0.0944*		0.0230*	-	0.0409*	0.2509*	-0.294*	-0.083*	0.0944*	0.9988*	1
12	Size			0.1589*		0.0209*	0.0304*	0.0994*	-	0.0890*	0.0342*	0.0994*	0.2949*	1
13	RateCap		0.0999*	0.0849*	0.5099*	0.2094*	0.0379*	0.0399*	0.0499*	-	0.0034*	0.0280*	0.2640*	0.0428**
14	Bank_Reg2		0.1248*	-	0.3920*	-	0.0242*	0.0209*	0.0299*	0.0939	0.5214*	0.2820*	0.1803*	0.0994*
15														0.035**
16														0.037**

4		*	0.026*	*	0.149*			*	*	*	*	*	*
1	Bank_Reg2	0.0929	0.093	0.2640	0.0304	0.0324	0.0579	0.9904	0.9942	0.0594	0.0438	0.0928	0.052**	0.015*
5				*			*	*	*	*	*		*	

1	Bank_Reg3	0.0309	0.004	-	0.5099	0.2409	0.0298	0.3949	0.2839	.0489*	0.0440	0.0442	0.159**	0.045**
6				0.094*	*	*		*			*	*	*	*
1	Bank_Reg4	-0.004	0.046	0.0928	0.3920	0.0094	0.2035	0.0922	0.0342	0.5639	0.0030	0.0473	0.054**	0.009
7					*		*					*	*	
1	Bank_Reg5	0.0904	0.049*	0.0894	0.3089	0.9949	0.0248	0.0240	0.0334	0.3709	0449*	0.091*	0.007*	0.021**
8				*	*	*				*				*
1	BankReg*CBank	0.0842	.0499*	0.1153	0.0994	0.9288	-	0.0198	0.0484	0.0294	0.9839	-	-	0.024**
9		*		*		*	0.0209	*	*		*	0.049*	0.040**	*

	14	15	16	17	18	19
14	1					
15	0.044**	1				
16	0.023***	-0.002	1			
17	-0.002	0.009	0.117*	1		
18	0.014*	0.010	0.070*	0.592*	1	
19	-0.002	0.027**	-0.095*	0.398*	0.254*	1

Source: Authors Computation (2022)

4.3 First-stage estimation for ALLP

The study evaluates the impact of the regulatory framework and various bank controls on the profitability of banks. Following the methodology of Dal Maso et al. (2018), the ALLP is used as a proxy for the earnings integrity of financial institutions. The purpose of the study is to determine whether banks may engage in excessively opportunistic profit management as a result of the stringent regulatory oversight structure. LLP is the most essential and impactful accrual component in a bank's profitability, according to existing studies (see Beatty and Liao, 2014). If the LLP is utilized as an accounting estimate, banks may be able to strategically alter their earnings. Financial regulators are therefore eager to develop regulations for the reporting of LLPs. Notably, the implementation of IFRS: Financial Instruments, which provides guidance on how predicted credit losses should be accounted for and serves as the basis for computing the LLP, has also had a substantial impact on the calculation of the LLP. In addition, in the post-crisis era, whether caused by the global financial crisis or a pandemic such as the COVID-19 pandemic, strengthening loan loss reserves has been one method for enhancing bank stability. Due to this need, the LLP must serve as a trustworthy proxy for measuring the integrity of bank earnings.

Table 4. 4b: First-stage estimation for ALLP

Dependent variable: LLP	Coefficient	Std. Error	t-statistics
Constant	80.049***	8.908	8.986
BEG_LLP	0.910***	3.18	3.782
LCO	0.89***	0.099	8.974
LOANS	0.063***	0.019	3.323
ΔLOANS	0.244***	0.028	8.792
NPLS	0.662***	0.139	4.764
ΔNPLS	0.104	0.149	0.698
LOSS	0.142**	0.06	2.356
Adjusted R2	69.2%		
P-value	0.001		
N	108		

Source: Authors Computation (2022)

4.3.1 Results

The empirical results indicate that BEG_LLP has a positive significant effect on LLP (B=0.910***and t=3.782), and there is a positive significant effect of LCO on LLP (B=0.89*** and t=8.974). Again LOANS, NPLS, ΔLOANS, and LOSS, all have a positive significant effect on LLP at 1% and 5% respectively. From the analysis only ΔNPLS is insignificant (B= 0.104 and t=0.698)

4.4 Regression Estimation

Due to its perceived superiority over the pooled ordinary least squares, the Feasible Generalised Least Squares (FGLS) estimator is used for both the disaggregated and aggregated multivariate regression analyses. This is especially true in the presence of heteroskedasticity, and serial and cross-sectional correlations (Barros et al., 2020). The study employs the generalized method of moments (GMM) proposed by Arellano and Bover (1995) to conduct a robustness test. The GMM is a modern technique used in empirical research to evaluate company performance. This study takes a unique approach by controlling for the possibility of endogeneity between banking regulation and earnings quality proxies. Combining the FGLS with the GMM yields more accurate findings than the OLS by resolving the economic problems of panel data models (Barros et al., 2020) and accounting for the influence of unobserved heterogeneity, respectively. When interaction variables are introduced in a model, multicollinearity becomes an issue and the OLS model becomes unsuitable. This method has been shown effective in previous studies; for example, Luck and Wolf (2016) used it. This research examines whether or not the GMM suffers from the over-identification of instrumented variables by employing the GMM and a two-step estimator created by Hansen (1982). The finding that the coefficient from Hansen's J

test is not significant at the 5% level indicates that there is no overidentification problem for instrumental variables in the models. Tables 4.4 and 4.5 display the results obtained from these two methods.

Table 4.4 Feasible Generalised Least Squares (FGLS) Estimation

	absALLP						
Dependent variable model	**1**	**2**	**3**	**4**	**5**	**6**	**7**
CBank	.0418**	0.0163***	0.0446**	0.0221***	0.0334***	0.0120***	0.0167**
	(0.0178)	(0.0019)	(0.0227)	(0.0049)	(0.0069)	(0.0032)	(0.0082)
RateCap	-0.0360**	−0.0548**	0.0354**	0.0671***	0.0413***	−0.0296***	−0.0477***
	(0.0182)	(0.0225)	(0.0177)	(0.0199)	(0.0028)	(0.00621)	(0.0132)
Size	-0.0954***	0.0121***	0.0541***	0.0758* (0.0426)	0.0121***	0.0103**	0.0609**
	(0.0295)	(0.0035	(0.0039		(0.0034)	(0.0044	(0.0289)
Loss	0.0367**	0.0177***	0.0201***	0.0299***	0.0177***	0.0145**	-0.0477**
	(0.0125)	(0.006	(0.0071	(0.0084	(0.0063)	(0.0055	(0.0187
PastLLP	0.0105*	0.0177***	0.0201***	0.0299***	0.0177***	0.0145**	0.0383**
	(0.0055)	(0.006	(0.0071	(0.0084	(0.0063)	(0.0055	(0.0152
EBT_LLP	0.0212***	−0.0256***	−0.0151**	-0.0254***	-0.0184**	0.239***	0.0248**
	(0.0073)	(0.0063)	(0.0077)	(0.0067)	(0.0085)	(0.0719)	(0.0124)
GFC	0.0214**	−0.0256***	0.0171 (0.0120)	0.0257***	-0.0295***	0.0231**	0.0274**
	(0.0091)	(0.0061)		(0.0069	(0.0079	(0.0098	(0.012)
RegCap	−0.0439**	0.0344	0.0344 (0.1110)	0.0344 (0.0112)	0.0526***	0.0335*	0.0502**
	(0.0161	(0.1110)			(0.0162)	(0.0188	(0.0211)
Lerner	0.0411**	0.0446	-0.0162	-0.0254***	0.0206***	0.267***	0.0186***
	(0.0251	(0.2110)	(0.0198)	(0.0067)	(0.0064)	(0.062)	(0.0063)
CreditorR	−0.0391***	−0.0457**	0.0383**	−0.0208**	0.0161***	0.0373**	0.0131***
	(0.0109)	(0.0182)	(0.0146)	(0.0089)	(0.0047	(0.0186)	(0.0034)
Big_4	−0.0162***						
	(0.0061						
BankReg		0.0334***	0.0684**	0.0224***	-0.0116 (0.0113)	−0.0162***	0.0587***
		(0.0023)	(0.0415)	(0.0081		(0.0060	(0.0128
Bank_Reg1							

Bank_Reg2
Bank_Reg3
Bank_Reg4
Bank_Reg5
BankReg*CBank

p-Hansens	.798	.801	.807	.799	.799	.784	.776
Hansen's J $\chi 2$	0.319	0.312	0.352	0.318	0.315	0.359	0.309
Obs.	108	108	108	108	108	108	108

Source: Authors Computation (2022)

4.4.1 Results

These first results provide some backing for the study's initial set of assumptions, especially concerning Bank Reg2 and Bank Reg5. To get more concrete and dependable results, the study also performed certain multivariate analyses, the results of which are shown below. Some indicators, however, were statistically significant at the 1%, 5%, and 10% levels and showed a strong correlation with measures of earnings quality, suggesting a potential negative influence on banks' profits quality. Included in this category are the following regulations and concepts: Bank Reg3: Internal Structure of Banking Supervision; Bank Reg4: Systemic Risk Assessments; Financial Stability and Stress Testing at the Bank and System Levels; Previous LLP Loss; EBT LLP; Regulation Capital; Regulation Capitalization; and Creditor. While multivariate models will be used to dig more into this idea, this data does show that not all aspects of banking law have a positive impact on profits. Considering that the maximum and minimum correlations are both under 0.54, it might be claimed that multicollinearity among the predictor variables is not a major issue. There is no multicollinearity in the detected variables because the variance inflation factors for the predictor variables are less than 5.

For the entire sample of 108 banks from 2010 to 2021, the multivariate estimate between regulatory oversight and abs ALLP is shown in table 4.4 using the feasible generalized least squares approach. The estimations are based on a theory put forth by Dal Maso et al. (2018),

which holds that bank managers have considerable wiggle room when it comes to establishing loan loss provisions, particularly when projecting the likeliness of the occurrence of losses in the loan portfolio. The LLP's net income increased this reporting period due to management's astuteness in capitalizing on opportunities. Consistent with the null hypothesis, Model 1 results show a positive and significant correlation between BankReg and abs ALLP (coefficient 0.0334). This data seems to support the conclusion reached by Dal Maso et al. (2018), that banks operating in a "stricter" regulatory environment have a lower absolute value of abs

ALLP. This suggests that stricter regulatory processes are leading to higher-quality profit reports from the financial sector. Ayadi et al. (2016) and Mishra and Reshef (2019) suggest that coercive monitoring and restriction mechanisms to prevent moral hazards and excessive risk-taking may have contributed to the improvement in earnings quality. Banks are now more reticent to overstate their financial success as a result of this. Institutional, corporate governance, social, and environmental factors at work in each of Ghana's commercial banks may mitigate any positive impact the banking regulatory framework has on the banks' financial performance. This is because there is no uniform legal framework and enforcement is weak (Ayadi et al., 2016). The research used this line of thinking to determine if the decentralized regulatory mechanisms have a positive or negative effect on bank profitability. Models 2, 4, and 5 display the results. As expected, the results demonstrate a negative and statistically

significant association between Bank Reg1 and profit quality, supporting the alternative hypothesis that the regulatory body's risk-based supervisory practices correlate positively with bank profitability (coefficient= 0.0939). The results corroborate the findings of earlier empirical research showing that the banking regulatory agency's responsibilities, powers, and jurisdiction are successfully pushing banks to furnish adequate financial information. Keeping an eye on the banks and reducing opportunistic profit-seeking is made easier when the roles, powers, and jurisdiction of the financial regulatory body are specified and strictly enforced. That's in line with what Kanagaretnam et al. (2010) found; they contend that banks in Ghana with stronger regulatory agencies have lower loan loss provisions and higher equity.

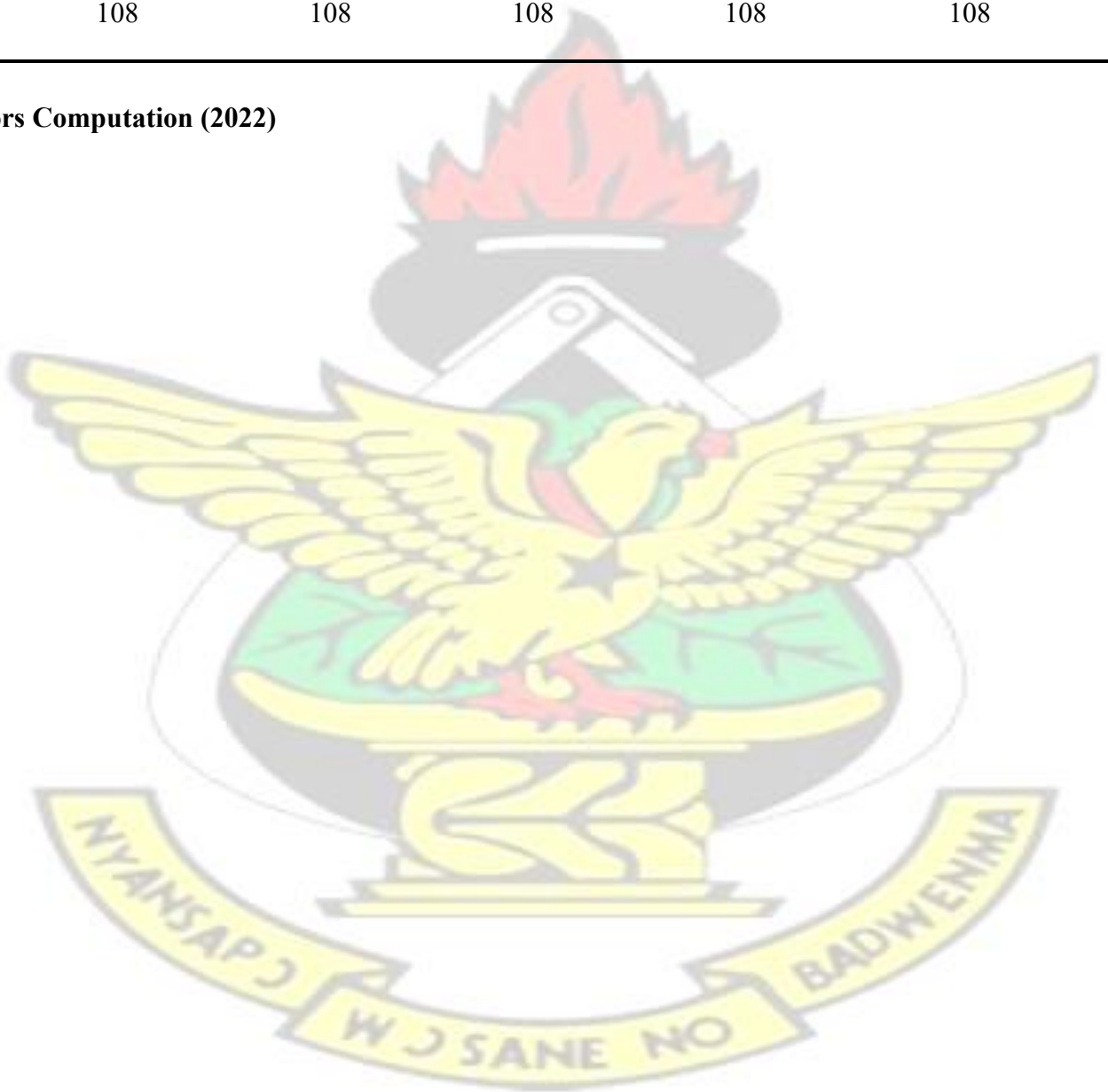
Table 4.5 Generalized method of moments (GMM) estimation results

	absALLP						
Dependent variable model	**1**	**2**	**3**	**4**	**5**	**6**	**7**
CBank	−0.0256***	−0.0257***	−0.0295***	−0.0256***	0.0151**	−0.0254***	−0.0184**
	(0.0061	(0.0069)	(0.0079)	(0.0063	(0.0077)	(0.0067)	(0.0085)
RateCap	0.0201***	0.0249***	0.0301***	0.0201***	0.0190**	0.0206***	384***
	(0.0065)	(0.0073	(0.0082)	(0.0064)	(0.0077	(0.0064	(0.0227)
Size	0.0344 (0.0112)	0.0171	0.0443 (0.0328)	0.0344 (0.1110)	−0.0181 (0.2119	0.0446	0.0446**
		(0.0120)				(0.2110)	(0.0227)
Loss	0.236***	0.249***	0.340***	0.236***	0.196***	0.267***	0.239***
	(0.0611)	(0.0627)	(0.0676)	(0.0601)	(0.0632	(0.0623)	(0.0719)
PastLLP	0.0121***	0.0541***	0.0758*	0121***	.0103** (0.0044	0.0131***	0.0212***
	(0.0035	(0.0039)	(0.0426)	(0.0034)		(0.0034	(0.0073
EBT_LLP	0.0177***	0.0201***	0.0299***	0.0177***	0.0145**	0.0186***	0.0214**
	(0.0064)	(0.0071	(0.0084)	(0.0063)	(0.0055	(0.0063)	(0.0091)
GFC	0.0383**	−0.0532***	-0.0260**	0.0383**	-0.0299**	-0.0208**	-0.0954***
	(0.0152)	(0.0117	(0.0103	(0.0146)	(0.0118)	(0.0089)	(0.0295)
RegCap	0.0477**	0.0235*	0.0327* (0.0177	0.0477***	0.0271* (0.0155	0.0383**	0.0418**
	(0.0187)	(0.0138		(0.0184)		(0.0146)	(0.0178)
Lerner	-0.0609**	−0.0358**	-0.0468*	-0.0609**	−0.0290**	-0.0457**	-0.0360**
	(0.0289)	(0.0180)	(0.0244)	(0.0284)	(0.0132)	(0.0182	(0.0182)
CreditorR	0.0167*	0.0520**	0.0802* (0.0416	0.0167**	0.0651***	0.0518**	.0141***
	(0.0101)	(0.0254		(0.0078)	(0.0240)	(0.0248)	(0.0032)
Big_4	0.0158***						
	(0.0048)						
BankReg		0.0335*	0.0150 (0.0428	0.0158***	0.0608***	0.0373**	0.0105* (0.0055
		(0.0188		(0.0047)	(0.0211)	(0.0186)	
Bank_Reg1							
Bank_Reg2							
Bank_Reg3							

Bank_Reg4
Bank_Reg5

BankReg*CBank							
p-Hansens	0.781	0.773	0.607	0.610	0.778	0.719	0.710
Hansen's J $\chi 2$	0.291	0.067	0.481	0.291	0.563	0.092	0.462
Obs.	108	108	108	108	108	108	108

Source: Authors Computation (2022)



4.4.2 Results

The study employs a robustness test on an estimate based on the generalized technique of moments to eliminate the possibility of endogeneity in the connection between banking regulation and earnings quality (GMM). The calculated values can be seen in Table 4.5. The analysis concludes that the aforementioned bank regulation systems have a strong positive link with one another. The coefficients in Table 4.5 all point upward, indicating that there is a positive relationship between banking regulation and the quality of banks' earnings and that regulatory scrutiny boosts banks' profitability. In Table 4.5, we can see that both BankReg and CBankReg have sizable and beneficial effects on absALLP. While the study's findings are inconclusive, they do suggest that the banking regulatory agency and banking regulatory processes may have a detrimental effect on the quality of bank earnings. This necessitates additional investigation. All of the coefficients for the control variables agree with Table 4.5 in both sign and direction. Table 4.5 uses Hansen's J Test (Hansen, 1982) to check for over-identification of the instrumented variables and assure the validity of the results.

4.5 Discussion of Findings

The Bank regulatory oversight and earnings quality of Ghanaian commercial banks listed on GSE was discussed using the theories. In addition, the discussions were supported by existing literature.

4.5.1 The connection between the financial regulatory agency's mandate, authority, and reach and the quality of banks' earnings

Some of the nine listed commercial banks may not see a positive effect of the banking regulatory framework on bank revenues due to differences in institutional, corporate governance, social, and environmental factors. This is because of the inconsistencies between regulatory structures and the

efficiency of enforcement (Leuz et al., 2003). Using this line of thinking, the study assesses whether or not the various regulatory systems have a good or negative influence on the quality of bank earnings. Models 2, 4, and 5 illustrate the results. The results show a positive and statistically significant correlation between Bank Reg1 and earnings quality, which is consistent with the hypothesis that there is a correlation between the responsibilities, authority, and scope of the banking supervision agency and the quality of earnings (coefficient = 0.0334). This demonstrates the efficiency of the financial supervisory agency's regulatory processes for encouraging banks to report quality earnings as described in the agency's duty, authority, and scope. Keeping a close check on banks and reducing opportunistic profit-seeking behaviour is simpler when the duties, authority, and scope of the financial regulatory body are clearly defined and rigorously implemented. Similar findings are reported by Kanagaretnam et al. (2010), who find that banks with more effective regulatory agencies have lower loan loss provisions and more equity.

4.5.2 The effect of the regulatory agency's risk-based supervisory methods on the standard of bank earning

The study finds a very significant positive link between BankReg2 and absALLP, a measure of earnings quality. With a coefficient of 0.0684, this supports the idea that the agency's risk-based approach to supervision improves the financial health of banks. This research supports the premise that the regulatory body's use of risk-based supervisory methods is connected with better bank profitability. The implementation of a risk-based supervisory method in bank regulation seems to dissuade banks from taking excessive risks, resulting in more conservative profitability, which is consistent with the earlier finding on BankReg1. Mishra and Reshef (2019) note the current trend of banks switching to risk-based supervision and internal supervisory systems. This research backs

such measures since they improve the quality of bank revenues and discourage exploitative actions by bank managers.

4.5.3 The internal structure of banking supervision and bank activity restrictions affects the quality of bank earnings

The study reveals a strong unfavourable association between BankReg3 and profit quality (coefficient = 0.0224). Consistent with Mishra and Reshef's (2019) observation, the internal structure of banking supervision has a positive effect on the quality of bank profitability, this data demonstrates that the efficiency and effectiveness of a bank's internal regulatory framework correlate positively with the success of the bank's performance. The supervision of bank management activities, particularly choices involving loan loss provisions and other accounting judgments, necessitates both internal procedures and heightened banking regulator monitoring. This reduces moral hazard by preventing banks from engaging in exploitative profit management at the expense of their depositors and investors.

The analysis also reveals a highly substantial positive link between BankReg5 and bank profitability (coefficient = 0.0587). This conclusion adds support to Dal Maso et al. (2018) assertion that when banking operations are restricted, bank profits are of higher quality, indicating that constraining banks' activities prudently enhances the quality of their profits (2018). Because unrestrained banking increases the likelihood that banks may participate in dangerous activities that imperil the funds of investors and depositors, bank authorities are eager to curb it. With the rise of conglomerates in the financial industry, it appears that more strict regulatory measures are required to prevent banks from taking needless risks by entering businesses with high levels of

uncertainty. This regulatory measure reduces moral hazard, which is consistent with the philosophy of regulation based on the public interest. According to Dale and Wolfe (1998), the regulator can mitigate the risk of moral hazard in banking conglomerates by conducting comprehensive investigations into each of the firm's business lines and closing any potential loopholes through which the conglomerate could profit from exploitative behaviour.

There are considerable positive associations between Bank Reg4 and high-quality profits. The data indicates that the assertion that there is a positive correlation between the frequency and thoroughness of bank and system-level systemic risk, financial stability, and stress tests and the quality of bank profitability is false, and that systemic risk assessments, financial stability, and stress testing at the bank and system levels exacerbate opportunistic behaviour by bank management, thereby diminishing the quality of bank profitability. This analysis validates earlier results that not all regulatory initiatives in the banking sector have a favourable effect on bank profitability quality. According to Altamuro and Beatty (2010), the regulatory community should be aware that tighter regulations may not have the desired effect. Due to the likelihood of unexpected repercussions, the introduction of banking regulatory measures requires prudence.

The results of Model 7 indicate that banking regulatory measures and agency supervisory procedures have little effect on bank profitability. Even though banking regulatory mechanisms appear to have an independent impact on bank earnings, regulatory agency mechanisms appear to have a positive impact on the quality of bank earnings and appear to compel bank managers to engage in opportunistic earnings management practices dealing with agency regulatory pressure. This is evidenced by the fact that CBankReg has a substantial positive correlation with abs ALLP in all six models presented in Table 4.4. Loss, previous LLP, EBT LLP, and Creditor_R are other factors that have a favourable effect on a bank's profitability. Following Kanagaretnam et al.

(2010). Dal Maso et al. (2018) find that larger banks have higher-quality profits because the banking regulatory body can detect instances of opportunistic earnings management more quickly at larger banks. Considering an effect size of 1 per cent, this is rather significant. This conclusion contradicts Ozili's (2021) and suggests that engaging with one of the Big Four auditors could assist banks to avoid unethical profit management practices.

CHAPTER FIVE

SUMMARY CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents a summary of the results and findings of the studies. Subsequently, conclusions for the study were drawn and recommendations are made. The summary of the findings of the research looks at the impact of the banking regulatory regime on banks' performance. The summary of the study focuses on the overall overview of the study, which includes short explanations of the study's variables, a description of the research methods, an overall summary of the study, and as well a discussion of the findings.

5.2 Summary of the Study

The study sought to examine the connection between the financial regulatory agency's mandate, authority, and reach and the quality of banks' earnings, to determine the effect of the regulatory agency's risk-based supervisory methods on the standard of bank earning, to determine how the internal structure of banking supervision and bank activity restrictions affects the quality of bank earnings. The study employed correlational and descriptive research designs. The Ghana commercial banks listed on GSE were chosen as the demographic for this research. Purposive sampling was used in this study to sample 9 commercial banks listed from the other commercial banks due to data availability. Secondary data was gathered through annual reports. The information was gathered from the period (2010-2021). Both Feasible Generalised Least Squares (FGLS) and Generalised Methods of Moment were adopted to estimate the parameters involved in the study objectives.

5.2.1 The connection between the financial regulatory agency's mandate, authority, and reach and the quality of banks' earnings

Due to variances in institutional, corporate governance, social, and environmental factors, some of the nine listed commercial banks may not see a positive impact of the banking regulatory framework on bank revenues. This is the result of mismatches between regulatory architecture and enforcement effectiveness. Using this line of reasoning, the study evaluates whether the various regulatory systems have a positive or negative effect on the profitability of banks. Models 2, 4, and 5 depict the outcomes. The results demonstrate a positive and statistically significant association between Bank Reg1 and earnings quality, supporting the premise that there is a relationship between the responsibilities, authority, and scope of the banking supervision agency and earnings quality. This illustrates the effectiveness of the financial supervisory agency's regulatory mechanisms in enticing banks to declare high-quality earnings, as outlined in the agency's mission, authority, and scope. When the duties, power, and scope of the financial regulatory body are clearly delineated and rigorously implemented, it is easier to keep a close eye on banks and reduce opportunistic profit-seeking behaviour.

5.2.2 The effect of the regulatory agency's risk-based supervisory methods on the standard of bank earning

The research demonstrates a highly substantial positive correlation between BankReg2 and absALLP, a measure of earnings quality. With a value of 0.0684, this indicates that the agency's risk-based approach to supervision enhances the financial health of banks. This research supports the concept that the implementation of risk-based supervisory approaches by the regulatory body is associated with increased bank profitability. The use of a risk-based supervisory mechanism in

bank regulation appears to discourage banks from taking excessive risks, resulting in more conservative profitability, which is consistent with the prior BankReg1 conclusion.

5.2.3 The internal structure of banking supervision and bank activity restrictions affects the quality of bank earnings

The study demonstrates a substantial unfavourable link between BankReg3 and profit quality. Consistent with Mishra and Reshef's (2019) observation, the internal structure of banking supervision has a positive effect on the quality of bank profitability, these findings demonstrate that the efficiency and effectiveness of a bank's internal regulatory framework correlate positively with the success of the bank's performance. The supervision of bank management operations, particularly choices involving loan loss provisions and other accounting judgments, needs both internal processes and heightened banking regulator monitoring. This reduces moral hazard by preventing banks from engaging in exploitative profit management at the cost of their depositors and investors. The research indicates that bank regulators are eager to restrict unrestrained banking because it raises the possibility that banks would participate in hazardous activities that put the funds of investors and depositors at risk. With the expansion of conglomerates in the financial industry, it appears that more strict regulatory measures are required to prevent banks from taking needless risks by entering businesses with high levels of uncertainty. This regulatory measure reduces moral hazard, which is consistent with the philosophy of regulation based on the public interest. The regulator can limit the danger of moral hazard in banking conglomerates by conducting exhaustive investigations into each of the firm's business lines and blocking any potential loopholes through which the conglomerate could profit from unethical conduct.

5.3 Conclusion

The study sought to investigate if the banking regulatory regime affects the earning quality of banks in Ghana. The Ghana commercial banks listed on GSE were chosen as the demographic for this research. Purposive sampling was used in this study to sample 9 commercial banks listed from the other commercial banks due to data availability. Secondary data was gathered through annual reports. The information was gathered from the period (2010-2021). Both Feasible Generalised Least Squares (FGLS) and Generalised Methods of Moment were adopted to estimate the parameters involved in the study objectives.

The results show that there is a consistent and statistically significant unfavourable link between the quality of bank profitability and the regulatory structures that govern them. The propensity for bank managers to engage in opportunistic profits management is reduced, as the study discover when banking regulatory scores are higher. However, the study also discovers that various regulatory strategies have different impacts on profit management, with some having positive contributions and others negative ones. The study concludes that the internal organization of banking supervision, prudent bank activity limitation, and regulatory procedures relevant to the duties, authority, and scope of the banking supervision agency all contribute to higher-quality bank profits. However, the study demonstrates that bank managers are more likely to engage in opportunistic behaviour as a consequence of systemic risk assessments, financial stability, and stress testing at the bank and system levels, which in turn leads to a reduction in the quality of bank profitability.

5.4 Recommendation

The results help close the gap between theory and practice by providing concrete evidence for how strict banking regulations have improved the quality of earnings at Ghana commercial banks. For banking regulation to have a positive effect on the quality of bank earnings in these nine banks, it must first be well-established and take into consideration the unique social and environmental characteristics of these banks. The findings suggest that bank regulators and policymakers should ensure the independence, appropriate qualifications, and familiarity of the heads of supervisory bodies and continue to improve the current regulatory structures. Findings from this study may help bank executives and regulators improve their methods for keeping bank performance under control. While the study does focus on banking regulation, multi-service banks in particular need to be wary of making sweeping generalizations about our findings. The ability of investors to make educated bets hinges on the efficiency with which the existing banking regulatory monitoring system oversees and regulates the industry. Foreign investors may compare countries' investment attractiveness by analyzing the strength and reliability of their banking systems. From a theoretical perspective, the study's findings provide credence to regulatory agency actions aimed at protecting the public interest and reducing the potential for moral hazards to occur as a consequence of banking activity. The study recommends that the banking regulator keep a close eye on financial institutions to prevent them from engaging in high-risk activities that might compromise the safety of their earnings.

The results are timely because of the fluid nature of Ghana's commercial banking regulation. This research also helps fill in some of the gaps in our understanding of how banks in the emerging sector handle their revenue and profit streams. This study sheds light on the role of regulation in influencing bank behaviour and, by extension, market stability in the wake of the glaring global

and national financial crises. The study shows that under a "stricter" regulatory framework, bank managers are especially likely to actively manage profits, whereas regulators prefer a more conservative strategy when it comes to the accounting methods bank managers choose. The study findings, however, support a stricter regulatory inspection system as a means of discouraging risky and destructive profits management practices on the part of bank managers.

5.5 Limitations and Future Suggestions

Due to a lack of data, the study is unable to account for banks engaging in a wide variety of activities, such as insurance, manufacturing, underwriting of securities, and FinTechs. The area needs further inquiry into other rules that can affect the associations under scrutiny. The quantitative approach used here may be replaced in the future by a qualitative one. To learn more about the impact of the banking regulatory regime on the earning quality of banks in Ghana, sector managers may be given a questionnaire or questioned one-on-one to address the issues. To help solve the mystery of what factors influence a company's earning quality, future researchers should examine the impact of the banking regulatory regime on the earning quality of banks across banks in Ghana.

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