UNIVERSITY OF CAPE COAST

AUDIT COMMITTEE EFFECTIVENESS AND BANK STABILITY IN

GHANA: THE MODERATING ROLE OF CREDIT INFORMATION

SHARING SYSTEM

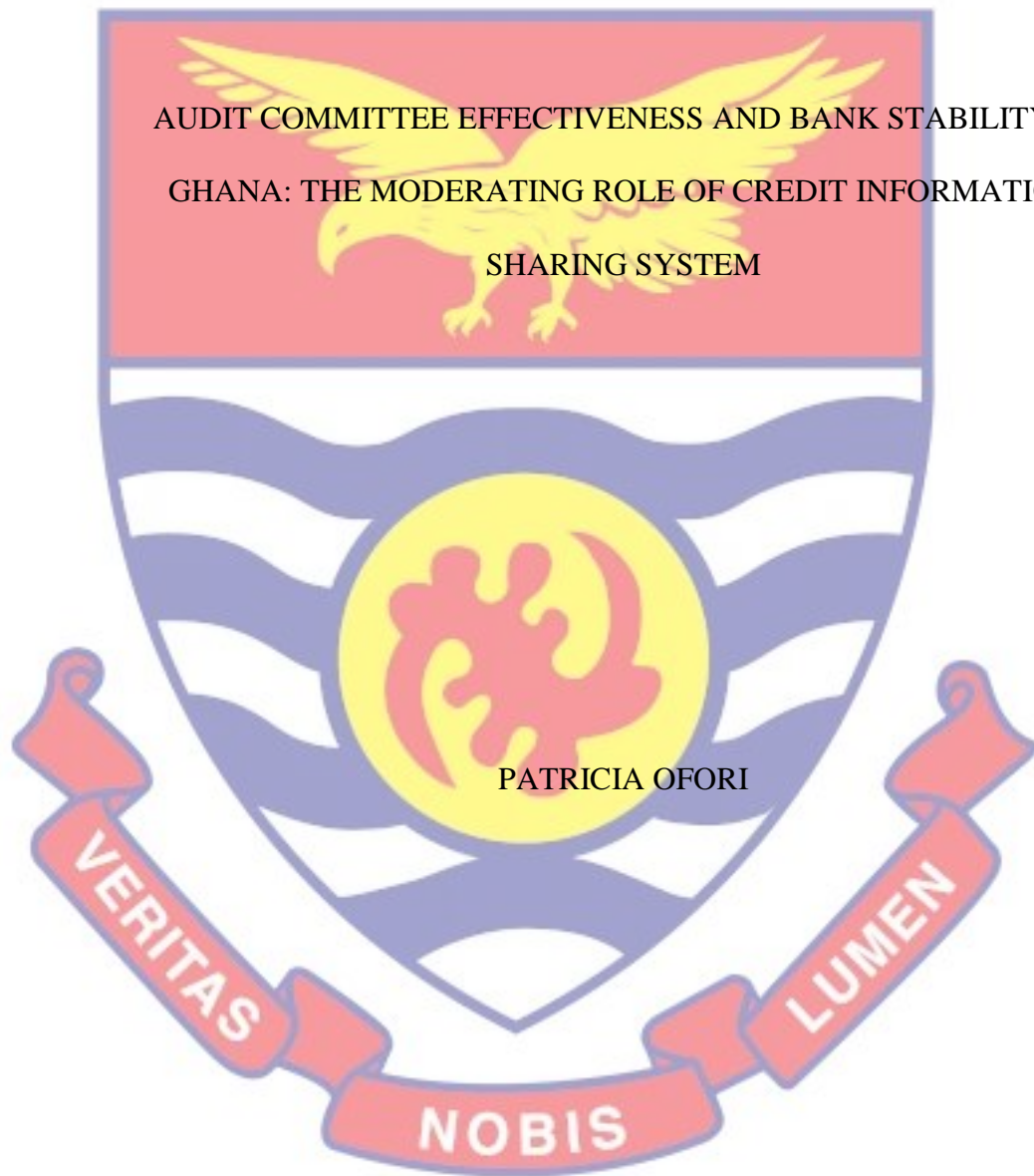PATRICIA OFORI

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UNIVERSITY OF CAPE COAST

AUDIT COMMITTEE EFFECTIVENESS AND BANK STABILITY IN

GHANA: THE MODERATING ROLE OF INFORMATION SHARING

BY

PATRICIA OFORI

Thesis submitted to the Department of Accounting of the School of Business,

College of Humanities and Legal Studies, University of Cape Coast in partial

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in Accounting

MAY 2022

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my original research and that no part of it has been presented for another degree in this University or elsewhere.

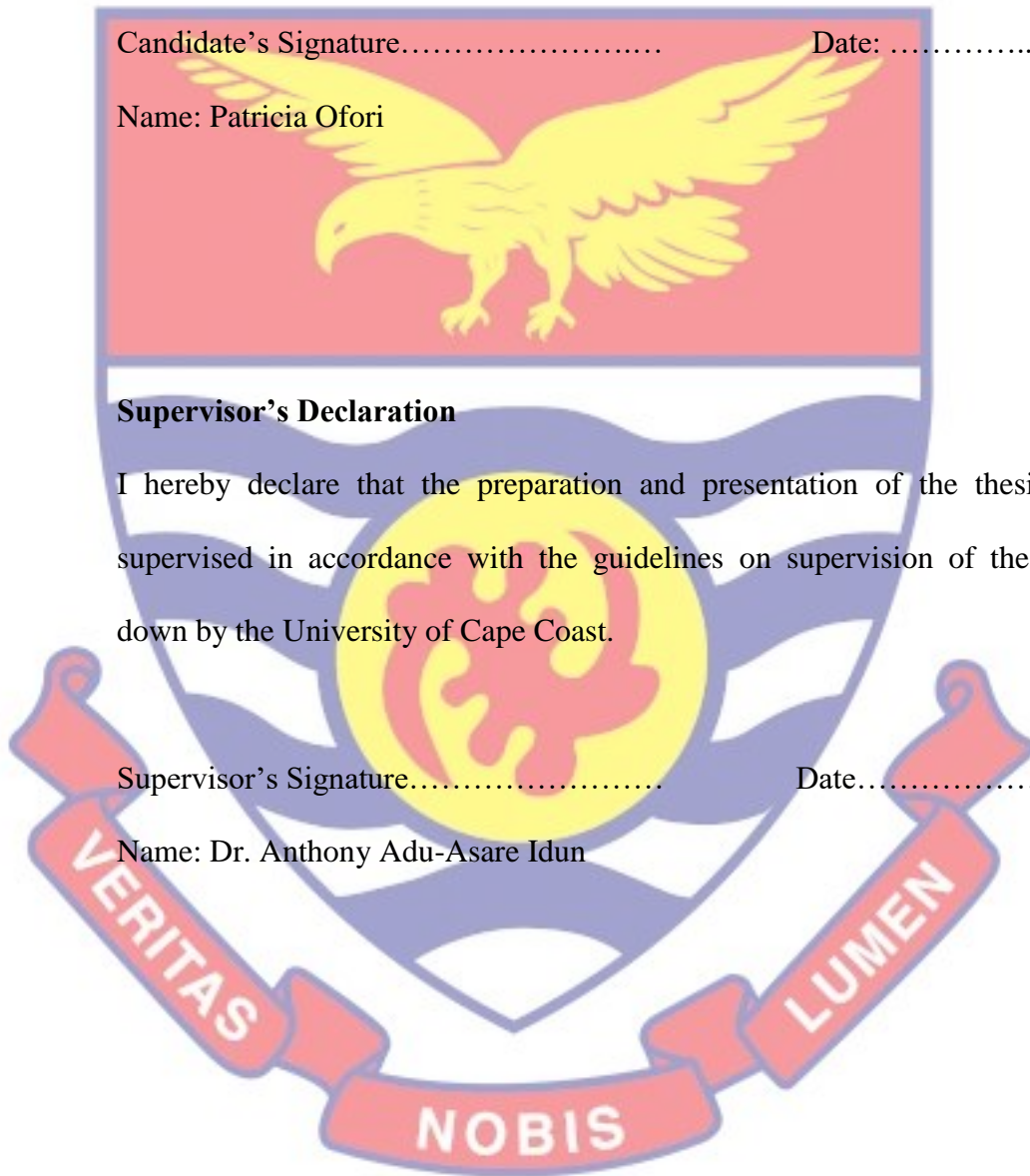Candidate's Signature………………….…   Date: …………...........

Name: Patricia Ofori

Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Supervisor's Signature…………………   Date………………

Name: Dr. Anthony Adu-Asare Idun

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ABSTRACT

Commercial banks and other financial sectors worldwide have undergone dramatic downturns due to global financial crises, issues in non-performing loans, and governance practices volumes in the past ten (10) years, and it has caught the attention of policymakers. The purpose of the study was to examine the moderating role of credit information sharing on the relationship between audit committee effectiveness and bank stability. Data were collected from 14 out of 23 commercial banks in Ghana from 2010 to 2019 due to data unavailability. The study adopted an explanatory research design. Secondary data was collected from banks' annual reports with excel through Ghana stock exchange and companies' website. The findings indicate that credit information sharing complements the audit committee's effectiveness (audit committee expertise, audit committee independence, audit committee meeting frequency, and audit committee size) in promoting the stability of banks in Ghana. The findings revealed that audit committee independence played a more significant role in strengthening resilience within Ghana, followed by expertise, diligence and size, respectively when information sharing patronage played a moderating character. The findings further showed that audit committee expertise played a more significant part in improving stability within the Ghana banking sector, followed by diligence, size, and independence after the credit information sharing cost played a moderated role. The researcher recommended that mandatory policies such as the audit committee effectiveness can improve bank stability by encouraging the credit information sharing usage. However, the researcher had limited time and resources, making the researcher run into a database problem.

KEYWORDS

Audit committee

Audit Committee Effectiveness

Bank stability

Credit information sharing

Information sharing system

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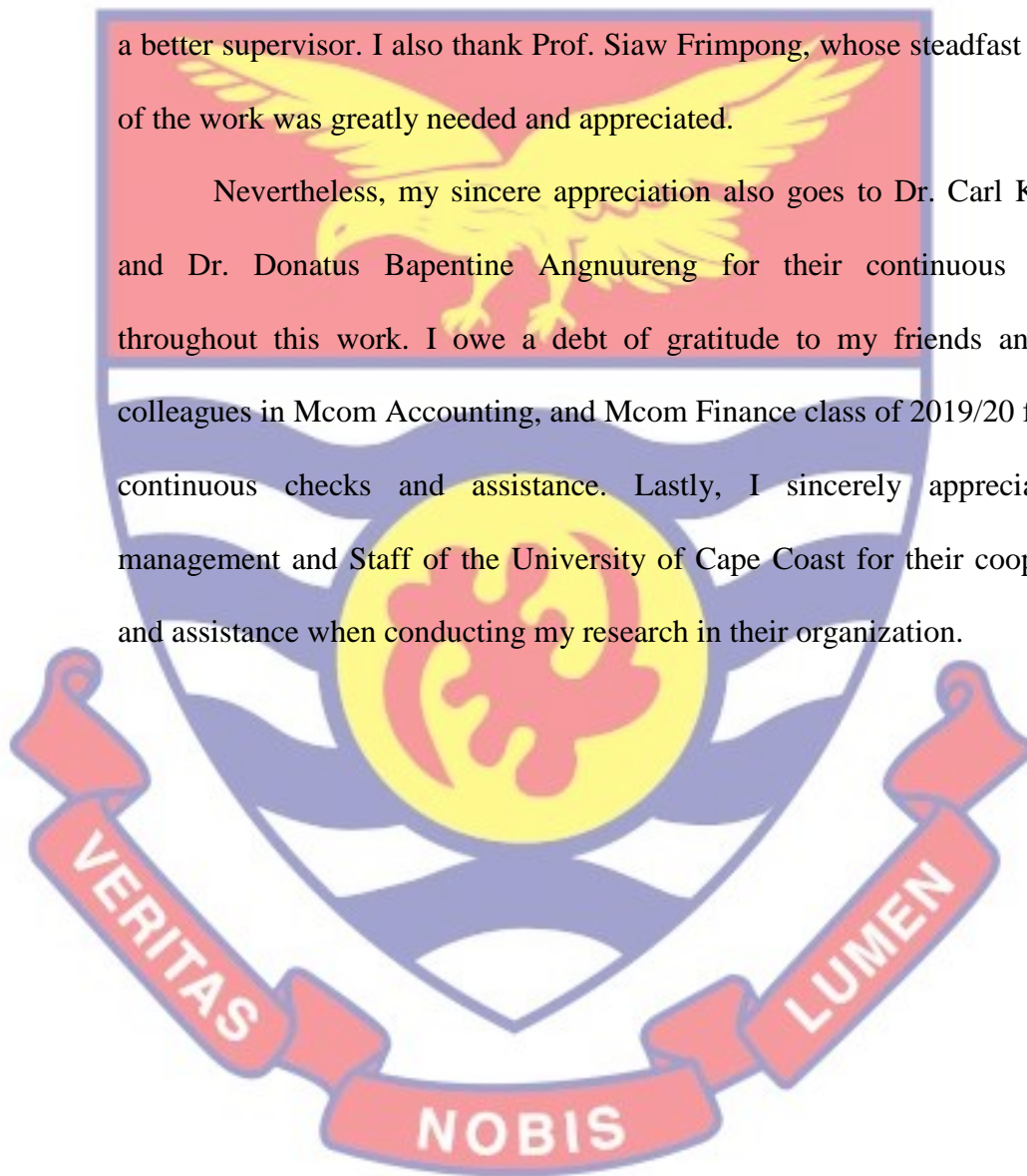
DEDICATION

To my grandfather, Mr. Albert Kobina Koomson, my god father, Mr. Kweku

Gyasi Essel and my father, Mr. Ebenezer Ofori-Okyere.

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LIST OF ACRONYMS

AC	Audit Committee
Ace	Audit committee effectiveness
ACez	Audit committee expertise
ACind	Audit committee independence
ACmeet	Audit committee meeting
ACsiz	Audit committee size
Bcompo	Board diversity or board composition
Bksiz	Bank size
BLEV	Bank leveraging
CAR	Capital Adequacy Ratio
CRB	Credit Referencing Bureau
GMM	General Method of Moment
INFS	Information sharing or credit information sharing
INFSc	Information sharing cost over gross loans and advances
INFSe	Information sharing enquiries
PCB	Private Credit Bureaus Coverage
PCR	Public Credit Registries
PWC	Price Waterhouse Coopers
RBV	Resource-based view
STAB	Stability
Z-scor	Z-score

CHAPTER ONE

INTRODUCTION

Globally, the financial sector has seen a massive increase in competition and decline in stability leading to a rise in discussion and debate among active policy-makers and scholars, both in theory and in practice. Thus, in the aftermath of the Global Financial Crises (GFC), the debate heated up with policymakers and academics raising a lot of concerns due to the prevalence of stability issues within the banking sector. Based on that, academia came out with their suggestions that the stability of the banks is dependent on the outcome of a defined set of measures such as loans and risk control mechanisms since the loans and risk control mechanisms considers the distress dependence among banks. Sometimes, lenders rely on inaccurate data which may lead to increase in non-performing loans. Therefore, there is the need for lending institutions to resort to credit reference databases to assess a borrower's credit and trustworthiness and audit committee to ensure that controls are working. Thus, raising the role of the audit committee and information sharing as a key construct to be considered in this study.

Background to the Study

Following the global financial crises and economic decline issues, corporate governance structures (such as the audit committee) has been highlighted as one of the factors affecting banks' stability in Ghana since corporate governance structures such as board audit committee oversees and monitors management oversight responsibility. Corporate governance (CG) performed a dire role in ensuring financial stability; and the financial market is one of the critical sectors to consider in presenting economic development due

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to the sector's ability to create, accumulate, and efficiently distribute credit. However, the banking business has experienced rapid consolidation, with fewer small banks and more large ones during the previous two decades (Jeon & Lim, 2013; Akins, Li, Ng & Rusticus, 2016).

Consequently, several régimes such as the bank of Ghana through the restructuring of the regulatory framework have attempted to regulate financial institutions for a long time, notably commercial banks, to safeguard the safety and well-being, and capable of meeting their responsibilities (Imam, Jacome & Nier, 2012). Furthermore, the withdrawal of the licenses of some commercial banks by bank of Ghana in July 2017 was as a result of significant capital impairment issue. Following that, throughout 2018, Bank of Ghana declared the insolvency of five other indigenous banks: Unibank, Beige Bank Limited, Royal Bank Limited, Sovereign Bank Limited, and Construction Bank Limited, citing financial statement and corporate governance difficulties as grounds (Tettey, 2017; Benson, 2019).

KPMG (2018) study revealed that corporate governance, risk control, regulatory and management shortcomings, and illegal transactions involving shareholders, related parties, and the parties' associated issues, were the leading cause of the collapsed banks meanwhile, these banks had high visibility and good performance. The critical reason for the capital funding gap is directly attributable to banks' poor lending portfolios, ineffective risk mitigation, and the board's lack of supervisory authority, the diversion of funds to related parties due to non-monitory schemes, periodic board meetings, and widespread involvement by non-executive directors. Thus, the devastating repercussion of recent world financial and economic crises has

increased focus on financial stability (Akosah, Loloh, Lawson, & Kumah, 2018) and the necessity for financial surveillance and regulation with a macro prudential component (Morgan & Pontines, 2014).

Furthermore, the definition of financial stability has raised a debate between academia and policy makers due to the multi-facets of economic systems. Financial stability, which includes financial intermediaries, markets, and infrastructure states, ability to resist shocks and unravel potential financial imbalances (European Central Bank, 2011). Similarly, according to Schinasi (2004), the term "financial stability" refers to a condition in which the financial sector is capable of boosting growth in the economy, mitigating risk, and absorbance of shocks with minimum interference. The scope of financial stability includes the economy's mechanism for valuing, allocating, and managing liquidity risk, credit risk, and other financial risks. According to Fajembola, Rahman, and Md-Rus (2018), the distinctiveness of the obligation to accept deposits and the provision of credit to debtors distinguishes banks from other financial organisations. Banks employ these services to transfer assets, meet the financial demands of different segments of society, and keep the economy running smoothly (Heffernan et al., 2005).

Also, given the importance of protecting the health of banks through the suggestions established by various governments; mechanisms of protection, on the other hand, are intended to mitigate the agency issue of unequal knowledge and reputational risk, which is typically at the basis of bank bankruptcy. The Board members and its committees are well-known tools for administrative constraints (Lan, Liu & Sun, 2014). Perhaps, one of the most important committees on the board of directors is the audit

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committee. The Board of governors and its committees' characteristics are well-known tools for managerial constraint and guidance in discharging management oversight (Lan, Liu & Sun, 2014).

The audit committee independence, expertise, size and diligent attribute of the audit committee are vital factors affecting companies' profitability (Ghafran & O'Sullivan, 2017). Thus, audit committee within the board of directors' size, independence, expertise, diligence and oversight role increases investors' trust in the dependability and fairness of financial statements, result in better corporate governance efficiency (Biçer & Tunç, 2019). Moreover, Hartoko, Honggowati, Setiany and Suhardjanto (2017) supported that member of the audit committee with accounting expertise are evidenced as a suitable governance mechanism since they would be more experienced and more effective in monitoring the processes involved in financial reporting. Furthermore, Audit committee independence usually increases the effectiveness of the board's functions such as quality of auditing because when an audit committee works independently, it can effectively monitor the behavior of management on behalf of the board (Al Farooque, Hassan, Mobarek, & Mollah, 2017). This implies that the independence, diligence and size of the audit committee results in a better monitoring function of the board and, as a consequence, also leads to better firm performance and shareholder wealth accumulation board (Al Farooque, Hassan, Mobarek, & Mollah, 2017). Furthermore, Kalemli-Ozcan, Sorensen and Yesiltas (2012) opined that Leverage across Firms, Banks, and Countries is best-measure of bank specific variables. Also, Ghafran & O'Sullivan (2017), and Ilmi, Mohamad and Shariff, (2022) opined that firm size and

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leveraging effect are important variables that affect performance of firms. Similarly, Liu, Yang and Zhang (2021) found that capital adequacy ratio significantly affect risk-taking, ROA (return on asset), ROE (return on equity), and Z-score. Likewise, researchers suggested that capital adequacy ratio, bank size and leverage effcet is a significant measure of the banking sector's resilience (Maquieira et al., 2012; Fallah & Mardani, 2018).

Consequently, due to high-profile financial scandals, beneficial roles and interests have grown dramatically to attract international concern to the audit committee's functional role. However, money and information are the two primary inputs to a financial system because a bank's ability to collect and interpret information is critical to its survival in the marketplace. As a result, sharing information about borrowers' characteristics and debt levels can significantly impact credit market activities and reduces information asymmetry and agency problems due to the effective institution of an audit committee. Again, information sharing between a credit reference bureau and a financial intermediary improves the efficiency of loan applications and performance of banks because performance is supervised by a good corporate governance instituted in an organisation (Machoka & Wamugo, 2018).

Statement of the Problem

Omar and Makori (2018) observed that global financial crises, hostile government policies, and high non-performing lending volumes have contributed to collapse of some commercial banks and other financial sectors. Due to that policymaker have attempted to identify factors contributing to a more improved financial system (Wood & Skinner, 2018; Le, Chuc, & Taghizadeh-Hesary, 2019). Thus, in 2017, the Central bank also announced an

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ambitious comprehensive strategy to strengthen the banking sector and tighten the regulation and supervision structure in order to create a more stable banking sector, including corporate governance restructuring, capital adequacy, and technology innovation reforms. Furthermore, evidence from Ghana depicts that the total number of banks has decreased rapidly because of license revocations of some banks, which followed capital impairment difficulties, non-performing loans, functioning under falsified licenses, insolvency, and perhaps other internal operation issues (Addison, 2018). These, according to the Bank of Ghana, were the challenges that contributed to the collapse of the banks. Likewise, Sikka and Stittle (2017) suggested that corporate governance is strengthened by the influence of their practices in businesses, hence maintaining firm long-term growth and survival in directing and managing the firm's affairs.

According to Sanusi (2010), one of the factors that contributed to the financial sector's collapse was the slackness of board committees; thus, corporate governance is a sensitive topic in the banking sector. Indeed, appropriate actions to mitigate the situation are not adopted because non-performing loans might collapse banks with large balances. Owing to that, the underlying difficulty of information asymmetry, a large number of borrowers with a low credit risk cannot obtain funding since lenders are unable to assess their credit history objectively. Furthermore, some bad loan debtors have taken advantage of the knowledge asymmetry in the banking business in Ghana to incur several bad loans. The serial defaulters' nature of loan operations has disrupted the credit market lending activity, negatively affecting bank profitability and threatening banking sector stability. According to Johnson,

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Badger, Walermire, Synder and Skorupka (2016) credit information sharing could incentivise defaulters to pay back loans once the legal context sorts credit agreements challenging to implement.

While studies across the globe have concluded that audit committee independence, expertise, size and diligent attribute of the audit committee are vital factors affecting companies' profitability (Ghafran & O'Sullivan, 2017; Ilmi, Mohamad & Shariff, 2022). Previous studies on audit committee and bank stability did not include the diligence character that measures audit committee effectiveness, although, diligence of the audit committee have a higher chance of success on performance (Fajembola et al. 2018; Nyumutsu, 2019). However, according to Felício, Greiner, Grove and Rodrigues (2018), increased activity through numerous meetings, could be an indication that an organization is experiencing problems. Nonetheless, Meetings provide an avenue for audit committee members to make key choices that could help improve risk mitigation and bank stability. Furthermore, previous study on the audit committee and bank stability research by Nyumutsu (2019) only looked at banks listed on the Ghana Stock Exchange, but this study will look at both listed and unlisted banks.

Also, the extant work (Nyumutsu, 2019; Nguyen & Yin, 2020) considered Ordinary Least Square (OLS) and Fixed Effects model for estimating their research variables; this is an issue to be looked at because the dependent variable (bank stability) is thus, the dependent variable depends on its past realization. General Method of Moments (GMM) panel estimator could have been an important estimator of the variables so as to deal with endogeneity problem. This was supported by Qian (2014) that when there is

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endogeneity problem, OLS estimates are biased and inconsistent on its results. Literature also supports the superiority of the General Method of Moments (GMM) estimation technique over Pooled Ordinary Least Square and Fixed Effects models to treat econometric problems that arise when dealing with dynamic panel data (Piper, 2014).

A previous survey of credit information sharing by Kusi and Opoku-Mensah (2018) utilised World Development Indicators to analyse the "Public Credit Registries (PCR) and Private Credit Bureaus Coverage (PCB)." On the other side, the PCR and PCB indicators estimate the number of people who exchange information at the national level; however, minimal attention is being paid at the bank level. Furthermore, this study develops and utilises credit reference bureau patronages and credit reference bureau cost. These variables were utilised since dummies were used in several previous credit referencing bureau (information exchange) research of which it did not properly depict the actual outcome of using a credit reference bureau system (Galati & woolddridge, 2009; Markus, Fedorowicz, Bodeau & Brooks, 2009).

However, this study did not include coverage of public credit registers (PCR) and private credit bureaus (PCB) in the World Development Indicators because unlike the study's goal, PCR and PCB measure coverage (the number of adults covered by credit information sharing institutions), not patronage or usage by banks. Also, the PCR and PCB variables track information exchange at the country level, this study, however, does so at the bank level. Lastly, the PCR and PCB variables do not take into consideration the fee charged for using the credit information sharing or the number of times banks utilise the system, both of these factors have an impact on bank profitability. Credit

reference bureau patronage and credit reference bureau cost are used in the study to address these issues.

The link between the effectiveness of the audit committee and bank stability is inconsistent. Firstly, the majority of research was conducted in developed economies and at the country level (Fajembola et al., 2018; Alqatamin, 2018) with none found so far in Africa and Ghanaian certain specifically. Again, few bank studies considered the context of the of bank of Ghana dissolute bank stability within the local and subnational banks. Yet, this is the level where the exercise of audit committee effectiveness is important to banks. Kusi, Agbloyor, Fiador and Osei (2016), assert that banks that institute information sharing system indicators have a complementary impact on other variables that affect stability. This indicates that the presence of information sharing in the financial institution tends to strengthen the connection between audit committee effectiveness and bank stability. Thus, information sharing shows an important role in audit committee effectiveness and bank stability.

Likewise, there is a connection between audit committee and bank stability. Yet, studies on the topic are inconclusive because while other researchers had positive effect on the audit committee effectiveness variables (Alqatamin, 2018; Nguyen & Yin, 2020); others also found a negative effect on the relationship (Johari, Rahim & Takril, 2015; Ghafran & O'Sullivan, 2017). Also, a number of studies reported that having more people on the board of directors is negatively related to firm performance (Cramer & O'Connell, 2010; Gill & Mathur, 2011). In contrast other researchers argued that the larger that board size the larger experienced members draws on a

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wider range of experiences which can only enhance firm performance (Larmou & Vafeas, 2010; Tornyeva & Wereko, 2012).

Therefore, moderating audit committee effectiveness with an information sharing system can enhance the relationship and also make the relationship better or stronger. Therefore, this study examines the moderating role of credit information sharing in the relationship between audit committee effectiveness and bank stability in Ghana. The use of an interaction term between audit committee effectiveness and bank stability to reflect the net effect of audit committee effectiveness on bank stability in Ghana is another gap in the literature which this research fills in the Ghanaian setting following the assertion of Agbloyor, Baah, Kusi and Osei (2016) that, information sharing has complementary effect on other variables that affect stability. Likewise, information sharing system plays a dual role through provision of credible information to the lending institution and assisting the audit committee in their activity as monitoring mechanism on bank officials, thereby helping to minimise the nonperforming loans of the banking institution, this leads to stability.

Purpose of the Study

The study sought to examine the moderating role of information sharing in the relationship between audit committee effectiveness and commercial bank stability in Ghana.

Research Objectives

Specifically, the study sought;

1. to examine the effect of audit committee effectiveness on commercial banks' stability in Ghana.

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2. to assess the relationship between the information-sharing system and commercial banks' stability in Ghana.

3. to examine the moderating effect of information sharing system on the relationship between audit committee effectiveness and commercial banks' stability in Ghana.

Research Hypothesis

1. There is no significant effect of audit committee effectiveness on commercial banks' stability in Ghana.

2. There is no significant relationship between credit information sharing system and commercial banks' stability in Ghana.

3. There is no significant moderating effect of the information sharing system on the relationship between audit committee effectiveness and commercial banks' stability in Ghana.

Significance of the Study

Given the rampant financial scandal in Ghana's banking industry, it is essential to look into the factors that lead to such scandals to enhance the ways to minimise further harm to the economy. This research is expected to contribute to the pool of knowledge on audit committees and aid policymakers in mitigating bank failures in our community. The research will help in large extent boost investors' confidence and increase the commitment of other financial information users residing in Ghana. The study will add to the extant literature on bank stability measurement. Also, the study will help policy makers focus on certain factors that will help resolve the state's financial crises. The study will also assist the board members in understanding key board and audit committee features that display a significant role in managing

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risks. As authorities such as the Bank of Ghana continue to identify and reconstruct audit committees' intended attributes and behaviour, the research findings will support future changes in policy surrounding audit committees that are appropriately informed.

Delimitations

The study is conducted on Ghanaian banks and thus excludes banks residing outside the country. Due to data availability, the researcher used 14 of 23 Ghana's commercial banks in this study. Also, instead of using all the antecedents as were stipulated by Archambeault, DeZoort and Hermanson in 2008, the study considered only the antecedents that were reviewed in the dimensional analysis by Robinson and Owen-Jackson in 2009, and Nyumutsu in 2019. As a result, in this study, the z-score was used as a proxy for bank stability, and audit committee attributes to measure audit committee effectiveness because both are used in literature widely. The survey also included credit bureau inquiries and costs compared to other metrics like dummies employed in some empirical investigations; this measure incorporates a broader range of features of the information-sharing system. The proximity of some selected commercial banks, particularly GCB, Prudential bank was advantageous given time and resources available.

Limitations

This study focused just on banks, ignoring the financial system as a whole, limiting the study's sample size, and potentially resulting in an issue with external validity. The study ran into a database problem with unlisted commercial banks in Ghana, and gathering essential data would take a long time to complete. Despite commercial banks across the country, it would have

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been more appropriate for the researcher to investigate all current banks. Still, financial resources and data availability constraints made this research impossible to conduct nationwide.

Definition of Terms

Stability

The European Central Bank (ECB, 2011) has termed financial stability generally as the ability of financial intermediaries, markets, and infrastructure to resist shocks and unwind possible financial imbalances, therefore lowering the risks of disruption in the financial intermediation process. In this study, bank stability is defined as the ability of the financial sector to stimulate economic growth, decrease risk, and handle shocks with minimal interference. The scope of financial stability includes the economy's mechanism for valuing, allocating, and managing financial risks such as liquidity risk, credit risk, and others.

Audit committee effectiveness

A committee is indeed an audit committee when set up in an organisation to manage the organisation's internal controls. As Johari, Rahim and Takri (2015) described, audit committee effectiveness is the functioning of the audit committee duties such as examining accounting data for corporations, supervising internal audit systems, and liaising with external auditors.

Information sharing system

Machoka and Wamugo (2018) defined information sharing as "the exchange of credit information between a credit reference Bureau and a lending institution."

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Credit reference bureaus

These are information providers who collect, file, and transmit information that their members voluntarily supply (Jappelli & Pagano, 2002).

Organisation of the Study

This research focused on five main parts. The first section provided a brief insight of the study. Its targets included the aforementioned: the study's background, the issue statement, the study's importance and limitations, a glossary of words, the study's organization, and a chapter summary. The second chapter spelt out the literature survey, theoretical arguments and empirical examination of the literature on the study. The third chapter examined the research methods, the research design, data sources, variables and measurement, data processing and analysis, and a summary of the research methodologies. The fourth chapter contained the regression results, a full explanation of the presented hypothesis, and a chapter summary. The summary, conclusions, recommendations, and suggestions for future research was discussed in Chapter Five.
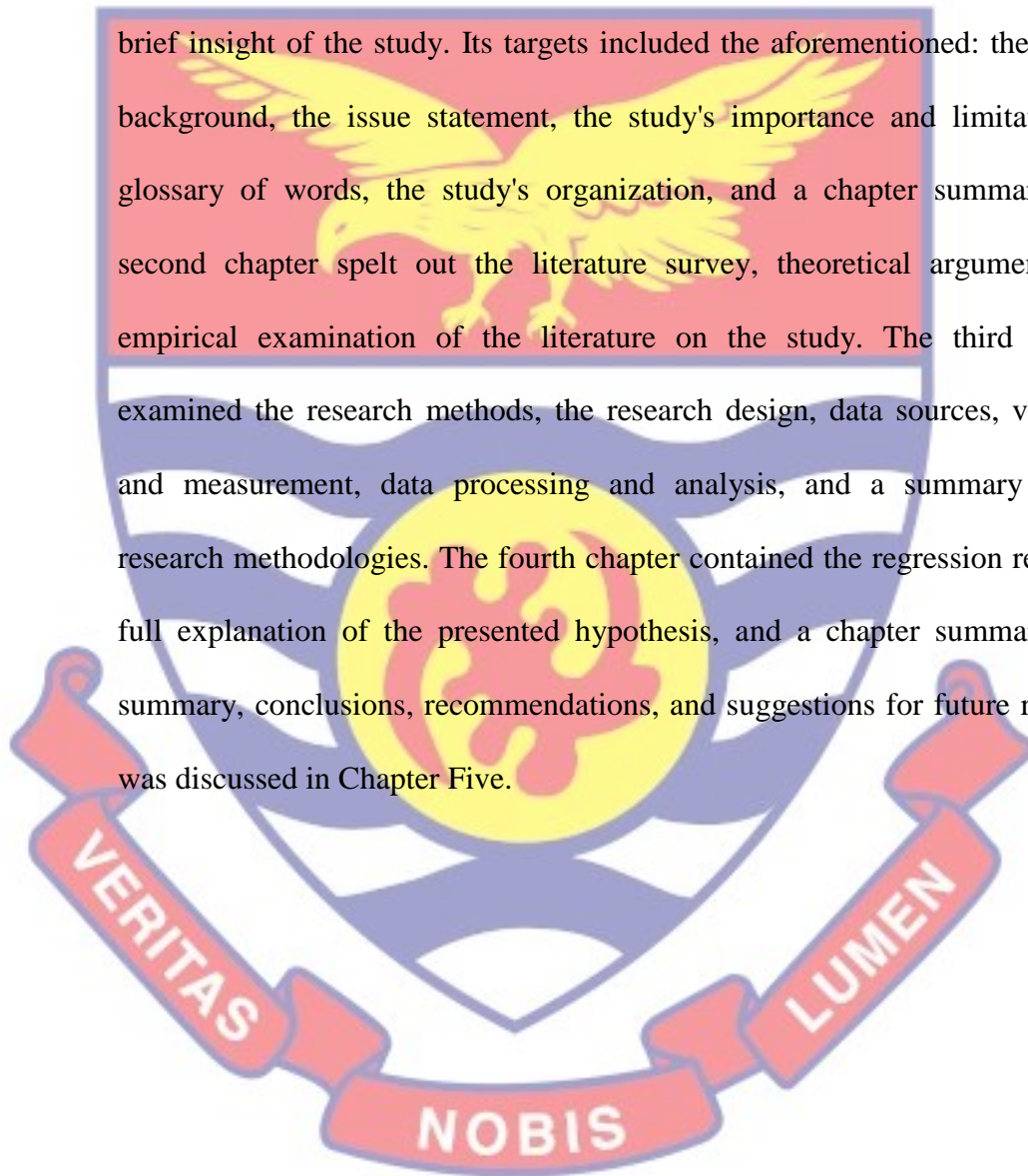
CHAPTER TWO

LITERATURE REVIEW

Introduction

This subdivision concentrated on reviewing significant literature to give a background to investigate the effectiveness of the audit committee and bank stability in Ghana as the credit information sharing system played a moderating role. This chapter also covered the theoretical, conceptual, and empirical review sections. It also reviewed the literature on other variables that influence bank stability in other parts of the world.

Theoretical Review

This section illustrates the theoretical literature review, an evaluative report of related concepts and ideologies that serve as the foundation of this research. The subsections studied agency theory, information asymmetry theory and resource dependency theory.

Agency theory

The agency theory emphasises the potential contradiction between managers (agents) and corporate owners. The agency theory specified that perhaps the shareholder would be unable to oversee management behaviour within the firm, which always results in opportunism (Jensen & Meckling, 1976); this leads to principal-agent conflict. Agency problem typically occurs when the principal and agent hold conflicting motives on what is suitable for the institution, resulting in agency costs (Colbert & Murray, 1999). According to the Institute of Chartered Accounting (2005), the expansion of auditing is explained by agency theory, an economic ideology of accountability. As a result, the agency theory emphasises the direct link between the principal and

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the agent in the contract. In the wake of this agreement, the agent's work aligns with the principal's motives and vision. So, the need for independent and effective control processes are keen for organisations to function as a check on management team in order to minimise deviations and safeguard shareholders interest (Fama & Jensen, 1983).

Similarly, monitoring measures (including the audit committee) must be put in place to alert stakeholders that the company's financial statements are accurate (Asmeri et al., 2017; Jones et al., 2017). As a result, audit committees play a critical function in assessing and supervising a company's management to safeguard the owners' interests (Kallamu & Saat, 2015). A company's performance and competitiveness could improve through good corporate governance, especially in a changing business environment (Herdjiono & Sari, 2017). Equally, an effective audit committee should prioritize shareholder wealth maximization over manager interest's maximization (Bansal & Sharma, 2016). Yet, effective and efficient corporate governance (of which the audit committee is not an exception) is to bridge the gap that may exist between shareholders and management to sustain stability (Abdullah & Ainuddin, 2001; Klein, 2002). According to Ejoh, Inyang and Okpa (2014), liquidity and credit concerns are the two most critical determinants and implications on banking stability.

Furthermore, according to Ghenimi, Chaibi, and Omri (2017), profitability risk affects bank stability, and the relationship adds to bank instability. Barra and Zotti (2019) discovered the performance of banks have favourable and statistically significant impact on bank stability. Alqatamin (2018) findings confirm the agency theory approach, meaning that

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independent directors successfully oversee managers, enhancing profitability and lowering the probability of managers engaging in unethical conduct, leading to increased performance. Thus, Ashari and Krismiaji (2019) affirmed that the efficacy of the audit committee and the success of organisations are inextricably linked. The audit committee's theory states that efficacy is maintained when managers produce appropriate financial statements to estimate the bank's returns.

Arguments raised by the agency theorists are that corporate governance improves long-term productivity because when managers are supervised, they perform better and reduce agency costs and information asymmetry. Gacheru (2013) also suggests that if managers are better supervised, corporate governance (including an audit committee) will result in more stock price appreciation or stronger long-term performance. According to Ashari and Krismiaji (2019), finance and accounting proficiency, audit committee independence, audit committee size and the number of audit committee meetings attended positively impact a company's financial performance. Consequently, Wiseman et al. (2012) submitted that when organisations set up corporate governance such as the board of directors' subcommittees consisting of directors with sufficient independence, competence, and experience and asymmetric knowledge, agent interest would be minimised. The principal ensures that the agent performs in the shareholders' best interests by providing rewards and overseeing the agent's conduct (Bonazzi & Islam, 2007). An effective audit committee is one of the steps to decrease the agent's self-serving tendency (Jones et al., 2017). Governance frameworks such as board subcommittees composed of directors

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who exhibit acceptable characteristics such as independence, experience, and ex-officio membership are required to eliminate information asymmetry. The agency's logic, according to Gompers, Ishii, and Metrick (2003), could have little to do with studies of a beneficial relationship between corporate governance and performance.

In contrast to the agency theory, the stewardship theory contends that management can operate as responsible stewards of the resources they govern. Stewardship theory claims that managers are concerned with the owners' well-being and overall functioning, which opposes the principal-agent viewpoint that asserts that agents are self-centered and selfish (Davis & Donaldson, 1991). However, Sanusi (2010) also pointed out that inefficiencies of management in an organisation are probably due to the slackness of board committees, which is one of the essential factors contributing to the instability in the financial sector. Hence, an influential board committee is a significant issue in the banking sector. According to Murthy (2006), effective corporate governance is maximising shareholder wealth while retaining equity and openness for all stakeholders through the legal, ethical, and sustainable methods. Evidence in the literature supports the stewardship idea and research figure showing leadership structure has little impact on business performance (Donaldson & Davis, 1991; Daily & Dalton, 1993; Dalton & Rechner, 1989).

However, stakeholders' theory contrasts agency theory by suggesting that corporate governance operations aim to help shareholders and other important stakeholders. However, Jensen (2001) recognised that proponents of the stakeholder paradigm could not provide viable answers to the various conflicting stakeholder interests those enterprises must preserve. Following

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the lead of Lewis (2014), corporate governance is the fundamental mechanism for ensuring that firms comply with organisations policy by encouraging employees, management, and the board to behave in the interests of investors and society. Similarly, in circumstances where conflict still exists, the auditor's function becomes most relevant to bridge the gap by providing objective reports on operational activities to assuage inherent distrusts between principal and agency, to further foster trust and stability within the institution (Safrilian et al., 2018).

Colbert and Murray (1999) evidenced that the auditor achieves stability in financial institutions by monitoring the agent's activities to attest to their performance objectively. The principal and agent's goals and aspirations linked ensure banks' resilience through good corporate governance (Dalton & Rechner, 1989). Mechanisms established are the audit committee which is vested mainly with the responsibility to oversee financial reporting. According to agency theory, a firm's monitoring and control needs depend on the audit committee's efficacy. The company's owners believe that top management is acting in their best interests with the audit committee (Donaldson & Davis, 1991). Thus, Firms' dependence to maximise profit and maintain financial stability lies on two main factors, namely, internal and external factors.

Similarly, the audit committee is an essential internal component put in place by management to improve the organisation's internal performance, which has the primary function of overseeing financial reporting. The Agency's theory states that effectiveness of an audit committee aligns with a company's monitoring and control requirements (Jones et al., 2017). The audit committee has been formed to ensure that senior management performs in

equity holders' greatest advantage and that no information is kept from the company's owners (Safrilian et al., 2018). Therefore, the theory of agency aids in examining interactions between administrators and workers to ensure the efficient implementation of audit committee programs that would benefit the institution to maintain stability.

Asymmetric information theory

Akerlof (1970) proposed information asymmetry theory after observing the differentiation between good and bad borrowers' challenges when marketing financial services. Lending institutions have no information of credit applicants' previous history, character traits, or intentions, likely to result in a moral risk problem in which creditors make lending decisions based on the average attributes of creditors instead of personal characteristics, resulting in a lower average likelihood of payment and higher credit costs (Stiglitz & Weiss, 2008). Higher interest rates intensify the adverse selection phenomena, for which only relatively high borrowers are willing to take out high-interest loans (Gehrig & Stenbacka, 2007).

Information asymmetry occurs when not all people involved in a project have access to relevant information (Ekumah & Essel, 2003). According to the notion, in a financial contract, the party with so much knowledge on a particular item to be transacted is better equipped than the other party to ensure the best conditions for a transaction (Richard, 2011). When it comes to making proper contract decisions, the individual with less understanding about the identical thing to be transacted is at a disadvantage. The audit committee aims to control financial as well as non-financial reporting practices and eliminate information asymmetry between

management and stakeholders as a core decision-making board (Karamanou & Vafeas, 2005). The theory of asymmetric information indicates that the complexity to determine the difference between good and bad borrowers may lead to the problem of adverse moral hazard and selection (Auronen, 2003). Adverse selection and moral hazard, according to Bofondi and Gobbi (2003), may contribute to credit contractions or non-performing loans, harming performance and stability.

The creditor's incapacity to supervise the borrower's conduct may cause moral hazard which influence repayment likelihood, such as the amount of effort the borrower puts in to manage his business and avoidance of defaulting on his debt (hidden action). Moral hazard puts the borrower in danger of engaging in opportunistic behaviour or moral hazard. When lenders could perhaps tell how good and bad borrowers vary, the adverse selection problem occurs, and all borrowers pay a standard interest rate based on their overall experience. If this rate is higher than good borrowers deserve, banks will be forced to charge even higher rates to those who stay. Pagano and Jappelli (1993), on the other hand, advised that sharing information lowers adverse selection by making banks more aware of credit borrowers. Through the exchange of credit information, the lender can distinguish between bad and excellent borrowers in the market. Lenders will also have improved access to data, allowing them to more accurately assess borrower risk and establish loan terms and conditions accordingly.

According to Claassen (2015), organisations that exchange knowledge typically eliminate moral hazard issues because their reward affects borrowers' imprudent behaviour. Furthermore, Kusa and Ongore (2013) proved that

information sharing lowers banks' average interest rates and information fee, reduces or even eliminates knowledge gain for larger banks, and enhances credit market completion. Credit registries allows safe applicants who were earlier forced out of market to get loans by eliminating asymmetry of information between lenders and borrowers, resulting in increased aggregate lending.

Sharing credit information increases bank awareness about the applicant's characteristics with customers who have no prior knowledge (Nasieku & Ngugi, 2016). It also serves as a discipline mechanism for borrowers because credit will no longer be available or even more costly credibility destroyed, and thus moral hazard is reduced. As a result, exchange of information contributes to leveling the playing field in the credit market, allowing lenders to provide more competitive loan terms.

Resource-based theory

A recent study has focused on the competence approach to strategy formulation (Yu, Chavez, Jacobs and Feng, 2018). Companies with valuable, unusual, unique, and non-substitutable resources can acquire a long-term competitive advantage by executing tactics that competitors find it difficult to imitate, according to the resource-based outlook (RBV) (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984). Penrose and Penrose (2009) present a conceptual foundation for the resource-based theory of the organisation as a management firm and the internal resource selection that directly impacts the company's strategies, efficacy, and efficiency.

The theory focuses on a few essential areas, including firm attributes and information, assets and capabilities, and employee and management knowledge development. The company manages these valuable resources, which assists management in implementing strategies or actions that improve efficiency and effectiveness (Barney, 1991). Businesses can use these precious resources to establish and retain competitive advantages and use these resources and competitive advantages to achieve improved performance. Meaning, ultimately, the organisation manages the essential instruments to help it reach a competitive advantage in its industry (Hoffman & Sandelands, 2005).

According to the resource dependency theory, board of directors serve as resourceful people for the organisation's long-term survival (Khan, Alam, Moullec & Yaacoub, 2017). As a result, board members provide the board with valuable services such as abilities, and skills gained through their instructive capability and their relevant expertise for resolving the issue of consultation and decision-making by the board (Farag, Mallin & Ow-Yong 2018). Boards are supposed to hire professionals with considerable financial or banking experience who can analyse financial contracts in this regard (Haron & Nomran, 2020).

Internal resources and capabilities, according to Madhani (2010), influence strategic decisions made by businesses when dealing in the marketplace. Some organisations can also add value to the consumer value chain, develop a new product, or grow into new markets to their capabilities. According to Barney (1986), valuable resources must enable a company to accomplish things and behave in ways that result in higher sales, lower

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expenses, higher margins, or other financial benefits. A firm becomes an asset when using its resources to gain a competitive edge (Hindle, 2005). A firm's internal resources analysis is for sufficiency, substitutability, and value (Hindle, 2005). However, the efficiency of the firms is measured by how well management adapts to changing circumstances. They value abilities, capacities and the opportunities accessible to the organisation to increase performance.

Internal factors include management's ability to develop and implement planning strategies that fit the business environment and board members providing resources hence and board composition directly relates to the board's ability to use the board company's resources effectively (Channar, Abbasi & Maheshwari, 2015). According to this theory, the AC offers guidance and counsel to the directors to bring valuable resources to the companies. Thus, the information sharing system is an internal resource made available to management by board of directors to make sure that worthy borrower is contracted to avoid increasing nonperforming loans. Consequently, banks preserve and acquire stability when the credit bureau is in a competitive setting.

Hypotheses Development

Stability of the Banking Sector of Ghana

The banking system is a vital variable considered whenever concerns are raised about the financial growth and services in developing economies since it serves as an engine of growth (Demirguc-Kunt, Feyen & Levine, 2013). Credit provided by the banking industry serves as an essential input that feeds the economic growth engine of an emerging economy such as Ghana. Using data from Ghanaian commercial banks, Ahiawodzi and Sackey

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(2013) investigated the factors of loan rationing in the Ghanaian private sector. The findings indicated that while interest rates liberalised to secure credit allocation, commercial banks could still rationalise credit. Because of the nature of moral hazards and adverse selection, other factors like the value of an asset, business experience, and collateral security are of considerable importance in deciding credit allocation. Consequently, the government must demonstrate a more active role in the financial industry, and banks must strengthen their oversight.

İskenderoğlu and Tomak (2013) suggested that z-score and nonperforming loans ratio are the two main measures of banks' stability whenever financial distress is concerned. International Monetary Fund (IMF) highlighted in their conversation with AREAS in 2018 that bank's strength depends on its ability to deal with its non-performing loans and capture its loan portfolio risk (Imam, Nier, & Jácome, 2012). The Z-index rises with higher levels of profitability and capitalization and declines with less consistent earnings by the use of higher standard deviation of asset return as a measure. Chiaramonte, Croci & Poli (2015) suggested that the natural log of z-score as a measure of stability would help a severely skewed data to be normally distributed. However, Lepetit and Strobel (2015) indicated that the log-transformed z-score is related to the log probability of insolvency. The inverse z-score is a significant proxy for measuring indebtedness risk (Houston, Lin, & Ma, 2010; Fang, Hasan & Marton, 2014). Therefore, higher z-score inverse values are an indication of higher probability of bankruptcy and stability, thus the inverse z-score is a significant measure of stability.

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However, Ijaz, Hassan, Tarazi, & Fraz (2020) indicated that measurements like return on equity on asset ratio included in the z-score determination are additional risk-exposure indicator proxies for measuring financial soundness and performance of banking institutions. The profitability growth focuses on risks accumulation associated with active exposures; hence ROA is positive but statistically insignificant. Experienced members' financial performance (ROA and ROE) improves, while profit gain vulnerabilities increase, jeopardizing bank financial stability (Z-score). Non-executive members improve shareholder remuneration (ROE), although their risk exposure contribution is statistically smaller (Z-score).

Audit committee effectiveness and bank stability

Committee of audits from directors of a company's board is one of the essential tools for sharpening conditions and increasing independence within an organisation. Bromark and Hoffman (1992) highlighted the necessity for an audit committee to cope with the business environment's persistent defiance and the management and board of directors' incompetence to deal with financial issues. Bromark and Hoffman continued to state that corporate ethics rising concern, complexity of accounting principles, dealings, and regulatory requirements increase, earnings and financial position for full and fair disclosure, as well as the consequences of management and the board's responsibility for complete and fair disclosure of monetary conclusions, and the use of information technology widely, such as satellite transmission, and exchange input of electronic data, have all posed difficulties to internal control systems, thus resulting in maintained stability of organisations.

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According to Khlif and Samaha (2014), companies' audit committees' principal duty is to support directors in managing the organisation's reporting policies. The audit committee is crucial in addressing the needs of investors for relevant, clear, and complete information; therefore, a firm's reporting environment should be favourable to audit committee effectiveness (Felo, Krishnamurthy & Solieri, 2003). According to Johari, Rahim & Takril (2015), the effectiveness of the audit is determined by its ability to evaluate corporate financial information, supervise internal audit systems, and communicate with external auditors. Owens-Jackson & Robinson (2009) also found that experience, diligence, size, and independence are the most critical elements to consider. Financial expertise, independence, meeting frequency, and size of an audit committee are vital factors of a company's profitability (Ghafran & O'Sullivan, 2017).

Audit committee expertise

The audit committees' financial experience has attracted the interest of other shareholders in the audit's value, causing Sarbanes-Oxley to change their Act in the United States to mandate that the audit committee within the firm has financial and accounting experience. According to Tanyi and Smith (2015), the committee of audit within the firm's board of directors understanding is crucial in preserving the processes in financial reporting. Indonesians also adopted a regulation in the year 2000 requiring public firms to have an audit committee with accounting and financial knowledge. Other researchers discovered that an audit committee with experience is more competent in accounting, finance, and in the new review and control of the

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company's financial statements (Chandar, Chang, & Zheng, 2012; Kurniawati, Probohudono, & Supriyanto, 2021).

Also, Lan, Liu and Sun (2014) concluded in their study that an audit committee that possesses the requisite knowledge and experience in finance and accounting would be able to detect earning management practices to influence decision making. Moreover, Setiany, Hartoko, Suhardjanto, and Honggowati (2017) supported that member of the audit committee with accounting expertise are evidenced as a suitable governance mechanism since they would be more experienced and more effective in monitoring the processes involved in financial reporting. Financial specialists on audit committees are most suited to evaluate the committee's work areas that require technical analysis to make decisions.

Nevertheless, the audit committee's financial expertise on audit charges yielded contradicting findings, with research providing a mixed bag of results hampered by a lack of agreement on the definition of experience. Financial knowledge at listed large firms may be less relevant in the pursuit of audit quality, according to Ghafran and O'Sullivan (2017), presumably because these firms already have higher levels of financial openness than smaller listed firms. However, Ghafran and O'Sullivan expressed some remorse that financial expertise, particularly non-accounting experience, is critical to improving the quality of their audits. This study backs up the notion raised by Armstrong, Guay and Weber (2010) on the earlier argument that organisations should deploy more special financial expertise to improve financial reporting transparency. Rashidah and Fairuzana (2006) found a favourable association between audit committee knowledge and expert, and

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firm performance in Malaysia. Carcello et al. (2002), for example, defined expertise in relations to other directorships and reported a favourable audit fees impact in the earlier studies. Abbott et al. (2003) employed a more extensive definition that included both degrees and experience to report a positive impact.

Oussii and Taktak (2018) also conducted multivariate analyses on audit committee attributes. The results showed that the members of the audit committee with financial expertise influence on banks performance significantly. As a result, the findings imply that economic competence on the audit committee helps enhance the timeliness of financial statements. Furthermore, Mohammed et al. (2019) revealed in research that audit committee knowledge and expertise positively affect firm performance. Similarly, extant literature (Wakaba, 2014; Amer, 2016) recorded a strong link between audit committee knowledge and expertise, and performance of firms.

Simply put, there is an inconclusive finding on the usefulness of knowledge on audit committees and significant differences in how audit competence is defined. In this study, the researcher used both broader (qualifications and experience) and narrow (accounting) definitions of expertise to investigate the difference in audit quality based on the definition given.

Audit committee diligence

According to Chandar et al. (2012), the diligent attribute of the audit committee is defined as the members' level of preparation, attentiveness, and activity with which members show that ability. The audit committee's diligence is measured by the level of preparation, attentiveness, and activity

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with which members show the ability (Fogarty & Kalbers, 1993). Given the vast nature of diligence, Abbott & Parker (2000) operationalised the diligence of the audit committee as committee meeting frequency. Previous studies (Turley & Zaman, 2007; Gendron & Menon, 2006; Menon & Williams, 1994) showed that the number of meetings attended by an audit committee member is a fair indicator of audit committee activity and diligence because a significant number of audit committee activity occurs outside of official board meetings.

According to Davidson et al. (2005), committees that meet more regularly are more likely to complete their allocated tasks. The diligence of the audit committee is judged on the regularity they meet, which often indicates higher commitment and interest, and makes them more likely to be successful monitors (Owens-Jackson & Robinson, 2009). Vefeas (1999) also indicated that the frequency of meetings is an essential factor affecting the audit committee's performance. Meetings allow members of organizations like committees to come together and carry out their responsibilities. Nevertheless, Beasley et al. (2000) indicated that lack of frequent audit committee meetings could lead to financial fraud since internal audit and control systems would less thoroughly be monitored, meaning that audit committees are not rigorous in carrying out their obligations. As a result, meetings provide an opportunity for audit committee members to make significant decisions that could improve risk management and promote bank stability. However, other previous suggested that the frequent meetings of the audit committee depict the inefficiency in the organisation because the audit committee establishes how members serve on the board of directors and advisors to management studies

(Bedard & Gendron, 2010; Brick & Chidambaran, 2010). Also, Adam and Mehran (2003) pinpointed that regular meeting and increasing activities may indicate an organisation experiencing troubles or a crisis. The mixed result in meeting frequency has no significant effect on financial statements (Krishnan & Visvanathan, 2009; Zaman et al., 2011).

Despite this, Alzharani and Aljaaidi (2015) found a substantially negative relationship between audit committee meetings and risk management. According to Beasley et al. (2000), audit committees at high-fraud organizations do not meet on a regular basis, preventing adequate reporting inspection and the prompt discovery of offences. It may be difficult to adequately evaluate reports and uncover breaches on time due to a lack of frequent meetings. The absence of regular meetings may impede efficient account review and timely identification of transgressions. Thus, more committee meetings could improve the audit committee's performance by allowing more time for a thorough review of executive proposals; this demonstrates the committee's commitment and diligence in carrying out their responsibilities, contributing to the organisation's stability.

Hence, inconsistent results are found from the previous studies on the diligence characteristic of the audit committee.

Audit committee size

The audit committee size is the number of members on the audit committee. According to Rahman and Haniffa (2002) and the Smith report (2003), the audit committee must have three members. Large audit committees get more credibility and power. It adds diverse abilities, experiences, and energy to the table, boosting the chances of resolving any issues during the

financial reporting process and completing the assignment on time. Previous research (Johari, Rahim & Takril, 2015; Ghafran & O'Sullivan, 2017) has shown that a larger audit committee causes unnecessary discussion and delays in making decisions and weaker communication and decision-making procedures (Johari, Rahim & Takril, 2015).

Nonetheless, there is a case to be made that a larger audit committee would result in better disclosure quality, implying that a larger audit committee would have a greater chance of including highly ethical individuals who may affect the quantity of disclosure to enhance stability (Persons, 2009). Johari, Rahim & Takril (2015) also discovered a substantial positive relationship between the size of the audit committee and the exposure of intellectual capital. According to the research by Takril, a larger audit committee is a potent monitoring device linked to more trustworthy and higher-quality reporting. Magena and Pike (2005) discovered no link between the size of the audit committee and the scope of the disclosure in temporary reports. Firms should form audit committees of at least three financially literate directors and at least one financial specialist, according to the Blue-Ribbon Committee (BRC, 1999). The Securities and Exchange Commission (SEC) later implemented this suggestion in December 1999. SOX imposed new standards requiring corporations to report whether or not their audit committee included a financial professional.

This criterion follows Ghafran and O'Sullivan's (2017) argument that the audit committee's effectiveness is determined by its members' knowledge and experience in auditing and financial affairs. The SEC then recognised a financial expert for SOX as an expert in accounting, financial practitioner

supervision, and financial results oversight. It's worth noting that the SEC's definition of financial competence is considered extremely broad, incorporating supervisory experience in addition to the more restricted financial expertise associated with formal accounting qualifications and experience. According to Smith (2003), at least one audit committee member should have "recent and relevant financial experience."

Audit committee independence:

The number of independent directors appointed to serve on an audit committee determines its independence (Bouaziz, 2012; Lan, Liu & Sun, 2014). According to Bronson et al. (2009), due to the financial crises at corporate giants such as WorldCom and Enron, the number of independent audit committee members has increased. Independent members have more clout in performing management supervision due to their separation from the executives (Defond & Francis, 2006). Inside directors, on the other hand, may be beneficial, according to Bronson et al. (2009), particularly in terms of giving crucial information that independent outside directors may not have. According to the amended listed company handbook requirement, they all have no ties to the company that could jeopardize their independence from management and the company, and have at least three directors.

Mohammed et al. (2012) used secondary data from a list of companies listed on the Iraq Stock Exchange from 2012 to 2015 to study audit committee independence and firm performance. They discovered a significant positive relationship between audit committee independence and firm performance. In Tunisia, Bouaziz (2012) discovered a strong and positive relationship between independent audit committee members and corporate financial performance.

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The findings are in line with the work of Klein (2002); thus, this implies that independent audit committee members could help businesses perform better. Audit committees with predominantly independent directors have been linked to high levels of effectiveness, according to Bronson et al. (2009).

Credit information sharing system and bank stability

Credit information sharing is a technique used by financial organisations to exchange information. The transmission of information on a client's financial history is known as credit information sharing (Jappelli, Juilliard & Pagano, 2010). According to Machoka and Wamugo (2018), information sharing is the exchange of credit data between a credit reference bureau and a lending institution. This system was used in Africa's banking sector in 2007 but only became mandatory, regulated and operational in Ghana in 2010. After its enactment in late 2007, the credit reference bureau (CRB) began functioning.

The Credit Reporting Act of 2007 legitimised the existence, licensing, operation, and the banking sector's information sharing structures were established, along with their functions. According to the Banking survey (2010), banks' performances of credit risk and profitability have declined, and CRBs were established when the banking sector's performance was failing; as a result, the introduction of CRBs would help to stabilise the situation while also improving the banks' lending scheme by removing numerous obstacles and challenges. Financial economists have long believed that exchanging information about borrowers among banks decreases or eliminates information asymmetry in modern lending markets.

Banks become more stable when the quality of credit information sharing institutions improves. Credit information sharing increases the amount of information availability about applicants' traits, reducing asymmetric information and so stabilizing the financial system (Kouevi-Gath, 2021). Pagano and Jappelli (2003) also suggested that when adverse selection is severe enough that safe borrowers leave the market, knowledge sharing increases lending volume. There are growing returns to the scale of information sharing after several banks agree to exchange information, even though the credit reference bureau is a natural monopoly.

Credit information sharing, which has significant benefits for both lenders and borrowers, can significantly contribute to the development of the financial system, which is a critical factor in economic growth (Doblas-Madrid & Minetti, 2009). Borrowers can negotiate better terms with lenders. Borrowers with a high credit score and an excellent credit history might persuade lenders to cut interest rates or even forgo collateral. Lenders can also overcome informational inequities by exchanging private information about future borrowers and lenders through credit reference agencies to increase their understanding of new customers. Doblas-Martin and Minetti (2013) employ an event research method on US banks to show that when a bank joins a credit bureau, its borrowers' contract late payments and default rates decrease. Majnoni et al. (2004) found that public credit registries have a favorable impact on credit risk assessment in Argentina, Brazil, and Mexico. Brown and Zehnder (2007) employ an experimental strategy to demonstrate that sharing information leads to a higher payback rate.

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Given these anticipated benefits, credit information sharing could have negative consequences in the banking system. They can jeopardize financial stability by discouraging banks from conducting their own research and, as a result, reducing inspection and monitoring efforts, which are costly. Furthermore, this may result in free riding on the information obtained by others (Jappelli & Pagano, 2003). Furthermore, the intense competition in lending institutions may have a negative impact on bank income. In reality, the franchise value theory contends that banks would engage in more risky operations in order to compensate for revenue losses due to competition, which would be detrimental to their financial health (Ijtsma et al., 2017). Nonetheless, empirical studies link them to increased financial stability and a lower risk of banking crises (Houston et al., 2010).

Empirical Review

Biçer and Tunç (2019) studied the audit committee and firm performance. The study showed that financial performance and stakeholders might be affected by CSR when information asymmetry is reduced between management and stakeholders, leading to stability. Nonetheless, Naceur, Marton, and Roulet (2018) found that their leverage ratios increase when large banks grant riskier, illiquid commercial loans. Capital ratios have significant and negative implications on banks in the context of deleveraging and the "credit crunch" in Europe following the 2008 financial crisis (Marton, Naceur & Roulet, 2018). Liquidity ratios have a positive yet unfavourable impact on banks' lending growth. Banks are likely to keep buffer inventories of liquid assets when expanding their riskier, illiquid commercial-lending activities to

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prepare for unanticipated liquidity disruptions that could cause substantial problems.

According to a study performed by Boahene, Dassah, and Agyei (2012), credit risk has a significant positive relationship with bank profitability. This reveals that banks in Ghana make a lot of money despite having a lot of credit risk, contrary to what other researchers have shown. Furthermore, this research backs up earlier empirical findings that show that bank size, growth, and debt capital have a favourable and significant impact on bank profitability. However, banks are vulnerable to various risks, including credit, market, and operational risks. All of these risks, however, have a variety of effects on bank performance (Chijoriga, 1997). According to Chijoriga, the quantity and intensity of loss produced by credit risk are significant enough to lead a bank to fail. As a result, the banking industry could encounter challenges if loan quality deteriorates little. Bad loans begin with the informational mechanism and worsen during the loan approval, monitoring, and control phases (Liuksila, El-Khouri, Kireyev, & Cheney, 1996).

Banks must have an adequate credit risk management system to avoid vulnerabilities (Apătăchioae, 2015). Banks must have a plan to assess and determine default risk hidden from them due to the imbalance of information asymmetry between lenders and borrowers Banks and borrowers have asymmetric information. It may be hard to distinguish between good and bad borrowers due to information asymmetry (which can contribute to adverse selection). Banks must have a framework to ensure that they can examine and

evaluate default risk concealed from them owing to knowledge imbalance between banking institutions (Bester, 1994; Di Patti & Gobbi, 2003).

The findings of Brown, Guin, and Morkoetter (2020) revealed that the likelihood of clients withdrawing deposits increases as the severity of a bank crisis grows. The transaction costs of transferring accounts, rather than information leases or differentiated services, are the mechanism that mitigates withdrawal risk through solid bank-client relationships. The findings lend empirical support to Basel III's liquidity restrictions, emphasising the importance of long-term client relationships in bank funding stability. The results are related to the research on the depositor discipline of distressed banks (Diamond & Rajan, 2001). Liu, Yang and Zhang (2021) also observed that cooperative banks become more stable and lucrative when the share of non-interest income increases, while investment banks become less stable

According to Liu, Yang and Zhang (2021) study on the impact of minimum capital requirements on risk-taking, ROA (return on asset), ROE (return on equity), and Z-score indicate a more secure allocation of resources. Stefanescu (2011) found that men have a positive but statistically negligible impact on ROA, with the rise in profitability being sensitive to risk buildup due to active exposures. The financial performance (ROA and ROE) of experienced members improves while increasing vulnerabilities for profit gain impairs the financial stability of banks (Stefanescu, 2011). Non-executive members increase shareholder remuneration (ROE) while contributing statistically insignificantly to risk exposure (Z-score). Members who own stock have a detrimental impact on ROE.

Contrary to the findings of Deyong, Spong and Sullivan (1995) which suggest that having an audit committee minimises risk exposure by ensuring the long-term stability of return on Assets. In addition, member instability lowered Z-score; however, this effect was not statistically significant. The second hypothesis, the qualities of members that influence bank performance, is confirmed based on the evidence presented. Foreign capital had a negative impact on ROA; this could indicate that placing bets to recoup invested capital resulted in a poorer return than anticipated due to the materialisation of associated risks. Because of the reduced return on assets, the majority of the ownership contributed to the rise in threats (Z-score).

Kallamu and Saat (2014) performed a task on the attributes of the audit committee on firm performance by using only listed financial companies on the Malaysia stock exchange as evidence without involving the non-listed companies. The research reveals a significant positive association between audit committee independence and profitability. Dual membership of directors on the audit and nomination committees, on the other hand, is required and has a detrimental impact on profitability. The findings corroborate agency theory, which holds that independent directors effectively oversee management, hence increasing profitability and limiting the probability of opportunistic behaviour by management and, as a result, improving performance. Again, the results showed a significant improvement within the corporate governance body in the financial companies.

Groeneveld and De Vries (2009) studied the stability of co-operative banks and commercial banks using data from 2007 to 2009 to determine the stability. They found that a typical Z-score has a higher value in cooperative

banks, suggesting that they are more stable than the rest. Also, Mikolajczyk, Pawlowska & Miklaszewska (2012) used information during the years 2009 and 2010 for using the same strategy, evaluating the influence of policy on bank stability in Central and Eastern Europe. The findings showed a sharp decline in bank stability during the financial crisis, followed by an increase in Z-score between 2009 and 2010. The bank's profit reinvestments can explain the Z-score increment over these two years. Profit maximisation also significantly affects banks' likelihood of survival and more financial stability (Fiordelisi & Mare, 2013). Arnold and Soederhuizen (2018) analysed bank stability and refinancing operations in the financial crisis; the finding indicates a positive association between bank instability and liquidity uptake.

Prior research has investigated the advantages of a full audit committee on an organisation's business and audit as a control mechanism over top management, such as financial expertise, autonomy, frequency of meetings, and audit committee size (Ghafran & O'Sullivan, 2013). Furthermore, an audit committee ensures increased voluntary disclosure to allow for an adequate evaluation of senior management's actions and behaviours and alignment of management and shareholder interests. Luo et al. (2011) opined that the financial system is essential for developing countries' companies. Finance companies' good corporate governance is vital for avoiding the negative consequences of poor control on financial system stability. Inadequate financial company performance due to poor asset management might lead to a liquidity crisis that is why the SEC in 2002 has made it obligatory for every organisation to establish an audit committee that is up and working effectively (Acedański & Karkowska, 2020). Bananuka (2018) also conducted a cross-

sectional and correlational study using questionnaire survey data from 52 Ugandan companies, analysed data with the Statistical Package for Social Sciences, and discovered when an internal audit is present, the competence of the audit committee significantly adds to accountability. Kallamu and Saat (2014) also emphasised that the audit committee's success was determined by its features rather than its sheer existence.

Also, the extant literature (Nyumutsu, 2019) examined the effect of independence of the audit committee, the size of the audit committee, as well as how the relationship between other variables such as the composition of gender, bank size, among others, influence the stability of the bank collecting a secondary data on some listed banks operating in the country over the period 2006 to 2016 from the Stock Exchange of Ghana (GSE). The study employed a panel data analysis in analysing the gathered data and estimated the variables using Ordinary Least Square (OLS). The study found out that the size of an audit committee and its gender composition positively impact bank stability and that audit committee independence, the size of the board, and bank size have negative implications for stability. Nguyen & Yin (2020) considered General Least Square (GLS) for estimating their research variables that involved data that depends on the previous panel, which the dependent variable (bank stability) is dynamic; thus, the dependent variable depends on its past realisation.

Fosu, Danso, Agyei-Boapeah, and Ntim (2019) used an extensive dataset to study knowledge sharing that covered three novel discoveries that emphasised that loan default rates reduce when credit information is shared. Fosu et al. (2019) found the association between credit information sharing

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and the credit default rate is affected by the composition of the banking sector. Fosu et al. (2019) also discovered that country-level governance quality had little impact on credit information sharing on loan default rates. In addition, Sitorus, Soedarmono and Tarazi (2017) conducted a study on Asian banks' credit information exchange and systemic risk. Their results indicated that enhanced credit information coverage and private credit bureaus could help develop banks systemic risk a year ahead due to higher abnormal loan growth. Doblas-Madrid and Minetti (2013) have illustrated how credit market sharing information influences business level connections. Their study showed that information sharing reduces contractual defects and defaults, particularly in information-opaque organisations. Also, their findings suggest that exchanging credit information cleans up financial institutions in a debt market and improves debt financing activity.

Similarly, Diekes, Erner, Langer, and Norden (2013) used a probity model to investigate datasets from 2002 to 2005 of firms in Germany, and the results demonstrated that information sharing improves the quality of company fallback prediction. Furthermore, a study conducted by Brown, Jappelli, and Pagano (2009) found that information sharing among banks influenced the credit availability transition in European countries between 2002 and 2005. The findings, which are based on businesses from 24 European emerging economies, suggest that sharing information increases access and lowers the cost of funding for businesses. According to the results, information sharing enhances credit risk and debt financing in banks.

Control Variables

The control variables of banks refer to other factors or variables that also influence the dependent variable (bank stability), apart from the leading independent variables, the variables of interest (independence of the audit committee, audit committee expertise, audit committee meeting, and audit committee size). For this study's purpose, board governance (board diversity), bank size, bank leveraging effect, and bank regulations (capital adequacy ratio) would be considered control variables.

Literature reports that bank-specific data consequently affect the bank's stability (Flamini, McDonald, & Schumacher, 2009); this was also supported with literature by Nyumutsu (2019). Previous researchers have agreed that this measure of bank size is a good measure of bank-level characteristics (Anginer, Bertay, Cull, Demirgüç-Kunt & Mare, 2019; World Bank, 2019). Mirzaei, Moore and Liu (2013) and Sanya and Wolfe (2011) larger bank size implies the bank has more assets and can easily maintain its stability, whereas a smaller bank size indicates the bank faces the risks of not being stable. However, Varotto and Zhaao (2018), among other scholars stated in their works that large-sized banks are exposed to a high systemic risk which could, in turn, lead to instability in the operations of the banks, thereby reducing the stability of banks. Overall, the public views a larger bank or a bank with more assets as a bank that can be stable for a long time and would boost their confidence to invest in it, but the opposite is equally correct. Yet, some studies, such as Nwogo (2017), did not view bank size as a significant variable in determining bank stability.

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Another explanatory variable which is the gender diversity of the board of directors and capital adequacy ratio are considered as a control variable in this study. Nyumutsu (2019) indicated that the higher the gender ratio on a board, the more diverse it is, and suggestions and decisions are less likely to emanate from a single source of decision-maker. Owen and Temesvary (2017) remarked that a threshold of women representatives on the board of a bank leads to effective auditing of the bank as it gives room for dynamic submissions to improve stability. Also, this study included the capital adequacy ratio and as a control variable. This variable assesses the safety and soundness of banks when compared to a bank with low capital, a bank with high capital is expected to handle any financial risks that arise with ease (World Bank, 2019). Capital Adequacy Ratio is an indicator of a bank's fitness and how well a bank's equity capital can withstand unforeseen events (Syahyunan, Muda, Siregar, Sadalia, & Chandra, 2017). A bank with a high CAR has more leverage when dealing with financial risks.

Kalemli-Ozcan et al. (2012) opined that Leverage across Firms, Banks, and Countries is best-measure of bank specific variables. Similarly, the researchers (Maquieira et al., 2012; Fallah & Mardani, 2018) suggested that capital adequacy ratio is a significant measure of the banking sector's resilience. Leverage increases resilience to less likely but highly correlated losses. However, the higher the leverage exposes the bank to riskier, higher-yield assets. Avgouleas (2015) that supported that bank leverage ratios are microprudential measure of bank specific variables. This was seconded by Unsal (2011) that leveraging of banks helps ensure stability.

Conceptual Framework

The framework below depicts the basic structure, comprising abstract blocks representing the research processes observational, experiential, and analytical parts. The framework comes to a finish when these pieces are connected. *Figure 2*: The relationship between the independent variable (audit committee effectiveness), the moderating variable (information sharing system), and the dependent variable (audit committee effectiveness) is depicted in this diagram (bank stability).

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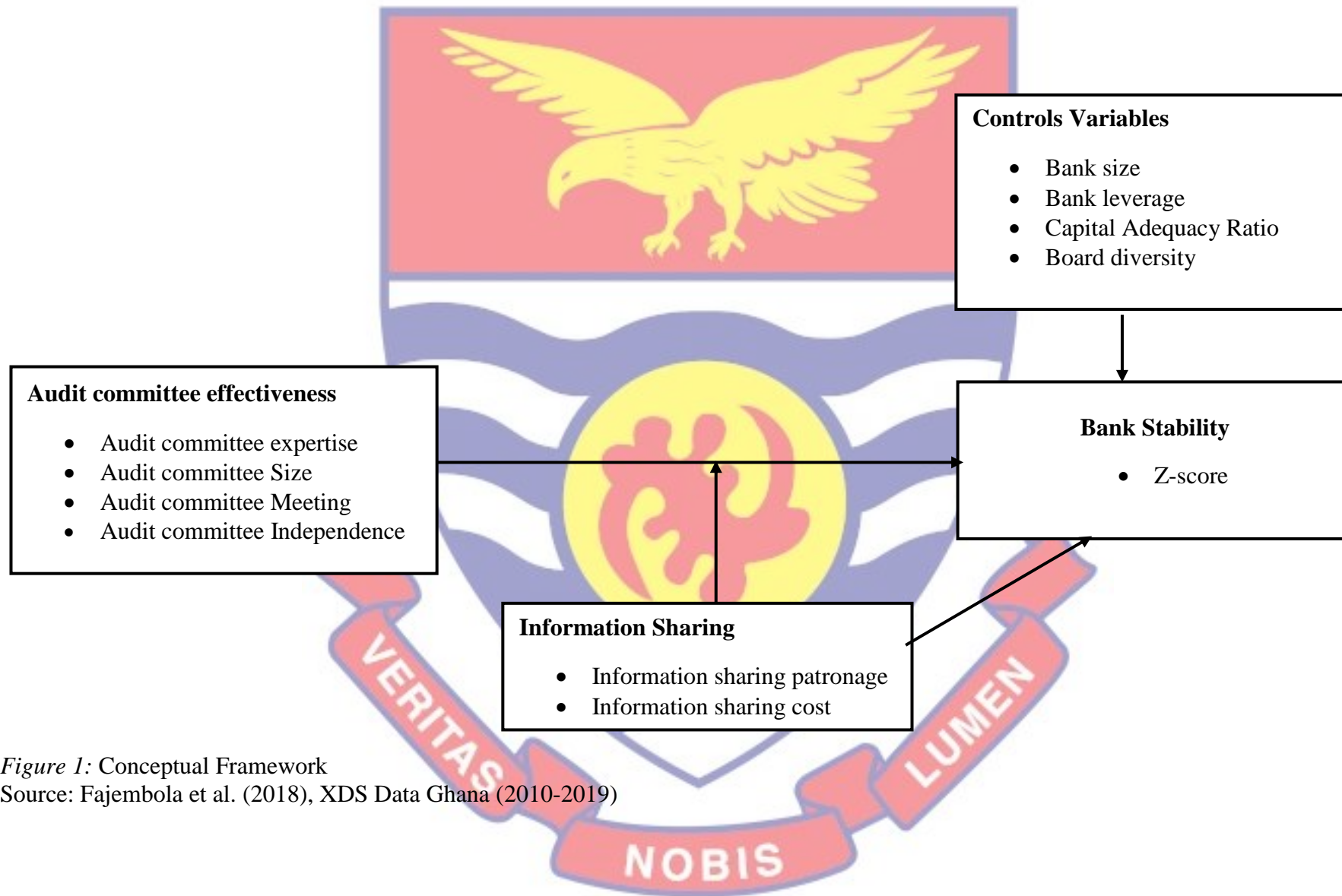
Figure 1: Conceptual Framework
Source: Fajembola et al. (2018), XDS Data Ghana (2010-2019)

Chapter Summary

This division looked into detail the three main theories: agency theory, information asymmetry theory and resource-based theory. The agency approach helps to examine the interactions between the administrators and workers to ensure effective implementation of audit committee programmes that would benefit the institution to maintain stability. Also, the theory of asymmetric information indicates that distinguishing between Moral hazard and adverse selection uncertainty may arise as a result of good and bad borrowers. In contrast, other researchers posited that adverse selection and moral hazard could contribute to contractions in credit or non-performing loans, thereby affecting performance and stability by enhancing banks' information on credit borrowers, information sharing can help to reduce adverse selection. This section continued to review other concepts that fundamentally relate to the study and the empirical findings related to the main variables.

47
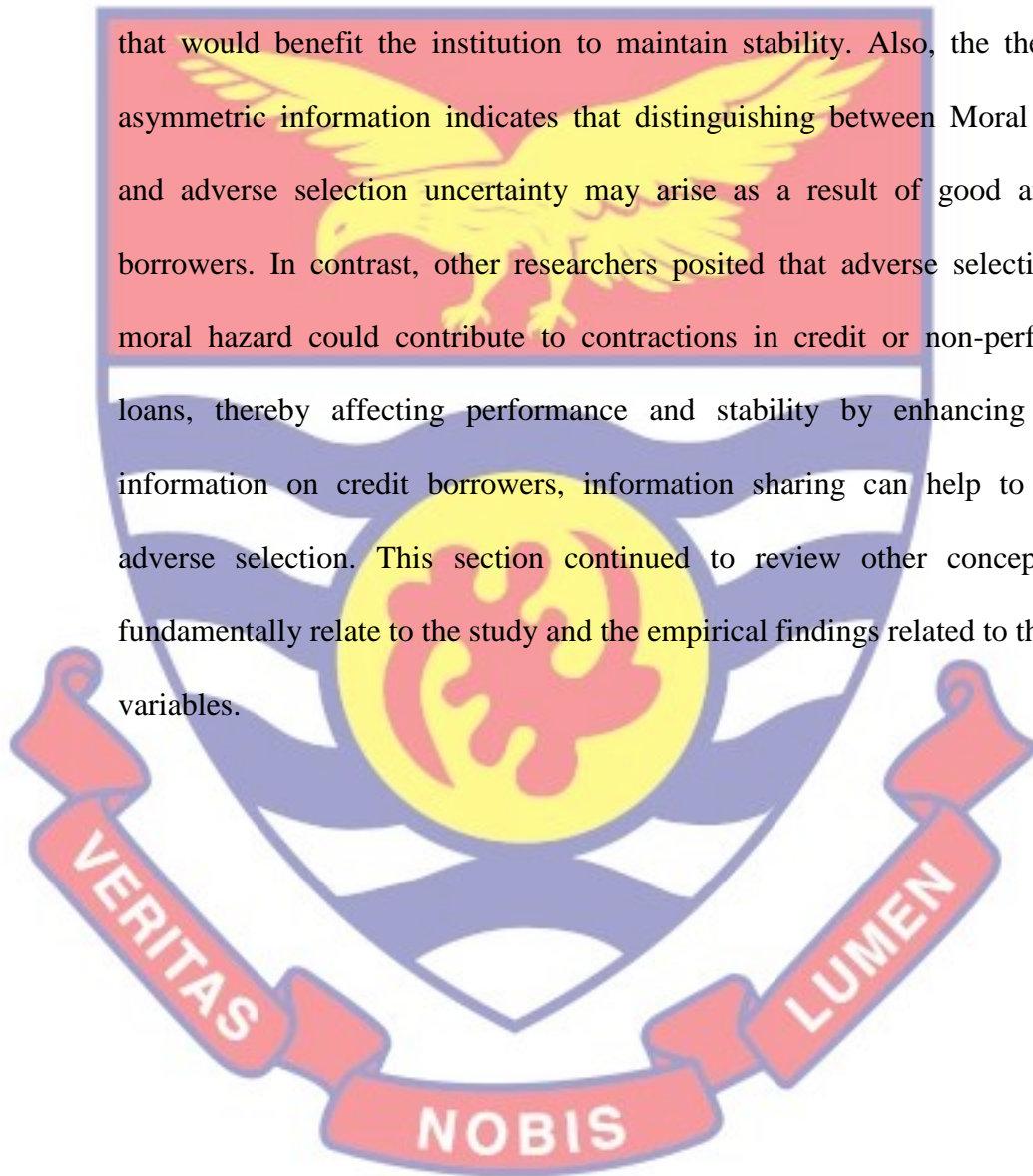
CHAPTER THREE

RESEARCH METHODS

Introduction

This section highlighted the strategies utilised in this study to fulfill the research goals. The research technique was the broad strategy the researcher used in carrying out the research work. The research paradigm, research design, research approach, demographic, and data collection procedures used in the study were all covered in this chapter. The section also outlined the type of data used, the data analysis, and the statistical tool to analyse the data. It also provided the model specification for the study.
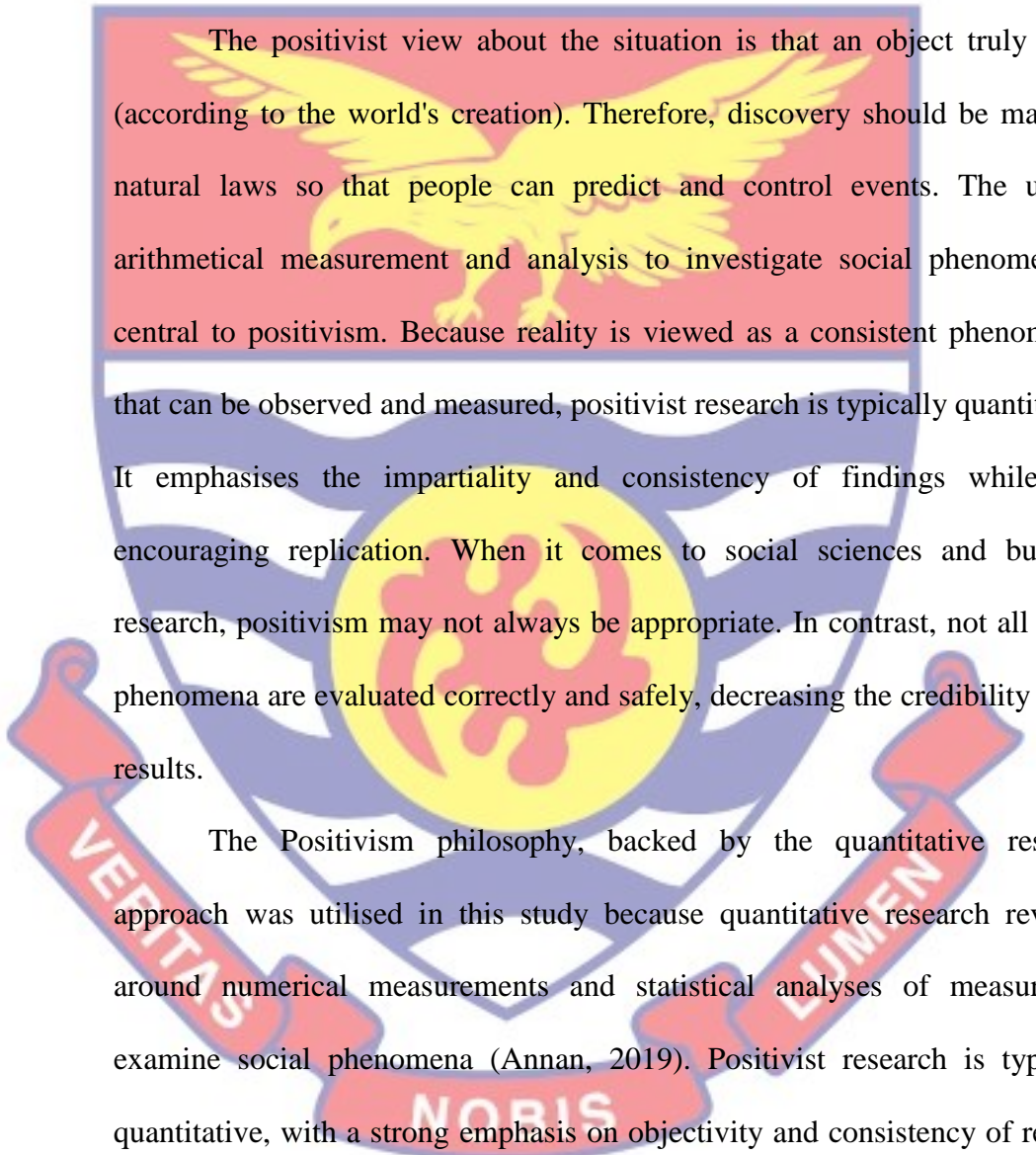
Research Design

In the opinion of Leedy and Ormrod (2010), a research design is a general structure the researcher sets in undertaking the research project. The study's objective, the location, the type of investigation, the level of research interference, the time horizon, and the analytic unit are all critical problems addressed by research design (Bougie & Sekaran, 2010). The problem statement, study questions, and objectives necessitate a simple research design (Saunders et al., 2009). The study's scope was determined by the research design, which specified whether it was descriptive, explanatory (or causal), or predictive. Thus, the researcher was informed with the differences between the key research designs, such as experimental, cross-sectional, longitudinal, case study, and comparative research model (Bell, Bryman, Mills & Yue, 2007). Quantitative researchers look for explanations and forecasts that leads to the emergence of new people and places. The goal of quantitative researchers is to establish, confirm, or validate correlations, as well as to develop

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generalisations that will help to advance theory (Leedy & Ormrod, 2010). This study sought to found the influence of the independent variables (audit committee effectiveness) and the moderating variable (information sharing) on the stability of banks by adopting an explanatory and descriptive design to test theories or explanations. The researcher explores how the dependent variables affect the independent variables in causal-comparative research, which involves cause and effect relationships. The degree of relationship (Creswell, 2014) between the audit committee effectiveness and the bank's financial stability could be measured using an explanatory design.

According to Annan, Adarkwah, Abaka-Yawson, Sarpong, & Santiago (2019), the research paradigm consists of people's ideas about how data regarding a topic should be gathered, analysed, and utilised. The research paradigm provides a practical grounding in the philosophical ideas behind research (Creswell, 2014). Positivism and phenomenology are the primary schools of thought in the study: positivism (realist) and phenomenology (idealist/subjective/interpretivism). These schools of thought have opposing viewpoints on how to conduct research and how to design it. The interpretive (idealist) view is that there is no external reality or objective truth; therefore, reality does not exist unless we create them. Subjective researchers suggest that the universe is a social construct and that human interests influence science. As a subjective person, the researcher is part of the world in which they are studied (Kankam, 2019). The conclusions of the subjective paradigm are typically more valid and less artificial than those of viewing occurrences in a realistic, real-life situation. It frequently enables researchers to gain a more precise knowledge of such events. And it demonstrates the breadth of

knowledge and complexity of details. However, phenomenological philosophy-driven research is impeded by the researcher's subjectivity and the findings' lack of reliability; hence, two researchers may reach contradictory interpretations based on other events witnessed concurrently (Apuke et al., 2013).

The positivist view about the situation is that an object truly exists (according to the world's creation). Therefore, discovery should be made on natural laws so that people can predict and control events. The use of arithmetical measurement and analysis to investigate social phenomena is central to positivism. Because reality is viewed as a consistent phenomenon that can be observed and measured, positivist research is typically quantitative. It emphasises the impartiality and consistency of findings while also encouraging replication. When it comes to social sciences and business research, positivism may not always be appropriate. In contrast, not all social phenomena are evaluated correctly and safely, decreasing the credibility of the results.

The Positivism philosophy, backed by the quantitative research approach was utilised in this study because quantitative research revolves around numerical measurements and statistical analyses of measures to examine social phenomena (Annan, 2019). Positivist research is typically quantitative, with a strong emphasis on objectivity and consistency of results. Quantitative analysis examines the relationship between variables to test objective ideas. The positivist assumptions have represented the traditional form of research. These assumptions are more valid for quantitative research than qualitative research since post-positivist analysis is based on in-depth

observation and experimentation of objective reality in the real world (Apuke, 2017). Furthermore, because the study tested and reinforced current beliefs to logically validate the positivist.

Research Approach

According to Creswell (2014), there are three main approaches to research, namely, the quantitative, qualitative, and mixed approach. This study will employ the quantitative approach because all the variables under the investigation are measurable quantitatively. Quantitative researchers seek explanations and predictions that will result in the creation of new persons and environments. The purpose is to develop, confirm, or validate correlations, as well as to construct generalizations that contribute to the theory (Leedy & Ormrod, 2010). Bell, Bryman, Mills and Yue (2007) stated that quantitative research is objective and measurable as it usually stresses quantitative in data collection and analysis research is objective. Quantitative data produces results that are highly independent of the person analyzing them because they include detailed processes and procedures that limit the researcher's influence on the study's results, allowing for a more robust, accurate, and equitable set of circumstances in the research topic evaluated.

The researcher analyzed how the independent variables affected by the dependent variables, including cause and effect relations, in causal-comparative research through the use of quantitative data analysis. The causal-comparative study design enabled the researcher investigated how explanatory variables interacted with each other and how this affects dependent variables.

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Data Type and Data Source

For the study's purpose, Secondary data was taken from the company's website. Consequently, the researcher considered all banks operating in Ghana from 2010 to 2019. However, the study specifically concentrated on only commercial banks and their audit committee as the unit of analysis because these banks possessed the relevant information needed to undertake the research; this population was considered because of the study's objective to examine the correlation between audit committee effectiveness and financial soundness in Ghana. The study involved the banks existing in 2019. Those banks have the attributes the researcher was looking out for; therefore, the population was selected based on data availability since that accurately measured the population. Based on the population under review, which consisted of listed and non-listed banks, the analysis focused on commercial banks in Ghana that published annual reports online during the study period (2010-2019) only.

This study exploited on commercial banks because commercial banks was a good representation of the rest of the banks in Ghana and provided the necessary information for the research. The commercial banks included had complete data required for the study purpose, which falls within the period (2010-2019) under observation because 2010 was when the implementation of the credit reference bureau in Ghana took place. The Bank of Ghana in 2019, as part of its supervisory activities, continued its monitoring of credit reference bureaus and financial institutions to ensure compliance with Act 726 and other directives issued by the Bank in areas such as data provider operations, data

quality, and protection, dispute resolution, submission of reports, application of sanctions and other incidental matters.

This study utilised a secondary data from annual reports published online, the individual banks' websites and the Ghana Stock Exchange website to access all selected banks annual reports; this assisted in determining the elements for audit committee effectiveness and bank stability. The audited financial statements were used to access accounting information related to the study since audited financial statements has been appropriately scrutinised and validated by external auditors and relevant bodies. The audited financial statement gave an objective assessment of the performance of banks. The researcher manually extracted the data in the annual report to get all the necessary information for the study with the help of excel software. Data extracted by the researcher in the excel software from the annual reports was given to the researcher's supervisor to randomly confirm the figures in the annual report to confirm the data's quality and dependability extracted into excel before further analysis was run to avoid validity and reliability issues. The analysis was run by the use of the statistical eviews version 10 software.

Also, as required by the Credit Reporting Act of 2007, credit bureaus gather, manage, and process lending data into credit reports or other services used by banking institutions in various credit appraisal procedures and respective data subjects (ACT 726). Also, information sharing system data is accessed from Ghanaian credit bureaus; XDS Data Limited, Hudson Price Data Limited, and Dun & Bradstreet Credit Bureau Limited are some of the companies involved are the three credit bureaus existing in Ghana. However, data accessed from the XDS Data Ghana Limited since XDS is the pioneered

credit referencing in West Africa to establish the credit agencies in Ghana and Nigeria through extensive feasibility studies and market. Hence, XDS is the most patronised bureau in Ghana, with historical information as far back as 2004. The three-credit bureau information available to access the data depends on the credit bureau system's existence, coverage, and usage. However, the main variables of interest are the usage and scope of the credit reference bureau.

Nonetheless, two different measures used for the variable of interest are credit bureau inquiries and costs. First, throughout the course of a year, the natural log of the number of times each bank used CRB services (denoted as INFSe). Secondly, the researcher divided the cost of using the information sharing services by the gross loans for that bank on an annual basis. Furthermore, whereas prior research has extensively used dummies to test the existence of information sharing (Luoto et al., 2007; Brown & Zehnder, 2007; Brown, Japelli & Pagano, 2009), this study did not test the existence of information sharing.

Model Specification

To accomplish the study's goal, the researcher hypothesised that the explanatory variables would influence banking stability. Following Nyumutsu (2019) and Fajembola et al. (2018) baseline models, the model is specified below; the indices i,t stands for bank and time, respectively.

Model 1- The relationship between audit committee effectiveness, credit information sharing and bank stability in Ghana

Model 1 is the regression equation for the objective (1) and objective (2), and it was adapted from the regression equation of Nyumutsu (2019) and Fajembola et al. (2018). These two studies explained that audit committee effectiveness, credit information sharing and the lag of bank stability variables are the key indicators of bank stability. Slight modifications were made by this study by controlling for other bank specific variables not employed in their study. The justification for these control variables were provided in chapter 2. The lagged dependent variable was inserted to enable for a partial adjustment of bank stability to its cointegration level. This is due to the fact that bank stability is dynamic, and previous levels of bank stability have an influence on current ones. The equations below, which are built on the literature review, indicate the relationship between audit committee effectiveness, information sharing system, and bank stability, whereas taking into consideration relevant bank-specific variables. Nyumutsu (2019) and Fajembola et al. (2018) baseline models are shown first, followed by the model employed in this evaluation.

Baseline Models:

$$BSTAB_{i,} = \beta o + \beta_1 AC\text{ind}_{it} + \beta_2 ACSIZ_{it} + \beta_3 BKZ_{it} + \beta_4 BSIZ_{it} + \beta_5 GEND_{it} + \beta_6 NONEXEC_{it} + \beta_7 INF_{it} + \varepsilon i_{it}$$ ………the baseline model of Nyumutsu (2019)

$$BSTAB_{i,} = \beta o + \beta_1 ACIND_{it} + \beta_2 ACSIZ_{it} + \beta_3 BKZ_{it} + \beta_4 BSH_{it} + \varepsilon i_{it}$$……………the baseline model of Fajembola et al. (2018)

Where BSTAB is the z-score

ACind is the ratio of independent audit committee members

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ACSIZ is the total number of the audit committee members

BKZ is the natural log of the total assets

BSIZ is the total number of board of directors

GEN is the portion of female members of the board of directors

BNONEXEC is the board members who are not executive members

BSH is the board shareholders

INF is the inflation rate

Model 1:

$$STAB_{it} = \beta_0 \, STAB_{it-1} + \beta_1 \, ACind_{it} + \beta_2 \, ACez_{it} + \beta_3 \, ACmeet_{it} + \beta_4 \, ACsiz_{it} + \beta_5 \, INFS_{it} + \beta_6 \, BCTR_{it} + \mu_{it} \ldots \ldots (1)$$

Where;

- STAB is the log of z-score

- $STAB_{t-1}$ is the log of the lag of z-score

- ACind denotes the proportion of audit committee members who are independent

- ACez depicts the ratio of audit committee members who have previous experience in accounting or finance

- ACmeet is the total number of meetings attended by the audit committee members proxying for diligence

- ACsiz represents the total number of audit committee members

- INFS is explained as credit information sharing system consisting of both credit information enquiries (INFSe) and information sharing cost (INFSc)

- CTR denotes the control variables

- β symbolizes the coefficients

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- μ represents the error term

- μit $= \alpha i + \gamma if t + \varepsilon it$

αi are bank-specific fixed-effects intended to capture persistent bank characteristics like information sharing and f refers to intermittent common factor that affects all banks and is not directly observable. In the context of this study, the common factor could be captured.

Model 2- The moderating role of credit information sharing in the relationship between audit committee effectiveness and bank stability in Ghana

Audit committee effectiveness and credit information sharing system were interacted, and the interaction term was introduced into the model as a separate independent variable in order to investigate the role of credit information sharing system in the relationship between audit committee effectiveness and bank stability, which is the third objective of this study.

$\text{STAB}_{it} = \beta_o \text{STAB}_{it-1} + \beta_1 \text{ACind}_{it} + \beta_2 \text{ACez}_{it} + \beta_3 \text{ACmeet}_{it} + \beta_4 \text{ACsiz}_{it} + \beta_5 \text{BCTR}_{it} + \beta_6 \text{INFS}_{it} + \beta_7 \text{ACind}_{it} * \text{INFS}_{it} + \beta_8 \text{ACez}_{it} * \text{INFS}_{it} + \beta_9 \text{ACmeet}_{it} * \text{INFS}_{it} + \beta_{10} \text{ACsiz}_{it} * \text{INFS}_{it} + \mu_{it} \ldots\ldots. (2)$

- ACez depicts the ratio of audit committee members who have previous experience in accounting or finance

- ACind is the ratio of independent audit committee members

- ACmeet is the total number of meetings attended by of audit committee members as a proxy for diligence

- ACsiz represents the total number of audit committee members

- INFS is described as a credit information sharing system. Information sharing system (INFS) measured with the usage of credit reference

bureau through the frequencies of system patronage (INFSe) and the cost involved in accessing the system (INFSc).

- ACind*INFS denotes the interacting term of the audit committee independence and credit information sharing variables.

- ACez*INFS denotes the interacting term of the audit committee expertise and credit information sharing variables.

- ACmeet*INFS denotes the interacting term of the audit committee meeting and credit information sharing variables.

- ACsiz*INFS denotes the interacting term of the audit committee size and credit information sharing variables

- CTR denotes the control variables. Thus, the control variables consist of Bcompo represents board gender composition or diversity, BKsiz represents bank size, CAR which means the capital adequacy ratio; and BLEV represents the leveraging effect of banks.

- β symbolizes the coefficients

- μ represents the error term

- $\mu it = \alpha i + \gamma if t + \varepsilon it$

αi are bank-specific fixed-effects intended to capture persistent bank characteristics like information sharing and f refers to intermittent common factor that affects all banks and is not directly observable. In the context of this study, the common factor could be captured.

Prior Expectations

Table 1-shows the expected signs of the independent variables based on the theoretical and empirical literature discussed in chapter 2.

Table 1: A Prior expected sign of the independent variables

Variables	Expected Signs Model 1	Expected signs Model 2	Expected signs Model 3
ACind	Ambiguous		+
ACez	Ambiguous		+
ACmeet	Ambiguous		+
ACsiz	Ambiguous		+
INFS*INFS		+	
ACind*INFS			+
ACez*INFS			+
ACmeet*INFS			+
ACsiz*INFS			+

Source: Annual Report (2021)

Data Processing and Analysis

The analyses of panel data, a mix of time series and cross-sectional estimates, were employed in this research. The panel data analysis determined the impact of audit committee effectiveness on Ghanaian bank stability. Because it emphasises time series and cross-sectional data benefits, Standard time series and cross-sectional analysis do not produce as convincing results as panel estimates. According to Alvarez and Arellano (2003), the cross-sectional series focuses on the sample and observations at a specific point in time. In contrast, the time series concentrates on the variables and their fluctuations over time. Panel analysis can account for omitted components, bank-specific influences, and long-run and short-run consequences, solving cross-sectional and time-series estimations (Gine, Prior & Surroca, 2016).

The panel analysis could reduce and remove the weakness and errors presented by time series and cross-sections. Panels are more revealing than primary aggregate time series because they allow for the tracking of individual

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histories. According to Roberts, Hsiao, Berman, & Reich (2003), Panel data gives the researcher more datasets, improving the degree of freedom and reducing collinearity among independent variables, and therefore improving the efficiency of econometric estimates. Panels are more informative than cross-sections because they reflect variable dynamics and Granger causality.

The two-way or a dynamic General Method of Moment (GMM) estimator was used with the help of Eviews software version 10.0 to determine the moderating role of the information sharing system on audit committee effectiveness and stability of commercial banks in Ghana; this is to help find the link between the variables since the dependent variable was dynamic (the current value of the variable is dependent on the past values). Blundell and Bond (1998) Blundell and Bond (1998) created this estimator used in this study for several reasons. Firstly, OLS lacks the data's panel structure (Aslam et al., 2019). Furthermore, the panel data methodology (General Method of Moment) is suitable for this study because it controls for the endogeneity of the lagged dependent variable, omitted variable problem, unobserved panel heterogeneity, autocorrelation problems (differences among the panels like widely dissimilar elements, more degrees of freedom and variability in data) and control of measurement error hence making the estimates robust and reliable (Mollah et al., 2017; Nomran et al., 2018; Chen, Fan & Yan, 2021). Also, Arellano and Bond model (dynamic) model was utilised to analyse the data.

Furthermore, the estimator is appropriate because it mitigates the influence of extended this research of audit committee traits, regulates endogeneity by including the lagged value of regressors, and addresses

heteroscedasticity (Chen, Fan & Yan, 2021). In addition, the Hansen test and first and second-order serial correlation are used to assess the instrument's validity. The null hypothesis for the Hansen test asserts that the instruments are valid and there is no correlation between them, and that the error terms for all models differ. Furthermore, a significant p-value for AR (2) in both models implies that the error terms are not serially related. The GMM estimator also offers consistency of data (fixed and random effect) by using instruments obtained from orthogonality conditions from the lagged dependent variables.

Variable Measurement and Justification

This section defined and justified the motivations for selecting dependent and explanatory variables. This section also specified the predicted indications of the many examined variables and their sources and measurement.

Dependent Variable

The dependent variable (bank stability) was measured by the use of Z-score (the ratio of the sum of return on assets and averages of equity to total asset by the standard deviation of return on asset). As an indicator of bank stability (BSTAB), the researcher used Z-scores; this captured the profitability, uncertainty, and leverage in determining these ratings. Previous research has supported this approach (Demirgüç-Kunt & Huizinga, 2010; Adusei, 2015; Köhler, 2015).

The following is how to calculate the Z-score;

Z score (BSTAB) = $\frac{ROA + E/TA}{\eth ROA}$

Table 2: Summary of Analysed Dependent Variable

Dependent Variable	Representation	Definition	Measurement	Referenced literature
Z-score	STAB	The ratio of the sum of return on assets and averages of equity to total asset by the standard deviation of return on asset.	$\dfrac{ROA + E/TA}{\eth ROA}$	Nyumutsu (2019)

Source: Nyumutsu (2018); Alqatamin (2018)

Independent Variables

The independent variables (audit committee effectiveness) comprised independence of the audit committee (ACind), audit committee expertise (ACez) which was also a representation of the audit committee qualification and audit committee experience, audit committee size (ACsiz), and audit committee meeting (ACmeet) as a proxy for audit committee diligence.

Table 3: Summary of independent variables analysed

Independent variables	Representation	Definition	Measurement	Referenced literature
Audit committee Size	ACsiz	The total number of the audit committee.	Total number of audit committee members.	Nyumutsu (2018)
Audit Committee Independence	ACind	The proportion of audit committee members on total membership.	Total independence/total members.	Alqatamin (2018)
Financial/accounting/previous Experience in audit committee	ACez	Share of audit committee members with experience in a financial market to total members of the committee.	The portion of board members with accounting or financial qualification or experience.	Alqatamin (2018)
Audit Committee Meeting	ACmeet	Number of meetings per year.	Number of meetings per year.	Alqatamin (2018)

Source: Nyumutsu (2018); Alqatamin (2018)

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Moderator Variable

The moderator variable (information sharing system) was measured through credit referencing bureaus (CRB) by employing: the natural log of the number of times each bank used CRB services in a given year (represented as INFSe). Second, the researcher divided the cost of using CRB services by the total amount of gross loan portfolio made by a bank in a given year (INFSc). INFSe examines whether a bank's willingness and ability to use CRB services impacts its stability, whereas INFSc examines whether a bank's frequency of using CRB services affects its stability. These two parameters evaluateed credit information sharing from a bank's perspective. The researchers devised and employed these methodologies because they more properly capture a bank's use of CRB information. These measurements are utilised since previous studies on CRBs used dummies that did not capture the effect (Markus et al., 2009; Galati & Woolddridge, 2009).

Control Variables

According to the literature, bank-specific data impacts the bank's stability (Flamini et al., 2009); this was also supported by Nyumutsu's research in 2019. This study considered control variables for board governance, bank size, bank leveraging effect, and bank regulations.

Bank Size

The total assets determine the size of the bank (Helfaya & Moussa, 2017). In most studies reviewed, assets are used as a proxy for bank (D'Amico, Kurakula, & Lee, 2016; Lai & Chen, 2014). Most studies reviewed took into account size-related economies and scale diseconomies. In this study, bank size is represented by the natural log of total assets. Hence, assets

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were converted to a natural logarithm to match other ratios in the model (Chithambo & Tauringana, 2015). A larger bank size implies the bank has more assets and can easily maintain its stability, whereas a smaller bank size indicates the bank faces the risks of not being stable. Overall, the public views a larger bank or a bank with more assets as a bank that can be stable for a long time and would boost their confidence to invest in it, but the opposite is equally correct.

Board diversity

The gender diversity of the board of directors, which indicates the ratio of female to male board members, is an explanatory variable. The higher the gender ratio on a board, the more diverse it is, and suggestions and decisions are less likely to emanate from a single source of decision-maker (Nyumutsu, 2019). As a result, strategic, tactical, and operational decisions are highly efficient and up-to-the-task. Such efficient strategic and operational choices may help the bank have stability, growth, and higher profits. The expectation is that gender compositions either have a positive or negative relationship with bank stability of banks in Ghana.

Bank capital adequacy ratio

Another variable in the study is the size of the bank's capital. This variable assesses the safety and soundness of banks when compared to a bank with low capital, a bank with high capital is expected to handle any financial risks that arise with ease (World Bank, 2019). A bank's success can be seen based on evaluating the bank's health (Dulchin & Kasmir, 2004). Capital Adequacy Ratio is an indicator of a bank's fitness. The Capital Adequacy Ratio (CAR) measures how well a bank's equity capital can withstand

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unforeseen events (Syahyunan et al., 2017). The capital adequacy ratio was calculated by dividing the book value of capital and the asset's book value. The percentage of a bank's risk-weighted credit exposures is used to calculate available capital. It aims to protect depositors while also promoting financial system stability and performance. Tier-1 capital, which can bear losses without requiring a bank to stop trading, and tier-2 capital, which can absorb losses in the event of a winding-up and thereby offers a lower level of security to depositors, are the two forms of capital that are calculated.

$$CAR = \frac{\text{Tier 1 capital} + \text{Tier 2 capital}}{\text{Risk-weighted assets}}$$

The CAR limit is set by the state's government in which the bank operates, and it shows how the banking system's capital affects its health. A bank with a high CAR has more leverage when dealing with financial risks. Bank of Ghana stipulates that the Capital Adequacy Ratio at Commercial Banks must be at least 10% of the bank's assets.

Leverage Ratio

Kalemli-Ozcan, (2012) stated that Leverage across Firms, Banks, and Countries is best-measured with1-equity/assets; this measure is equivalent to the measure used in the previous study (Maquieira et al., 2012). Leverage increases resilience to less likely but highly correlated losses. However, the higher the leverage exposes the bank to riskier, higher-yield assets.

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Table 4: Summary of the control variable

Control variables	Representation	Definition	Measurement	Referenced literature
Bank size	BKsiz	Natural log of the total asset	Ln of total asset	World Bank (2019)
Board diversity	Bcompo	Share of female directors to the number of the board.	Female members/total board members	Nyumutsu (2019)
Capital Adequacy Ratio	CAR	The ratio of the regulatory capital on the risk-weighted asset.	Tier 1+Tier 2 capital/risk-weighted assets.	Syahyunan et al. (2017).
Leverage	BLEV	The share of total debt on the total equity.	Debt/equity	Debela, Sultan & Teshome (2017).

Source: World Bank (2019), Nyumutsu (2019), Syahyunan et al. (2017),

Debela, Sultan & Teshome (2017).

Ethical Consideration

The researcher would ensure that information gathered would only be used for research purposes, and data ownership would be duly acknowledged. Also, the researcher would ensure that data would be kept for no longer than it is needed and ensure that data is kept safe from unauthorised access.

Chapter Summary

The chapter described the research methods used to carry out this research. The study is based on the positivist research paradigm and the quantitative research approach. The study also used an explanatory research design to explain the relationships between audit committee effectiveness, information sharing system, and stability of banks in Ghana. The choice of

only 14 banks of 23 banks in Ghana was due to the availability of specific data. Three baseline models were developed in the study. The first model definition attempted to demonstrate a link between audit committee effectiveness and bank stability in Ghana. The second model was created to investigate the connection between the information-sharing system and bank stability. Finally, the final model investigated the importance of the information-sharing mechanism on the relationship between audit committee effectiveness and Ghanaian bank stability. The study mainly employed the Generalised Method of Moment estimation techniques to estimate all the models as it controls for endogeneity.

However, the study focused only on banks, ignoring the financial system as a whole, limiting the study's sample size and potentially resulting in an issue with external validity. The study ran into a database problem with unlisted commercial banks in Ghana, and gathering essential data would take a long time to complete. Despite commercial banks across the country, it would have been more appropriate for the researcher to investigate all current banks. Yet, financial resources and data availability constraints made this research impossible to be conducted.
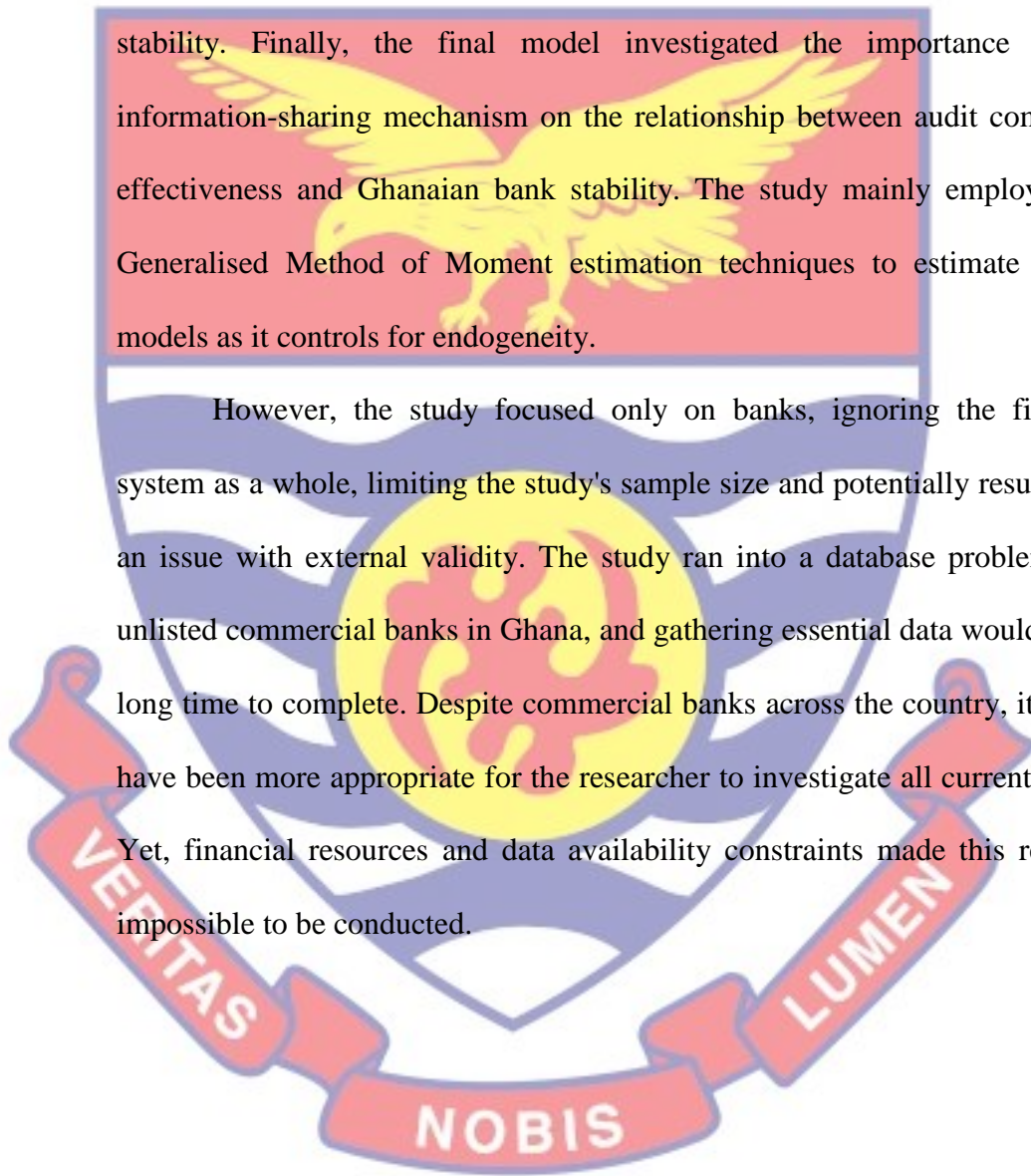
CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presented and discussed the results from the empirical analysis obtained. Using descriptive statistics, tables and figures organised to depict the results found a well understanding of the values and direction of the relationships among the variables of the audit committee's effectiveness, information sharing, and bank stability. The chapter then presents a correlation matrix that aids to avoid issues of multicollinearity in the empirical specification. Subsequently, the chapter presents the formal discussions on the various models estimated in the study.

Descriptive Statistics

This section discusses descriptive statistics on a sample of 14 commercial banks out of 24 existing commercial banks in Ghana due to data availability issues. In Appendix A, a list of the sampled commercial banks in Ghana is depicted there. This section includes descriptive statistics such as the mean, which measures average patterns, the standard deviation, which represents the extent of variability, the minimum and maximum values for each variable, and the number of instances and how they correlate to the population.

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Table 5: Descriptive statistics

	Observations	Mean	Std. Dev.	Minimum	Maximum
STAB	140	16.447	13.642	-1.210	116.763
ACez	140	0.706	0.282	0	1.333
ACind	140	0.930	0.138	0.4	1.25
ACsiz	140	4.279	1.170	2	7
ACmeet	140	5.064	2.505	1	18
Bcompo	140	0.231	0.160	0	0.714
CAR	140	0.205	0.116	0.065	1.15
BLEV	140	0.843	0.082	0.079	0.991
BKsiz	140	21.492	0.891	19.098	23.303
INFSe	140	7.973	1.594	4.143	11.622
INFSc	140	6.956	69.112	0.000	818.460

Source: Field survey (2022)

From the above descriptive statistics, the average returns on assets and averages of equity to the total assets over the standard deviation of return on asset (STAB) was as low as 16.447 and standard deviation of 13.642 within the ranges of -1.210 and 116.763. This may imply that during the period the banks started using the information sharing system the trustworthy of the banks was low and this show that not all banks were using the information sharing system so bankruptcy was high however, the trust worthy of the banks increased during the period where almost all the banks started utilizing it However, out of the four indicators of audit committee effectiveness, number of experienced AC members to the total number of the audit committee (ACez) recorded an average as was as low as 0.706 and a standard deviation which connotes how that the observation is dispersed from the sampled average of 0.282 within the ranges of 0 and 1.333. This may also imply that some of the companies audit committee members were no existence of experienced audit committee members in the banking sector during the time of financial crises and establishment of information sharing system in Ghana. Thus, some of the committee members were not experienced in their oversight

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responsibility and only two (2) of the members within the companies' audit committee were experienced in their responsibility.

Yet, the banks recorded an average of 0.929 members who are independent of their activities from the sample of this study, which falls between the limits of 0.4 and 1.25 with a standard deviation of 0.138, This may also imply that at some of the companies audit committee members were not playing their role separately from management. Thus, some of the committee members were not independent that and only 2 of the members within the companies' audit committee were independently selected into the board. Hence, the independence of the audit committee members was very weak.

Also, the average size of the audit committee (ACsiz) was (four) 4, which is within the minimum legal requirement of 2 members and the maximum legal requirement of 7 members mandated by the Bank of Ghana. However, the sample observation of the number of committee members (ACsiz) dispersed from the mean with about 1.17. The audit committee members meet (ACmeet) averagely 5times each year within a minimum of 1 and a maximum of 18 meetings every year. pTherefore, this depicts that the average audit committee within Ghana's banking sector meets approximately 6times a year. However, while some of the audit committees meet only once per year, others meet almost every 3weeks.

The control variables, which are made of board diversity (Bcompo), capital adequacy (CAR), and debt to equity ratio (BLEV), and bank size (BKsiz), showed an average of 0.231, 0.204, and 0.843 respectively from 2010 to 2019. The board of directors' composition recorded 0.16 deviation from the

average within a range of 0 to 0.714. The capital adequacy ratio (CAR) further found a variation of 0.116 within a range of 0.065 and 1.15. Also, another control variable called the bank size (BKsiz) showed an average number of 21 in that same period; this is within a range of 19 and 23. However, the 140 deviated from the mean of about 0.891. Likewise, 0.843 of the equity of these banks is in debt. Similarly, the average size of the bank (BKsiz=21) is within a limit of 19 and 23, with a recorded standard deviation of 0.891.

The interactive variable, which is known as the information sharing system (INFS) variable, is made up of both credit reference bureau inquiries (INFSe) and the cost incurred in accessing the system (INFSc). Information-sharing system indicators recorded an average figure of approximately 8 times and GHS6.956 and the standard deviation of 8times and 69.112 respectively within ranges of 4 and 1, and 0 and 818.46, respectively the total observation of the 136.

Correlation Analysis

To find the unbiased results in the regression model, correlation analysis of independent variables was computed to trace the possible correlation among them. This is necessary because the variables should not correlate with each other. The correlation matrix is employed to group highly correlated variables and not be positioned together in the same model. It is used to show any variable of multicollinearity in the data and its relevance to the study.

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Table 6: Correlation matrix

	lnSTAB	ACez	ACind	ACmeet	ACsiz	Bcompo	CAR	BLEV	BKsiz	INFSe	INFSc
lnSTAB	1										
ACez	-0.187	1									
ACind	-0.099	0.146	1								
ACmeet	-0.167	0.263	0.019	1							
ACsiz	0.294	0.082	0.481	0.081	1						
Bcompo	0.154	0.158	0.234	0.000	0.188	1					
CAR	0.260	0.129	0.234	0.048	0.054	0.287	1				
BLEV	0.031	0.069	0.362	0.035	0.184	0.140	0.425	1			
BKsiz	0.085	0.143	0.105	0.128	0.087	0.344	0.140	0.057	1		
INFSe	0.049	0.028	0.032	0.087	0.343	0.046	0.121	0.064	0.347	1	
INFSc	0.285	0.013	0.040	0.038	0.021	-0.039	0.128	-0.010	0.081	0.113	1

Source: Field survey (2022)

From the use of the standard method employed in Kennedy (2008), the threshold of 0.7 of Pearson's correlation for high collinearity among the variables was used by the researcher. It is clear from the table above that none of the factors are highly correlated. The previous financial or accounting experience or qualification through certification (ACez) recorded a -0.187 correlation. A correlation of -0.099 was recorded for the independence of the audit committee; audit committee meeting (ACmeet), which is a proxy for the diligence of audit committee meeting is -0.167, the size of the audit committee recorded 0.002 though the accounting or financial qualification of the audit committee is 0.294. Board diversity (Bcompo) correlates 0.1549; capital adequacy ratio correlates 0.260, while bank size is 0.085. Information sharing variables (INFSe and INFSc) correlated 0.049 and 0.285, respectively.

According to Liu, Yang and Zhang (2021), for a severely skewed z-score regularly dispersed, the natural logarithm of the z-score should be

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utilised. Similarly, as indicated by Lepetit and Strobel (2015), log-transformed z-score is proportionate to the log probabilities of bankruptcy. As a result, the log of the z-score is also a measure of illiquidity. Fang, Hasan, and Marton (2014) both support the inverse z-score as a proxy for a bank's likelihood of default. Inverse z-scores with higher values indicate greater instability (Li, Malone & Tripe, 2017). Accordng to the numbers shown above, all variables favourably influence stability, except for audit committee experience, audit committee qualification, audit committee independence, and audit committee meeting, which has a detrimental influence on the strength during the study.

Regression results on the relationship among audit committee effectiveness, bank stability, and Information sharing system

The first variance panel regression approach was used to meet the study's goal and evaluate the effect of audit committee effectiveness on the stability of banks in Ghana, with results shown in table 7. Also, EQ1 to EQb are the main indicators for model 2.

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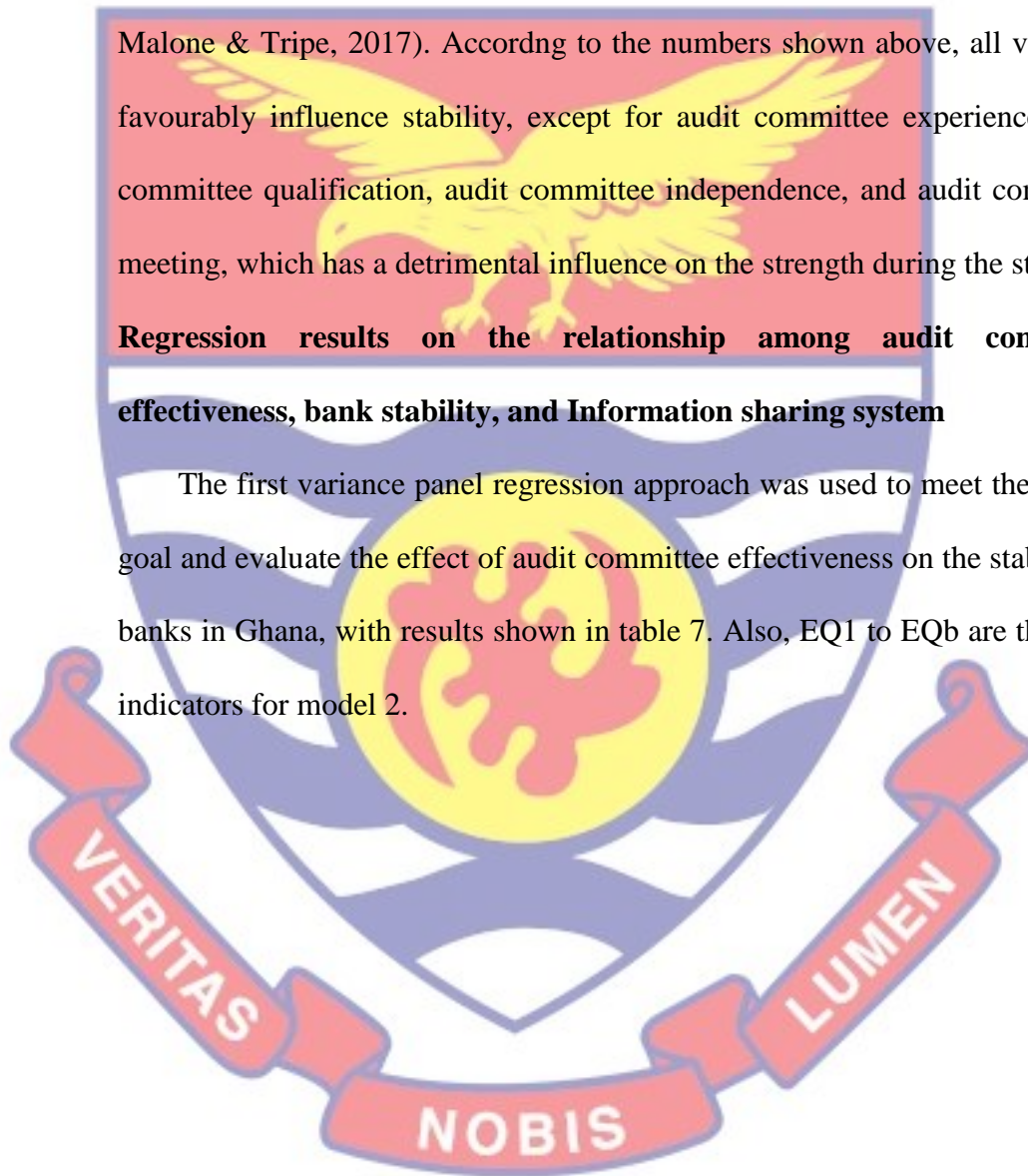
Table 7: Individual effect of audit committee effectiveness and information sharing on the stability of banks in Ghana

Eq Name:	EQ1	EQ2	EQ3	EQ4	EQa	EQb
LNSTAB (-1)	0.002	-0.009	0.0003	0.012	-0.111	-0.046
	(0.062)	(0.038)	(0.033)	(0.047)	(0.038)**	(0.143)
ACez	-0.717					
	(0.196)**					
ACind		-0.561				
		(0.472)				
ACmeet			-0.017			
			(0.05)			
ACsiz				0.122		
				(0.057)*		
INFSe					0.087	
					(0.032)**	
INFSc						-0.093
						(0.103)
Controls:						
BKsiz	0.009	-0.007	-0.029	-0.036	-0.1	-0.199
	(0.068)	(0.067)	(0.05)	(0.055)	(0.058)	(0.098) *
CAR	2.298	2.626	2.615	2.771	2.206	2.945
	(0.510) **	(0.631) **	(0.374) **	(0.614) **	(1.157)	(0.790) **
Bcompo	-0.319	-0.225	0.029	0.058	0.248	0.129
	(0.572)	(0.57)	(0.484)	(0.365)	(0.551)	(0.59)
BLEV	2.723	2.987	2.384	2.725	2.093	3.314
	(0.751) **	(0.488) **	(0.716) **	(0.572) **	(0.424) **	(1.498) *
Diagnosis:						
Prob(J-stat)	0.3598	0.4678	0.1336	0.3589	0.176	0.381
Hansen Test	5.3271	4.3922	3.2331	4.5442	7.4542	4.982
AR (2)	0.4834	0.9463	0.1138	0.4617	0.517	0.955
Groups No.	14	14	14	13	13	14
Instrument	140	140	140	140	140	140
Observations	103	103	103	103	99	107

Note: Z-SCOR (-1) is the first lag of the log of stability variable, ACez is audit committee expertise or previous experience, financial, accounting, or banking certification, ACind is audit committee independence, ACmeet is audit committee meeting as a proxy for diligence, ACsiz is audit committee size, INFSe is frequent use of information-sharing services, and INFSc is the cost incurred in using information-sharing services. BKsiz represents the natural log of the whole asset. The capital adequacy ratio (Regulatory capital/risk-weighted asset) is represented by CAR. Bcompo is an abbreviation for board diversity, which is the ratio of female board members to total board members. The debt-to-equity ratio is represented by BLEV, which is the total liabilities divided by the total equity. Except for the diagnosis section, all values in brackets are the standard errors of the coefficient values. All numbers outside of brackets are coefficient values; ** signifies significance at 1%, * represents significance at 5%, and *** represents significance at 10%. In the diagnostics section of Table 7, the z values of AR (2), probability of z values of AR (2), probability of the J-statistics test, number of instruments, and number of observations are reported in the order shown.

Source: Field survey (2022)

Audit committee Effectiveness and stability of Banks in Ghana

EQ1, EQ2, EQ3, and EQ4 in table 7 above depicts model 1 in the model's specification in chapter 3. Model 1 in Table 7 displays the results on the relationship between the audit committee effectiveness and the stability of Ghanaian commercial banks. The findings from model 1 of EQ1 show that at a 1% significant level, audit committee experience had a significant adverse effect on instability by showing a -0.717 coefficient. The coefficient of -0.717 shows that a unit increase in audit committee experience would lead to a 0.717 decrease in instability, which invariably improves stability. Hence, the researcher rejected the first hypothesis that audit committee effectiveness has no significant effect on bank stability based on the result. Audit committees with financial or accounting experience tend to help strengthen the financial reporting transparency in an institution, leading to improvement in strength as the main argument of Jensen and Meckling agency theory (Armstrong et al., 2010).

The significant coefficient of audit committee experience findings supports the idea that audit committee members' expertise impacts bank instability. This finding is consistent with Baiden (2020) finding that audit committee financial experience significantly affects bank performance. However, this is inconsistent with the study by Alqatamin in 2018, which explained an insignificant effect of audit committee members' experience on company performance.

Concerning audit committee members' independence (ACind), this study found that audit committee independence shows a coefficient of 0.561 at an insignificant negative effect on instability. Alternatively, this implies that a

positive relationship exists between audit committee independence and stability (Lepetit & Strobel, 2015). The coefficient of -0.561 shows that a unit increase in audit committee independence would lead to a 0.561 decrease in instability; hence, this invariably enhances stability. As a result, the findings do not rule out the possibility of no significant association between audit committee effectiveness (independence) and bank stability. These findings are congruent with Kallamu and Saat (2015), who discovered a significant association between audit committee independence and corporate performance.

Similarly, the result is consistent with Fra, Hassan and Tarazi (2020), whose results showed a positive relationship between audit committee independence and liquidity. Also, Adeboye, Dahunsi and Ojeka (2021) found a positive relationship between audit committee independence and non-performing loans. However, Baiden (2020) found statistically significant associations between audit committee independence and the bank's financial performance, suggesting that members' freedom in the audit committee help to mitigate the impact of instability hence leading to improved stability. However, the influence might not be significant. An audit committee comprising numerous independent directors may provide more excellent monitoring due to its ability to withstand managers' impact (Kallamu & Saat, 2015).

The findings from model EQ3 shows that the audit committee meeting, which is a proxy for the diligent attribute of the members had a negatively insignificant effect on instability with a 0.017 coefficient. The inconsequential audit committee meeting indicates that our findings show the impact of audit

committee members' vigilance on bank instability. The -0.017 coefficient suggests that a unit increase in audit committee diligence results in a 0.017 decrease in instability. As a result, stability improves. Therefore, the findings do not support the premise that there is no significant association between audit committee effectiveness (due diligence) and bank stability. Ali (2017) discovered a link between audit committee sessions and financial performance.

The findings from model EQ4 show that audit committee size positively affected instability at a 5% significant level by showing a 0.122 coefficient. The significant coefficient of audit committee size confirms that the result provides evidence for the effect of audit committee number of members and size on bank instability. Based on the argument by Lepetit and Strobel (2015), it can also be explained that the coefficient of 0.122 would also depict that a unit increase in audit committee size would lead to a 0.122 increase in instability. Nevertheless, based on the suggestions by Liu, Yang and Zhang (2021), the just aforementioned result would lead to a decrease in stability. Hence, the result rejects the hypothesis that there is no significant relationship between audit committee effectiveness (diligence) on bank stability.

Information sharing system and bank stability in Ghana

Information sharing system (INFS) is a measure for credit referencing bureau service usage frequencies (INFSe) and usage cost ratio (INFSc). Model EQa in table 7 shows the results on the relationship between information sharing system patronage by banks (represented as INFSe) and the stability of Ghanaian banks. The findings from the model EQa depicts that at a 1%

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significant level, a positive coefficient of 0.87 enquiries was obtained from the information-sharing system. The coefficient of 0.87 shows that a unit increases in credit information sharing frequency of enquiries would lead to a 0.87 increase of instability. The frequency of CRB patronage by banks (represented as INFSe) has a positive and significant effect on bank instability. Thus, information sharing patronage has an indirect relationship with stability; hence stability is impeded. Therefore, the result rejects the hypothesis that there is no significant relationship between the information sharing system (INFSe) and bank stability. The results imply that as banks patronise CRB services, bankruptcy is encouraged; hence, information sharing and stability are indirectly related. In a nutshell, this also inversely means that the frequency of access to the CRB would impede stability. As more and more banks access the information sharing system, it reduces stability. The result obtained is consistent with Kusi et al. (2016), who found a negative effect of credit information sharing on credit risk. Yet, the result is inconsistent with the findings of Kusi et al. (2016), who found a positive link between information sharing patronage of banks and profitability as banks' profitability is improved to increase stability when banks patronise the services of CRBs.

Model EQb, which portrays the ratio of CRB cost to gross loans and advances (INFSc). This (INFSc) represents the amount banks are willing to spend on information communicating through CRB services to ensure they recover all loans and advances, reports a negative and insignificant impact on instability. A coefficient of -0.093 was obtained from the information-sharing system (INFSc). The coefficient of -0.093 implies that a unit increase in credit information sharing cost to gross loans and advances leads to a 0.093

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reduction of banks' instability. Thus, the information sharing variable has an indirect effect on instability. Hence this would lead to stability increment. Therefore, the result accepts the hypothesis that there is no significant relationship between the information sharing system (INFSc) and bank stability. The findings are consistent with previous findings on information sharing through CRBs, as they assert that information sharing (via CRBs) can improve lenders' knowledge of borrowers (screening influence) (Bennardo, Pagano, & Piccolo, 2009; Kusi et al., 2016). As a result, the appearance of the CRB encourages banks to spend less than 10% of total loans and advances on information sharing systems because banks tend to spend less in evaluating and monitoring borrowers due to the pressure of future credit on borrowers, lowering bank operating costs and increasing stability.

Results of the control variables for the models assessing the separate effects of audit committee effectiveness and information sharing system on bank stability in Ghana

Bank size was negatively insignificant in model EQ1 in the presence of the CRB measure (INFSe) with a coefficient of -0.1 during instability. This negative relationship suggests that larger banks tend to exhibit lower margins in circumstances of financial distress. This implies that these banks respond in the same direction to attain stability, consistent with economies of scale models. The findings are congruence to Alhassan et al. (2014), who evidenced that larger banks enjoy economies of scale. This study disputes the argument by Kusi et al. (2016) that in the presence of CRB, bank size does not give any advantage to larger banks to make more profit than small banks. The findings also refute the conclusions made by Varotto and Zhaao (2018), among other

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scholars whose works make similar assertions of large-sized banks being exposed to a high systemic risk which could, in turn, lead to instability in the operations of the banks.

The findings of the study highlight Capital (CAR) to be positive and insignificantly related to bank instability in model EQ1. This suggests that shareholders who dislike risk expect a higher return on investment to compensate for their risk. As a result, they do not put pressure on bank management to operate to fulfil shareholders' total remuneration requirement. The model EQ2 also depicts a negatively and significantly related to instability with a 5 percent significance level. This suggests that risk-averse shareholders expect a larger return on investment to compensate for their risk, putting pressure on bank management to outperform to fulfil shareholders' total remuneration demand (Naceur & Omran, 2011).

The composition of gender, as seen in the table above had insignificant but positive relationship with information sharing systems and occurrences of bankruptcy in banks. It indicates that a change in the gender composition of the board of directors causes an immediate difference in the instability of banks. This is inconsistent with the findings of Owen and Temesvary (2017), which stated that when there is a threshold of women representatives on the board of a bank which happens to be effective auditing of the bank, dynamism is improved to enhance decision making.

Bank leveraging ratio is measured with the debt to equity, recorded significant positive relationship among the models. This implies that banks can finance their debt well whenever there is high bankruptcy in the sector and

supports an assertion by Avgouleas (2015) that bank leverage ratios are micro prudential measure and increase stability.

Diagnostics on the models assessing the effects of audit committee effectiveness and information sharing system on bank stability

According to Mileva (2007), the null hypothesis for the AR (1) process in first disparities should normally be rejected, whereas the null hypothesis for the AR (2) process in first variances should not be rejected. Any of the p-values of the AR (2) process demonstrated no rejection of the null hypothesis of no autocorrelation at a 5% significance level for all of the models in Table 7. This means that there is no autocorrelation in any of the models. Furthermore, the J-statistics probability values showed no rejection of the null hypothesis that the instruments as a group are exogenous. This means that all of the tools used in table 7 for each model are correct. The J-statistics' insignificance also demonstrates that the instruments used in the GMM estimations have adequate exclusion constraints. In addition, the Hansen test and first and second-order serial correlation showed that the instruments are valid. The null hypothesis for the Hansen test asserted that the instruments are valid, and that there is no correlation between them, and that the error terms for all models differ. Furthermore, a significant p-value for AR (2) in both models implies that the error terms are not serially related.

The moderating role of information sharing on audit committee effectiveness and bank stability

This illustration depicts the moderating role of credit information sharing variables in the relationship between audit committee effectiveness and bank stability of Ghana. Table 8 presents models of the results on the

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moderating role demonstrated by the information sharing system through the individual information sharing variables (INFSe & INFSc) in the relationship between audit committee effectiveness and bank stability of Ghana. The individual model from table 8 is depicted as EQa1-EQb4 by each indicator of the information-sharing system. The models for the first variable of information sharing (INFSe) of this illustration depicted as EQa1 – EQa4, and the second variable of information sharing (INFSc) showed as EQb1 – EQb4 shows the moderating role played by information sharing (INFSc) in the relationship between the effectiveness of audit committee effectiveness and commercial bank stability in Ghana. All these models are shown in table 8 below:
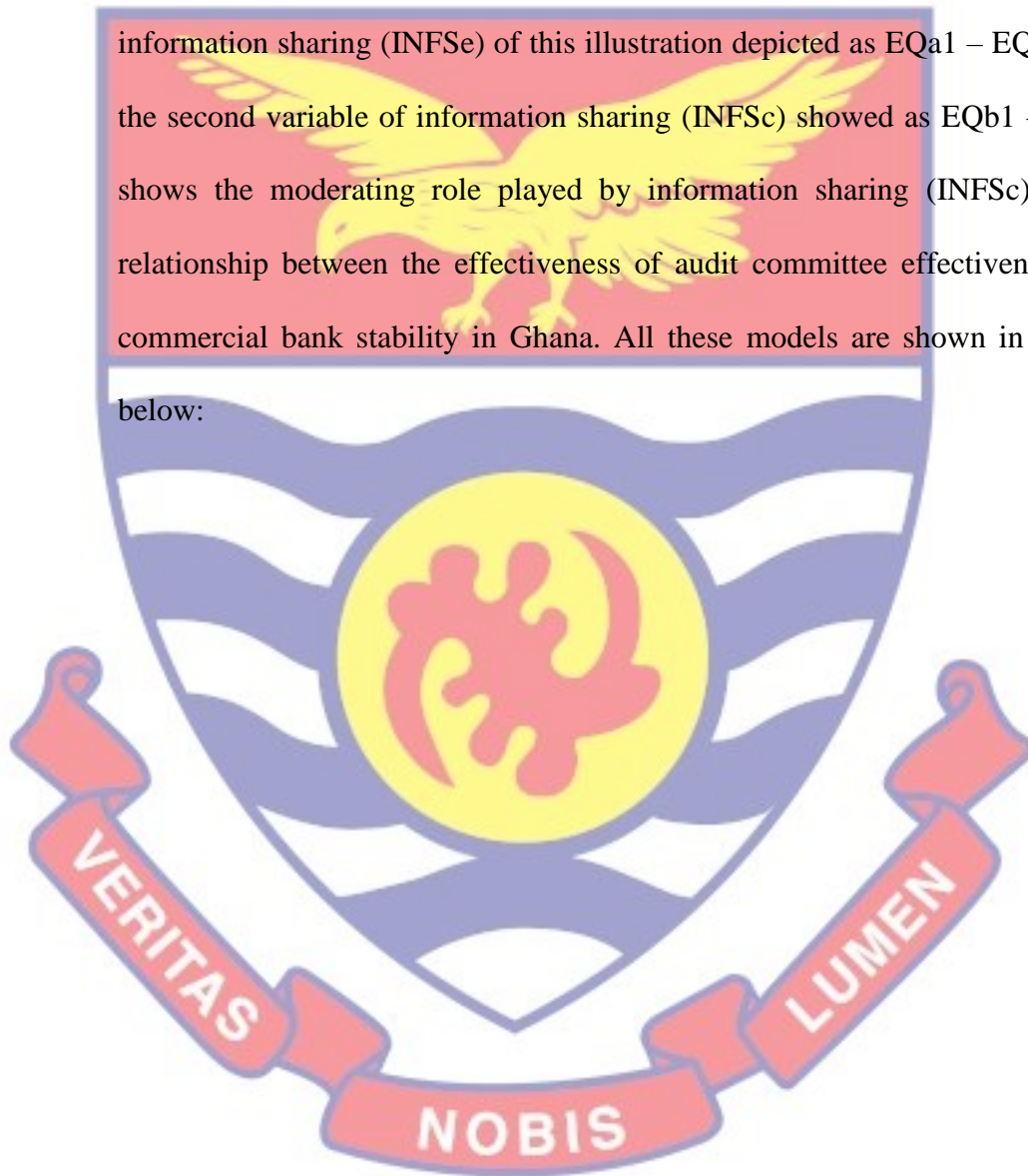
Table 8: The role of information sharing system in the relationship between audit committee effectiveness and bank stability of Ghana

Model	EQa1	EQa2	EQa3	EQa4	EQb1	EQb2	EQb3	EQb4
LnSTAB (-1)	0.035	-0.022	-0.119	-0.112	-0.049	-0.006	0.01	-0.015
	(0.243)	(0.094)	(0.081)	[0.104]	(0.090)	(0.218)	(0.263)	(0.065)
ACEZ	-4.107				-0.703			
	(3.682)				(0.544)			
ACind		-5.334				-0.838		
		(2.008)**				(0.660)		
ACmeet			-1.083				-0.033	
			(1.936)				(0.170)	
ACsiz				0.226				0.129
				(0.391)				(0.077)
INFSe	-0.25	-0.42	-0.362	0.183				
	(0.324)	(0.259)	(0.848)	(0.198)				
INFSc					-0.192	-1.757	-0.257	0.073
					(0.243)	(0.862) *	(1.199)	(0.185)
INTER-e	0.361	0.552	0.114	-0.025				
	(0.377)	(0.295) ***	(0.210)	(0.043)				
INTE-c					0.202	1.758	0.065	0.066
					(0.459)	(0.862) *	(0.300)	(0.107)
CONTROLS:								
BKSIZ	-0.024	-0.038	-0.308	-0.116	-0.101	-0.266	-0.247	-0.108
	(0.210)	[0.112]	[0.296]	(0.111)	(0.125)	(0.130) *	(0.105) *	(0.064)
CAR	1.515	2.532	1.758	1.536	2.782	5.167	4.731	2.458
	(3.097)	(2.075)	(1.870)	(1.522)	(1.007) **	(2.503) *	(2.111) *	(1.034) *
Bcompo	0.235	-0.627	-0.281	0.001	-0.545	0.802	0.809	0.115
	(0.806)	(1.030)	(1.610)	(0.699)	(0.657)	(0.649)	(0.827)	(0.426)
BLEV	2.396	2.657	2.623	2.900	3.157	3.977	5.525	2.529
	(1.460)	(0.898) **	(1.174) *	[0.786] **	(1.098) **	(3.736)	(4.115)	(1.090) *
Diagnosi:								
Prob(J-stat)	0.417	0.117	0.169	0.294	0.300	0.513	0.607	0.213
Hansen	3.231	4.323	5.332	7.322	2.443	8.668	3.233	9.322
AR (2)	0.940	0.612	0.615	0.990	0.870	0.010	0.957	0.839
Group	13	13	13	13	13	13	14	13
No. Instrument	140	140	140	140	140	140	140	140
Observ.	103	103	103	103	103	103	103	103

Note: "STAB (-1) is the first lag of the log of stability variable, ACez refers to audit committee expertise or previous experience, financial, accounting or banking certification, ACind refers to audit committee independence, ACmeet is audit committee meeting as a proxy for diligence, ACsiz is audit committee size, INFSe is frequent use of Information sharing services, INFSC is the cost incurred in using the information-sharing system. BKsiz represents the natural log of the total asset. CAR represents the capital adequacy ratio (Regulatory capital/risk-weighted asset). Bcompo refers to board diversity, representing the ratio of the number of the female board over the total number of board of directors. BLEV represents the total liabilities over the total equity and refers to the ratio of Debt to equity. INTER-e represents the interaction of audit committee variables (ACez, ACind, ACmeet, & ACsiz) and Information sharing patronage through the number of inquiries (INFSe). INTER-c represents the interaction of audit committee variables (ACez, ACind, ACmeet, & ACsiz) and Information sharing cost over total loans and advances. Apart from the diagnosis section, all values in brackets are the standard errors of the coefficient values. All values not in brackets are the coefficient values; ** represents significance at 1%, * represents significance at 5%, and *** represents significance at 10%. The z values of AR (2), probability of z values of AR (2), probability of the J-statistics test, number of instruments, and number of observations are presented in the diagnostics part of Table 8 in the order displayed."

Source: Field survey (2022)

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Table 8 presents results on the moderating role of information sharing system in the relationship between audit committee effectiveness and bank stability by including an interaction term of audit committee effectiveness and information sharing system.

The results from table 8 show the findings of the model EQa1 and explain a very intriguing phenomenon. The interaction term between audit committee experience and credit information sharing patronage (INFSe) had a positive coefficient of 0.361 but insignificant. The introduction of the interaction term causes the audit committee effectiveness variable (ACez), which represents experience obtain a coefficient of -4.107 compared to a coefficient of -0.717 in table 7.

However, the coefficient of information sharing system patronage attained a negative coefficient of -0.250 in Table 8 compared to a positive coefficient of 0.087 in table 7. This means that the interaction term reveals the true nature of the information-sharing system patronage of banks in Ghana. Even though the fragile nature of information sharing system patronage may increase bank instability but impedes bank stability, it complements audit committee effectiveness to improve stability. The net effect of audit committee experience on bank stability can be estimated from the partial differential of bank stability concerning audit committee experience. The net effect of audit committee effectiveness on bank stability is -4.107 + 0*INFSe, which is -4.107 (computed as -4.107 + 0*0.706). The net effect of audit committee experience is -4.107 compared to the coefficient of -0.717 in model EQ1 of objective 1. This explains that audit committee experience in isolation

may not contribute much to bank stability in Ghana unless strong information-sharing system variables had put into practice.

The results are consistent with Kusi et al. (2016), who discovered that banks that institute information sharing system indicators have a complementary impact on other variables that affect stability. Fakhari and Pitenoei (2017) also supported the above findings by elaborating that financial expertise is a personality trait that influences the audit committee's effectiveness and, as a result, improves the company's information environment. Flesher, Nichols and Noland (2004) also explained that the participation of finance experts or those with banking and finance knowledge on a bank's audit committee is expected to contribute to greater stability, hence lowering moral hazards and risk-taking through the implementation of information sharing system. Fajembola et al. (2018) bewailed in the same banking context that audit committee members who possess technical knowledge in finance are likely to be more effective when they understand the complex reports presented to them, which would lead to a reduction of risk exposure and, also acts as a curb on risky behaviours which frequently leads to instability.

The introduction of the interaction term between audit committee effectiveness variable (independence) and information sharing system patronage causes the audit committee effectiveness variable to attain a coefficient of 0.552 at a significant level of 10%, as shown in model EQa2 of table 8. The inclusion of the interaction term causes the audit committee effectiveness variable (ACind) to attain a negative coefficient of 5.334 compared to a negative coefficient of 0.561 in table 7. Nevertheless, the

coefficient of information sharing system (EQa2) reached a negative coefficient of 0.420 in table 8 compared to a positive coefficient of 0.087 in table 7. Thus, the interaction term reveals the actual effect of information sharing system patronage (INFSe) of banks in Ghana. Although the weak nature of information sharing system patronage may encourage bank instability, which means stability is compromised, it complements audit committee independence to enhance stability.

Consequently, the information sharing variable (INFSe) complements audit committee independence to improve stability. The net effect of audit committee effectiveness on bank stability is ⁻5.334 +0.552*INFSe, which is -4.821 (computed as -5.334 + 0.552*0.930). The net effect of audit committee independence is -4.821 compared to the coefficient of 0.561 in model EQ2 of objective 1. This signifies that audit committee independence in isolation may increase bankruptcy which reflects on the instability of banks in Ghana; a good information-sharing system must be put in place to reduce instability to enhance stability. The findings align with Kusi et al. (2016), who found that banks that implement information-sharing system indicators positively affect other variables that determine stability. Fakhari and Pitenoei (2017) also supported the above findings by stating that audit committee independence is a personality attribute that influences the audit committee's effectiveness and, as a result, develops the company's information environment and leading to assurance of stability.

The interaction term between audit committee meeting (Acmeet) and information sharing patronage (INFSe) have a positive coefficient of 0.114 at an insignificant level as depicted in model EQa3 in table 8. The audit

committee effectiveness variable (meeting) had a coefficient of -1.083 as compared to -0.017. Nevertheless, the coefficient of information sharing system patronage (EQa3) attained an insignificant negative coefficient of -0.362 in Table 8 compared to a positive coefficient of 0.087 in table 7. This implies that the interaction term reveals the real nature of banks' information sharing system patronage in Ghana. Even though the fragile nature of information sharing system patronage (EQa3) may encourage bank stability, it complements audit committee effectiveness to improve stability.

The net effect of audit committee effectiveness on bank stability is -1.083 +0*INFSe, -1.083 (computed as -1.083 + 0*5.064). The net effect of the audit committee is -1.083 as compared to the coefficient of -0.017 in model 3 of objective 1. Yet, the coefficient of information sharing variable (INFSe) attained a positive coefficient of 0.093 in table 8 compared to a positive coefficient of 0.087 in table 7. This signifies that the interaction term reveals the true nature of the information-sharing system usage in Ghana. The results are consistent with Kusi et al. (2016), who explained that information sharing system indicators have a complementary impact on other variables that affect stability within the banking sector. Fakhari and Pitenoei (2017) seconded the above discoveries by stating that the diligence character of the audit committee affects the effectiveness of the audit committee, as a result, increases the company's information environment of which is likely to lead to stability.

The introduction of the interaction term between audit committee size and information sharing inquiry had a negative coefficient of 0.025. The audit committee variable (size) had 0.226 compared to a coefficient of 0.122

obtained without the information sharing variable (INFSe). The information-sharing variable (INFSe) had a positive coefficient of 0.183(depicted in table 8), compared to 0.087, as shown in table 7. This means that the interaction term reveals the true nature of the information-sharing system cost (b) of banks in Ghana. When the information-sharing system cost complements audit committee independence, it will maintain instability, reducing stability. The net effect of audit committee effectiveness variable (size) on bank stability is 0.226 + 0*INFSe, which is 0.226 (computed as 0.226 + 0*4.064). The net effect of the audit committee is 0.226 as compared to the coefficient of -1.226 in model EQ4 of objective 1. The findings align with those of Kusi et al. (2016), who found that banks that implement information-sharing system indicators have a complementary effect on other variables that affect stability. Similarly, Fakhari and Pitenoei (2017) backed up the initial conclusion by indicating that the audit committee's size influences its efficacy while also increasing its information environment, which is likely to result in instability.

Furthermore, another moderating variable known as information sharing cost over gross loans and advances (INFSc) was introduced. The introduction of the interaction term of audit committee experience and information sharing cost causes the audit committee effectiveness variable (ACez) to attain a coefficient of 0.202 as shown in model EQb1 of table 8 compared to a coefficient of -0.717 in table 7. However, the interaction term between audit committee experience and information sharing cost incurred was insignificant. This means that the interaction term reveals the true nature of the information sharing cost (EQb1) of banks in Ghana. Even though the fragile nature of the information sharing system (EQb1) may weaken bank

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stability, it complements audit committee effectiveness to enhance stability. The net effect of audit committee effectiveness on bank stability is -0.703 + 0*INFSc, which is -0.703 (computed as -0.703 +0*0.706). The net effect of the audit committee is -0.703 as compared to the coefficient of -0.717 in model EQ1 of objective 1. This explains that audit committee effectiveness in separation may contribute much to bank instability, thus contributing less to stability in Ghana. However, when strong information-sharing system variables are put in place, instability is low, leading to stability development. Likewise, the findings are consistent with Alqatamin (2018) results who evidenced an insignificant connection between the financial expertise of the audit committee. Fakhari and Pitenoei (2017) also supported the above findings by pinpointing that financial expertise is a personality trait that influences the audit committee's effectiveness and, as a result, improves the company's information environment.

The moderating role of information sharing cost in the relationship between audit committee independence and bank stability in Ghana is shown in model EQb2. The interaction term between audit committee independence and information sharing cost had a positive coefficient of 1.758 at a 5% significant level, whiles audit committee independence had -0.838. This means that the interaction term reveals the true nature of the information sharing (EQa2) banks in Ghana. Even though the fragile nature of the information sharing system (EQb2) may weaken bank stability, it complements audit committee effectiveness to improve stability. Likewise, the coefficient of information sharing system (EQb2) attained a negative coefficient of 1.757 in table 8 compared to a negative coefficient of 0.093 in table 7. This means that

the interaction term reveals the true nature of banks' information sharing (INFSc) in Ghana. Even though the fragile nature of the information sharing system (EQb2) may weaken bank stability, it complements audit committee effectiveness to improve stability. The net effect of audit committee effectiveness on bank stability is -0.838 + 1.758*INFSc, which is 0.797 (computed as -0.838 + 1.758*0.930). The net effect of the audit committee is 0.797 as compared to the coefficient of 0.561 in model EQb of objective 1. However, the coefficient of information sharing variable (INFSc) attained a negative coefficient of 1.757 in table 8 compared to a negative coefficient of 0.093 in table 7. This signifies that the interaction of information sharing changes the effect on the stability of banks in Ghana. The results align with those of Kusi et al. (2016), who established that banks that implement information-sharing system indicators have a complementary effect on other variables that affect stability. Similarly, Fakhari and Pitenoei (2017) backed up the previous conclusion by stating that the audit committee's independence impacts its effectiveness and strengthens the company's information environment, which is likely to lead to stability.

The results from the moderating role on the ratio of information sharing system cost (INFSc) over gross loans and advances in the relationship between audit committee meeting and bank stability in Ghana is shown in model EQb3. The interaction term between audit committee meetings and the information sharing system through the use of cost incurred in accessing the system had a positive coefficient of 0.065, which is insignificant. The coefficient of the audit committee is a negative value of 0.033 compared to a negative coefficient of 0.0174. Yet, the coefficient of information sharing

variable (INFSc) attained a negative coefficient of 0.257 in table 8 compared to a positive coefficient negative coefficient of 0.093 in table 7. This means that the interaction term reveals the true impact of banks' information sharing (INFSc) in Ghana. Even though the fragile nature of the information sharing system (EQb3) may weaken bank stability, it complements audit committee effectiveness (meeting) to improve stability. The net effect of audit committee effectiveness on bank stability is -0.033+ 0*INFSc, which is -0.033 (computed as -0.033 + 0*5.064). The net effect of the audit committee meeting is -0.033 as compared to the coefficient of -0.017 in model EQ2 of objective 1. The findings are consistent with Kusi et al. (2016), who explained that banks that implement information-sharing system indicators have a complementary effect on other variables that determine stability. Similarly, Fakhari and Pitenoei (2017) backed up the previous conclusion by stating that the audit committee's diligence affects its effectiveness and strengthens the company's information environment, which is likely to lead to stability. In the presence of CRBs, banks become more robust to stability through reduced adverse selection and moral hazard.

The introduction of the interaction term between audit committee size and information sharing cost had a 0.066 coefficient, whiles the exclusion of information sharing cost obtained a coefficient of 0.129 in table 7. Nevertheless, the coefficient of the information sharing system (EQb4) attained a positive coefficient of 0.073 in table 8 compared to a coefficient of -0.093 in table 7. This means that the interaction term reveals the true nature of information sharing (EQb4) of banks in Ghana. Even though the information-sharing system (EQb4) may weaken bank stability, it complements audit

committee effectiveness to improve stability. The net effect of audit committee effectiveness (size) on bank stability is -0.015ᐧ + 0*INFSc, which is -0.015 (computed as -0.015 + 0* 4.064). The net effect of the audit committee is -0.015 as compared to the coefficient of 1.226 in model EQ1 of objective 1. This explains that when a strong information-sharing system is put in place audit committee will contribute greatly to improve stability in the banking sector than the audit committee working in separation. The findings align with those of Kusi et al. (2016), who established that banks that use information-sharing system indicators positively impact other variables that influence stability. In the same way, Fakhari and Pitenoei (2017) backed up the findings mentioned above by suggesting that the size of the audit committee affects its effectiveness and improves the company's information environment, which is likely to lead to stability.

Results of the control variables for the models assessing the moderating role of information sharing system in the relationship between audit committee effectiveness and bank stability of Ghana

All the models in table 8 also controlled for variables as depicted in Table 7. Concerning model EQa1, bank size had a coefficient of -0.024 at an insignificant level. This implies that a unit increase in the size of a bank will lead to a 0.024 decrease in bank instability of Ghana; hence this would lead to improvement in stability. Similar results were obtained in the other models from EQb1 – EQb4; therefore, the result is consistent with the results of Nyumutsu (2019), following the demand hypothesis set. However, this result is inconsistent with the assertion made by Varotto and Zhaao (2018), among other scholars whose works make similar assertions of large-sized banks being

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exposed to a high systemic risk which could, in turn, lead to instability in the operations of the banks, thereby reducing the stability of banks.

Capital adequacy ratio impacted bank instability in model EQa1 positively. The measure used implies that the capital adequacy is indirectly related to the stability of a bank, with a percentage (1%) increase in capital adequacy leading to a 1.515 decrease in instability within the banking sector. Similar results were obtained for the rest of the models in table 8.

The composition of gender, as seen in the model EQa1 of the table above, is also positively linked to bank instability but the result is insignificantly related to information sharing systems and occurrences of bankruptcy in banks. It indicates that a one-point increase in the gender composition of the board of directors causes a 0.235 increase in the instability of banks, which in the long run declines stability. This is inconsistent with the findings of Jing-ying, Wen-quan and Xiu-Li (2012), and Owen and Temesvary (2017), which remarked that a threshold of women representatives on the board of a bank which in this case is the audit committee, leads to effective auditing of the bank as it gives room for dynamics submissions to improve stability.

The leveraging ratio of bank as seen in EQa1 to EQb1 of the table above, is positively correlated to bank instability. This implies that an increase in leveraging of bank causes a 2.396 increase in instability of banks. Thus, an increase in leveraging of banks would lead to a decrease in bank resilience, hence this is in supports of an assertion by Avgouleas (2015) that bank leverage ratios are micro prudential measure and promotes stability.

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Robustness

Several methodologies were used in the research to assure the results' reliability, efficiency, and correctness. Firstly, the study screens for extreme values to ensure that the data is normal and there is no multicollinearity in the dataset. Controlling for these improves the findings' dependability and correctness. Secondly, the two-step contrast GMM technique is used in the investigation to compensate for potential autocorrelation, heteroscedasticity, and endogeneity issues in the dataset. The J-statistics and Arellano–Bond serial correlation tests (2) derived from the GMM estimations show that the models are resilient. Again, the signs of the variables are widely uniform across the estimated models, indicating that the results are robust, dependable, and can be generalised

Agglomerating effect in all the models

The researcher included the lagged bank stability variable (non-performing loans) in all the models to adjust bank stability to its long-run equilibrium value partially. Because bank stability is a process, historical levels of stability influence current levels. Almost all of the models discussed in this chapter had a negative coefficient for the lag instability variable. The negative sign of the coefficient of the lag stability variable in nearly all of the models indicates that bank stability in Ghana's prior eras impacts adversely to that of the current periods. The importance of the lagged dependent variable means that the system GMM is a suitable predictor, and the empirical data can be used for parameter estimation.

Chapter Summary

The chapter presented an analysis of the stability of banks in Ghana by the use of fourteen banks. The study reveals that the audit committee has a role to play when it comes to the stability of banks. After, the chapter presented a descriptive analysis of the variables used in the study. The descriptive analysis revealed that based on the four indicators employed to measure audit committee effectiveness, banks in Ghana were involved in greater effectiveness of audit committee from 2010 to 2019; however, stability is low. The descriptive analysis also revealed that banks in Ghana have bad records when it comes to credit information sharing. Also, the chapter continued to discuss the separate effects of audit committee effectiveness and information sharing system on bank stability of Ghana. Based on the discussions, it is evident in data that both audit committee effectiveness and information sharing system are required to foster stability. The chapter also discussed the moderating role of the information sharing system in the relationship between audit committee effectiveness and stability of banks in Ghana. The discussions revealed that a robust information-sharing system is required to enhance audit committee effectiveness on bank stability.
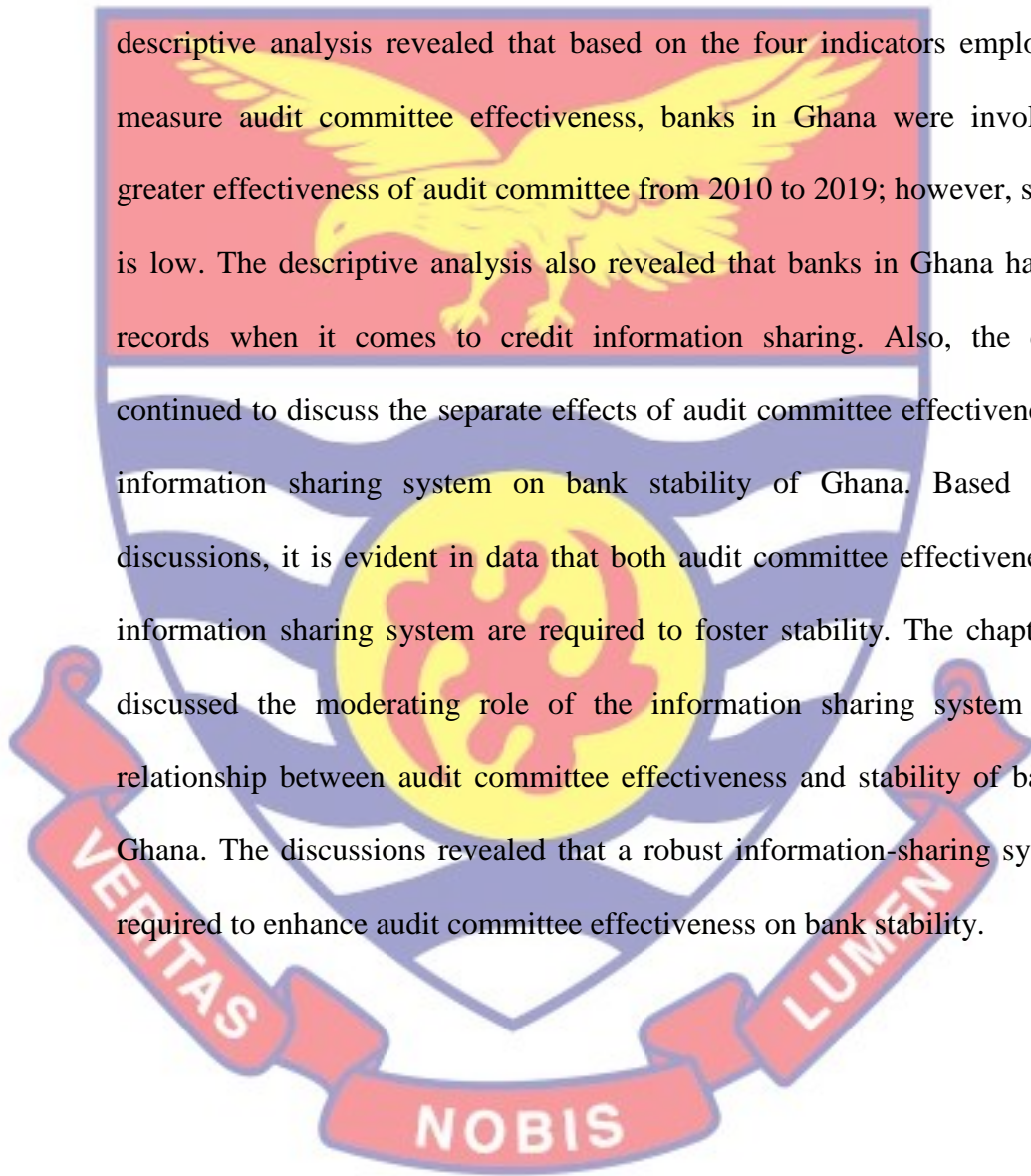
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The primary findings from the entire investigation were presented in this chapter. A summary of the results, conclusions, recommendations, and proposals for future research were also included in this chapter.

Summary of the Research

Ghana has attained a low level of stability in the banking sector over the years, although there is a potential to close the stability gap. Literature suggests various factors that could boost up resilience. However, in the first chapter, assimilative importance was highlighted on the role of the information sharing system in the relationship between audit committee effectiveness and bank stability of Ghana. This is because, due to the poor information sharing system in the banking system of Ghana, improving audit committee effectiveness in banks is not contributing much to the level of stability of banks in Ghana.

The literature review provided supportive theories, conceptual review, and empirical evidence on the relationship among audit committee effectiveness, information sharing system, and stability of banks in Ghana. The agency theory, asymmetric information theory, and resource-based theory was employed explicitly in the study. The empirical review theorised inconclusive findings on the audit committee effectiveness on bank stability in Ghana. This is because the effects of audit committee effectiveness and information sharing systems on bank stability have been analysed separately in prior research efforts. However, this study looked at how audit committee

effectiveness interacts with the information sharing system of various commercial banks in Ghana to hypothesise that the information sharing system moderates the relationship between audit committee effectiveness and bank stability in the Ghanaian economy.

The study was based on the positivism research paradigm through the use of a quantitative approach. The study employed the explanatory research design to estimate various models. The study considered audit committee within the banking sector as the unit of analysis. Also, only 14 out of 23 banks in Ghana were included in the study because of the availability of data. Moreover, the study developed three fundamental models. The first model specification established the impact of audit committee effectiveness on the bank stability of Ghana. The second model also showed the relationship between the information-sharing system and bank stability of banks in Ghana. Lastly, a third model was to determine the moderating role of the information sharing system in the relationship between audit committee effectiveness and bank stability of Ghana. To estimate all of the models, the researchers used the Generalised Method of Moment estimation approach.

Key Findings

The findings of this investigation yielded several insightful and noteworthy but mixed conclusions. The study's first objective was to examine the effect of audit committee effectiveness on the bank stability of Ghana. The second objective examined the relationship between the information-sharing system and bank stability of banks in Ghana. The third objective examined the moderating role of the information-sharing system in the relationship between audit committee effectiveness and bank stability of Ghana.

The key findings on these objectives are summarised in the table below:

Table 9: Summary of Results on the Hypothesis

Hypothesis	Confirmation
Ho: There is no significant effect of audit committee effectiveness on bank stability of Ghana.	Rejected
Ho: There is no significant effect of audit committee effectiveness on bank stability of Ghana.	Rejected
Ho: There is no significant relationship between information sharing system and bank stability of Ghana.	Rejected
Ho: There is no significant moderation effect of information sharing system on the relationship between audit committee effectiveness and bank stability of Ghana.	Rejected

Source: Annual Report, GSE, XDS Data Ghana (2022)

From the results on the first objective, a shred of strong evidence is found that audit committee effectiveness had a significant positive effect on bank stability of the sample of Ghana. This implies that establishing an audit committee in Ghana will increase bank stability. Also, based on the second objective, the information sharing system was found to have a significant positive effect on the bank stability of Ghana. This signifies that maintaining a strong information-sharing system is necessary for the bank stability of Ghana.

Results on the third objective specified that information sharing system gives support to audit committee effectiveness to contribute more to the stability of banks in Ghana, based on the deduction that the introduction of the interaction term of audit committee effectiveness and information sharing system through the use of the number of enquires made (INFSe) in the equations of objective1 causes the audit committee effectiveness

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variables(ACez, ACind, ACmeet, ACsiz) to attain a coefficient of -4..107, -5.3343, -1.0826, -.8715 and 0.2257 respectively as compared to a coefficient of -0.7169, -0.5607, -0.0174,-o.2260, 0.1221 in the first equation and the interaction term itself was positive and insignificant. The study further examined the specific roles each of the two information-sharing indicators played to the relationship between audit committee effectiveness and bank stability of Ghana. The coefficient of the interaction term between audit committee effectiveness (ACez, ACind, ACmeet, ACsiz) and each information sharing inquiry and information sharing cost was positive and insignificant to stability. This means that bank size, board diversity, capital adequacy of a bank, and bank leverage strengthen the relationship between audit committee effectiveness and stability of the sampled banks in Ghana.

Conclusion

Based on the results, the inference on the first hypothesis is that the audit committee's effectiveness is required to improve on bank stability of Ghana because audit committee effectiveness had a positive effect on bank stability. Besides, the conclusion on the second hypothesis is that the development in the information-sharing system of Ghanaian banks will be required to increase bank stability by overcoming some of the resistance attributes posed by officials who oppose bank stability. Finally, about the third hypothesis, the study concludes that a robust information sharing system will be required to enhance audit committee effectiveness on the bank stability of Ghana.

Recommendations

With the first objective, the researcher recommended that banks in Ghana should continue to encourage the mandatory practices that improve audit committee performance to raise stability within the banking sectors. However, to objective three, such efforts will yield much more stability if policies are also implemented to improve the patronizing of information sharing systems. Specifically, audit committee effectiveness can better improve bank stability by encouraging the usage of the system (through increasing the willingness to use and frequency of patronage of the services).

Reduction in the size of banks will expose the banks to a low systemic risk, which could, in turn, improve stability in the banks' operations to make agents and principals use the available resource. Also, improvement in and an appropriate level of capital adequacy within the banking sector would ensure that the bank has adequate capital to expand its operations while also having enough net worth to withstand any financial downturns without going bankrupt. It's a ratio that measures a bank's ability to satisfy its short-term obligations as well as other risks, including credit risk, market risk, and operational risk. Encouragement of Board diversity would enhance the monitoring and leadership function of a board of directors. Board diversity may also serve as a positive signal to the firm's environment or stakeholders, increasing its reputation and possibly symmetry by aligning its internal organisation with its environment.

Finally, the leveraging ratio is a measurement of financial leverage or the extent to which financial firms fund their operations with their equity. The more debt financing a company employs, the higher its financial force, which

means higher interest payments and a greater risk for creditors and investors. As a result, excessive corporate leverage makes financial companies more vulnerable to shocks and may damage their repayment capabilities. Hence, improvements in information sharing systems will also positively impact Ghana banks' stability as mentioned in the second objective.

Suggestions for Future Research

First and foremost, other studies could build on this current study by examining the moderating role of the information sharing system in the relationship between audit committee effectiveness and bank stability of other developing countries. Also, further studies can scrutinise the effect of audit committee effectiveness (authority, i.e., responsibility, and resources, i.e., access to management and auditors) that affect bank stability and how they interact with the information-sharing system to affect bank stability. Other sources of information sharing system variables include the Hudson Price Data Limited and Dun & Bradstreet Credit Bureau Limited. Data on information sharing system indicators were not obtained from these other sources. As a result, the researcher recommended that, if at all possible, future studies use these indicators from these other sources.

Furthermore, although the z-score is the most widely used and standardised measure of bank stability in literature, there are various other measures of bank stability. Therefore, it is suggested that further research can employ Tobin Q, return on asset, the ratio of non-performing loans and advances to total loans and advances. Finally, different estimating techniques than those used in this study could be used in future research.

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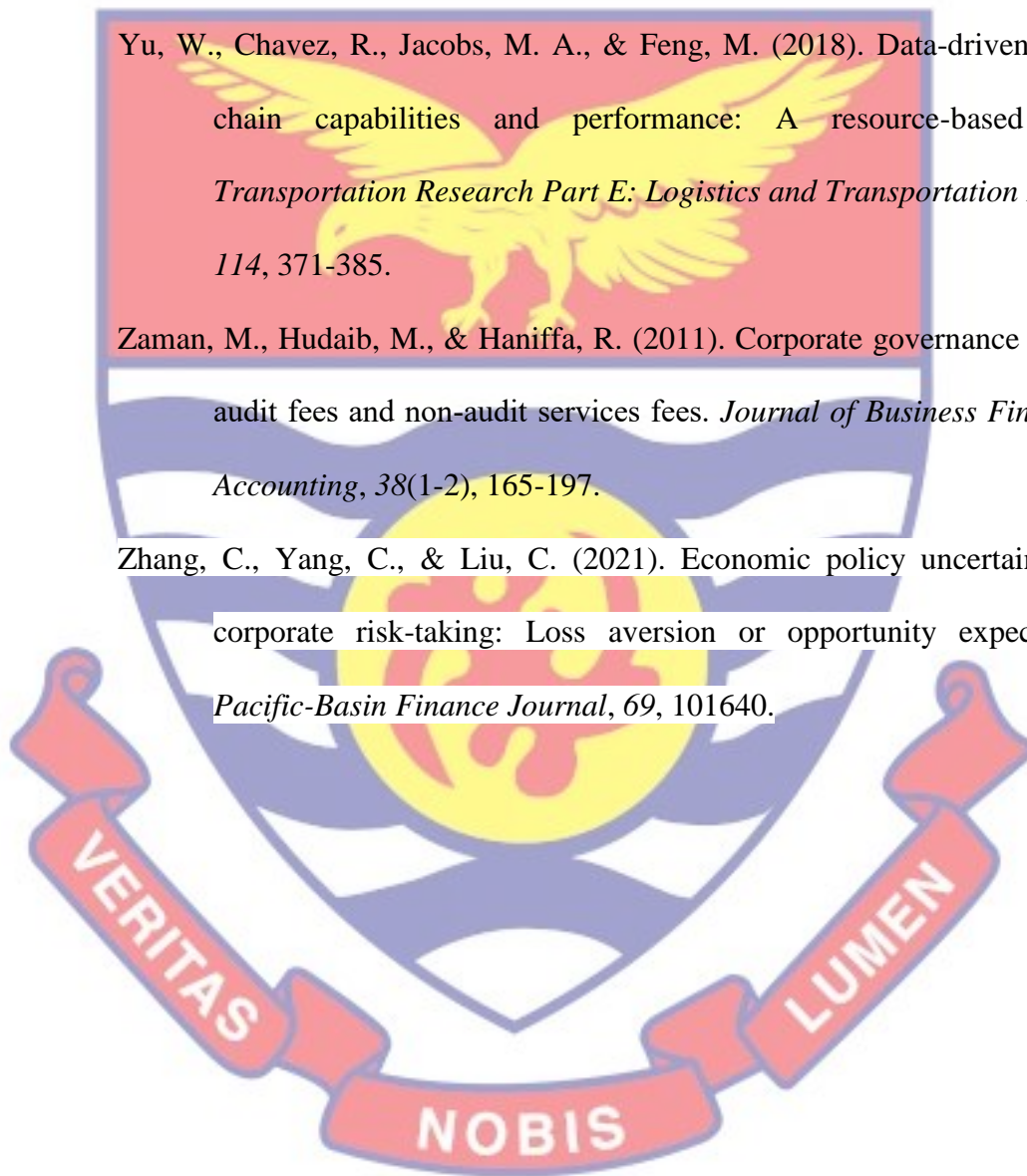
APPENDIX

Banks Included in the Study

1. Absa Bank Ghana Limited

2. Access Bank (Ghana) Limited

3. Agricultural Development Bank (ADB)

4. Bank Of Africa (Ghana) Limited

5. CalBank Plc

6. Ecobank Ghana Limited

7. Fidelity Bank Ghana Limited

8. Ghana Commercial Bank

9. Guaranty Trust Bank (GTB) Ghana Limited

10. Republic Bank Ghana Limited

11. Prudential Bank Limited (PBL)

12. Societe Generale (SG) Ghana Limited

13. Standard Charted Bank Limited (SCB)

14. Zenith Bank Limited