

**ADVANCING THE PERFORMANCE OF COMMERCIAL BANKS IN  
GHANA: DOES QUALITY OF INTERNAL AUDIT FUNCTION MATTER?**

KNUST

By

**BERNICE AFI BEDI**

A Thesis Submitted to Department of Accounting and Finance,  
Kwame Nkrumah University of Science and Technology, Kumasi  
In Partial Fulfillment of the Requirement for the Degree Of

Master of Science  
**(ACCOUNTING AND FINANCE OPTION)**

School of Business  
College of Humanities and Social Sciences

NOVEMBER, 2023

## DECLARATION

I hereby declare that this submission is the result of my own work towards the Masters of Science Degree in Accounting and Finance programme and that, to the best of my knowledge, this study contains no materials previously published by no person or submitted for the award of any other degree of the University, except where acknowledgement has been duly made in the text.

Bernice Afi Bedi .....

(Name & PG9377421)

Signature

Date

Certified by:

Dr. Richard Owusu-Afriyie .....

(Supervisor)

Signature

Date

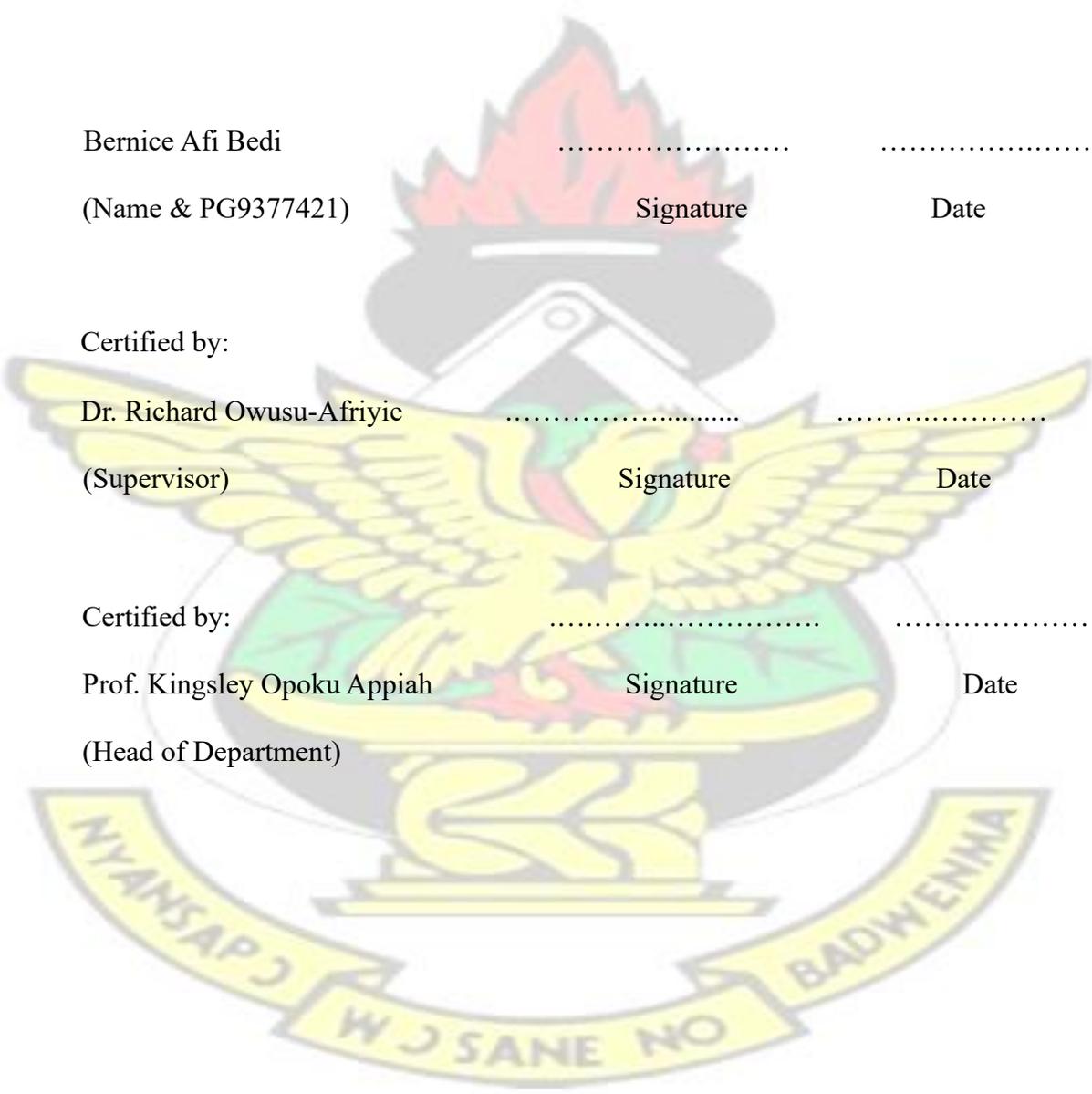
Certified by: .....

Prof. Kingsley Opoku Appiah .....

(Head of Department)

Signature

Date



## **DEDICATION**

I dedicate this thesis first of all to God for his invaluable grace and mercy throughout this program. To all my family, to Mr. Daniel Adonu, former Director of Internal Audit, Ministry of Health for all the pieces of advice, support and encouragement throughout my study. Last but not least, I extend my sincere appreciation to my Supervisor and colleagues for their contributions in devising ways towards the completion of this thesis



## **ACKNOWLEDGEMENT**

First of all, I want to praise and thank God Almighty for His protection, wisdom, and favour during my thesis work, which enabled me to successfully complete my

research. The completion of this undertaking could not have been possible without the participation and assistance of so many people whose names may not all be listed. We genuinely appreciate the various ways in which they have contributed. A very special thanks to Dr Owusu Afriyie my supervisor, whose advice enabled me to finish this thesis. Last but not least, I want to sincerely thank my family for supporting me while I was putting this thesis together.



## **ABSTRACT**

This study examines the nexus between the quality of internal audit (professional competence, audit independence, and audit quality) and the performance of banks in a developing country context, Ghana. The study uses an ordinary least square (OLS) regression model on a primary and secondary dataset of 20 banks over five years (2017

to 2021). The study finds that professional competence has an insignificant positive relationship with financial performance. However, audit independence and quality audit work have a positive and significant relationship with the performance of banks in Ghana. Also, bank size positively affects financial performance. Liquidity records a negative relationship with the bank's performance. Board size, however, records an insignificant positive relationship with the financial performance of banks in Ghana. The study concludes that audit independence, quality of audit work, and bank size increase banks' performance in Ghana. However, professional competencies of internal audit and board size do not predict the financial performance of banks; however, liquidity decreases banks' performance in Ghana. The study recommends there should be adequate professional training for internal audit staff to enhance audit quality which can help improve the effectiveness of internal audit functions. Management of banks should consider training and professional CPDs to enhance the professional competencies of internal auditors or internal audit staff. Finally, management, government agencies, potential investors, and other pertinent stakeholders of financial institutions should use the study's findings and other relevant to assess the bank's performance of banks in developing countries.

**TABLE OF CONTENT DECLARATION**

..... **ii**

DEDICATION .....**iii**

ACKNOWLEDGEMENT .....  
**iv**

ABSTRACT .....  
**v**

TABLE OF CONTENT .....  
**vi**

LIST OF FIGURES ..... x

x

LIST OF TABLES ..... xi

xi

CHAPTER ONE ..... 1

INTRODUCTION ..... 1

1.1 Background to Study..... 1

1.2 Problem Statement ..... 2

1.3 Research Objectives..... 4

1.4 Research Questions ..... 4

1.5 Significant of the Study ..... 5

1.6 Brief Methodology ..... 5

1.7 Scope of the Study ..... 5

1.8 Limitations of the study ..... 6

1.9 Organization of the Study ..... 6

CHAPTER TWO ..... 7

LITERATURE REVIEW ..... 7

2.1 Introduction..... 7

2.2 Internal Audit Function ..... 8

2.2.1 Proficiency of Internal Audit ..... 13

2.2.2 Internal Audit Independence..... 14

2.2.3 Internal Audit Quality ..... 16

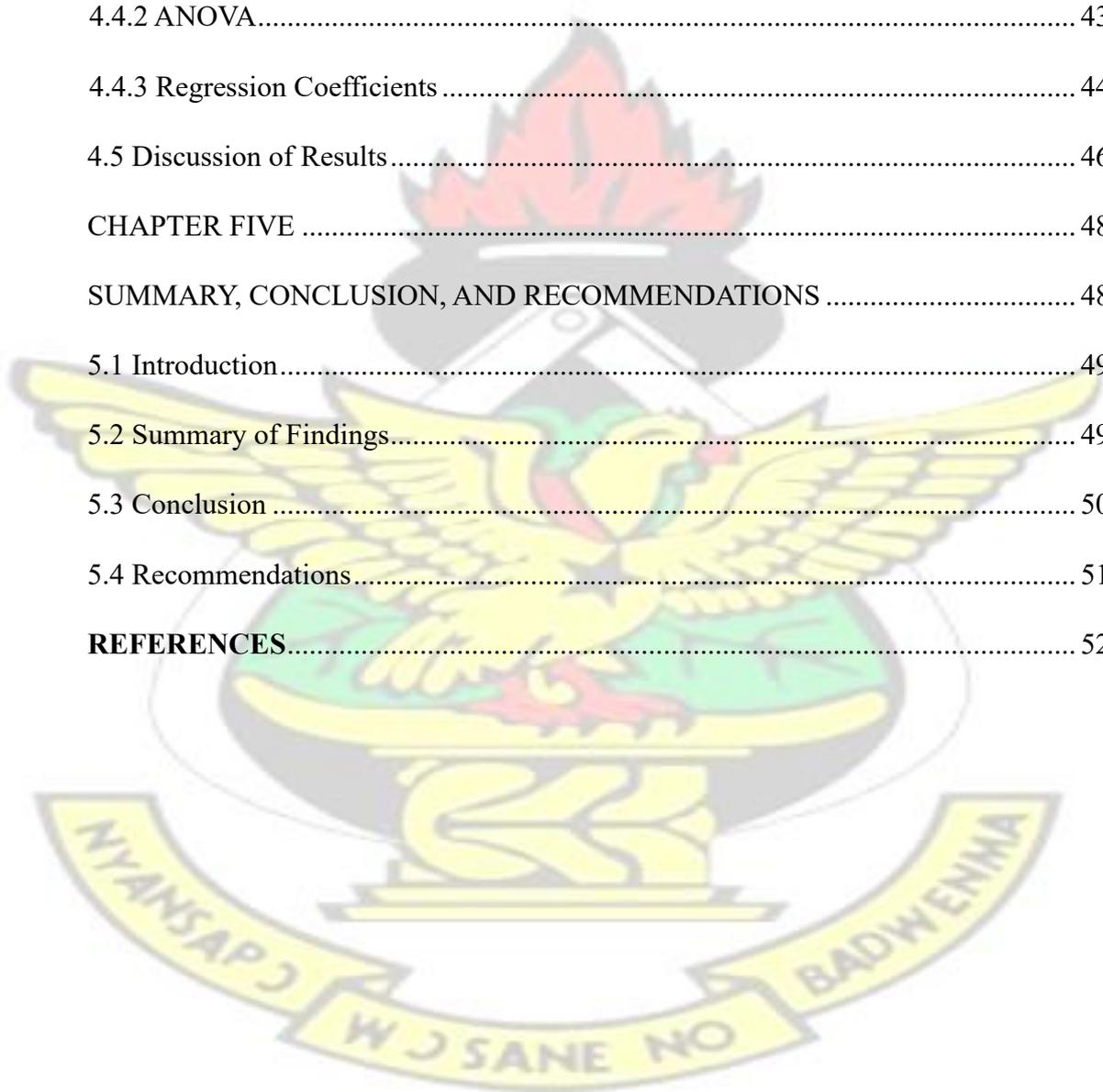
2.3 Financial Performance ..... 20

2.4 Internal Audit and Financial Performance ..... 21

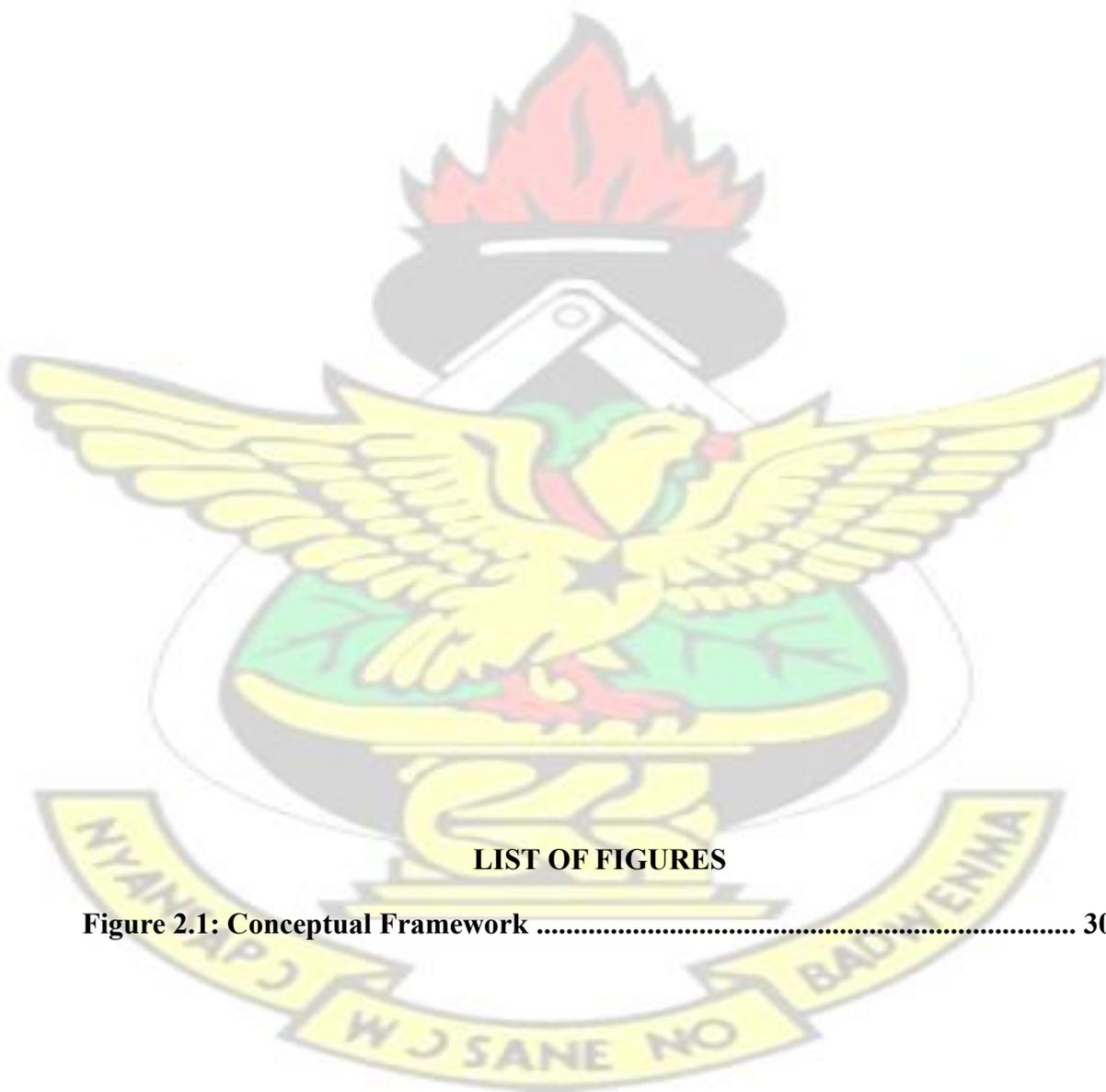
2.5 Other Determinants of Bank's Performance ..... 22

2.5.1 Liquidity .....	22
2.5.2 Firm size .....	22
2.6 Theoretical Review .....	22
2.6.1 Stakeholder Theory.....	23
2.6.2 Agency Theory.....	23
2.6.3 Institutional Theory .....	24
2.7 Empirical Review.....	26
2.8 Conceptual Framework.....	29
CHAPTER THREE .....	30
RESEARCH METHODOLOGY.....	30
3.1 Introduction.....	30
3.2 Research Design.....	30
3.3 Population and Sample Size.....	31
3.4 Data Collection .....	32
3.5 Data Analysis .....	32
3.6 Regression Model .....	33
3.7 Definition and Measurement of Variables .....	33
3.7.1 Financial performance .....	33
3.7.2 Professional proficiency .....	34
3.7.3 Quality of audit work.....	34
3.7.4 Auditor's independence.....	35
3.7.5 Liquidity .....	35
3.7.7 Firm Size.....	35
3.8 Validity and Reliability .....	39
CHAPTER FOUR.....	40

PRESENTATION AND DISCUSSION OF RESULTS .....	40
4.1 Introduction.....	40
4.2 Descriptive Statistics and Correlation Matrix.....	40
4.3 Testing for multicollinearity using the correlation coefficient.....	41
4.4 Regression Results.....	42
4.4.1 Summary of the Model.....	43
4.4.2 ANOVA.....	43
4.4.3 Regression Coefficients .....	44
4.5 Discussion of Results.....	46
CHAPTER FIVE .....	48
SUMMARY, CONCLUSION, AND RECOMMENDATIONS .....	48
5.1 Introduction.....	49
5.2 Summary of Findings.....	49
5.3 Conclusion .....	50
5.4 Recommendations.....	51
<b>REFERENCES.....</b>	<b>52</b>



# KNUST



## LIST OF FIGURES

Figure 2.1: Conceptual Framework .....	30
--	----

# KNUST



## LIST OF TABLES

Table 3.1: Variable Explanations .....	37
Table 4.1: Descriptive Statistics .....	39
Table 4.2: Correlation Matrix .....	41
Table 4.3: Summary Results .....	42
Table 4.4: ANOVA .....	43
Table 4.5: Regression Coefficient.....	45

# KNUST



# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to Study

Internal audit quality serves as an assurance of reporting quality financial statements for stakeholders of listed or non-listed firms, and private and public organizations in emerging and advanced countries (Brekumi et al., 2023). Again, it serves as a firm's basis for those charged with governance to detect errors, fraud, and other operational activities (Clarkson, Gibbs and Shroeder, 1995). Further, internal audit quality boosts stakeholders' confidence and assures the reliability and validity of financial information due to its contribution to reporting quality financial reports (Brekumi et al., 2023). Stakeholders rely on quality financial reports to make prudent decisions, and thus, they have a keen interest in internal audit quality that can negatively or positively affect an institution's operations (Clarkson et al., 1995). For instance, external (government, customers, competitors, public) and internal (employees and management) relied on the quality of audit since it significantly affects them in making prudent decisions (Dill, 1958; Murray and Vogel, 1997).

The internal audit unit addresses these issues by providing relevant systems and quality information in enhancing support for staff and management of the institutions in the achievement of the institutions' objectives, stakeholders' worth, and financial performance (Cashell and Aldhizer, 2002). The internal audit units provide unbiased systems and information for high-hierarchy authorities to efficiently manage the institution's scarce resources (Brekumi et al., 2023). Again, the internal audit unit gives top management reliable, valid, objective data in managing the institutions' operations. DeAngelo (1981) argues that internal audit quality is enhanced when the internal audit

department can detect and prevent a reasonable amount of material misstatement due to fraud or errors and adequately account for them. In this case, internal audit quality can be explained in two key points; (1) the ability to detect material misstatement and (2) the promptness in disclosing material misstatements during auditing processes. Internal audit can also be measured using two indicators; (1) number of years of auditing practice (or experiences), and (2) the professional accounting of staff.

The above discussion shows that internal audit quality has direct consequences on the performance of firms; however, few studies in extant literature have delved into exploring this relationship. Previous research has explored the relationship between audit quality and bank performance in firms, public institutions, local governments, and NGOs (Alzeban, 2020, Brekumi et al., 2023; Bananuka et al., 2018, Bednarek, 2018, Christopher, 2015), neglecting financial sectors. Bankruptcies, liquidity crises, financial instabilities, or financial failure of recent institutions in every country have been the banking sector. The banking sector contributes significantly to the economic development of every nation; however, they are faced with bankruptcy issues. Aslam and Haron (2020) argue that banks' persistent failure results from a lack of internal audit quality. This study contributes to the existing literature by examining the nexus of internal audit quality and banks in Ghana, a country that has been coupled with bank failure in recent times.

## **1.2 Problem Statement**

Internal audit quality has become a critical issue due to international financial crises, especially in every country's era of a global pandemic. Orazalin et al. (2016) and Aslam and Haron (2020) conclude that one fundamental cause of these financial crises is the

lack of internal audits. They assert that the massive bankruptcies of banks are a result of a lack of internal audit quality. Recently, the Government of Ghana disbursed over GH¢21 billion to paid collapsed firms in the financial sector due to a lack of corporate governance and internal audit quality. Henceforth, internal audit quality has become a topical issue in research due to ongoing fraudulent activities, international economic declines, and bankruptcy issues in the banking sector (Soh and Martinov-Bennie, 2015; Aslam et al., 2020).

Internal audit promotes accountability, transparency, and a true reflection of banks' financial reporting that boosts stakeholders' confidence (Aslam and Haron (2020). In addition, the quality of internal audit improve the bank's value, efficiency, and effective operations geared to growth and financial performance (Avino et al., 2019; Bednarek, 2018; Hazami-Ammar, 2019; Aslam et al., 2020; Orazalin et al., 2016). Surprisingly, few studies focus on internal audits in developing countries such as Ghana. Previous studies that have explored internal audit quality and performance in developing countries focused on microfinance or Islamic banks (see Aslam et al., 2020), neglecting listed banks that are the core commercial banks in developing countries. In addition to these findings, most past research on the relationship between internal audit quality and performance is contradictory (Sulub et al., 2020). For example, Sulub et al. (2020) posit that internal audit has no direct effect on performance, whereas Aslam et al. (2020) report that internal audit increases a bank's performance. This current study fills the above gaps by investigating whether the competencies and independence of internal auditors and internal audit quality affect the financial performance of listed and non-listed commercial banks in Ghana, a developing economy with recent bank failure, bankruptcy, or liquidity.

### 1.3 Research Objectives

The study's primary purpose is to investigate whether internal audit quality influences the bank's performance in a developing country, Ghana. The specific objectives are as follows:

1. To assess whether the internal audit's professional competence affects the bank's performance in Ghana.
2. To ascertain the nexus between audit independence and the performance of banks in Ghana.
3. To examine whether internal audit quality improves bank's performance in Ghana.

### 1.4 Research Questions

Based on the above research objectives, the following the research questions for the study:

1. Does internal audit professional competence affect the performance of banks in Ghana?
2. What is the nexus between audit independence and banks' performance in Ghana?
3. What is the effect of internal audit quality on bank performance in Ghana in Ghana?

### **1.5 Significant of the Study**

Apart from the study's significant contribution to the existing literature on the nexus of audit quality and bank performance in developing countries, the findings would be beneficial to the government, stakeholders, and policymakers of Ghana and other developing countries with similar jurisdictions by providing them with an in-depth of understanding of audit quality attributes and its impact of banking activities. Also, the study's findings would highlight strategies for managing resources in the banking sector effectively. Indeed, the research would suggest some solutions to help deal with any negative about audit function quality on a bank's performance. The outcome of this study can add to extant scholarly studies and future research into internal audit quality functions in academia in developing and emerging economies.

### **1.6 Brief Methodology**

This present research is a quantitative study using both primary and secondary data to achieve the research objectives. Also, the research design includes descriptive and explanatory strategies to examine the nexus between internal audit quality and the financial performance of banks in Ghana. In addition to the secondary data (financial data), the study uses questionnaires to collect primary data to ascertain the primary information about the banks. The study tested the reliability and validity of data using Cronbach Alpha and VIF to check the interaction among the operationalized indicators or constructs. The Stata software are employed to estimate the outcomes for discussion.

### **1.7 Scope of the Study**

The study focuses on the financial sector in a developing country context. The study explores the effects of audit independence, professional competencies, and internal

audit quality on Ghana's financial performance of listed and non-listed banks. The study involved twenty (20) banks in total consisting of ten (10) listed and ten (10) non-listed. The banks involved both consist of indigenous and foreign-owned banks.

### **1.8 Limitations of the study**

The limitation also pertains to the random sampling technique employed to select the listed and non-listed on the GSE. The study uses a random sampling technique due to financial restraints, access to data, and time. The study uses only 20 listed and nonlisted banks in one developing country, Ghana, and the generalization of the study's findings to developing countries can be problematic. However, since internal audit systems and performance in developing countries are similar, the study's findings can still be useful for policymaking. The researcher believes that the study still tends to influence the outcome.

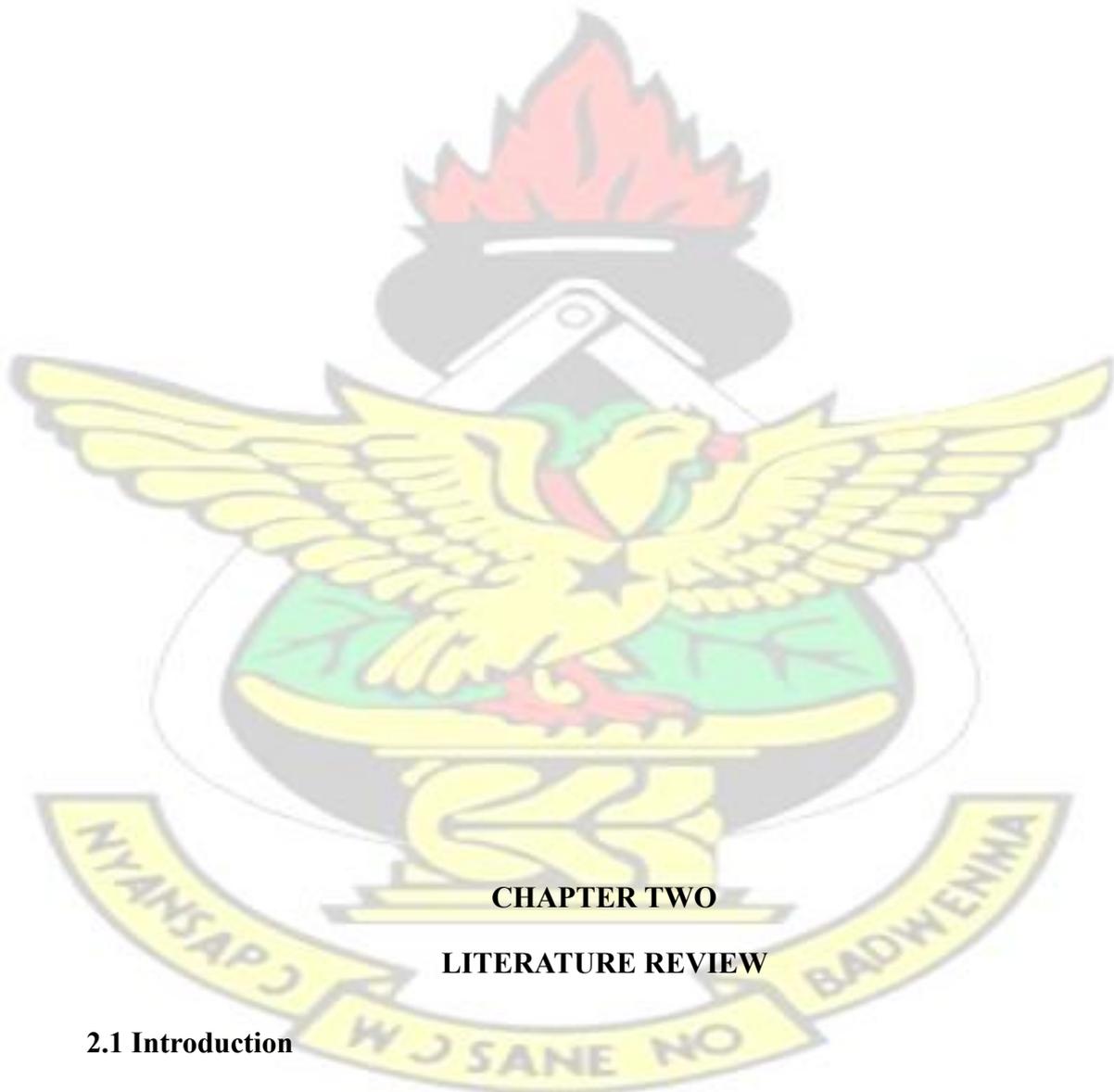
### **1.9 Organization of the Study**

The study is divided into five chapters. The introductory chapter encompasses various components, including the background of the study, the problem statement, research objectives and questions, the significance of the study, a concise description of the methodology, the scope of the research, limitations, and the structure of the thesis. Chapter two of the work presents a comprehensive literature review. The primary objective of the literature review is to elucidate various concepts, conduct empirical reviews, examine existing theories, and analyze conceptual frameworks.

Chapter three presents the methodologies employed in the study. The study encompasses several components such as design, population, sample, sampling methodologies, data sources, data processing, models and measurements, and tests of

significance. Chapter four presents the findings and analysis of the study following the research objectives. The fifth chapter of this study serves as a conclusion, providing a summary of the findings, conclusions, and implications or recommendations derived from the study's results.

KNUST



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

The chapter reviews the existing literature on the topic. According to Creswell (2009), literature review refers to the act of identifying and summarizing research-oriented findings of a topic. The chapter is fourfold. One, the chapter discusses the concepts of

audit quality and bank performance. Two, the study provides empirical reviews of extant literature. Three, the study provided the theories, and the study finally gives the conceptual framework based on the research objectives.

## **2.2 Internal Audit Function**

The internal audit is responsible for attaining a firm's goals and the execution of strategies for its success (Franck and Sundgren, 2012). The internal audit determines the credibility, authenticity, and dependability of financial and operational reports or information received from different firm divisions. The suitable firms' decisions at all management levels are taken for effective and efficient execution of internal audit responsibilities. In addition, there must be a firm's independent, that is, the internal audit activities such as evaluations, implementation of strategies, information, and conclusions must not influence the firm's management. In this manner, the communication between management and the internal audit is principally based on the internal audit report. According to Barua, Rama, and Sharma (2010), this serves as a significant guideline for the successful management of the firms.

Additionally, the internal audit function plays a crucial role in supporting the functioning and effectiveness of the audit committee and audit function, ensuring that the objectives of the organization align with the financial reporting oversight responsibilities of the latter (Goodwin and Yeo, 2001; Goodwin, 2003; Scarborough, Rama, and Raghunandan, 2004). The presence of the internal audit function as a means of influencing corporate governance processes is supported by government reports and previous research conducted by Goodwin and Kent (2003) as well as Collier and Gregory (1996).

Furthermore, Al-Shammari (2010) states several factors of internal audit functions: The internal control systems and arithmetic assessments; ensuring appropriate accounting and internal controls systems, and instituting suitable internal control systems to improve facilities proposed systems. Goals and procedures assessments in determining the flaws in the company's systems and procedures, suggesting the appropriate modifications and enhancements needed, and offering the authority to the internal auditor to examine the aspects of establishment activities while considering the staff commitment to the firm procedures and policies. This implies that the internal auditor clarifies the policies and procedures to employees and monitors their successful implementations. Protection of established funds against manipulation and fraud to detect fraud and reduce losses arising from neglect/abuse (loss of proper storage) as the development and implementation of systems are done.

According to the research conducted by Beyanga (2011), the presence of a high quality internal audit can contribute to the reduction of overhead costs. This is achieved through the identification and implementation of efficient strategies that enhance the organization's ability to capitalize on opportunities while adequately protecting its assets. The findings suggest that such measures can have a substantial impact on the financial performance of the organization. The report reiterates that the quality of audit work plays a crucial role in facilitating performance improvement for management. According to Fadzil et al. (2005), the involvement of internal auditors in a company's operations contributes to enhanced effectiveness and efficiency, ultimately leading to a rise in shareholder value. In conclusion, Hermanson and Rittenberg (2005) posited that

the presence of a proficient internal audit quality function is correlated with enhanced organizational performance.

Most Institutions presently rely on internal audits to provide assurance of no risk and compliance processes and internal control. According to Mihret and Yismaw (2007), an internal audit helps companies identify and assess the risks they might face in achieving their business objectives and be better prepared for potential risks. According to the research conducted by Mihret, James, and Mula (2010), it is asserted that internal audit contributes value to the organization by offering assurance that its risk exposures are adequately comprehended and controlled. Consequently, this aids a company in the identification and assessment of hazards, positioning the profession at the forefront of risk management.

Furthermore, according to Mulugeta (2008), the internal audit function plays a crucial role in ensuring the review and correction of controls. This aids organizations in evaluating the adequacy of the controls, such as policies and procedures, implemented to enhance the effectiveness and efficiency of financial reporting. The internal control processes, when performed by the internal audit function, offer a level of confidence that the organization's goals are effectively met concerning its operations, financial reporting, and adherence to regulatory requirements (COSO, 2013).

The external auditing standards, such as ISA 400 and AUS 402, acknowledge the importance of an efficient internal audit function in enhancing the control environment. This is achieved through the evaluation of the internal control structure and the oversight of information system operations and control procedures on behalf of management. The presence of information asymmetry between senior managers and

division managers might lead to a loss of tight operational control for senior managers. The issue at hand is further exacerbated by internal agency expenses that emerge as a result of divergent incentives between higher-level executives and subordinate personnel.

Therefore, it is imperative to establish a robust internal control framework, incorporating the utilization of internal audits as a means of conducting thorough assessments and overseeing operations. In addition, the internal audit function functions as an internal mechanism of governance for corporations. The significance of robust governance, as viewed from an agency standpoint, arises from the necessity to harmonize the objectives of management with those of other stakeholders within the organization, to mitigate agency costs (Cohen, Krishnamoorthy, and Wright, 2010).

The internal audit function serves as an alternative method for oversight instead of director supervision. Nonetheless, the existence of information asymmetry issues between executive and independent directors implies that internal audit is more inclined to serve as a supplementary mechanism. Nevertheless, it still plays a crucial role in enabling organizations to assess and enhance their overall governance processes.

### **2.1 Factors of Internal Audit Function**

The internal and external audit function acknowledges the crucial elements necessary to uphold the quality of internal and external audits following professional standards. It also specifies the specific set of auditing standards, numbered 65, as established by the American Institute of Certified Public Accountants (AICPA) in 1991. The factors

influencing the internal audit function encompass various aspects, including the competence of internal auditors.

This competence can be evaluated based on factors such as educational background, adherence to audit policies, professional experience, participation in relevant programs, possession of professional certifications, adherence to procedures, and practices related to the supervision of assignments, as well as the appraisal of their performance.

The aims of the internal auditor during the auditing process encompass several key aspects. Firstly, it is crucial to ensure that the audit report provided to the officer is comprehensive and sufficient in its content. Secondly, the internal auditor must strive to achieve wide audit coverage, meaning that all relevant activities are thoroughly examined and assessed. Lastly, the internal auditor must consider the parties responsible for appointing internal auditors and ensure that their obligations are adequately fulfilled. The assessment of task performance audit quality is discussed in the AICPA's 1991 publication.

In addition, the requirements set out by the Institute of Internal Auditors (IIA) encompass various quality factors about the audit functions, namely independence, proficiency, and objectivity (IIA, 2003). The examination of internal control in its comprehensive scope, encompassing all internal activities, necessitates the assessment of quality by management and the perpetual auditors. Furthermore, the established criteria need that the managers overseeing the internal audit department of executives are responsible for upholding and improving the effectiveness and efficiency of the internal audit process. This is achieved by regular assessments of the quality of the

internal audit functions and ongoing evaluation of internal controls (IIA, 2003b). The quality of the internal audit function is a significant responsibility of management and the audit committee. This is achieved through the appropriate allocation of resources and the establishment of the level at which audit reports are submitted (Eisa, 2008).

### **2.2.1 Proficiency of Internal Audit**

The significant aspect of this concept of internal audit is the availability of quality employees in the internal audit department. The provision of qualified staff for firms' audit departments contributes significantly to efficient and effective internal audit operations. Auditors must possess good educational competency with the necessary training, experience, and professional qualifications to conduct the full audit assessment needed as required (Fadzil, Haron, and Jantan, 2005).

As per the guidelines set forth by the Institute of Internal Auditors (IIA, 2008), auditors are required to meet the basic educational prerequisites and adhere to the professional standards established by their respective professional associations. According to Tackie et al. (2016), for an individual to be classified as a human resource within the field of auditing, they must possess a higher degree of educational attainment. The presence of a diverse range of abilities required poses a significant challenge for tertiary institutions, professional organizations, and management (Tackie et al., 2016).

According to Redmayne (2011), limited research has been conducted on the subject matter, indicating that the professional qualifications of internal auditors, including their level of professional training and educational attainment, are significantly associated with corporate performance. The study conducted by Alrjoub and Ahmad (2017)

demonstrated a strong correlation between auditors' level of expertise and their assessments of internal accounting control. The assessment of internal control quality, in its comprehensive scope, necessitates the review of all internal activities by management and the perpetual auditors.

Furthermore, the established criteria need that the managers overseeing the internal audit department of executives uphold and improve the effectiveness and purpose of the internal audit through regular assessments of the quality of internal audit activities and ongoing internal controls (IIA, 2003b). The quality of the internal audit function is a significant responsibility of management and the audit committee. This is achieved through the appropriate allocation of resources and the establishment of the level at which audit reports are submitted (Eisa, 2008).

### **2.2.2 Internal Audit Independence**

The internal auditor's responsibilities in a firm are complicated. A study by Christopher, Sarens, and Leung ii(2009) recognizes some strong misperceptions in the management and auditors relationship; it is the duty of internal auditors to support management in performing their tasks while independently accessing the efficiency and effectiveness of management. Internal auditors are hired to prioritize the interests of their employers. In assessing the strength of an internal audit department, the level of the auditor's operational independence on management must be considered (Bou-Raad, 2000).

A firm's independence is vital to the internal audit function (Brown, 2014). This means that auditors must not depend on management in carrying out their duties. Auditors'

independence and objectivity are key determinant factors of the accuracy of the auditors' work. This gives the employer confidence in the reliability of the audit report. According to Mautz and Sharaf (1964), the auditor's independence is based on three major dimensions: investigative independence, programming independence, and reporting independence. They, therefore, consider reporting independence as the most crucial dimension.

Organizational independence could be emphasized on individual independence and organizational support (Rittenberg, 1977; and US Montondon, 1995). They further state that organizational independence is essential to the effective internal audit, thereby guarding the internal auditor against intimidation and management pressure. This tends to increase the objectivity of the auditors' work. There are four objective and independent auditing factors: objectivity, freedom, information, and system responsiveness (Rittenberg, 1977; and US Montondon, 1995).

To be able to conduct a successful auditing program, there must be an auditor's independence from management (Chevers, Lawrence, Laidlaw, and Nicholson, 2016). This helps the auditors to establish their audit goal, and hence can successfully conduct the audit and independently assess management without interference. Also, the level of the auditor's authority and independence are vital to the objectivity of their work (Clarkson, Gibbs and Shroeder, 1995). In a nutshell, the auditor's independence increases the internal auditors' effectiveness by giving auditors a supportive environment to objectively perform their duties without fear of management's intimidation and pressure and thus, minimizing the conflict of loyalties.

### 2.2.3 Internal Audit Quality

Internal auditing may be improved by reviewing, enhancing, and controlling risks and systems, which is now the current concept of internal audit (Brekumi et al., 2023). Aspects of management of risks, controls, and governance systems include rules and techniques put in place to enhance the attainment of strategic objectives, such as risk valuation, dependability of in-house reporting and accountability procedures, the acquiescence of applicable rules and conventions, as well as amenableness with the behavioural and moral ethics established for an organization and its staff. In this context, risk administration, controls, and governance systems are all terms used to refer to this process.

Risk management encompasses a firm's accomplishments and activities to ensure that it is well-educated about the risks it confronts, makes informed choices about managing those risks, and identifies and capitalizes on potential opportunities. Generally speaking, "control" refers to all the actions an organization's leadership takes to guarantee that its resources are held to a greater degree of accountability than otherwise. It is the means of ensuring credibility, equitable service delivery, assurance of appropriate behaviour, and mitigating the threat of corruption that are referred to as governance when it comes to setting and achieving goals.

The emergence of numerous huge, dispersed, complicated organizations around the turn of the twentieth century sped up the internal audit function's development.

Initiated in 1941, the Institute of Internal Auditors (IIA) in response to this growth. The Institute of Internal Auditors is mainly responsible for creating contemporary internal

auditing in its early years. This involves gradually enlarging the internal audit operations' purview and the practice's professionalization. Institute of Internal Auditors (IIA) did not release its first Statement of Responsibilities until 1947. The Standards were released in 1979, and the Code of Ethics in 1968. In 1974, the first Certified Internal Auditor (CIA) exams were given, suggesting that internal audit practitioners were thought to have access to a recognized body of knowledge at the time.

According to Pickett (2005), internal audit has advanced significantly during the previous two to three decades. Internal auditing was once thought of as a way to double-check the hundreds of thousands of financial transactions that were posted to the account each week. It was limited to simple testing of the accounts in the 1950s and 1960s to identify mistakes and inconsistencies. Internal auditors of today, on the other hand, assist in the creation of appropriate controls as part of a larger risk strategy and offer guarantees regarding the dependability of these controls. There has been a significant shift away from low-level, in-depth checks of a sizable volume of primary transactions and toward high-level corporate risk management (Glazer and Jaenike, 2016). Because a company functions in a world full of uncertainty, risk management is crucial. As a result, internal auditing in the modern global economy should focus more on risk management and control rather than the conventional examination of transaction volume. Instead of emphasizing error and fraud detection, it should concentrate on error and fraud prevention.

In internal auditing, according to Glazer and Jaenike (2016), what counts most is the capacity of auditors, both internal and external, both within and outside of an

organization, to achieve particular objectives. The organization's management determines the objectives of an organization's internal audit unit, which is valid for any business, and an internal audit ensures that these goals are met (Glazer and Jaenike, 2016). Because of the differences in effectiveness across firms' stages and countries, organizations should set clear objectives for internal audits to achieve the scarce assets and additional methods that may aid in attaining such objectives. Although internal auditors may be examined using systematic and usually reliable procedures, their performance is suggested to rely on the prospects of the significant interested party they serve (Glazer and Jaenike, 2016).

Brekumi et al. (2023) define internal auditing as an independent evaluation function created by an organization's management to review its internal control systems. Internal auditing is an impartial, unbiased assurance and consulting activity to enhance and add value to a company's operations, according to the Institute of Internal Auditors (IIA). Internal auditing supports organizational goals by employing methodical and stringent methods to assess governance procedures, controls, and risk management concerns. The Internal Auditing Profession is governed by International Standards for the Professional Practice of Internal Auditing. One of the main components of the internal control systems is internal audit. It is conducted within the company with the main goals of enhancing its value and streamlining its operations.

Most Institutions presently rely on internal audits to ensure no risk, compliance processes, and internal control (Glazer and Jaenike, 2016). It helps an organization identify and evaluate risks, moving the profession into the front line of risk management (Glazer and Jaenike, 2016). Moreover, Bou-Raad (2000) asserts that the internal audit

function helps to ensure control evaluation and remediation. This assertion of Bou-Raad (2000) can help companies assess whether the controls that include procedures and policies they have put in place are adequate to make financial reports more effective and efficient. Internal control processes as a function of internal audit provide reasonable assurance of an entity's objectives concerning operations, financial reporting, and compliance with regulations (Brekumi et al., 2023).

Internal audit quality means the internal auditor's ability to achieve the organization's objective (Glazer and Jaenike, 2016; Bou-Raad, 2000). Internal audit quality, in the opinion of Brekumi et al. (2023), is centred on the internal audit's capacity to organize, carry out, and effectively convey its results. These studies suggest that internal audit effectiveness can be attained through preparing for internal audits, assuring their efficient execution, and ultimately, objectively and promptly communicating the findings.

Glazer and Jaenike (2016) argued that the auditor must perform the auditing work per the internal auditing standards to achieve audit effectiveness. Ridley and D'silva's (2014) study in the UK reveals that complying with professional audit standards is one of the most crucial contributors to internal auditors' effectiveness and added value.

To systematically improve risk management, governance, and control, auditors must perform their duties in compliance with applicable audit standards and work objectively. This is required because the audit scope evaluates areas that need a highlevel professional judgment, and the audit report also influences management's decisions (Bou-Raad 2000). This means that the audit effectiveness can be enhanced by

understanding the quality of internal audit work in terms of compliance with professional standards.

### **2.3 Financial Performance**

There are several dimensions for analyzing Commercial Banks' performance. The appraisal of the essence of banks' profitability can be done at the micro and macro levels of the economy (Muga, 2012). Profit is considered the prerequisite of competitive banking institutions and the most affordable fund source at the microlevel. It is necessary for successful banking in growing competition periods but not a mere result on the financial market. Hence, it is evident that the key aim of every financial institution is to maximize profit which serves as the indispensable requirement for operations.

On the other hand, sound and profitable banking are essential at the macro level. This helps the banks to resist and absorb adverse shocks and contribute to a stable financial system. Banks' profit, if re-invested, provides a vital source of equity into the business, leading to a safe and stable bank with high financial stability and profitability.

According to Schiuma (2003), there are three indicators of accountingbased performance: Return on total Equity, Return on Assets, and Return on Investment. These are widely used by most financial institutions, including commercial banks, in assessing the firms' performance. Bank regulators usually use the returns on total equity (ROE) and total assets (ROA) to evaluate banks' performance. This study aims to examine if the internal audit function can enhance a bank's financial performance or otherwise

## **2.4 Internal Audit and Financial Performance**

According to AL-Shammari (2010), a proficient internal audit function plays a crucial role in identifying opportunities for improving organizational efficiency and minimizing overhead costs. This suggests that there is a positive relationship between the presence of a well-functioning internal audit department and improved financial performance. According to Al-Shammari (2010), internal audit has a crucial role in improving an organization's financial performance, as emphasized by the author. This practice contributes to the optimization of protective measures in ensuring the security of the assets held by the organization, exerting a substantial influence on the financial performance of the corporation. Fadzil et al. (2005) assert that internal auditors have a crucial function in facilitating the efficient and successful operations of a firm, with the ultimate goal of maximizing shareholders' wealth. However, Hermanson, Carcello, Neal, and Ridley (2005) have established a correlation between effective internal control functions and improved performance. Based on the aforementioned assessments, it can be inferred that there exists a favourable correlation between internal audit and financial performance.

According to a survey done by KPMG in 2003, the presence of an internal audit function within a corporation has the potential to improve performance and detect indications of profitability even amid corporate disasters. Conversely, instances of financial fraud frequently demonstrate a correlation with inadequate governance. Hence, it is imperative for an internal audit to safeguard the firm against malpractices and fraudulent activities by assuming the role of a vigilant overseer. This will facilitate the organization in attaining its objectives of financial viability and operational efficiency.

## **2.5 Other Determinants of Bank's Performance**

Other factors that may influence the financial performance of a firm (banks and other financial institutions are reviewed under this section. These factors include financial leverage, liquidity, and firm size.

### **2.5.1 Liquidity**

Liquidity is a crucial tool for meeting contractual obligations or replacing liabilities appropriately. Liquidity helps management and investors to properly assess the firm's fate, calculate the investment risk and return, determine stock price, etc. (Richards and Laughlin, 2016). This helps a firm manage its current assets and current liabilities properly.

### **2.5.2 Firm size**

In addition, Stierwald (2010) reveals a more optimistic and crucial parameter to estimate a firm size. This refers to the actual size of a firm in a given industry, leading to the lowest production cost per unit. The firm's size comprises total sales, total assets, and market value of equity. The study indicates that bigger firms are more advantageous than minor firms. The firm's size principally upgrades its execution.

## **2.6 Theoretical Review**

The paramount theories upon which this study is based are the stakeholder, agency, and institutional theories.

### **2.6.1 Stakeholder Theory**

The theory is based on moral values and business ethics and accepts that these are prudent in managing a firm. This theory was propounded from the blending of sociological and organizational disciplines (Wheeler, 2003). These theories assume that management keeps a relationship network in every firm that comprises suppliers, employees, lenders, and business associates who are other business stakeholders. These stakeholders make crucial decisions to help achieve the firm's objectives, such as controlling and allocating resources that impact the firm. The stakeholders' interest in the organization may be environmental or economic. They are most interested in the survival of the business.

Friedman (1970) suggests that management must possess high ethical responsibilities to secure the entire firm and the legal claims of all stakeholders. The management must consider the firm's existence and its wealthiness through the balance of the multiple conflicting interests of the stakeholders. This is essential because the interest of each stakeholder is vital to the sustained progressive operational firms' performance.

### **2.6.2 Agency Theory**

Agency theory emphasizes the behaviour of management and the order of corporate ownership (Fayezi et al., 2012). Under this theory, a contract is established between an agent and one or more individuals (principals) whereby the agent is obliged to conduct some services. Therefore, any resultant decision is made by the agent on behalf of the principal. This charges management to maximize the wealth of shareholders. However, no theory signals and highlights the conflict of interest between management and the interest of shareholders (maximizing the firm's returns) (Fayezi et al., 2012). They further explained the relationship between the agent and the principal, where the

management duties are delegated to the agent to maximize the principal's returns. In effect, there is much efficient and effective utilization of resources.

Top management plays a vital role in achieving an effective audit quality; however, there could be a threat to the auditor's independence. Therefore, agency theory seeks to address the conflict of interest between management and shareholders. This arises when the maximization of shareholders' wealth is subjected to the interest of the management (Bradley and Roberts, 2015). This means that the parties may intend to take actions that are odd to each other's interests. Agency problem serves as the supposed diverging goals of the principal and the agent. Therefore, a principal (owners/ shareholders) must safeguard their interest through innovative measures such as hiring external auditors (creating agency cost) or ensuring effective and efficient internal audits. This helps to keep management on track and secure the interest of shareholders instead of satisfying the interest of management.

### **2.6.3 Institutional Theory**

The institutional theory, as conceptualized by Rowan (1977) and further developed by DiMaggio and Powell (1983), posits that institutions deliberately design and implement structures, processes, and systems to include novel procedures and practices (Karbhari, Alam, and Rahman, 2020). According to Zhao, Fisher, Lounsbury, and Miller (2017), organizations that integrate these processes and approaches have a higher probability of enduring over an extended period. Internal control is a commonly seen organizational structure that serves as a mechanism for ensuring accountability and adherence to established norms. In addition to attracting clients, corporations also engage in competition for legitimacy.

Hence, a company must adapt and formulate targeted internal audits to enhance its credibility and the operational viability of its competitors (Asiligwa and Rennox, 2017). Tetteh et al. (2020) argue that when establishing corporate objectives, organizations should take into account their financial performance and internal audit practices. According to Ji, Kaplan, Lu, and Qu (2020), it is likely that a firm's profit quality will be weaker when there are significant control issues in the auditing process. According to the findings of Vargas-Hernandez et al. (2018), it is imperative to establish a system for overseeing a company's adherence to corporate regulations and implementing internal mechanisms that promote optimal operational performance.

According to Hajj (2016), the establishment of corporate governance, a code of ethics, and the implementation of company practices and structures serve to uphold the values, philosophy, and core principles of an organization, hence fostering long-term and sustainable growth. According to Goodwin and Wu (2014), the implementation of internal audit tasks within institutions is challenging and intricate, whereas the external perception of an organization may have a limited correlation with its internal operations. The perspective of institutional theory posits that organizations establish structured operations to uphold social accountability.

An effective internal audit procedure enhances the operational efficiency of the firm (Goodwin and Wu, 2014). The primary objective of internal auditors is to enhance corporate governance within an institutionalized framework, aligning with the principles of institutional theory. Therefore, it is imperative to subject the financial reporting of the company to increased examination to protect the interests of the

stakeholders. The assessment of the internal auditor's role is an inevitable aspect, especially when considering its significant contribution to organizational efficiency.

## **2.7 Empirical Review**

This section provides existing literature on the main variables used for the study. The section begins with literature on professional competence, followed by audit independence and audit quality. Most prior studies report a significant positive relationship between professional competencies and a firm's performance regarding professional competence. For instance, Alrjoub and Ahmad (2017) investigated the relationship between the professional competencies of auditors and the performance of firms and found that professional competencies positively affect firms' performance. Similarly, Botica (2011) found that there is a direct relationship between professional competencies and the profitability of organizations. Additionally, Abbass and Aleqab (2013), Abdolmohammadi (2009), Ziegenfuss (2000), and Onumah and Yao Krah (2012) reported a significant positive nexus between professional competencies and firm performance.

Christopher, Sarens, and Lenug (2009) examined the effects of audit independence on the performance of companies. They argue that audit independence influences the performance of organizations since their findings reported a significant positive relationship between audit independence and performance. Similarly, Alzeban and Gwilliam (2014) reported that the independence of internal auditors significantly drives audit effectiveness that is geared towards the profitability of firms.

Oussii and Boulila (2017) conducted comparative research on internal audit quality and earnings administration from the developed country perspective. The study examines the impact of audit quality, national audit conditions, and performance of capital markets on income administration across developed countries. In Germany, France, and the UK, they identified that the earnings administration activities vary from country to country. Their study revealed three key issues: large-size audit firms have a significant impact on the income administration exercises in the UK, strict national audit conditions influence income administration, and finally, a more raised amount of collections in organizations depend on worldwide capital markets.

Also, the results of Beyanga (2012), Fadzil et al. (2015), and Hemanson and Rittenberg (2015) concluded that the quality of internal auditors drives performance. Put differently, these scholarly authors asserted a significant positive relationship between audit quality and the firm's performance. According to Chen, Yeh, Lu, Huang, Tang, Yang, Wu, and Chen (2019), there is a positive relationship between firm performance and experienced internal auditors of firms. Per the information obtained from the Taiwan IPO firms, the customers of the Big Five Audit firms have detailed unpredicted accumulations. The findings propose that large audit companies can manage their earnings properly using quality and reliable financial information.

Binti and Khairi's (2015) study examines the nexus between the level of audit firms on the conservatism and precision of reviewed income measures specified in the Australian initial public offerings policies. They used a sample of two hundred and fifteen (215) firms over eight years. They revealed that large auditing firms use precise information to estimate performance, which shows a high capacity for financial statements. They

find that the estimates of the returns of large firms have more detailed and accurate audit issues than small audit firms. Another scholar, Caramanis and Lennox (2008), also investigated the impacts of internal audits on a firm's profit. Caramanis and Lennox (2008) reported that low audit exertions influence the directors to be more forceful in overseeing profit with a specific end goal of meeting the income standard. However, they discovered a proportional negative relationship between revenue-expanding earnings and audit hours, which indicates that a substantial number of auditors work extensive working hours and hence can detect and prevent earnings smoothing. Therefore, it is evident that a low audit effort opens opportunities for directors to manage the firm's earnings following applicable rules and regulations.

Yassiariti and Nelson (2012) used audit expenses as an indicator to represent the quality of internal auditors' work. They found that companies that pay high audit fees can get quality audits compared to those that pay fewer audit charges. O'Sullivan and Diacon (2002) argued that qualified auditors need a lot of auditing hours to be able to detect fraud or error. Henceforth, a substantial amount of charges need to be paid to them for effective or quality audits, which eventually leads to firm performance.

Yuriati (2011) also investigated the nexus between audit expenses and the performance of firms in Indonesia. The result shows that high audit expenses increase audit quality and firm performance. One of the factors considered as the major aspects of the corporate administration is the neutral audit. This is used as a means to control a firm's assets to achieve organizational objectives. Mustafa et al. (2016) also examine the relationship between audit quality and corporate administration and establish audit excellence's impact on accounting dependability.

An organization with a conservative internal audit method positively impacts a firm's performance (Brown and Caylor, 2004). Carey and Simnett (2006) examined the correlation between irregular working capital accumulation and audit residency. They found that working capital accumulation is the pivot of audit quality.

## 2.8 Conceptual Framework

The conceptual framework for this study comprises the dependent and independent variables. The dependent variables include the Financial performance measure of Return on Equity (ROE) and Return on Assets (ROA), whereas the independent variables are the auditors' professional proficiency, independence, and quality audit work. The control variables are auditors' experience, firm size, and auditors' qualifications.

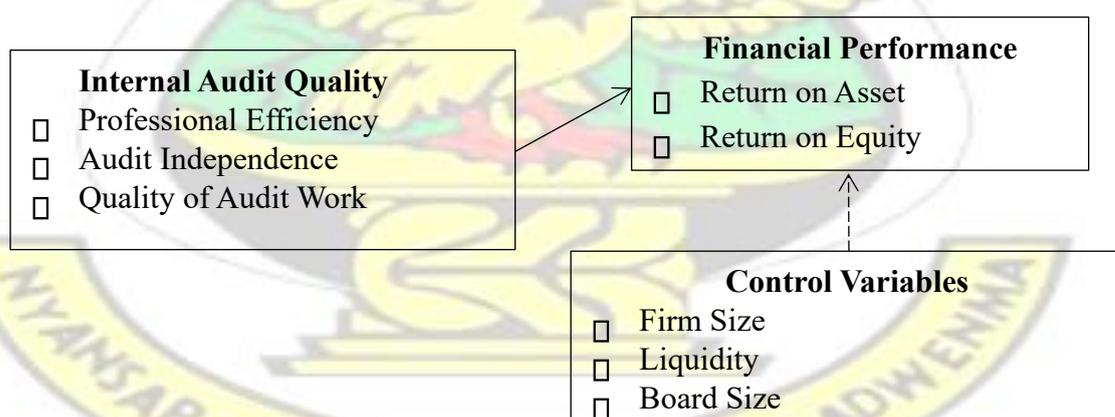


Figure 2.1: Conceptual Framework

Source: Researcher Framework (2023)

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter explains the methods employed to achieve the study's objectives or research questions. The study's primary purpose is to explore the relationship between internal audit quality and the performance of listed and non-listed banks in Ghana. The chapter focuses on methodological issues such as the research design, population and sample, data sources, data analysis, model and measures, validity and reliability, and significance test. The study uses descriptive and inferential statistics to achieve the study's objectives, and results are presented in tables and graphs to achieve the study's objectives.

#### 3.2 Research Design

According to Kothari (2008), research design refers to the systematic framework and methodologies employed to address research inquiries or accomplish research goals. The research objective utilizes explanatory and descriptive methodologies to examine the correlation between the quality of internal audits and the financial performance of banks in Ghana. The research methodology employed in this study involves the use of an experimental approach to statistically investigate the interconnectedness between several characteristics, specifically internal audit quality and banks' performance, within the context of Ghana. As previously said, the research employs a quantitative methodology to accomplish its aims. According to Saunders, Lewis, and Thornhill (2009), the primary objective of quantitative research is to establish the correlation between the dependent and independent variables. The study uses descriptive and inferential statistics, which are considered to be more dependable and impartial, to make

generalizations about the associations between internal audits and the performance of banks in Ghana.

Additionally, the temporal aspect of this study incorporates both cross-sectional data obtained through a survey to gather comprehensive primary information regarding the banks and essential research topics, as well as time-series data derived from secondary sources about the selected banks, which are utilized for this study. Furthermore, the utilization of a time series dataset is justified in this study due to its reliance on a secondary dataset encompassing the years 2017 to 2021, specifically comprising data from 20 banks in Ghana. This dataset is employed to conduct statistical analysis. The primary objective of the statistical analysis is to address the research inquiries or accomplish the research objectives of the study.

### **3.3 Population and Sample Size**

The study population refers to the entire set of units from whom the sample size is chosen to conduct research (Bell and Bryman, 2007). The target demographic for this study comprises all officially registered financial institutions operating inside the country of Ghana. The present study is limited in its ability to comprehensively examine the entire population and appropriately generalize the findings. The study incorporates a sample of twenty (20) commercial banks, both listed and non-listed, as of the conclusion of December 2021. Due to data constraints and the non-availability of annual reports from the Bank of Ghana and the Ghana Stock Exchange, the study uses the purposive sampling technique to select the available sample to achieve the study's objectives.

### **3.4 Data Collection**

The present study used a combination of primary and secondary datasets to conduct the research. The indicators utilized in this study were sourced from the annual report and financial statements, specifically focusing on the selected variables, covering the fiscal years 2017 to 2021. The financial performance is considered the dependent variable in this study, while the control variables, including board size, liquidity, and bank size, are obtained from reputable sources such as the Bank of Ghana, the Ghana Stock Exchange, and the African Financial website. Consistent with previous research, this study also used primary data collection through a questionnaire to obtain firsthand information from the 20 selected banks that were included in the study. The study aims to get primary data on operationalized variables, including auditors' professional competence, audit independence, and internal audit quality, from the management of selected banks in Ghana. The sources of secondary data encompass the Bank of Ghana, the Ghana Stock Exchange, and the African Financial website.

### **3.5 Data Analysis**

The retrieved secondary data and primary data from the questionnaire are entered into Microsoft Excel, STATA, and SPSS for the data analysis. The analysis comprises descriptive statistics (percentages, mean, standard deviation, minimum, and maximum scores) and inferential statistics (correlation, ANOVA, OLS regressions) presented in figures (or graphs) and tables for easy discussion and interpretation to achieve the study's results.

### 3.6 Regression Model

The study adopts a regression model to discover the relationship between audit independence, quality of audit work, professional competence, and bank size on the financial performance of listed and non-listed banks in Ghana.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \epsilon_i \dots \dots \dots i1$$

Y = Financial Performance  $X_1$

$X_1$  = professional competence

$X_2$  = Audit Independent

$X_3$  = quality of audit work

$X_4$  = Liquidity

$X_5$  = Board size

$X_6$  = Bank size

$\beta_0$  = Regression constant

$\epsilon$  = Error term

Table 3.1 provides a summary of the above variables used for the study.

### 3.7 Definition and Measurement of Variables

#### 3.7.1 Financial performance

This indicator measures how assets are used in generating profit for the banks. It indicates the banks' overall profitability over a period to compare firms' competition in the same industry locally and globally. In terms of financial performance, the study uses

Return on Assets (ROA) as the two fundamental proxies to measure the financial performance of the banks. ROA equals the percentage of earnings after tax over the total assets over the periods under consideration (2017-2021).

### **3.7.2 Professional proficiency**

With professional proficiency, seven variables were measured. The internal auditor was asked to give his opinion on the following statements, whether they agreed or not on the following: the internal audit head is an affiliate or associate of ICAG; all internal audit staff are members of the relevant professional body; IA is obliged to comply with relevant professional standards; there are established policies for hiring Internal Audit staff; there are established policies for training and assigning Internal Audit staff to engagement; Internal Audit staff have adequate technical training in auditing; and Internal Audit staff possesses the required financial reporting knowledge and necessary skills.

### **3.7.3 Quality of audit work**

Six indications are used in measuring the internal audit quality. Respondents are asked perceived statements whether they agree or disagree on the below measures: the bank can plan an audit annually organized by the Internal Audit Unit; the bank has an internal audit charter to be complied with by the Internal Audit Unit, the Internal Auditor has documented Internal Audit procedures such risk assessment; the internal Auditor reports on a timely basis to the audit committee; BODs and the Audit Committee in your organization are responsible for terminating the work of Internal Audit; and there are no restrictions to information when the Internal Audit staff need data or information about your organization.

### **3.7.4 Auditor's independence**

This variable for this study is measured using the following statements. The statements are: the internal audit unit and audit committee have direct and regular operational relationships in your organization; all internal audit staff are members of the relevant professional body; internal Auditors are obliged to comply with relevant professional standards; the board oversees internal Audit employment/ recruitment of directors; internal audits do not have other responsibilities that affect their objectives; internal Audit Unit has unrestricted access to external auditors; and the internal Audit Unit is highly reorganized in the organization.

### **3.7.5 Liquidity**

This assesses the ability of banks to meet and service their short-term debt as they fall due. The assessment is important for the survival of a firm as it predicts the firm solvency level. It also typically refers to the ability of a company usage of current assets to pay short-term debts. This variable is equal to the percentage of total current assets over total current liability. Thus, it is calculated as dividing banks' current assets by current liabilities.

### **3.6.6 Board Size**

These are the overall members of the board of governors of the bank. Most boards range from 3 to 31 members.

### **3.7.7 Firm Size**

The size of the firm can influence its decisions. So, throughout this study, unless proven otherwise, the bank size may influence the dependent variables in this study.

For this research, bank size is equal to the natural logarithms of the bank's total assets.

# KNUST



**Table 3.1: Variable Explanations**

Variables	Measurement	Expected Signs	Source
Financial performance <b>(Dependent variable)</b>	ROA represents financial performance and is equal to the percentage of earnings after tax over the total asset.		(Aslam and Haron, 2020)
Professional competence	Composite arithmetic average marks from the 5-point perceived statements.	Positive (+)	(Leow, 1999)
Quality of audit work	Composite arithmetic average marks from the 5-point perceived statements	Positive (+)	((Egland, i1988)
Audit independence	Composite arithmetic average marks from the 5-point perceived statements	Negative (-)	(Egland, i1988)
Bank size	Equal to the natural logarithms of the bank's total assets	Positive (+)	(Berger and DeYoung, 1997)
Liquidity	Equal to the percentage of total current assets over total current liability.	Positive (+)	(Nwankwo, 2013)
Board size	Equal to the overall sum of board members	Positive(+)	Aslam and Haron (2020)



# KNUST



### 3.8 Validity and Reliability

According to Kothari (2008), the assessment of a study's quality, design, and outcomes should encompass the consideration of validity and reliability as two fundamental components. The term "validity" pertains to the extent to which a measurement accurately represents the underlying construct it is intended to assess. The concept of reliability pertains to the probability that a specific measurement method will consistently produce an accurate depiction of a particular phenomenon. According to Neumann (2006), the fundamental objective of dependability is to reduce errors and biases. The research examines the Variance Inflation Factor (VIF) and conducts pairwise tests to assess the presence of multicollinearity among the independent variables in the regression models. The study's findings indicate that the presence of multicollinearity can be observed when the Variance Inflation Factor (VIF) exceeds a threshold of 10. Multicollinearity occurs when two explanatory variables exhibit a Pearson correlation coefficient of 0.7 or higher.

According to Saunders et al. (2015), it is suggested that when the tolerance level of the sample data variable is below 2, the absence of collinearity is indicated, hence demonstrating the validity and reliability of the data. According to Kent (2010) and Saunders et al. (2015), it can be inferred that information is deemed accurate and credible if the Variance Inflation Factor (VIF) is below 4. Multicollinearity or collinearity does not pose a significant issue. Hence, the data obtained from the study can be considered genuine and reliable, as indicated by the Variance Inflation Factor (VIF) values of all variables being below 4. The tolerance levels for all variables exhibit values below 2, while all correlation coefficients (R-values) are seen to be below 0.70.

**CHAPTER FOUR**  
**PRESENTATION AND DISCUSSION OF RESULTS**

**4.1 Introduction**

This chapter presents various statistical analyses on the nexus of internal audit quality and bank performance in Ghana. To achieve the study's objectives, both descriptive statistics (percentages, mean, standard deviation) and inferential statistics (correlation, regression, ANOVA) are tested on the sample.

**4.2 Descriptive Statistics and Correlation Matrix**

The sub-section presents the descriptive statistics and correlation analysis among the variables ascertaining the internal audit quality-financial performance nexus of banks in Ghana from 2017 to 2021. The summary consists of the mean, standard deviation, minimum and maximum.

**Table 4. 1: Descriptive Statistics (N = 20)**

Variable	Mean	Standard deviation	Minimum	Maximum
PC	4.19	0.35	3.43	4.83
AI	4.13	0.34	3.57	4.71
AQ	4.28	0.42	3.50	5.00
SIZE	17.04	1.87	14.86	20.66
LIQ	1.18	0.66	7	1.33
BOARD_SIZE	8.8	1.32		13

Note: PC = Professional Competence, AI = Audit Independent, AQ = Audit Quality, LIQ = Liquidity, SIZE = Bank Size.

Table 4.1 above depicts large variations of the banks in Ghana as indicated by the minimum and maximum values. The standard deviation indicates a high dispersion of

the banks; prominent among the factors include the SIZE, and liquidity, which suggests heterogeneity among the banks. The reformation of the banking sector with the introduction of new capital minimum requirements leading to the merging of some of the banks will help reduce this heterogeneity. The bank's size is well in shape with an average of 17.04 per cent, with minimum and maximum values of 14.86 and 20.66, respectively.

Professional competence records 4.19, 3.43, and 4.83 represent the mean, minimum and maximum values. Audit independent recorded an average score of 4.13 per cent with minimum and maximum scores of 3.57 and 4.71, respectively. However, Audit quality also recorded an average value of 4.28 per cent, and the minimum and maximum recorded for audit quality were 3.50 and 5.00, respectively. Liquidity also recorded mean, minimum, and maximum values of 1.18, 1.08, and 1.33, respectively. Finally, board size also records 8.8, 7, and 13 as the mean, minimum and maximum scores, respectively.

#### **4.3 Testing for multicollinearity using the correlation coefficient**

The study uses the Pearson Correlation Matrix to determine whether multicollinearity exists among dependent, independent, and control indicators. Table 4.2 presents the correlation matrix and indicates no significant correlations between the indicators. This result suggests that there are no issues or problems of multicollinearity and collinearity among the variables.

**Table 4.2: Correlation Matrix**

VARIABLE	FIN PERF	PC	AI	AQ	LIQ	BOARD SIZE	SIZE
FIN PERF.	1.0000						
PC	0.0390	1.0000					
AI	0.0360	-0.1568	1.0000				
AQ	-0.1507	0.0619	-0.1918	1.0000			
LIQ	-0.3492	0.3605	-0.1268	0.0972	1.0000		
BOARD SIZE	-0.1991	0.0700	0.1134	0.1990	0.4841	1.000	
SIZE	0.3602	0.0011	0.1114	-0.1681	-0.0156	-0.2833	1.000

Note: FIN PERF = Financial Performance, PC = Professional Competence, AI = Audit Independent, AQ = Audit Quality, LIQ = Liquidity, SIZE = Bank Size.

The finding in Table 4.2 indicates a positive correlation between the internal audit quality indicators and the bank's performance in Ghana. Professional competence has a weak positive correlation with the bank's performance in Ghana, with an R-value of 0.0390. Audit Independent also has a weak correlation with financial performance. The correlation coefficient recorded for this was 0.0360. Quality of work also has a weak and negative correlation to financial performance. Liquidity also has a weak negative correlation with banks' performance in Ghana, with a correlation coefficient of 0.3492. Again, bank board size has a weak inverse correlation on bank performance with a correlation coefficient of -0.1991. Table 4.2 also shows that a bank's size has a weak and positive correlation with the performance of the banks with a coefficient of 0.3602.

#### 4.4 Regression Results

This sub-section presents and discusses the econometric model results, including the actual Ordinary Least Square (OLS) results, summary results, and the analysis of variance (ANOVA).

#### 4.4.1 Summary of the Model

**Table 4. 3: Summary Results**

Model Result	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	SE
1	0.4701	0.2984	0.1154	4.7453

Predictors: (Constant), Professional competence, Audit Independent, Audit Quality, Liquidity, and Bank Size.

From Table 4.3, R-squared records a value of 0.2984, indicating that the variation of independent variables accounted for 29.84% of the variation in banks' financial performance. Independent variables are professional competence, Audit independence, Audit Quality, Liquidity, and bank size. The value of R is the correlation factor that enlightens the relations among the dependent and independent indicators. The R records a score of 0.4701, depicting a weak linear relationship between the independent and dependent indicators.

#### 4.4.2 ANOVA

Table 4.4 presents the analysis of variance among the indicators investigating the nexus between internal audit quality (financial aspects) and the bank's performance in Ghana. From Table 4.4, the result indicates a significant relationship between financial audit indicators and the banks in Ghana because the calculated value of 1.63 is less than the significance value of 0.018.

**Table 4. 4: ANOVA**

Model Sum	Sum square	Df	Mean square	F	Sig
Regression	126.69	6	21.11	1.63	0.018
Residual	297.86	23	12.95		
Total	424.55	29			

Dependent Variable: Financial Performance

Predictors: (Constant) Professional competence, Audit independence, Quality of Work, Liquidity, Board size, and Bank Size.

#### 4.4.3 Regression Coefficients

From the results in Table 4.5, Professional competence positively affects the banks' performance in Ghana with an insignificant coefficient of 2.356. This result implies that a unit upsurge in professional competence increases a bank's financial performance by 2.356. Similarly, a unit decrease in professional competence decreases the bank's performance by 2.356 units. Therefore the results indicate that professional competence does not have a significant relationship with the performance of banks in Ghana.

Audit Independent has a positive nexus with the performance of banks in Ghana. Audit independence positively affects financial performance. Table 4.5 also implies that a unit increase in audit independence increases the bank's performance by 0.623 units. Similarly, a unit decrease in audit independence will also decrease financial performance by 0.623 units. The coefficient is significant at a one per cent significant level. This indicates that audit independence as a measure of the quality of internal audit is perfect.

Based on Mutua's (2012) study on the relationship between risk-based and banks' performance, the study argues that banks' performance requires an appropriate internal audit. Therefore, the findings in Table 4.5 indicate that the internal auditor's independence is an excellent indicator to measure internal audit quality. As expected, the study's result agrees with the extant literature and reports a significant positive relationship between audit quality and the bank's financial performance. Further details reveal that a unit increase in audit quality increases a bank's performance by 0.652 units and vice versa.

From Table 4.5, liquidity also records a negative relationship with the bank's performance. The result implies that liquidity negatively affects a bank's performance. The result here explains that a unit increase in Audit quality decreases a bank's performance by 27.842 units. Equally, a decrease in liquidity will increase banks' financial performance by 27.842 units. Board size has a positive nexus with banks' performance. Board size positively affects financial performance. The results from Table 4.5 imply that a unit increase in board size increases banks' performance in Ghana by 0.427 units. The coefficient is insignificant at a one per cent significant level. From the results above, bank size positively affects financial performance. This implies that bank size and financial performance have a positive relationship. More specifically, a unit increase in bank size will lead to an increase in the financial performance of banks by 0.794. Similarly, a unit decrease in bank size will decrease banks' financial performance by 0.794 units, *ceteris paribus*. The coefficient of 0.050 is also statistically significant.

**Table 4. 5: Regression Coefficient**

Variable	Coef.	Std. Err.	t	p-value
Professional Competence	2.356	2.104	1.12	0.274
Audit Independence	0.623	0.274	2.27	0.000
Audit Quality	0.652	0.313	2.09	0.042
Liquidity	-27.842	12.682	-2.20	0.038
Board Size	0.427	0.622	0.69	0.499
Bank Size	0.793	0.384	2.06	0.050
_cons	18.621	20.196	0.92	0.366
Obs	20			
R-squared	0.2984			
Model Sig	0.021			

#### 4.5 Discussion of Results

Table 4.5 presents the results of the simple OLS model for the effect of financial audit components on the financial performance of banks in Ghana. An improvement in the financial performance of banks is indicated by a positive coefficient, while a negative coefficient depicts a decline in financial performance.

Table 4.5 shows that professional competence directly relates to the bank's performance and is insignificant at one per cent. This suggests that professional competence in Ghana does not affect financial performance. This result disagrees with the findings of Alrjoub and Ahmad (2017) and Botica (2011). The results above follow studies of a few research that have looked into this issue, and the outcome indicates that greater professional qualifications of the internal auditors in a given department are defined by the length of their professional training and educational level, the greater the effectiveness of this

department (Botica, 2011). However, a study by, Alrjoub and Ahmad (2017) also found that auditor experience had a positive effect on evaluations of internal accounting control.

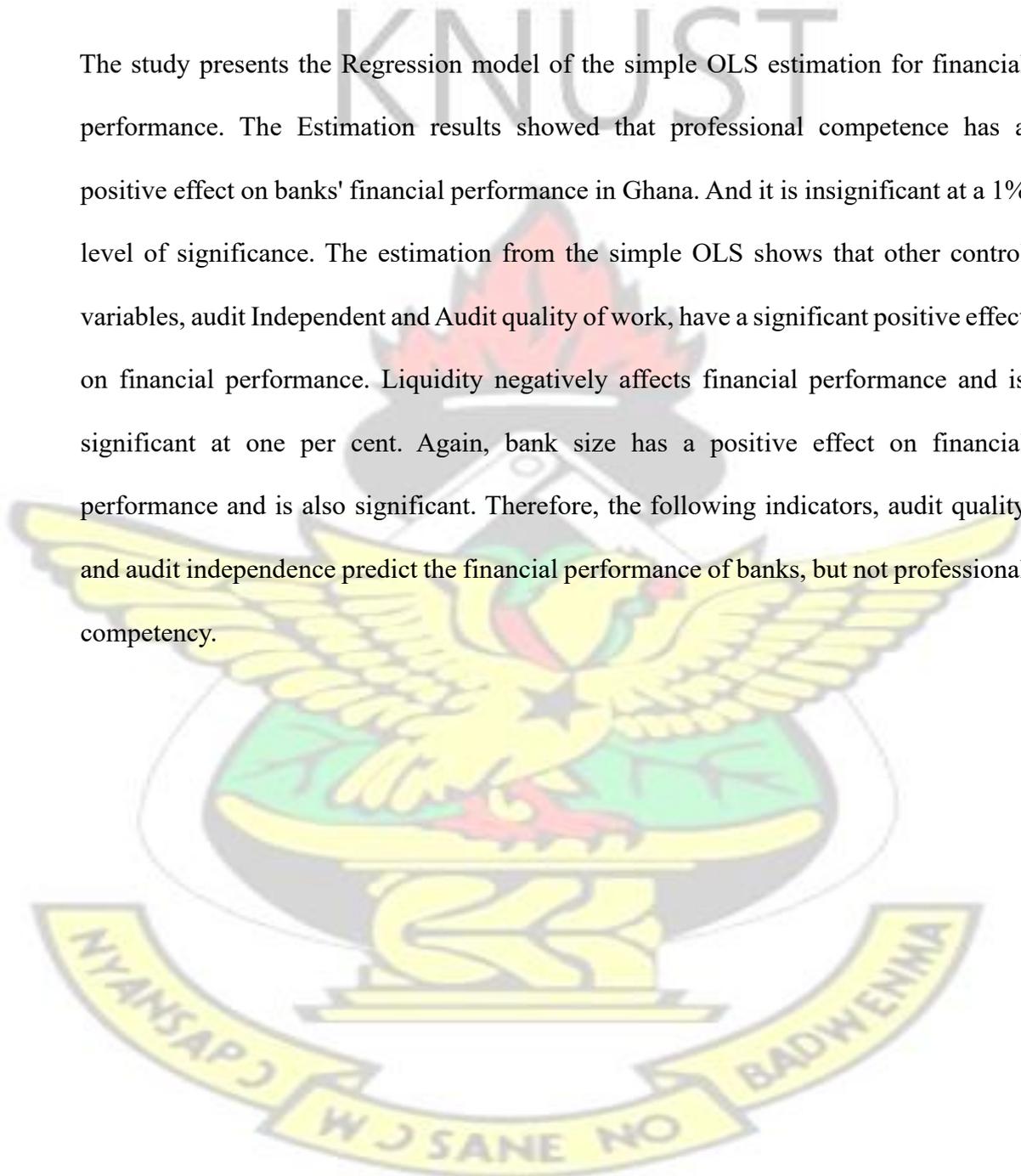
Christopher et al. (2009) identify the role of Internal auditors in organizations as complex. The result of this study is that audit independence has a positive relationship with the financial performance of banks in Ghana. Audit independence positively affects financial performance. The results imply that a unit increase in audit independence will increase financial performance by 0.6233 units. Similarly, a unit decrease in audit independence will lead to a decrease in financial performance. The coefficient is significant at a one per cent significant level.

Table 4.5 shows that Audit quality of work influences financial performance positively. The result is also significant, and further details reveal that a unit increase in Audit quality of work will increase financial performance and vice versa. However, the findings of this study agree with the results of a study conducted by (Beyanga 2011). According to Beyanga (2011), an effective internal audit quality can aid in overhead reduction, coming out with efficient ways to maximize exposure to potential from inadequately safeguarding company assets, which can have a significant or relevant effect on the financial performance of an organization. The study again said audit quality of work is instrumental to management for improving performance.

Fadzil et al. (2005) also stated that internal auditors help run a company more effectively and efficiently to increase shareholders' value. To conclude, Hermanson and Rittenberg (2005) argued that the existence of an effective internal audit quality function is

associated with superior organizational performance. It could be concluded that internal audit quality and financial performance have a positive relationship, which agrees with this study's results.

The study presents the Regression model of the simple OLS estimation for financial performance. The Estimation results showed that professional competence has a positive effect on banks' financial performance in Ghana. And it is insignificant at a 1% level of significance. The estimation from the simple OLS shows that other control variables, audit Independent and Audit quality of work, have a significant positive effect on financial performance. Liquidity negatively affects financial performance and is significant at one per cent. Again, bank size has a positive effect on financial performance and is also significant. Therefore, the following indicators, audit quality and audit independence predict the financial performance of banks, but not professional competency.



## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION, AND RECOMMENDATIONS**

## 5.1 Introduction

This chapter presents the summary of findings of the analysis of results, the conclusion, and the study's implications and recommendations for further studies.

## 5.2 Summary of Findings

This study examines the nexus between the quality of internal audit (professional competence, audit independence, and audit quality) and the performance of banks in a developing country context, Ghana. The study uses an ordinary least square (OLS) regression model on a primary and secondary dataset of 20 banks over five years (2017 to 2021). The summaries of the findings are as follows.

The study's first objective is to find out whether professional competence affects banks' performance in Ghana. The study finds that professional competence positively correlates with financial performance but is not significant at 5 per cent ( $p\text{-value} > 0.05$ ). This suggests that the professional competence of internal auditors does not predict banks' performance in Ghana. Put differently, banks' performance in Ghana is not a result of the competencies of internal auditors. The insignificant relationship between professional competence and the performance of banks disagrees with the findings of Alrjoub and Ahmad (2017) and Botica (2011) that the professional competencies of internal audit contribute to the performance and effectiveness of internal control systems.

The study's second objective investigates the nexus between audit independence and bank performance in Ghana. The study records a significant positive relationship ( $p\text{value} < 0.05$ ) between audit independence and the financial performance of banks in Ghana. This implies that the independence of internal auditors predicts the performance

of banks in a developing country, Ghana. Henceforth, banks' performance in Ghana can be attributed to the audit independence in the organization.

The last research objective of the study is to examine the effect of the quality of the work of internal audit and the financial performance of banks in Ghana. The study also records a significant positive nexus ( $p\text{-value} < 0.05$ ) between audit quality and the financial performance of banks in Ghana. This result implies that the quality of the work of internal auditors contributes significantly to the performance of banks in a developing country, Ghana. Henceforth, the performance of banks in Ghana is due to audit quality performed by internal audit units in banks in Ghana. As stated earlier, the study agrees with the findings of Beyanga (2011), Fadzil et al. (2005), and Hermanson and Rittenberg (2005) who found that an effective internal audit quality function drives a firm's financial performance.

### **5.3 Conclusion**

Internal audit quality is a significant phenomenon that has become imperative in recent research due to persistent banking crises across the globe. Prior studies conclude that the massive bankruptcies of banks result from a lack of internal audit quality. In theory and practice, there is an increasing importance of quality of audit quality in research in recent studies. However, few studies are investigating the relationship between internal audit quality and financial performance in the financial sector of an economy. This study fills the gap by examining the nexus between internal audit quality and the financial performance of listed and non-listed in a developing country. The study uses both primary and secondary data from 20 banks from 2017 to 2021 from Ghana. The study employs OLS to investigate the nexus between professional competencies, audit

independence, audit quality (internal audit quality measures), and the financial performance of banks in Ghana. The study also considers other determinants of banks' performance such as liquidity, board size, and bank size.

The study finds that professional competence has an insignificant positive relationship with financial performance. However, audit independence and quality audit work have a positive and significant relationship with the performance of banks in Ghana. Also, bank size positively affects financial performance. Liquidity records a negative relationship with the bank's performance. The result implies that liquidity negatively affects the performance of banks. Board size, however, records an insignificant positive relationship with the financial performance of banks in Ghana. The study concludes that audit independence, quality of audit work, and bank size increase banks' performance in Ghana. However, professional competencies of internal audit and board size do not predict the financial performance of banks; however, liquidity decreases banks' performance in Ghana.

#### **5.4 Recommendations**

Based on the study's findings, relevant stakeholders of banks in developing countries need to adhere to the following implications, especially those in Ghana. The internal auditor should have maximum independence from the company they work for. The internal audit activities must be positioned to obtain cooperation from the audited company that has free, unrestricted access to all functions, records, property, and personnel, including those charged with governance. Also, there should be adequate professional training for internal audit staff to enhance audit quality which can help improve the effectiveness of internal audit functions.

It is important for banks to strictly adhere to effective internal control systems and practices in tackling strategic internal audits for effective audit quality. Management of banks should consider training and professional CPDs to enhance the professional competencies of internal auditors or internal audit staff.

Also, banks in Ghana and other developing countries should focus on improving competencies and the level of interaction with internal auditors to improve the overall effectiveness of internal auditing in preventing fraud, errors, or risk in the financial records of the banks and eventually affect the performance of the banks.

Finally, management, government agencies, potential investors, and other pertinent stakeholders of financial institutions should use the study's findings and other relevant to assess the bank's performance of banks in developing countries.

## REFERENCES

- Abbass, D. A. and Aleqab, M. M., 2013. Internal auditors' characteristics and audit fees: Evidence from Egyptian Firms. *International Business Research*, 6(4), 67-98.
- Abdolmohammadi, M., 2009. Factors Associated with the Use of and Compliance with the IIA Standards: A Study of Anglo-culture CAEs. *International Journal of Auditing*, 13(1), pp.27-42.
- Abbott, L. J., Parker, S., Peters, G. F., and Raghunandan, K., 2012. *An empirical investigation of audit fees, nonaudit fees, and audit committees: Contemporary Accounting Research*.

- Alrjoub, A.M.S. and Ahmad, M.A., 2017. Internal audit and its impact on risk management at the Islamic banks listed in Amman Stock Exchange. *International Journal of Academic Research in Business and Social Sciences*, Volume 7(8), pp.414-430.
- Al-Shammari, A., 2010. *The role of the Audit Committees in Corporate Governance in Saudi Arabia*. In *Workshop paper*, Saudi Arabia: College of Business Administration-King Saud University .
- Aslam, E., and Haron, R. (2020). Does corporate governance affect the performance of Islamic banks? New insight into Islamic countries. *Corporate Governance: The International Journal of Business in Society*, 1-18.
- Ataullah, A., and Le, H., 2006. Economic reforms and bank efficiency in developing countries: the case of the Indian banking industry. *Applied Financial Economics*, 16(9), pp. 653-663.
- Alzeban, A. and Gwilliam, D.. 2014. Factors affecting the internal audit effectiveness: A survey of the Saudi public sector. *Journal of International Accounting, Auditing and Taxation*, 23(2), 74-86.
- Barua, A., Rama, D.V. and Sharma, V., 2010. Audit committee characteristics and investment in internal auditing. *Journal of Accounting and Public Policy*, Volume 29(5), pp.503-513.
- Bou-Raad, G., 2000. Internal auditors and a value-added approach: the new business regime. *Managerial Auditing Journal*.
- Bradley, M. and Roberts, M.R., 2015. The structure and pricing of corporate debt covenants.. *The Quarterly Journal of Finance*, Volume 5(02), pp.1550-1563.
- Brekumi, H. A., Sarpong-Danquah, B., Owusu-Afriyie, R., and Gyimah, P. 2023.

- Nexus Among Internal Audit Quality, Corporate Governance and Performance of Selected Banks in Africa. *Global Business Review*, 09721509221147432.
- Brown, L. D. and Caylor, M. L., 2004. *Corporate Governance and Firm Performance*.
- Brown, L. D., 2014. *Corporate Governance and Firm Performance*.
- Caramanis, C., and Lennox, C., 2008. Audit effort and earnings management. *Journal of Accounting And Economics*, Volume 45(1), pp. 116-138.
- Carey, P., and Simnett, R. , 2006. *Audit partner tenure and audit quality: The Accounting Review*, 81(3), 653-676.
- Cashell, J.D. and Aldhizer, G.R., 2002. An Examination of Internal Auditors' Emphasis on Value-Added Services. *Internal Auditing-Boston-Warren Gorham and Lamont Incorporated*, 17(5), pp.19-31.
- Chen, H.S., Yeh, D.M., Lu, Y.C., Chen, C.Y., Huang, C.F., Tang, T.Y., Yang, C.C., Wu, C.S. and Chen, C.D., 2019. *Strain relaxation and quantum confinement in InGaN/GaN nanoposts: Nanotechnology*, 17(5), pp.1454.
- Chevers, D., Lawrence, D., Laidlaw, A. and Nicholson, D., n.d. The effectiveness of internal audit in Jamaican commercial banks. In: s.l.:Accounting and Management Information Systems, 15(3), pp.522.
- Christopher, J., Sarens, G. and Leung, P., 2009. A critical analysis of the independence of the internal audit function: evidence from Australia. *Accounting, Auditing and Accountability Journal*, pp. 57-63.
- Clarkson, M. E., Gibbs, H. and Shroeder, D., 1995. A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of Management Review*, Volume 20(1), pp. 92- 117.
- Collier, P. and Gregory, A., 1996. Audit committee effectiveness and the audit fee.

- European Accounting Review, pp.177-198.
- Cooper, D. R., and Schindler, P.S., 2011. *Business Research Methods*, New York: McGraw Hill.
- Creswell, J., 2009. *Mapping the field of mixed methods research*.
- DeAngelo, L., 1981. Auditor independence, 'low balling', and disclosure regulation. *Journal of accounting and Economics*, Volume 3(2), pp.113-127.
- Debrah, A., 2018. *Re-visiting the link between sustainable development and optimal mining: developing a strategy for growth and development of resource-rich African countries (Doctoral dissertation)*.
- Desender, K. A., 2010. *Ownership Structure and Stock Price Performance during Turbulent Financial Markets*.
- Dill, W., 1958. Environment as an influence on managerial autonomy. *Administrative science quarterly*, pp 409-443..
- Dunn, J.M. and Stern, E.H., 2000. *International Business Machines Corp Display accessory for a record playback system.*: US Patent 6,073,103..
- Fadzil, F. H., Haron, H., and Jantan, M., 2005. Internal auditing practices and internal control system. *Managerial Auditing Journal*, Volume 20(8), pp. 844-866.
- Fayezi, S., O'Loughlin, A. and Zutshi, A., 2012. Agency theory and supply chain management: a structured literature review. *Supply chain management: an international journal*, Volume 17(5), pp.556-570..
- Franck, P. and Sundgren, S., 2012. Determinants of internal governance quality: evidence from Sweden. *Managerial Auditing Journal*.
- Freeman, R. E., 1999. *Divergent stakeholder theory*: Academy of management review, 24(2), 233-236.
- Friedman, A., 1970. *Foundations of modern analysis*, s.l.: Courier Corporation.

- Glazer, D. and Jaenike, H., 2016. *The effectiveness of internal audit in Jamaican commercial banks*. s.l.:Accounting and Management Information Systems, 15(3), pp.522..
- Goodwin, J. and Kent, P., 2003. *The relation between audit fees, internal audit and the audit committee. Working Paper*. Brisbane, Australia, University of Queensland/Queensland University of Technology.
- Hay, D., Knechel, W. R., and Ling, H. , 2008. Evidence on the impact of internal control and corporate governance on audit fees. *International Journal of Auditing*, Volume 12(1), pp. 9-24.
- Hermanson, D. R., Carcello, J. V., Neal, T. L., and Riley, R. A. , 2005. *Board characteristics and audit fees*, s.l.: Contemporary Accounting Research, 19(3), 365-384.
- Hutchinson, M.R. and Zain, MM, 2009. Internal audit quality, audit committee independence, growth opportunities and firm performance . In: s.l.:Corporate Ownership and Control, 7(2), pp.50-63.
- Institute of Internal Auditors (IIA), 2003. *Internal auditing: Adding value across the board*, s.l.: Corporate Brochure, IIA.
- Kothari, C., 2004. *Research Methods and Techniques. 2nd Edition, New Deli: Wishwa Prakashan*.
- KPMG, 2003. *Fraud Survey Results*, New York, NY: KPMG Peat Marwick.
- Ljubisavljević, S. and Jovanović, D., 2011. Empirical research on the internal audit position of companies in Serbia. In: Serbia: Economic Annals, pp.123-141.
- Maijoor, S. J., and Vanstraelen, A., 2006 . *Earnings management within Europe: the effects of member state audit environment, audit firm quality and international capital markets*, MUmbai: Accounting and business research, 36(1), 33- 52..

- Mautz, R.K. and Sharaf, H.A., 1961. *The philosophy of auditing (No. 6: American Accounting Association.*
- Montondon, L., 1995. *Accountability in municipalities: the use of internal auditors and audit committees: The American Review of Public Administration, 25(1), pp.59-69..*
- Muga, N., 2012. *Moving towards universal health coverage: health insurance reforms in nine developing countries in Africa and Asia.*
- Murray, K.B. and Vogel, C.M., 1997. Using a hierarchy-of-effects approach to gauge the effectiveness of corporate social responsibility to generate goodwill toward the firm: Financial versus nonfinancial impacts. *Journal of Business Research, Volume 38(2) pp.14.*
- Onumah, J.M., and Yao Krah, R., 2012. Barriers and catalysts to effective internal audit in the Ghanaian public sector. *Research in Accounting in Emerging Economies, 12 (1), pp.177-207.*
- O'Sullivan, N. and Diacon, F., 2002. *The impact of board composition and ownership on audit quality: evidence from large UK companies*, London: The British Accounting Review, 32(4), 397-414.
- Oussii, AA and Boulila, NT, 2017. *The impact of formal and informal interactions between the internal audit function and the audit committee on the implementation of the recommendations of the internal audit report.*
- Pasewark, W. R., Shockley, R. A., and Wilkerson, J. E., 1995. *Legitimacy claims of the auditing profession vis-a-vis the behaviour of its members: An empirical examination: Critical Perspectives on Accounting, 6(1), 77-94.*
- Petraşcu, D. and Tieanu, A., 2014. The role of internal audit in fraud prevention and detection. *Procedia Economics and Finance, Volume 16(8), pp.489-497.*

- Redmayne, N.B., 2011. Auditing and Assurance Services and Ethics in Australia: An Integrated Approach. *Journal of Accounting and Organizational Change* pp. 23-27.
- Richards, V. D., and Laughlin, E. J., 2016. *A cash conversion cycle approach to liquidity analysis*, s.l.: Financial management, 32-38.
- Ridley, A. and D'silva, P., 2014. *Internal control in small and medium enterprises in the manufacturing sector*.
- Rittenberg, L., 1977. *Auditor independence and systems design*: Institute of Internal Auditors, Incorporated.
- Sarbanes, O. and Oxley, M.G., 2002. *Corporate and Auditing Accountability, Responsibility, and Transparency Act of 2002*.
- Scarborough, Rama and Raghunandan, 2004. The effect of audit committee and board of director independence on auditor resignation. *Auditing: A Journal of Practice and Theory*, Volume 23(2), pp.131-146.
- Schiuma, B., 2003. Business Performance Measurement.:Managerial Auditing, pp.680-687.
- Schiuma, B. M., 2003. *Business Performance Measurement*: Managerial Auditing, 680-687.
- Stierwald, R., 2010. Agency theory and supply chain management: a structured literature review. *Supply chain management: an international journal*, Volume 17(5), pp.556-570.
- Sullivan, N., 2001. *The impact of board composition and ownership on audit quality: evidence from large UK companies*, London: The British Accounting Review, 32(4), 397-414.

Tackie, G., Marfo-Yiadom, E. and Achina, S.O., 2016. Determinants of internal audit effectiveness in decentralized local government administrative systems.

*International Journal of Business and Management*, Volume 11(11), pp.184.

Wheeler, W., 2003. Implied alignment: a synapomorphy-based multiple-sequence alignment method and its use in cladogram search: *Cladistics*, pp.261-268.

Yassiariti, G and Nelson, K., 2012. *The relationship between audit committee characteristics and earnings management among Jordanian listed companies:*

Proposing conceptual framework.

Yin, D., 2003. Higher market valuation of companies with a small board of directors.

*Journal of Financial Economics*, Volume 40(2), pp. 185-211.

Yuriati, D., 2011. *Analysis of profitability (roe) determination of sharia banks in indonesia (2010: 1-2015: 12)*

Ziegenfuss, D. E., 2000. Developing an internal auditing department balanced scorecard. *Managerial Auditing Journal*, 15(1/2), pp.12-19.

