Strathmore UNIVERSITY

SU+ @ Strathmore University Library

Electronic Theses and Dissertations

2026

Effect of deposit insurance on stability of commercial banks in Kenya: moderating role of bank size.

Fardosa, Hassan
Strathmore Business School
Strathmore University

Recommended Citation

Fardosa, H. (2026). *Effect of deposit insurance on stability of commercial banks in Kenya: Moderating role of bank size* [Strathmore University]. https://hdl.handle.net/11071/16891

Follow this and additional works at: https://hdl.handle.net/11071/16891

This work is availed for free and open access by Strathmore University Library.
It has been accepted for digital distribution by an authorized administrator of SU+ @Strathmore University.
For more information, please contact library@strathmore.edu

EFFECT OF DEPOSIT INSURANCE ON STABILITY OF COMMERCIAL BANKS IN KENYA: MODERATING ROLE OF BANK SIZE

FARDOSA HASSAN

ADMISSION NO. 170423

A DISSERTATION SUBMITTED TO THE STRATHMORE BUSINESS SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER'S IN DEVELOPMENT FINANCE OF STRATHMORE UNIVERSITY

MAY, 2026

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the present dissertation contains no material previously published or written by another person except where due reference is made in the research itself.

Fardosa Hassan



13.05.2026

Approval

The Dissertation of Fardosa Hassan was reviewed and approved by the following:

Name of Supervisor: Albert Abanga



13.05.2026

Faculty: Strathmore Business School

Institution: Strathmore University

ABSTRACT

Bank stability is fundamental to financial system resilience, depositor confidence, and sustainable economic growth, particularly in emerging banking systems. This study examined the effect of deposit insurance on the stability of commercial banks in Kenya and the moderated role of bank size, focusing on deposit insurance coverage, depositor protection, and deposit insurance funding. The main objectives of the research were to determine the effect of deposit insurance coverage on the stability of commercial banks in Kenya, to establish the effect of depositor protection on the stability of commercial banks in Kenya, to assess the effect of deposit insurance funding on the stability of commercial banks in Kenya, and to determine the moderating effect of bank size between deposit insurance and bank stability. Anchored in moral hazard and bank-run theories, the study adopted a positivist research philosophy and a quantitative, descriptive research design. Using an unbalanced panel dataset of 38 licensed commercial banks from 2015 to 2024, secondary data were sourced from banks' audited financial statements, the Central Bank of Kenya, and the Kenya Deposit Insurance Corporation. Data analysis combined descriptive statistics with panel econometric techniques. Fixed Effects and Random Effects models were estimated, with selection guided by the Hausman specification test and supported by robustness analysis using Feasible Generalized Least Squares (FGLS). The empirical findings reveal that deposit insurance coverage and depositor protection do not exert a statistically significant within-bank effect on stability once unobserved heterogeneity is controlled for under the Fixed Effects specification. However, robustness analysis using FGLS indicates that depositor protection is positively and significantly associated with asset quality ratio, suggesting potential market-discipline weakening effects consistent with moral hazard dynamics. Deposit insurance funding emerged as a relevant dimension, exhibiting a weak but positive association with asset quality ratio. These underscores increased risk taking by banks with high deposit insurance funding. Interaction effects reveal that bank size does not moderate the relationship between deposit insurance and stability; however, bank size is a significant direct determinant of stability, reflecting diversification and scale advantages. These findings offer policy-relevant insights for strengthening Kenya's deposit insurance framework through appropriate design of the DIS and supervisory complementarity to strengthen banking stability.

Keywords: *Deposit Insurance, Bank stability, Depositor Protection, Moral Hazard, Bank Run*

TABLE OF CONTENTS

DECLARATION i
ABSTRACT ii
TABLE OF CONTENTS iii
LIST OF FIGURES vi
LIST OF TABLES vii
ABBREVIATIONS AND ACRONYMS viii
DEFINITION OF TERMS ix
ACKNOWLEDGEMENTS x
CHAPTER ONE: INTRODUCTION 1
1.1 Background of the Study 1
1.1.1 Determinants of Bank Stability 2
1.1.2 Deposit Insurance and Bank Stability 3
1.1.3 Overview of Deposit Insurance 5
1.1.4 Commercial Banks in Kenya 7
1.2 Statement of the Problem 8
1.3 Research Objectives 10
1.3.1 General Objective 10
1.3.2 Specific Objectives 10
1.4 Research Questions 10
1.5 Scope of the Study 10
1.6 Significance of the Study 11
1.6.1 Depositors 11
1.6.2 Policy Makers and the Deposit Insurer 11
1.6.3 Researchers and Academicians 11
1.6.4 Banks and Other Financial Institutions 11
1.7 Chapter Summary 12
CHAPTER TWO: LITERATURE REVIEW 13
2.1. Introduction 13
2.2. Theoretical Review 13
2.2.1. Moral Hazard Theory 13
2.2.2. Bank Run Theory 15
2.3. Empirical Review 17
2.3.1. Deposit Insurance Coverage and Bank Stability 17
2.3.2. Depositor Protection and Bank Stability 20
2.3.3. Deposit Insurance Funding and Bank Stability 23
2.3.4. Bank Size and Bank Stability 25
2.4. Research Gaps 29
2.5. Conceptual Framework 35
2.6. Operationalization and Measurement of Variables 36

2.7. Chapter summary 38
CHAPTER THREE: RESEARCH METHODOLOGY 39
3.1. Introduction 39
3.2. Research Philosophy 39
3.3. Research Design 40
3.4. Population 40
3.5. Data Collection Methods 40
3.6. Variable Measurement and Model Specification 41
3.6.1. Dependent Variable: Bank Stability 41
3.6.2. Independent Variables: Deposit Insurance 42
3.6.3. Moderating Variable: Bank Size 43
3.6.4. Control Variables 43
3.7. Data Analysis Techniques 44
3.7.1. Panel Estimation Strategy 45
3.7.2. Diagnostic Tests and Model Robustness 45
3.8. Research Quality 47
3.9. Ethical Considerations 47
3.10. Chapter Summary 47
CHAPTER FOUR: PRESENTATION OF RESULTS 48
4.1. Introduction 48
4.2. Sample Representation 48
4.3. Descriptive Statistics 49
4.3.1. Bank Stability (BSAQR) 50
4.3.2. Depositor Insurance Dimensions (PROT, FUND, and COV) 50
4.3.3. Bank Size as Moderating Variable (BS) 51
4.3.4. Control Variables (CAP, BEEF, and LIQ) 51
4.3.5. Correlation Analysis 51
4.4. Econometric Analysis and Inferential Results 52
4.4.1. Diagnostic and Model Selection Tests 53
4.4.2. Baseline Fixed Effects Model: Direct Effects of Deposit Insurance 56
4.4.3. Moderating Role of Bank Size 57
4.4.4. Feasible Generalized Least Squares (FGLS) and Robustness Analysis 58
4.5. Chapter Summary 60
CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS 61
5.1. Introduction 61
5.2. Summary of the study Findings 61
5.3. Discussion of findings 62
5.3.1. Deposit Insurance Coverage and Asset Quality 62
5.3.2. Depositor Protection and Asset Quality 63
5.3.3. Deposit Insurance Funding and Asset Quality 64

5.3.4. Moderating Role of Bank Size 65
5.3.5. Control Variables and Bank Stability 66
5.4. Conclusion 66
5.5. Recommendations 67
5.6. Limitations of the Study 68
5.7. Areas for Future Research 68
REFERENCES 70
APPENDICES 78
Appendix 1: Ethical Clearance 78
Appendix 2: List of commercial banks 79
Appendix 3: Bank-Year Data Availability Matrix for Kenyan Commercial Banks (2015–2024) 80
Appendix 4: Plagiarism Report 82
Appendix 5: Data collection tool 83

LIST OF FIGURES

Figure 1.1. NPLs Ratio by Bank Peer Groups 8
Figure 2.2. Conceptual Framework 35

VT OMNES VNVM SINT

LIST OF TABLES

Table 2.1. Summary of the Existing Literature on the Topic and the Gaps Identified 31
Table 2.2. Operationalization of the Variables 36
Table 4.1. Summary Statistics of Panel Data Completeness……..49
Table 4.2. Descriptive Statistics of Study Variables (in %) 50
Table 4.3. Correlation Matrix 52
Table 4.4. Shapiro-Wilk W test for normal data..... 53
Table 4.5. Variance Inflation Factor (VIF)..... 54
Table 4.6. Hausman Test (FE vs RE) 55
Table 4.7. Baseline Fixed Effects Model..... 56
Table 4.8. Fixed Effects Model with Bank Size as a Moderator 58
Table 4.9. Cross-sectional time-series FGLS regression 59

VT OMNES VNVM SINT

ABBREVIATIONS AND ACRONYMS

BCBS	Bassel Committee on Banking Supervision
CAP	Capital Adequacy Ratio
CBK	Central Bank of Kenya
DIS	Deposit Insurance System
DPFB	Deposit Protection Fund Board
EPU	Economic Policy Uncertainty
EU	European Union
FE	Fixed Effects
FGLS	Fixed Generalized Least Square
GDP	Gross Domestic Products
GMM	Generalized Methods of Moments
IADI	International Association of Deposit Insurers
IMF	International Monetary Fund
KDIC	Kenya Deposit Insurance Corporation
MENA	Middle East and North Africa
NPL	Non-Performing Loans
OLS	Ordinary Least Square
ROA	Return on Asset
ROE	Return on Equity
SGMM	System Generalized Methods of Moments
SIFI	Systemically Important Financial Institutions
SSA	Sub Saharan Africa
TBTF	Too-Big-To-Fail
US	United States
USD	United States Dollar

DEFINITION OF TERMS

Deposit insurance: A scheme that provides a guarantee on depositors' funds in banks, typically administered by the government, and maintains financial system stability by protecting insured deposits (Quintero, 2023; Nikolaj et al., 2022, IADI 2014).

Deposit Insurance System: Comprises of the deposit insurer and its ties to the participants in the financial safety net that facilitate the resolution process and the entire operation of deposit insurance (IADI 2014).

Coverage: The maximum amount that a depositor is guaranteed for reimbursement by a deposit insurer in case of a bank failure. For explicit deposit insurance schemes, deposits are covered up to a statutory coverage limit (IADI, 2021; Anginer & Demirguc-Kunt, 2018).

Moral Hazard: When parties are motivated to take on additional risk because the associated costs are incurred, wholly or partially, by others (IADI, 2014). With regards to deposit insurance, moral hazard is when the presence of deposit insurance incentivizes banks to fund high-risk, high-return ventures, since the deposit insurer will provide compensation to depositors in the event of bank failure (Ngalawa et al., 2016).

Bank run: A circumstance in which depositors of banks withdraw their deposits simultaneously due to concerns about the bank's solvency (Ngalawa et al., 2016).

Systemically Important Financial Institutions: These are entities such as banks or firms, which are considered critical in the economy as their collapse would trigger a financial crisis (Iyer et al., 2019; Hoelscher & Quintyn, 2003).

ACKNOWLEDGEMENTS

I appreciate the immense support from my supervisor, Dr. Albert Abang'a, for his unwavering guidance and encouragement in drafting my research.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Banks play a key role in promoting economic development through job creation and improving the country's welfare. They achieve this by undertaking functions such as liquidity creation, connecting deficit spending units with surplus funds, and efficiently allocating resources (Abor et al., 2022; Kiemo et al., 2019). To effectively play these roles, the banking system must be stable and sound. Banks' financial stability refers to the system's capacity to manage risks, allocate resources effectively, and withstand shocks (Ullah et al., 2024). A robust and sound banking sector impacts everyone involved, including depositors, policymakers, regulators, and the entire financial system. Ozili (2018) defines bank stability as the absence of financial crises, pointing out that it is attained when banks within the banking system or industry are stable. A robust banking system is essential in promoting growth and reducing financial institutions' vulnerability to crises (Koskei, 2020). This in turn, reduces disruptions in the financial system, which is harmful to the economy. The perception of the public regarding the stability of the banks affects their savings culture and has a key effect on the mobilization of deposits, the main source of funding for the banks. Banking stability is therefore crucial in instilling public confidence in the financial sector. Chernykh et al. (2019) show how depositors' perceptions of the stability of banks are significantly shaped by the total number of bank failures and the depositors affected by such events.

Banking systems may sometimes be harmful, particularly when they are struggling and failing, as experienced during the global financial crisis of 2007–2009 (Abor et al., 2022). Instability in the banking industry can manifest either as a bank run or an insolvency problem (Ngalawa et al., 2016). During a bank run, depositors simultaneously withdraw their deposits in full in anticipation of a looming bank failure (Ngalawa et al. 2016). This causes liquidity crisis and eventually, bank crisis. Bank runs caused by panic withdrawals increase the possibility of banking instability and systemic crisis (Nikolaj et al., 2022). Bank instability, on the other hand, can manifest as bank insolvency, usually characterized by erosion of the bank’s net worth and a large number of NPLs (Ngalawa et al., 2016). Following the global financial crisis of 2007-2009, banking stability has grown to be a significant concern to regulators and policymakers in many countries and an

important area of study for many researchers (Koskei, 2020). In particular, the implementation of Basel III with the objective of addressing solvency was a key development (Kiemo, 2025). By increasing banks' capital requirements, the standard has improved banks' prudential regulation, oversight, and risk management. With SIFI required to hold more common equity, the standard also introduced the liquidity coverage ratio and net stable funding with the aim of increasing the resilience of the banks (Cerrone, 2018). The significance of bank stability discussed above prompts the need to examine the key determinants of bank stability. A combination of internal factors specific to the bank, external macroeconomic and regulatory conditions impact bank stability (Yitayaw et al., 2023). These determinants interact to either strengthen or weaken a bank's ability to withstand shocks and sustain operations. Understanding these factors provides the foundation for examining how specific policy instruments, such as deposit insurance, contribute to overall stability in the banking sector.

1.1.1 Determinants of Bank Stability

The research by Yitayaw et al. (2023) demonstrates that a combination of external factors and internal factors unique to a bank affects a bank's stability. Factors specific to the internal operations of individual banks, including financial aspects, can impact bank stability. These factors include capital adequacy, level of non-performing loans and adequacy of the provisioning for such loans, liquidity, and profitability, among others. According to the study by Yitayaw et al. (2023), banks' lending rate, asset tangibility, and capital mobilization are key determinants of the stability of banks. Koskei (2020) draws a similar conclusion that internal factors, including a bank's profitability and liquidity, are key factors affecting bank stability. The paper by Ozili (2018) demonstrates that internal factors, including regulatory capital, bank efficiency, number of NPLs, bank profitability, and banking concentration, are key factors in determining banking stability in Africa. A comparable conclusion was drawn by Kiemo et al. (2019) in their study on bank-specific determinants of commercial banks' stability in Kenya. The study demonstrates that bank size, regulatory capital, and bank funding are key determinants of the stability of commercial banks in Kenya. Similar findings by Adusei (2015) establish that big banks are more stable than their smaller counterparts in Ghana.

The study by Ullah et al. (2024) finds that government factors such as corruption, political stability, and regulatory governance have a positive and significant influence on bank stability. Similar sentiments are echoed by Kiemo et al. (2019), who conclude that improvement in corporate governance increased the financial stability of commercial banks. To ensure the safety and soundness of the banking system, efficient regulations are used to enforce discipline (Maysami & Sakellariou, 2008). Ullah et al. (2022) and Ozili (2018) demonstrate that financial stability improved with regulatory governance, with the quality of the regulatory system being one of the key determinants of banking stability in Africa. Regulations range from supervisory, prudential regulations, capital requirements, and deposit insurance. According to Bawuah (2024), capital requirement regulations can sustain banking stability, allowing banks to finance the entire financial system, contributing to economic growth. On the other hand, regulations such as deposit protection play a key role in protecting depositors, the financial system, and other significant stakeholders (Alam et al., 2021).

While numerous studies have examined determinants of bank stability, including capital adequacy, profitability, NPLs, and liquidity, Koskei (2020), Kiemo et al. (2019), and Ozili (2018), few studies have examined the stabilizing or destabilizing effect of deposit insurance on bank stability, especially in the Kenyan context. Moreover, while the factors discussed above are widely acknowledged as critical to bank stability, they often don't operate in isolation but jointly with institutional safeguards that promote depositor confidence. Deposit insurance stands out as a policy-based mechanism that aims to protect depositors and the entire financial system (Nikolaj et al., 2022). This is because banks are uniquely prone to runs due to the role they play in transforming short-term demand deposits into long-term assets (Anginer & Demirguc-Kunt, 2018). Its design and administration determine whether it is beneficial or detrimental to the economy (Anginer & Demirguc-Kunt, 2018). This gap underlines the importance of examining the effect of deposit insurance on bank stability.

1.1.2 Deposit Insurance and Bank Stability

Banks are susceptible to bank runs due to the short-term nature of demand deposits and the long-term nature of bank loans (Cullen, 2024). Due to the mismatch between deposits and loans, banks' balance sheets are naturally unstable (McCoy, 2007). Further, investment in long-term assets by

banks amplifies this mismatch (Anginer & Demirguc-Kunt, 2018). This means that in the event of bank runs, the bank will not be able to liquidate its assets fast enough to meet depositors' demands. Furthermore, bank runs can cause a ripple effect and trigger full-blown contagion (McCoy, 2007). A common response to the problem of bank runs and contagion is the establishment of deposit insurance (Alam et al., 2021). Deposit insurance is a regulatory mechanism used by central banks to safeguard depositors (Kung'u, 2021). By acting as a financial safety net to provide a buffer during liquidity crises, deposit insurance plays a complementary role alongside central banks' functions as lender of last resort, bank regulation, and supervision (Nikolaj et al., 2022). Besides increased banking supervision introduced by Basel III after the global financial crisis, the incorporation of the directive on bank recovery and resolution, a role played by deposit insurers, gained prominence to prevent future banking crises (Cerrone, 2018). In particular, the BCBS and the IADI cooperated to develop a globally accepted set of core principles governing deposit insurers around the world on coverage, funding, and membership (IADI, 2010). In fact, according to Alam et al. (2021), in order to restore market trust and advance financial stability during the financial crisis, policymakers and regulators resorted to deposit insurers in addition to monetary and fiscal measures. Most jurisdictions that did not have a deposit insurance system moved to establish them, while others increased their coverage, and others introduced blanket guarantees (Demirgüç-Kunt et al., 2014). This response by policymakers following the financial crisis underscores the significance of deposit insurance and its effect on financial stability, highlighting the role played by deposit insurance in promoting bank stability.

By playing the role of stabilizing the financial sector through guaranteeing depositors' prompt access to their insured deposits in the case of a bank failure, deposit insurance reduces the chances of panic withdrawals and bank runs (Quintero, 2023). Nicolaj et al. (2022) point out the need for deposit insurance due to information asymmetry caused by the fact that most depositors lack the expertise necessary to evaluate bank risk. It is generally anticipated that deposit insurance systems will boost depositor confidence, according to Chiaramonte et al. (2019) by preventing bank runs and safeguarding the interests of small, inexperienced depositors. In addition, deposit insurance can enhance societal welfare (Anginer et al., 2014). Since depositors' funds are the major source of funding for banks, insuring these deposits has become an important feature of countries' financial safety net (Cerrone, 2018).

Despite the role played by deposit insurance in promoting bank stability, some studies have attributed it to banking instability, arguing that it indeed contributes to moral hazard (Ngalawa et al., 2016). According to the study, in pursuit of higher interest rates, depositors no longer feel obliged to assess the credit risk associated with depositing money in risky banks, while on its part, the banks pursue high-risk, high-return activities with the knowledge that depositors will not suffer in the event of bank failure. High deposit insurance coverage during non-crisis times increases banks' risk-taking, exacerbating financial system vulnerabilities (Chiaramonte et al., 2019). Demirgüç-Kunt and Detragiache (2002) aver that deposit insurance is often associated with banking instability due to impaired market discipline, more so where the institutional environment is weak. The inconsistencies and contradicting findings in the literature on the subject form the basis for the current research. Further, very few studies exist in the context of the Kenyan banking system (Kung'u, 2021; Malala, 2022).

The effectiveness of deposit insurance can vary across different bank sizes, with big banks benefiting more from deposit insurance due to TBTF perception (Iyer et al., 2019). Quintero (2023) demonstrates that the strength and the direction of bank stability on deposit insurance are affected by bank size, with TBTF perception inhibiting market discipline and promoting bank instability. This is because large banks with a larger proportion of insured deposits can offer lower rates to depositors than their counterparts. Similarly, Iyer et al. (2019) demonstrate that depositors move their deposits from small banks to systemic banks during banking stability concerns, underscoring the TBTF perception. Despite this interaction effect of bank size on deposit insurance, few studies have been conducted in Kenya to establish the effectiveness of deposit insurance on bank stability and the role bank size plays in this relationship. The current study will employ bank size as a moderating variable to address this critical gap.

1.1.3 Overview of Deposit Insurance

Deposit insurance was first introduced worldwide in the 1930s in the US as a countermeasure to the Great Depression-era banking crisis that caused a wave of bank failures (Demirgüç-Kunt et al., 2014). Today, deposit insurance is a standard feature of many developed countries' financial safety net. Currently, 148 countries have established deposit insurance globally (IADI, 2024). The World Bank and the IMF played a key role in spearheading the adoption of deposit insurance as they

collectively endorsed deposit insurance as best practice (Demirgüç-Kunt et al., 2014). Whilst deposit insurance is uncommon in less economically developed countries and more prevalent in middle to high-income countries, most of the financial instability situations have been documented in the latter nations (Ngalawa et al., 2016). However, in recent years, deposit insurance is gained momentum across Africa. As reported by IADI (2024), deposit insurance schemes have been established in 19 African countries. There are a number of reasons why deposit insurance has become so popular in Africa, including the imitation of policies seen in developed countries and the political appeal of deposit insurance's ability to alleviate depositor worries about the safety of their money, which in turn encourages more deposits into banks. (McCoy, 2008). Regionally, Kenya was the first to set up a deposit insurance scheme dubbed DPFB in 1988 (Malala, 2022). This resulted from massive bank failures caused by weak regulatory systems that overlooked aspects like poor corporate governance, insider lending, and an unsecured loan portfolio, to mention just a few (Abor et al., 2022).

Since deposit insurance's effects are not always foreseeable, Anginer & Demirguc-Kunt (2018) point out that how well a deposit insurance system is planned and administered determines whether it is beneficial or detrimental to the economy. These planning and administration features of a deposit insurer include coverage, payout, funding, administration, risk risk-adjusted premium assessment, among others (Chiaramonte et al., 2019; Bonfim & Santos, 2023). The scope and the limit of coverage are salient features of the scheme. The scope of coverage takes into account the different deposit products, deposit instruments, and deposit types covered. Another key element of deposit insurance is the coverage limit. IADI (2021) defines coverage limit as the maximum value that a depositor may be compensated by a deposit insurer in the occurrence of a bank failure. On the face value, unlimited coverage offers the most benefits for financial stability. However, unlimited coverage may disrupt the entire financial system, as highlighted by Androvandi et al. (2022). This is because additional funding requirements may ultimately be passed to banks, as well as moral hazard concerns. On the other hand, deposit insurance funding refers to the sources of the deposit insurance fund and whether it is publicly or privately administered. It determines the financial capacity and credibility of the scheme in reimbursing depositors during bank failures. The effectiveness of deposit insurance depends on its design features, such as coverage, depositor protection, and funding. These areas have largely remained unexplored in the Kenyan context. Additionally, there is scanty research that has examined specific features of deposit insurance,

including coverage, protection, and funding, in the context of the Kenyan deposit insurance system. By focusing on coverage, depositor protection, and funding features, this study attempts to establish the effect of deposit insurance on bank stability in Kenya.

1.1.4 Commercial Banks in Kenya

Kenya has thirty-eight commercial banks, all of which are subject to Central Bank of Kenya regulations (Central Bank of Kenya, 2025). According to the report, commercial banks are classified into small, medium, and large peer groups depending on their market share; with twenty-one banks in the small peer group, eight banks in the medium peer group, and nine banks in the large peer group. Due to the nature of banks advancing customer deposits to create lending, the major source of income for banks, banks' stability is closely tied to the performance of the loans. In the recent past, the stability of the Kenyan banking sector has raised concerns. The continued rise in domestic lending rates caused by the monopolistic tendencies of banks poses banking stability concerns associated with increased credit default (Kiemo, 2025). According to the Central Bank of Kenya (2023), the banking sector has been recording a consistent growth in NPLs, which was at a high of 15.6 percent as of 2023. The ratio has continued to deteriorate to 17.1% as of December 2024 (Central Bank of Kenya, 2025). These continuously growing levels of NPLs signal underlying vulnerabilities in the banking sector that can threaten the stability of the entire financial system. In fact, prior to the 2015-2016 banking crisis in Kenya, the level of NPL rose from 36.7% in 2013 to 52.8% in 2016 at the peak of the crisis, according to the Central Bank of Kenya (2025), culminating in the collapse of Chase Bank, Dubai Bank, and Imperial Bank. This is because NPLs are related directly to the commercial bank failures, as resources are locked up in an unprofitable industry, stifling economic growth (Abor et al., 2022).

Further, Kenyan banks have significantly increased their holding of government securities, with these assets rising from 19 percent to 28 percent of total bank assets between 2015 and 2024 (Central Bank of Kenya, 2024). This has consequently exposed the sector to systemic risk in the event of government restructuring or default. Further, lack of diversification in the holding of similar portfolios poses concentration risk, which could easily spread to the entire financial system due to the interconnectedness in the sector (Kenya Bankers Association, 2025). A common response to the problem of bank instability is the establishment of a deposit insurance scheme (Alam et al., 2021). In the Kenyan banking system, KDIC acts as a financial safety net by

complementing CBK in upholding the soundness of the country's financial system and fostering depositor confidence through deposit insurance (Central Bank of Kenya, 2025). Due to the banking stability concerns discussed above and the role of KDIC in fostering bank stability, this study aims to examine the effect of deposit insurance on the stability of commercial banks in Kenya.

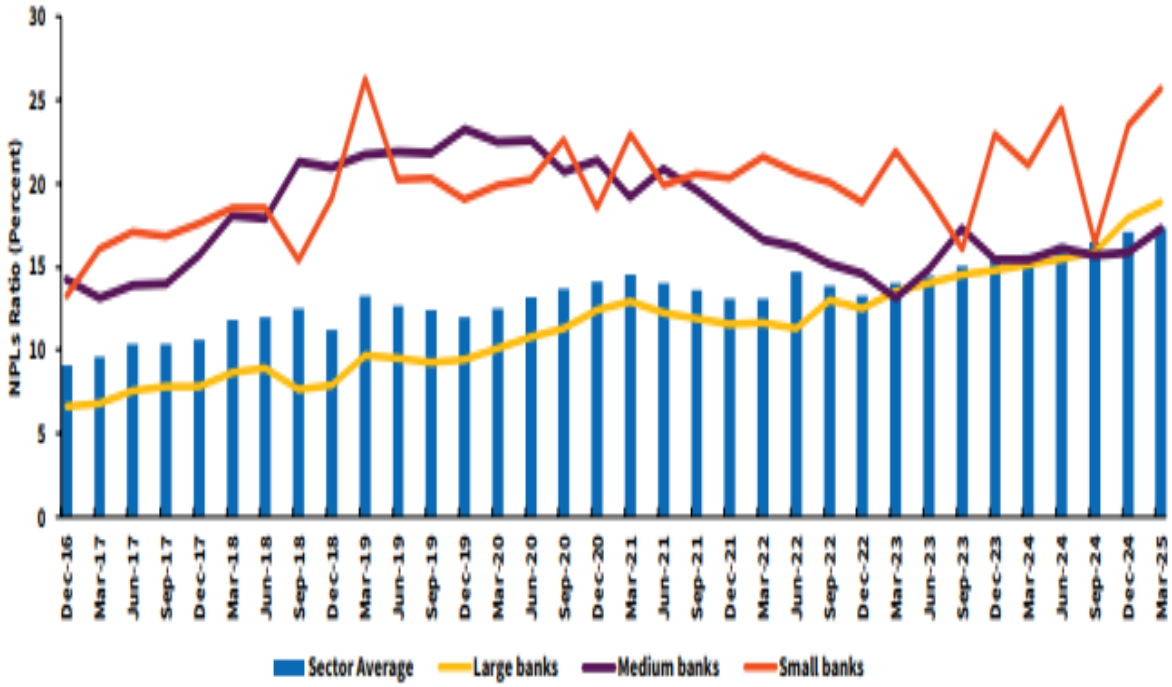


Figure 1.1. NPLs Ratio by Bank Peer Groups

Source: Central Bank of Kenya (2025)

Similar to Koskei (2020), the asset quality ratio is used as a measure of bank stability in the study and is assessed using the NPL ratio. The ratio has been steadily increasing over the years, with a record high of 17.1% as of December 2024 (Central Bank of Kenya, 2025). This has raised bank stability concerns (Kiemo, 2025). Banks in the small peer group had recorded the highest average in NPL ratio of 23% as at December 2024.

1.2 Statement of the Problem

The continued rise in domestic lending rates caused by monopolistic tendencies of banks has led to financial stability concerns associated with increased credit default (Kiemo, 2025). The Central Bank of Kenya (2025) has reported deterioration in NPL with a high of 17.1% as of December

2024. This continuously growing levels of NPLs signal underlying vulnerabilities in the banking sector that can threaten the stability of the entire financial system. In fact, prior to the 2015-2016 banking crisis in Kenya, the level of NPL rose from 36.7% in 2013 to 52.8% in 2016 at the peak of the crisis (Central Bank of Kenya, 2025). Coupled with poor corporate governance, these led to the collapse of Chase Bank, Dubai Bank, and Imperial Bank, which were placed under receivership and later, liquidation (Koskei, 2020). Further, Kenyan banks have significantly increased their holding of government securities, with these assets rising from 19% to 28% of total bank assets between 2015 and 2024 (Central Bank of Kenya, 2024). This has consequently exposed the sector to systemic risk in the event of government restructuring or default. Lack of diversification in the holding of similar portfolios poses concentration risk, which could easily lead to the contagion effect (Kenya Bankers Association, 2025). In addition, the acquisition of struggling banks such as The National Bank and Jamii Bora Bank points to the challenges facing the sector. To promote bank stability, the CBK amended the Business Laws Act of 2024, which aimed to raise the minimum core capital requirements for commercial banks from Kes 1 billion progressively to Kes 10 billion through a phased approach by 2029. This initiative, together with the lifting of the moratorium on licensing of new commercial banks, is intended to bolster the stability of the banking sector (Central Bank of Kenya, 2025).

Following the COVID-19 pandemic and the failure of Silicon Valley Bank in the US, the appeal for deposit insurance increased worldwide as depositors sought assurance of timely payouts in the event of banking system failures (Cullen, 2024). Quintero (2023), Nafis et al. (2021), and Cullen (2024) attribute deposit insurance to promoting bank stability. However, other scholars have demonstrated that DIS can have a detrimental effect on banks' stability due to moral hazard concerns (Nikolaj et al., 2022). These inconsistencies and contradicting findings in the literature on the subject form the basis for the current research. Despite the implementation of DIS in Kenya, its role in promoting bank stability has not been adequately explored, with most studies focusing on advanced economies. This study therefore seeks to contribute to the gap in knowledge on the effect of deposit insurance on bank stability in Kenya. The findings of this study will inform policy on the effectiveness of the deposit insurance framework and provide evidence-based recommendations for enhancing the deposit insurance role in promoting a stable and sound banking system.

1.3 Research Objectives

1.3.1 General Objective

To analyze the effect of deposit insurance on the stability of commercial banks in Kenya.

1.3.2 Specific Objectives

i. To determine the effect of deposit insurance coverage on the stability of commercial banks in Kenya
ii. To establish the effect of depositor protection on the stability of commercial banks in Kenya
iii. To assess the effect of deposit insurance funding on the stability of commercial banks in Kenya.
iv. To determine the moderating role of bank size on the association between deposit insurance and stability of commercial banks in Kenya.

1.4 Research Questions

i. What is the effect of the deposit insurance coverage on the stability of commercial banks in Kenya?
ii. What is the effect of depositor protection on the stability of commercial banks in Kenya?
iii. What is the effect of deposit insurance funding on the stability of commercial banks in Kenya?
iv. Does bank size moderate the relationship between deposit insurance and stability of commercial banks in Kenya

1.5 Scope of the Study

The study will focus on 38 licensed commercial banks that are, by law, members of KDIC. Secondary data from 2015-2024 will be collected from KDIC and published financial statements of the banks in line with internal policies and the Data Protection Act. The study is anchored on moral hazard theory and bank run theory while using a positivist approach and a descriptive research design. The independent variables are deposit insurance expressed as the deposit insurance coverage, protection, and fund. The ultimate question is, does bank stability become more pronounced with deposit insurance or not?

1.6 Significance of the Study

The anticipated outcome of the study is to benefit several actors as discussed below:

1.6.1 Depositors

The results of this study will clarify to depositors the role of deposit insurance and the significance of banking their money in licensed banks. This is by illuminating the functions that deposit insurance plays in guaranteeing depositors of prompt access to their insured cash, even in the event of a bank failure. Banks stand to benefit from synergies. This is because an increased savings culture is essential for them in mobilization of funds for lending or asset creation; therefore, these concepts may complement one another.

1.6.2 Policy Makers and the Deposit Insurer

Owing to the fact that bank stability is crucial in fostering public trust in the economy, the results of the study will shed light on the effect of deposit insurance on bank stability to policymakers and the country's deposit insurer. Further, the findings will provide useful insights to the deposit insurer in setting the optimal coverage limit that takes into account moral hazard. Such useful insights can then influence policies regarding reviewing and setting up appropriate coverage limits.

1.6.3 Researchers and Academicians

Since research on deposit insurance on bank stability in Kenya is scanty, the results of this study will add to the body of knowledge on deposit insurance and bank stability in Kenya. Further, the study will shed light on specific areas of deposit insurance, like the deposit insurance coverage and the deposit insurance and moral hazard, for further studies.

1.6.4 Banks and Other Financial Institutions

Banks' contribution through premiums is the major source of funds for DIS. Therefore, the study will assist in clarifying the effectiveness of deposit insurance, the rationale for paying premiums, and the current coverage limit. The results of the study will provide an avenue for advocacy for change in the limit for overall stability of the banking system.

1.7 Chapter Summary

This chapter discussed the concept of bank stability with a focus on internal bank factors and macroeconomic factors affecting bank stability. The chapter then reviewed deposit insurance and how it affects bank stability based on previous studies. By pointing out inconsistencies in previous studies, the chapter brings out the role of deposit insurance in bank stability, pointing out to contextual gaps, particularly in the context of Kenyan banking system. This gap forms the foundation of the current study.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The theoretical and empirical literature related to the key themes and objectives of the research will be reviewed in this chapter. The study drew from multiple sources on deposit insurance and bank stability across the world. First, the chapter begins by discussing a theoretical review, followed by an empirical review, after which the summary of research gaps and the conceptual framework are discussed.

2.2. Theoretical Review

This study will investigate deposit insurance as measured by the deposit insurance coverage, protection and funding, and its effect on bank stability in the context of the Kenyan banking system. Therefore, it is essential to take into account theoretical explanations of deposit insurance and banking stability. Consequently, the study will take into account the moral hazard theory and the bank run theory. The theories are discussed in detail in the following sub-section.

2.2.1. Moral Hazard Theory

Moral hazard theory has its origin in the insurance industry in the 19th century. The theory was later proposed by academicians Kenneth Arrow, Arrow (1968) and Tom Baker (Baker, 1996). The theory argues that there exists a positive relationship between the occurrence of an insured event and possession of insurance cover. According to Arrow (1968), the ideal insurance is not valid if the availability of insurance cover influences the demand for the insurance product. Moral hazard is a widespread concern in the insurance industry, and it is used to describe the tendency to take on more risk because one is protected from the negative effects of taking these risks. It is often used to describe the unfavorable outcomes of well-meaning attempts to collectively manage adverse occurrences in life. This involves conduct that increases losses. Arrow (1968) argues that when individuals' behavior cannot influence the occurrence of an event, competitive insurance markets will result in optimal allocation. However, any attempt by the government to mimic a

perfectly competitive system would fail to attain optimality if the amount of insurance payout is in any way based on the insured's decision, as well as the condition of nature. According to Arrow (1968), moral hazard may hinder insurance companies from providing advantageous types of coverage. He argues that, particularly in the medical field, doctors may oversupply treatments and patients might overdemand the services. Therefore, insurers bear the brunt of their bad choices. This therefore calls for a careful balance between what is covered by the insurance and limiting excessive risk-taking behavior by the insured. The moral hazard theory is also important in this study because it explains why deposit insurers provide limited protection of deposits rather than insuring the entire deposits in the banking industry (Anginer & Demirguc-Kunt, 2018). The strength of the theory is observed in its ability to explain the level of deposit insurance coverage sufficient to protect depositors and to prevent excessive risk-taking by banks. Further, according to Demirgüç-Kunt and Detragiache (2002), the existence of moral hazard in the banking industry underscores the need for strict regulation and supervision. Despite its strengths, this phenomenon came under sharp criticism from behavioral economist Mark Pauly (Pauly, 1983). More significantly, Pauly argued that moral hazard in insurance had little to do with morality. He suggested that when the cost of insurance is spread across a large number of people, rational economic agents have a reasonable incentive to seek additional medical treatment. Demirgüç-Kunt and Detragiache (2002) criticized the theory by noting that the existence of deposit insurance alone does not contribute to excessive risk taking and moral hazard, but only when institutional quality is weak and in the presence of poor bank regulation. Similarly, Laeven (2004) argues that in predicting moral hazard in banks, the mere presence of deposit insurance does not determine its existence, but rather, the design influences the existence of moral hazard.

The variables under study, deposit insurance and bank stability, are informed by the theory as they can be linked directly to the theory. A high deposit coverage limit has the potential of creating moral hazard and contributing to instability in the banking system. The assurance of high payout by a deposit insurer with a high coverage limit can encourage banks to pursue riskier businesses with the potential of high returns, thereby increasing the likelihood of bank instability and bank failures (Androvandi et al., 2022). Conversely, depositors who are assured of high insured deposit payouts may choose to deposit their funds with riskier banks, prioritizing returns at the expense of a bank's financial condition. The paper by Ngalawa et al. (2016) supported the fact that deposit insurance might lead to moral hazard when banks take on too much risk, ultimately leading to bank

insolvency. The same perspective is echoed by Androvandi et al. (2022). Depositors are incentivized to seek out higher rates without considering risk, protecting risky banks from losing depositors. On their part, banks may increase their risk appetite because of the guaranteed repayment of the deposit in case of a failure. This is impacted by an external party guarantee since depositors are incentivized to look for better rates without considering the level of risk the banks are taking. This possibility for decline in market discipline means increased risk-taking by the banks and is a form of moral hazard. Therefore, market discipline is eliminated, banks are encouraged to take on excessive risk, and depositors of insured institutions have no incentive to select where to bank (Ngalawa et al., 2016). Further, the study concludes that countries with more generous coverage schemes are more susceptible to bank failures.

Partial coverage can maintain a certain level of market discipline by subjecting large account holders to risk of losses relative to high coverage limits (Yilmaz & Muslumov, 2008). The study concludes that deposit insurance leads to a tendency toward moral hazard for both the bank, which involves taking on excessive risk, and the depositor, who involves making insufficient monitoring efforts. On their part, Alam et al. (2021) contend that banks take on greater risk in a booming economy in order to increase profits because they are confident in the safety of deposit insurance. Market discipline reduces banks' incentives to take unwarranted risks by making it expensive for them to do so. Moral hazard risk in deposit insurance will be reduced by efficient regulatory bodies and well-managed banks, according to deposit insurance system proponents (Alam et al., 2021). In the Kenyan context, where KDIC provides a partial coverage of Kes 500,000, Kung'u (2021) argues that partial coverage eliminates moral hazard and promotes banking stability in the short run.

2.2.2. Bank Run Theory

The bank run theory was first developed by Diamond and Dybvig (1983) and later refined by Bryant (1980). According to the theory, during a bank run, panic withdrawals cause depositors to withdraw their funds in anticipation of bank failure, even when the banks are fundamentally solvent. The short-term nature of demand deposits exacerbates the situation due to a mismatch between the liquidity needs of the customers and the long-term and illiquid nature of the bank loans. According to the theory, these panic withdrawals in the absence of financial safeguards

cause the failure of even solvent banks. The contagion effect associated with bank runs has an adverse effect on the economy because it not only affects liquidity-strapped banks, but even sound banks can fail, disrupting the monetary system and the entire financial system. According to the study, the presence of financial safety net institutions has successfully thwarted bank runs in the US since the great depression. This financial safety net includes deposit insurance, which can play a significant role in preventing a bank run that is motivated by panic withdrawal (Diamond & Dybvig, 1983).

Numerous researchers have supported the fact that deposit insurance is a key tool for deterring bank runs. Empirical research by Nikolaj et al. (2022) on deposit insurance and banking stability did not contradict this conclusion, as they note that high deposit protection promotes bank stability by reducing risks associated with panic withdrawals. Toby (2021) supports the tenets of the bank run theory that deposit insurance prevents costly bank runs, thereby promoting bank stability. The research investigated the relationship between deposit insurance and non-performing loans in Nigeria and found evidence of reduced bank runs with deposit insurance in place. Notably, depositors put their confidence in the government as a source of infinite liquidity by believing that any bank in distress can be rescued from the bank run crisis through deposit insurance. Jacklin (1987) criticized the demand deposit contract assumed in the Diamond and Dybvig model by showing that long-term projects can be financed through equity, which would meet the liquidity needs of these savers during financial shocks. Another key limitation of this theory is the assumption that deposit insurance and regulation automatically protect the economy from contagious bank runs. However, in reality, deposit insurance can fail to protect against bank runs, as evidenced by the study by Ngalawa et al. (2016) and Chiaramonte et al. (2019). The results of the study indicate that the presence of deposit insurance in a country promotes moral hazard, implying that such economies are more susceptible to banking instability through bank runs. Further, the theory ignores the role of globalization, financial system interconnectedness, and financial technology plays in accelerating bank runs.

This theory is pertinent to the present research in two ways. The presence of deposit insurance could increase bank stability by reducing the adverse effect of bank runs by instilling public confidence in the banking sector (Nikolaj et al., 2022; Toby, 2021). On the other hand, the presence of deposit insurance could actually contribute to banking instability through bank runs (Ngalawa

et al., 2016). There are clear inconsistencies in the research findings on the bank run and moral hazard on bank stability. Notably, most of this research was conducted in advanced economies where the banking system and the overall financial system are at an advanced stage of development. A study on deposit insurance and banking stability in the Kenyan context would contribute to the knowledge gap from a developing country's perspective. Second, the bank run theory is important to the government in preventing the costly effect of bank runs and their associated contagion effect by promoting policies such as deposit insurance and strengthening the key functions of the central bank as a lender of last resort.

2.3. Empirical Review

Several research works have examined deposit insurance from various perspectives, including the design of a deposit insurance, the role of deposit insurance in promoting banking stability, the credibility of deposit insurance, and deposit insurance and moral hazard, just to mention a few. The areas this study will focus on include, but are not limited to the deposit insurance coverage and bank stability. An empirical overview of the aspects this study will focus on is provided in the next subsection.

2.3.1. Deposit Insurance Coverage and Bank Stability

IADI (2021) defines coverage limit as the maximum amount that is guaranteed to a depositor for reimbursement by a deposit insurer in case of bank collapse. Coverage varies by the type of deposit product covered and the limit on the amount insured, with the cap varying from country to country (Anginer & Demirguc-Kunt, 2018). Diamond and Dybvig (1983), in the bank run theory, underscore the benefits of deposit insurance in protecting the financial system against the contagion effect of a bank run. Economies with high deposit coverage are more vulnerable to bank runs and overall fragility of the financial systems due to moral hazard problems (Ngalawa et al., 2016; Chiaramonte et al., 2019; Ntwaepelo, 2023). According to IADI (2021), DIS coverage should cover small unsophisticated depositors while leaving out the majority of depositors to market discipline in line with the moral hazard theory. DIS provides assurance to small depositors that their funds are secure (Kung'u 2021). Locally, the Kenya Deposit Insurance Act (2022) notes that deposits placed with member banks are insured up to a maximum of five hundred thousand Kenyan shillings or as may be determined from time to time. In terms of the scope of the coverage,

deposits in held in banks in Kenya including demand, call, current, saving and fixed accounts in both foreign currency and local currency, are insured. Various studies have linked deposit insurance and bank stability.

Some researchers have shown an adverse relationship between coverage and bank stability (Ngalawa et al., 2016; Chiaramonte et al., 2019; Iyer et al., 2019). Ngalawa et al. (2016) analyzed panel data of 118 countries across the world to determine the effects of moral hazard on deposit insurance. The study analyzed the relationships between coverage, payout, legal environment, and bank stability indicators using regression analysis. The results indicate that higher coverage increases moral hazard, making such economies susceptible to banking instability through bank runs. Similar results have been established by Chiaramonte et al. (2019). However, the findings contradict the conclusion by Nikolaj et al. (2022) and Toby (2021), who attribute high deposit insurance coverage to bank stability. Chiaramonte et al. (2019) evaluate the effects of deposit insurance features on bank stability of 27 EU countries between 2003-2013. The study establishes that during a crisis, high coverage tends to generate moral hazard incentives and decreases bank stability. However, during a non-crisis period, high coverage does not increase bank instability. This implies that increasing coverage, as observed during the financial crisis of 2007-2009, means depositors do not monitor banks' risk-taking, allowing unsafe bank practices that require stricter oversight. These studies do not consider differences in financial development, which is key in the Kenyan banking context. The present study will consider the unique financial and banking environment in the context of the Kenyan banking sector.

Deposit insurance on large banks encourages such banks to take on excess risk, thereby contributing to banking system instability (Iyer et al., 2019; Quintero, 2023; Kung'u, 2021). In Denmark, a quantitative study using a regression framework covering the period between 2003-2011 by Iyer et al. (2019) attributed the introduction of coverage limit to causing a significant decrease in deposits above the covered amount, with systemic banks maintaining and even garnering uninsured deposits than the non-systemic banks. The study focused on the effect of "too big to fail" DIS on bank competition. The current study will focus on the deposit insurance effect on the stability of all banks in Kenya, regardless of size. Considering the findings of the research on uninsured deposit flight from non-systemic banks to system banks during crisis, robust supervision and regulation are key, especially to the systemic banks in the Kenyan economy, to

prevent the contagion effect as experienced during the collapse of Chase Bank. In the context of the Colombian banking system, Quintero (2023) analyzed the effect of raising the coverage limit in 2017 on market discipline in Colombia. The findings contradict the moral hazard theory and uphold the "too big to fail" theory. The study used regression analysis and found a positive correlation between coverage limit and market discipline. However, for large banks, market discipline weakened. Similar to the findings by Iyer et al. (2019), this implies that the "too big to fail" perspective limits market discipline in big banks, contributing to banking instability. For developing economies like Kenya, this has policy implications when designing an appropriate coverage limit. It is key to understand the relationship between market discipline and coverage limits across the various sizes of the banks and deposit composition before setting up appropriate coverage limits.

Alam et al. (2021) studied deposit insurance coverage limit and its impact on bank stability in 61 jurisdictions across Asia and Europe, covering the period before and after the global financial crisis. The study anchors on the moral hazard theory and uses descriptive statistics, with the result indicating that in Europe, high coverage had a strong adverse effect on bank stability. However, the effect remained unclear in Asia, since both high and low coverage were significantly correlated negatively with bank stability. This highlights that the effectiveness of the deposit insurance system depends on the maturity of the financial system and economic variables across countries, impacting the design of the scheme. The study has policy implications for the Kenyan banking system in coming up with the design of the deposit insurance system. The design of the system should be set in consideration of the level of development of the local financial system. The research had a multinational focus, while the current study will focus on the Kenyan banking system. Ben-Ammar (2024) analyzed the interaction between bank capital and DIS on financial stability in MENA using the IMF deposit insurance database and the annual IADI survey. Findings reveal that DIS had a positive impact on the financial stability of conventional banks. The study used a binary variable for the existence of deposit insurance, while the current study will use real deposit insurance data.

Tuma et al. (2025) reported that banks attracted deposits with reforms in deposit insurance as they faced less pressure to offer higher interest rates to attract depositors. The study investigated the impact of deposit insurance reforms on depositor behavior and bank risk-taking in the EU, the US,

Japan, and Canada, using panel data analysis. The study focused on developed economies with an advanced banking system, while the current study will focus on a developing country. Ntwaepelo (2023) analysed the effects of an increase in coverage limit in Brazil over the period 1980-2020 on the stability of the banks and financial development. The study utilized the synthetic control method and found a negative correlation between increasing coverage limit and bank stability during the non-crisis period. However, during a crisis, increasing the coverage limit stabilises banks. This therefore implies that when policymakers increase the deposit insurance limit, it should be closely implemented alongside robust bank supervision to prevent banking instability associated with moral hazard. The research assessed the impact of DIS coverage level in Brazil, while the current study will focus on the deposit insurance and banking stability in the Kenyan context. Kgari et al. (2025) investigate the impact of deposit insurance generosity on bank stability using data from 54 African countries in the period between 2000 to 2021. Using coverage ratio as a proxy for deposit insurance, the study establishes that more generous deposit insurance notably promotes banking sector stability. The study assessed deposit insurance in terms of coverage ratio alone, while the current study will use deposit insurance proxies, including coverage limit to GDP per capita, deposit insurance funding, and insured deposits, to assess deposit insurance. Domestically, Kung'u (2021) anchored his study on public interest theory to examine the effect of deposit insurance on bank stability in Kenya. The research uses a panel data regression model on Kenyan commercial banks, from 2000-2019. The findings indicate that the relationship between DIS and bank stability only exists in the short run and tends to contribute to financial stability alongside a strong regulatory framework. The study focused on static coverage limit, while the current study will focus on the period before and after the revision of the coverage limit in Kenya. Further, the current study will use bank size to assess whether bank size moderates the relationship between deposit insurance and bank stability.

2.3.2. Depositor Protection and Bank Stability

Deposit insurance provides a mechanism that ensures depositors are protected and recover their insured savings when a bank fails to meet its obligations (IADI, 2014). The theoretical work by Diamond and Dybvig (1983) underscores the role played by deposit insurance in protecting depositors against the harmful effects of bank failure occasioned by bank runs. This theory is backed by empirical studies by Tuma et al. (2025), Nikolaj et al. (2022), and Toby (2021), who

attribute the presence of deposit insurance to reduced risk of bank run. Deposit insurance works to protect depositors from suffering loss on their funds, ultimately strengthening financial system stability (Alley, 2025). This way, the system instills depositor trust in the financial system. The present study will use insured deposits among other deposit insurance features to gauge depositor protection as recommended by IADI (2014). Domestically, depositor protection level in Kenya stood at 14.7% as of 2023, with 99% of the industry accounts protected (CBK, 2023).

Various studies have linked depositor protection with bank stability (Nikolaj et al., 2022; Bonfim & Santos, 2023; Toby, 2021). Bonfim & Santos (2023) highlight depositors' sensitivity to the existence of deposit protection in Portugal during the crisis as depositors actively moved their funds to branches of foreign banks that were backed by stronger and more credible schemes. Toby (2021) examined the association linking deposit insurance and NPLs in Nigeria. Anchoring on Williamson's theory of deposit insurance, the study used random sampling of 994 Nigerian banks and employed the OLS method on time series data. The study concludes that insured deposits promote bank stability by reducing bank distress. However, Toby's study was focused on the Nigerian banking context, while the current study will focus on the Kenyan context. Nikolaj et al. (2022) demonstrate that an increase in the level of protection reduces bank risk and promotes stability. The study focused on bank stability in EU countries and Southeast Asia, evaluating the effect of the value of insured deposits on bank stability indicators. A panel analysis using the GMM Arellano–Bond estimator was applied. The recommendations of the study emphasize the significance of deposit protection in enhancing bank stability and its role in steering economic growth and promoting overall financial stability. The research involved a cross-country analysis, while the current study will concentrate on the Kenyan banking sector. Similarly, Jaiyeoba et al. (2024) establish that deposit protection served as a stabilizing measure during the COVID-19 pandemic, protecting banks against pandemic-induced instability. Zibusiso et al. (2022) examined the relationship between liquidity and depositor protection in DTMFI across 18 SSA countries. Microfinance Information Exchange panel data from 2006 to 2017 was utilized using Estimated Random Effect, with results showing a strong positive relationship between depositor coverage and liquidity. The research points out to the fact that designing and implementing explicit DIS mitigates liquidity risk. The study recommends the formulation of deposit insurance policies that embrace microfinance deposits of all types. However, the study was limited by its focus on deposit protection as an overall representation of deposit insurance, ignoring coverage ratio and funding,

which are significant features of a DIS. Also, the study focused on deposit protection in microfinance banks. In the Kenyan context, Malala (2022) focused on deposit protection schemes as a qualitative case study, with the analytical tools being archival data and interviews. The authors conclude that robust prudential protection of deposits increases the confidence of depositors, which helps avoid a run on banks. Its empirical substance is constrained by its qualitative focus and absence of more substantive quantitative analysis. Martin et al. (2018) explore how depositor protection can be used to control the inflows and outflows of deposits in failing banks. The research applies a regression discontinuity design using U.S. bank data from 2007-2014 to study deposit flows around the thresholds of bank failure. The results confirm that deposit insurance substantially stabilizes the deposit flows by lowering outflows in bank distress conditions since insured depositors are unaffected. Still, uninsured deposits withdraw at high rates, adding to instability. The study focused on deposit flow in distressed banks, while the current study will focus on the features of deposit insurance on all banks in Kenya. A study by Alley (2025) uses random effects and a GMM regression model to study the nexus between DIS and financial inclusion. The study establishes that DIS promotes both financial inclusion and financial sector development. It is thus expected that depositor protection in the form of insuring their deposits will promote bank stability. However, the study focused on the general features of an explicit deposit insurance system, while the current study will use specific features of explicit DIS, including the extent of depositor protection.

The negative effect of depositor protection on bank stability has been established through studies by Darko et al. 2024, Demirgüç-Kunt and Detragiache (2002), and Anginer et al. (2014). Darko et al. (2024) examine bank profitability, the nature of ownership, risk, and deposit insurance of commercial banks in the African continent. The study shows that depositor protection has adverse impacts on profitability and risk maintenance in the short term. The findings are made using GMM and Fixed Effects estimation on the data of the 141 banks in 19 countries in Africa from 2009 to 2020. It is generally difficult to assess depositor protection and its effect on bank stability. Further, most of the previous research has not employed protected value as a measure of deposit insurance. The present study will fill the perceived gap with the goal of determining deposit insurance's impact on bank stability.

2.3.3. Deposit Insurance Funding and Bank Stability

The primary goal of DIS is to stop systemic bank runs. Adequate and well-funded DIS ensures credibility by allowing prompt access to depositors' funds in the event of bank failures, thereby enhancing banking soundness by promoting depositor trust and supporting the resilience of the banking system during periods of crisis (Demirgüç-Kunt et al., 2014). Funding can be ex-ante and ex-post, while the main source of funding for DIS is premium contribution (IADI, 2014). Locally, licensed commercial banks contribute ex-ante funding in terms of risk-based premiums annually (Kenya Deposit Insurance Act, 2022). The relationship between DIS funding and bank stability is underscored through studies by Ghosh and Magotra (2025), Toby (2021), Chiaramonte et al. (2019), and Bonfim and Santos (2023). Ghosh and Magotra (2025) hold that a well-capitalized DIS facilitates deposit growth and improves bank stability. Using panel regression of 80 nations from 1991-2021, the study sought to examine the impact of deposit insurance on the growth of deposits. The study anchored on moral hazard theory and utilized instrumental variables, including the method of assessing and levying premiums, to bring out the effect of deposit insurance on deposit growth using the Global Financial Development Database and the IADI database. The findings of the study are similar to those of Toby (2021) and Chiaramonte et al. (2019). Nonetheless, this study does not involve a comprehensive examination of funding values, which restricts its policy implications. The current research will utilize the fund values of DIS in Kenya.

Using 27 EU countries' data covering the period before and after the global crisis, i.e, 2003–2013, Chiaramonte et al. (2019) stress the importance of deposit insurance funding. Anchored on the moral hazard theory, the study showcases that deposit insurance funding and administration, particularly during a crisis period, are significant in maintaining financial stability. The research uses an aggregate of deposit insurance funding proxies; source and the method of funding, i.e., ex-ante or post-ante, the differential premium system in force, and the administration of the DIS. A key shortcoming of the study is the use of simple dummy variables to measure complex deposit insurance features, funding, which may obscure operational differences of DIS, particularly in the Kenyan context. The current study will use real deposit insurance funding data to examine its effect on bank stability. While the stabilizing effect of deposit insurance funding is well supported by literature, Chiaramonte et al. (2019), Nikolaj et al. (2022), and Toby (2021), there are divergent studies' findings on which funding features are most effective. Bonfim and Santos (2023)

underscore that government support in terms of ex-post ante funding is crucial in maintaining financial stability. Toby (2021) adopted Williamson's Theory of Deposit Insurance and established that risk-based funding by member banks had a negative relationship with the level of bank instability.

Nikolaj et al. (2022) aver that deposit insurance can promote stability in periods of strong funding. The study sought to investigate the effectiveness of deposit insurance in promoting financial stability using a panel analysis of 50 countries over 18 years (2000-2018). The study used a dummy variable for deposit insurance funding, while the current study will use deposit insurance fund balances in the Kenyan context. Malala (2022) focuses on deposit protection schemes within the bank resolution regimes in Kenya as a qualitative case study of the DPFB, with the analytical tools being archival data and interviews. The authors conclude that weak funding limits the ability to resolve a problem bank. Further, the research concludes that robust prudential protection of deposits increases the confidence of depositors, which helps avoid a run on a bank. Its empirical substance is constrained by its qualitative focus and absence of more substantive quantitative analysis, and it fails to capture the funding structure. The current study will employ a qualitative approach and will use funding values over the period of study. Ozili (2018) examines the determinants of bank stability in African nations and the role played by deposit insurance. The authors apply panel data regression analysis for 35 African banks, from 2000 to 2016, and measure bank stability as Z-scores. Findings show that DIS can increase bank stability by decreasing uncertainty among depositors, although action requires it to be adequately funded and regulated. The broad study focused on a broad scope, hampering the depth concerning deposit insurance funding mechanisms, and cross-country differences in funding structures are not emphasized enough. The current study will focus on deposit insurance in Kenya. Ayele et al. (2025) examined the impact of financial inclusion on bank stability, with deposit insurance as a moderating factor. Applying a dynamic panel data model to the Ethiopian banking data from 2010-2022, the researchers conclude that deposit insurance enhances the positive relationship between bank stability and financial inclusion by fostering depositor trust, especially when adequate finance is available. Nonetheless, the study focused on the Ethiopian banking system and does not examine the specific funding sources. The current study will focus on the Kenyan banking system and will examine deposit insurance funding.

The article by Anginer et al. (2014) examines the effects of deposit insurance and bank risk-taking behaviour during the 2008 financial crisis using a difference-in-differences estimation with global bank data (2005-2012). The conclusions drawn indicate that deposit insurance decreases risk-taking but contributes to the moral hazard in the case of unacceptable funding. Jaiyeoba et al. (2024) evaluate the efficiency and stability of the world's banking industry in response to COVID-19 through stochastic frontier analysis of global banks (2018-2022). According to the results, deposit insurance served as a stabilizing measure, protecting banks against pandemic-induced instability, though underfunded schemes proved less effective.

The reviewed literature depicts consistent evidence that deposit insurance positively impacts banks' stability by minimizing the likelihood of panic in depositors and systemic risks, which has been achieved when efficiently funded. Nevertheless, there are still crucial gaps. The research generally excludes the funding mechanisms, such as the size of the deposit insurance fund, sufficient to reimburse depositors in case of a bank failure. The reviewed literatures focus on cross-country funding mechanism comparison, mostly using dummy variables to depict the funding method. The current research will fill this gap by using real deposit insurance funding values in the Kenyan context to inform effective policy frameworks in the deposit insurance system.

2.3.4. Bank Size and Bank Stability

The Central Bank of Kenya (2023) indicates that the banking sector is dominated by nine large commercial banks. There are controversies regarding financial stability and the size of a bank, as discussed among academicians and policymakers. Understanding the relationship between bank size and financial stability is therefore key in appreciating regulators' and risk managers' behavior. A large bank can have economies of scale as well as diversification, and as a result, be more stable. Nevertheless, the same size might also promote risk-taking, which makes them susceptible to system challenges. Such contraposition is the reason why it is important to investigate empirical approaches towards the connection between size and stability.

Kilonzo and Atheru (2024) studied how the level of capital provided to commercial banks in Kenya influenced their financial stability. Based on the capital buffer theory, the research shows that the key reason for shocks is the capacity of high levels of capital, which are shock absorbers, hence flexibility. On the basis of secondary data of 39 banks from 2016 to 2022, they concluded that the

relationship between stability and capital is positive. Nevertheless, external risks of crisis, such as COVID-19, were not taken into account, so the transferability of the results may be affected. Similarly, Sang (2021) reported similar findings on overall improvement of Vietnamese banks because of capital adequacy, but differed from those of Maria et al. (2022), who noted that size and capital were ineffective in countering the pandemic-induced instability in Indonesian banks. In Kenya, Odundo and Orwaru (2024) analyzed the size-stability relationship by relying on the data of the 10 largest listed commercial banks between 2011 to 2017. The study drew its foundation from TBTF theory. The study established that the bigger the banks, the greater the tendency to risk-taking that undermined their stability. This result is also expressed by Maria et al. (2022) in cases of large Indonesian banks. It is in contrast with Sanderson et al. (2025), who conclude that size contributes to stability in the SADC region. Similarly, Kihuro et al. (2023) anchored their study on too too-big-to-fail theory and examined the nexus between the size of banks, credit risk, and the financial performance in Kenya. The study used secondary data of 43 commercial banks and found that bigger banks were more efficient in managing credit risk, enhancing their performance. Their observations are in agreement with Vu and Ngo (2023), who established that size is able to cushion adverse impacts of liquidity generation, but the findings of the study contradict Phan et al. (2021), who showed that size moderates risk only in strong capital buffer conditions. The paper by Sanderson et al. (2025) evaluated factors that determine bank stability in 15 SADC countries from 2010-2022 on the basis of the Economies of Scale framework. They discovered that stability was supported by size, profitability, and efficiency, and negatively affected by funding risk. The endogeneity was dealt with using dynamic panel regression. The findings of the study are similar to Kihuro et al. (2023) and Bawuah (2024), who find size to be stabilizing, and differ from Odundo and Orwaru (2024), who point out the destabilizing effect of bank size in Kenya. Based on the theories of capital buffer and institutional quality, Bawuah (2024) investigated the presence of a trade-off between the stability of banks and Economic growth in Sub-Saharan Africa. Referring to 71 banks in nine countries between 2007 to 2021, the research did not reveal a trade-off using SGMM and FE models. The improved regulatory capital and institutional quality had positive effects on both stability and GDP per capita. All these findings support the stabilizing picture of size and capital as presented in Kilonzo and Atheru (2024). Still, the findings are inconsistent with the findings of Nguyen (2021), who reported that the volatility of the regulatory environment strongly affected the stability.

Applying the financial inclusion theory, Chinoda and Kapingura (2023) assessed the impact of electronic inclusion and bank competition on the stability in Sub-Saharan Africa. They discovered that digital inclusion reduced nonperforming loans and increased stability, but with augmented competition, financial stability deteriorated. This finding is similar to the results of Chowdhury et al. (2024), who noted a positive effect of diversification on stability, and contradict Rizky et al. (2024), who suggested that the impact of competition may widely differ depending on the strength of the institutions. Chowdhury et al. (2024) revealed the moderating role of bank size in the relationship between income/asset diversification and stability in Bangladesh. Based on the diversification theory, they came up with the discovery that although diversification tends to improve stability, the effect is reduced in big banks. Applying heteroscedasticity-robust regressions to the data of 36 banks (2018-2022), consistent with the findings of Vu and Ngo (2023) that demonstrate that size can erode the benefits of diversification, but inconsistent with Sanderson et al. (2025), where size in isolation was stabilising. On the basis of the Economic Policy Uncertainty (EPU) theory, Danisman and Tarazi (2023) studied the impact of EPU on the stability of banks in America. Based on panel regressions covering 5,656 banks from 2011 to 2020, the study established that larger banks tend to be more susceptible to EPU, but capital and liquidity buffers alleviated such effects. This research confirms the argument by Nguyen (2021) about the destabilizing impact of EPU and disagrees with Sanderson et al. (2025), who also failed to find a negative relationship between size and stability.

To investigate the effect of monetary tightening on the fragility of U.S. banks, Jiang et al. (2023) relied on the theory of risk management. Their view of 4,844 banks (2022-2023) provided that tightening aggravated fragility on the basis of mark-to-market losses and depositor runs. This is consistent with Pham et al. (2021), reporting that the monetary policy restricts the liquidity creation, and with Kihuro et al. (2023), who stress the protective effect of size against credit risk. Maria et al. (2022) used the systemic risk theory to examine the impacts of the COVID-19 pandemic on banks in Indonesia. They applied a fixed effects regression on 108 banks and discovered that the performance worsened regardless of size and ownership. This agrees with Odundo and Orwaru (2024) on the riskiness of large banks but not with Sanderson et al. (2025) and Bawuah (2024), who believe that big banks are more stable. Pham et al. (2021) examined the relationship between the bank size and the process of liquidity creation during contractionary monetary policy in Vietnam. The results of 2SLS regressions and fixed effects showed that bigger

banks had better capabilities in absorbing policy shocks. The results are in line with Kihuro et al. (2023) and Vu and Ngo (2023), although they contradict the research by Jiang et al. (2023), who affirms that bank size limits the conditions of monetary tightening. By analysing global panel data, Phan et al. (2021) studied the impact of geopolitical risk on the stability of banks across the world. Based on risk buffer theory, they deduced that size and capital buffer counteract the destabilizing geopolitical risk effect. Their findings corroborate the stability of the size in Bawuah (2024), although they disagreed with Chowdhury et al. (2024) in terms of reduced returns on size regarding diversification of the firm. Rizky et al. (2024) examined bank competition and institutional quality as the variables of stability across 127 countries from 1993 to 2017. With System-GMM, they demonstrated that competition reduces the level of stability in developed countries, whereas institutional quality boosts it. These results augment Chinoda and Kapingura (2023), who also commented that competition was destabilizing, but contrast with Sanderson et al. (2025), where structural efficiency (potentially the workings of competition) contributed to stability. Vu and Ngo (2023) examined the interaction of capital, generation of liquidity, and asset diversification in Vietnamese banks from 2014 to 2021 and discovered that an undiversified creation of liquidity was detrimental to stability, but capital buffers offset this effect. This is consistent with Chowdhury et al. (2024), who discovered the size moderation effects and contradicts Maria et al. (2022), where neither capital nor diversification protected banks during the crisis. Based on the capital adequacy theory, Sang (2021) outlined the discussion of how the CAP impacted the stability of Vietnamese commercial banks (2010 - 2020). The study employed GMM and concluded that an association exists between CAP and stability, although excessive CAP damages profitability. This is in line with Kilonzo and Atheru (2024), but contradicts Maria et al. (2022), where, conversely, the capital levels failed to protect in the systemic crises.

Empirical literature reveals that there are stabilizing and destabilizing impacts of size that vary with region, quality of institutions, and external shocks. Thus, the present study hypothesizes that the effect of bank size on financial stability would be positive. However, there exists a limit to which it can provide positive effects, after which applications will decline or be reversed. The outcome of this observation can be utilized in making policy choices regarding the regulation of bank supervision and size-sensitive regulation in Kenya.

2.4. Research Gaps

The current study will address several gaps as identified in the existing literature. First, there are inconsistencies in the literature regarding the effect of deposit insurance on the stability of banks. Some studies show that deposit insurance contributes to bank instability by causing moral hazard and bank run (Ngalawa et al. 2016; Chiaramonte et al. 2019; Iyer et al. 2019), while other studies show both positive and negative effects of deposit insurance on bank stability (Alam et al., 2021). On the other hand, other studies support the fact that deposit insurance in fact contributes to bank stability (Quintero, 2023; Toby, 2021; Nikolaj et al., 2022). Therefore, the relationship between deposit insurance on the stability of banks is unclear. Apart from a lack of consensus on the effect of deposit insurance on bank stability, conceptual gaps also exist in the reviewed literature. Ozili (2019), Yitayaw et al. (2023), Chiaramonte et al. (2019), Kung'u (2021), and Kiemo et al. (2019) use the traditional Z score to measure bank stability. This measure ignores key factors affecting bank stability, such as asset quality, concentrating on a few aspects of bank stability, limited to profitability and capital adequacy. Further, the continuous deterioration of the asset quality ratio in Kenya signals underlying vulnerabilities in the banking sector associated with banking instability. In fact, prior to the 2015-2016 bank failures in Kenya, the level of NPL rose from 36.7% in 2013 to 52.8% in 2016 at the peak of the crisis, according to the Central Bank of Kenya (2025), culminating in the collapse of Chase Bank, Dubai Bank, and Imperial Bank. This makes the asset quality ratio, as measured by NPL as a more realistic measure of banking stability in the Kenyan context. The current study will use the asset quality ratio, a key ratio in informing the solvency and profitability of banks, to measure bank stability, similar to Nikolaj et al. 2022 and Koskei (2020).

Most of the reviewed literature focuses on a single feature, deposit insurance coverage as a measure of deposit insurance (Kung'u, 2021; Ntwaepelo, 2023; Kgari et al., 2025; Igwe & Toby, 2021; Alam et al., 2021). Others have used a single dummy variable to indicate the presence or absence of deposit insurance in a country as a measure of deposit insurance (Alley, 2025; Demirgüç-Kunt et al., 2006). Therefore, there are gaps in capturing funding adequately, a key aspect of deposit insurance. The present study will use deposit insurance funding as a variable for deposit insurance.

In addition to conceptual gaps, the review has identified methodological gaps. The study by Malala (2022) uses a qualitative focus and lacks substantive quantitative analysis. Calomiris and Jaremski (2016) use a descriptive design, while Ngalawa & Tchana (2019), Nikolaj et al. (2022), and Alam et al. (2021) use binary variables for deposit insurance.

Apart from the gaps discussed above, contextual gaps also exist. Existing studies on deposit insurance and bank stability have been conducted in Europe, Chiaramonte et al. (2019), comparison between Europe and Asia, Alam et al. (2021), Colombia, Quintero (2023), and Denmark, Iyer et al. (2019). Remarkably, it is clear that most studies on deposit insurance and bank stability have been carried out in developed countries, which differ from emerging countries in relation to the degree of advancement in the financial system and regulatory environment. Few studies have been conducted in Africa; Kgari et al. (2025), with Toby (2021) and Alley (2025) conducting the study in Nigeria. Very limited studies on deposit insurance have been conducted in the Kenyan banking setting, Kung'u (2021), Malala (2022), despite the distinct regulations in Kenya that differ from the developed world, where a lot of studies have been conducted.

VT OMNES VNVM SINT

Table 2.1. Summary of the Existing Literature on the Topic and the Gaps Identified

Authors	Purpose of the study	Findings	Research gaps	How the study fills the gaps
Ngalawa et al. (2016)	To determine the impact of moral hazard on the effectiveness of deposit insurance in bank stability	Both moral hazard and bank insolvency are exacerbated by deposit insurance.	The study used a simple dummy variable of 1 where the country has deposit insurance and 0 otherwise; failing to account for specific features of deposit insurance	The current study uses real deposit insurance variables such as coverage, insured deposits and funding
Chiaramonte et al. (2019)	To assess the impact of deposit insurance features on bank stability	High coverage does not lead to greater bank risk. However, during crisis, high coverage levels tend to generate moral hazard and decreases bank stability	The study focused on European Union countries	The study focusses on the effect of deposit insurance on bank stability in Kenya.
Iyer et al. (2019)	To evaluate the implication of TBTF coverage on bank competition for small deposits	Coverage limit caused a drop in deposits above the insured amount. Big banks successfully attracted new deposits and uninsured deposits during crisis compared to smaller banks	The research focused on the effects of TBTF deposit insurance on bank competition for retail depositors	The study focusses on the effect of deposit insurance on bank stability and how bank size moderates this relationship in the Kenyan context.
Alam et al. (2021)	With keen emphasis on coverage limit, the study aimed to analyze how deposit insurance affects	Deposit insurance systems have both positive and negative effects on banking stability depending on	The study focused on deposit insurance in Asia and Europe	The study focusses on how deposit insurance affects

Authors	Purpose of the study	Findings	Research gaps	How the study fills the gaps
	stability of banks in Asia and Europe.	the level of maturity of the country's deposit insurance system		stability of commercial banks in Kenya
Nikolaj et al. (2022)	To study the impact of the deposit insurance system on bank stability depending on the characteristics of banks	Large and systemically important banks behave in a riskier way, distorting the purpose of the deposit insurance scheme and jeopardizing the safety of banking systems	The study uses dichotomous variables in terms of insured amount, types of premiums and type of administration	The study uses variables with real deposit insurance data such as coverage limit to GDP per capita and fund to insured deposits
Quintero (2023)	To analyze the effect of coverage levels on market discipline before and after increase in coverage in 2017	Market discipline existed and It was not affected negatively by the change. Nevertheless, for large banks and banks that held more insured deposits, market discipline weakened.	The study only focused on how deposit insurance affect market discipline. The study was based in Columbian banking system.	The study determined whether bank size moderates the relationship between deposit insurance and bank stability. The study focusses on Kenyan banking system
Anginer & Demirguc -Kunt (2018)	To examine the costs and benefits of deposit insurance, emphasizing on the role of certain design elements of a deposit insurance.	The findings indicates that inadequately designed schemes can raise the likelihood of a banking crisis in a country.	The study was focussed on the general design of deposit insurance scheme	The study focusses on specific elements of deposit insurance i.e coverage, protection and funding

Authors	Purpose of the study	Findings	Research gaps	How the study fills the gaps
Demirgüç-Kunt, et al. (2006)	To identify factors that influence decisions about the adoption of a deposit insurance system design; with focus on economic development and political institutions	More financially developed countries more likely to adopt explicit deposit insurance and are also likely to manage better the design features	Focusses on cross country comparison and uses dichotomous variables for deposit insurance, membership and funding as indicators of deposit insurance	The study focusses on deposit insurance in Kenya and uses variables with real deposit insurance data such as coverage limit to GDP per capita ratio and fund to deposits
Abor et al. (2022)	The study's objective was to examine bank failures in Africa in order to pinpoint potential contributing factors	According to the study, state ownership, sovereign debt restructuring, and currency crises are the main causes of bank failures in Africa	The study focused on causes of bank failures in Africa	The current study focusses on the effect of deposit insurance on stability of comercial banks in Kenya
Chernykh et al. (2023).	The study aimed to investigate how systemic and bank-level factors affect depositors' trust in banks.	The study finds that the financial stability indicators at the industry level have a significant impact on public trust in banks	The study only focused on financial stability on public confidence in banks	The current study focusses on the effect of deposit insurance on stability of comercial banks in Kenya
Kung'u (2021)	To establish the link between deposit insurance and bank system stability, with an	Deposit insurance only tends to contribute to financial stability where other regulatory frameworks	The study used one deposit insurance variable, i.e. deposit	The study used variables with real deposit insurance data such as coverage limit

Authors	Purpose of the study	Findings	Research gaps	How the study fills the gaps
	empirical review on the Kenya banking system	is strong and in the absence of bank competition	insurance coverage to total customer deposits	to GDP ratio and fund to deposits
Alley (2025)	To assess how DIS affects financial inclusion	Explicit deposit insurance promotes financial inclusion.	The study emphasis was on the overall deposit insurance design; specifically explicit and implicit DIS	The study will investigate whether bank size moderates the relationship between deposit insurance and bank stability

Source: Author (2026)

VT OMNES VNVM SINT

2.5. Conceptual Framework

The research's conceptual framework is depicted in Figure 2.1 below. The independent variable employed in the study is derived from the key features of deposit insurance and includes the deposit insurance coverage, depositor protection, and deposit insurance funding. The dependent variable in the study is bank stability as measured by the asset quality ratio for the banks.

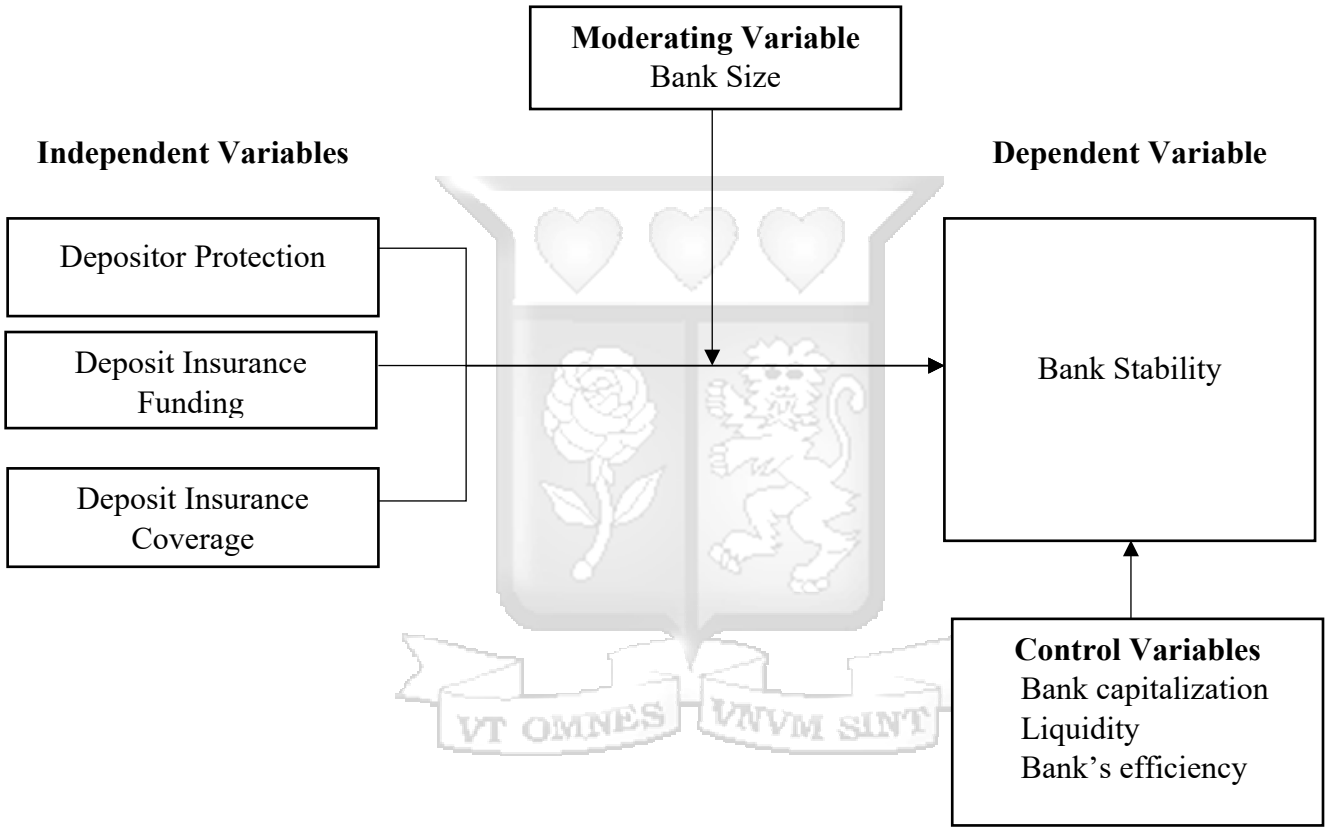


Figure 2.1. Conceptual Framework

Source: Author (2026)

2.6. Operationalization and Measurement of Variables

The important variables for the analysis are identified and operationalized in this subsection.

Table 2.2. Operationalization of the Variables

Type	Variable	Measurement	Data source	Supporting literature
Dependent variable	Bank stability	Asset Quality ratio (NPL/Gross Loans)	Published financial statements of individual commercial banks; Central Bank of Kenya (CBK) Bank Supervision Reports	Koskei (2020), Nikolaj et al. (2022), Alam et al. (2021)
Independent Variables	Deposit insurance coverage	Coverage limit / GDP per capita	Kenya Deposit Insurance Corporation (KDIC) annual reports; Kenya National Bureau of Statistics (KNBS)	Alam et al. (2021), Kung'u, (2021), Chiaramonte et al. (2019), Nikolaj et al. (2022), Toby, (2021), Kgari et al. (2025)
	Deposit insurance funding	Deposit insurance fund/total deposits	Kenya Deposit Insurance Corporation. Published financial statements of the commercial banks	Chiaramonte et al. (2019), Ghosh and Magotra (2025), Toby (2021)
	Depositor protection	Insured deposit/total deposits	Kenya Deposit Insurance Corporation.	Kung'u (2021), Chiaramonte et al. (2019), Nikolaj et al. (2022)

Type	Variable	Measurement	Data source	Supporting literature
			Published financial statements of the commercial banks	
Moderating variable	Bank size	Natural Log of total assets	Financial statement of individual bank sourced from respective website.	Quintero (2023), Kiemo et al. (2019), Ozili (2018)
Control variables	Capital adequacy (CAR)	Core capital / risk-weighted assets	Published financial statements; CBK reports	Ozili (2018); Kiemo et al. (2019); Koskei (2020)
	Bank efficiency (BEFF)	Operating expenses / operating income (cost-to-income ratio)	Published financial statements of individual banks	Ozili (2018); Yitayaw et al. (2023)
	Liquidity ratio (LIQR)	Current assets / current liabilities	Published financial statements; CBK reports	Koskei (2020); Kiemo et al. (2019)

Source: Author's compilation based on CBK, KDIC, KNBS, and audited financial statements of commercial banks.

VT OMNES VNVM SINT

2.7. Chapter summary

This chapter reviewed the theoretical and empirical literature on the topics under study, as provided by several academics and researchers regionally and worldwide. It integrates Moral Hazard Theory and Bank Run Theory to explain bank stability dynamics. The chapter discusses the research gaps in detail. The review incorporated information from several sources related to the study's focus and goal. The conceptual framework hypothesizes these relationships, providing a complex but structured approach for analysis. Additionally, the operationalization of variables ensures empirical rigor, defining key constructs and their proxies. This establishes a solid foundation for hypothesis development and the methodological design in the next chapter.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter outlines the methodology employed to analyze the effect of deposit insurance on the stability of commercial banks in Kenya, while considering the moderating role of bank size. It details the research design, data collection methods, and analytical techniques employed in the study. The chapter is structured first to discuss the philosophy of research and design, followed by an exploration of the population, sampling approach, data collection procedures, and analytical methods. Moreover, it concludes with an overview of the quality of research and ethical considerations.

3.2. Research Philosophy

Research philosophy refers to the foundational assumptions governing how knowledge is generated and validated (Saunders et al. 2017). The principal philosophies in business and social science research, interpretivism, postmodernism, critical realism, pragmatism, and positivism, differ in their ontological orientations and epistemological orientations and, consequently, in their methodological implications.

Interpretativism holds that reality is socially constructed and subjectively experienced, favoring qualitative inquiry into meanings and lived experiences (Creswell & Poth, 2018). Postmodernism, more radically, rejects universal knowledge claims and systemic measurement altogether, rendering it unsuitable for hypothesis-driven research (Saunders et al., 2019). Critical realism acknowledges an objective reality but argues that observable phenomena are produced by deeper, often unobservable mechanisms, typically requiring mixed-methods approaches to capture this complexity (Bhaskar, 1975). Pragmatism prioritises research utility over philosophical commitment, advocating a method to the question at hand (Tashakkori & Teddlie, 2010). None of these philosophies adequately supports th strictly quantitative, deductive design of this study.

This study was therefore anchored on the positivist philosophy, which posits that reality is objective, observable, and measurable, and that causal relationships among variables can be empirically tested using statistical techniques (Creswell & Poth, 2018; Bayezid, 2019). This

approach is particularly appropriate for financial and banking studies where variables such as bank stability, deposit insurance coverage, capitalization, and liquidity are quantifiable. Consistent with positivism, the study adopted a deductive approach, testing theoretical predictions derived from Bunk Run Theory and Moral Hazard Theory. The use of data from commercial banks provides a sufficiently large dataset to support generalizable inference, in line with prior empirical studies such as Alam et al. (2021), Toby (2021), and Kung'u (2021).

3.3. Research Design

This study employed a quantitative descriptive research design. Quantitative methods facilitated objective measurement and statistical testing using financial data, aligning with the study's goal to empirically assess market dynamics (Phoenix, et al., 2013; Kotronoulas, et al., 2023). The descriptive aspect enables the study to summarize trends and characteristics of bank stability and deposit insurance variables over time, while the correlational aspect facilitates examinations of causal relationships between variables (Cote, 2021).

3.4. Population

The population of the study comprised all 38 licensed commercial banks in Kenya that were operational and members of the Kenya Deposit Insurance Corporation (KDIC) during the period from 2015 to 2024. The study period was informed by lack of available data specifically for explanatory variables. The population frame was obtained from official listings published by the Central Bank of Kenya (CBK) and KDIC (Central Bank of Kenya, 2024). A census approach was adopted, eliminating sampling bias and enhancing the external validity of the findings.

The Unit of analysis is the individual commercial bank, observed annually over 10 years, yielding an unbalanced panel dataset. The choice of commercial banks was informed by their mandatory participation in the deposit insurance scheme under Kenyan law (Government of Kenya, 2022) and the availability of audited financial statements.

3.5. Data Collection Methods

The study relied exclusively on secondary data, from 2015-2024, obtained from audited financial statements of commercial banks, Kenya Deposit Insurance Corporation (KDIC) publications,

Central Bank of Kenya (CBK) reports, and Kenya National Bureau of Statistics (KNBS) data for GDP per capita.

Secondary data was preferred due to its reliability, cost efficiency, and standardized reporting requirements in the banking sector (Saunders et al., 2017). The use of an unbalanced panel enhances estimation efficiency and mitigates econometric challenges such as multicollinearity and unobserved heterogeneity.

3.6. Variable Measurement and Model Specification

3.6.1. Dependent Variable: Bank Stability

Bank stability was measured using the Asset Quality Ratio (AQR). A lower ratio indicates better asset quality and higher bank stability. This measure is particularly relevant in the Kenyan context, where elevated non-performing loans have been a persistent source of financial sector vulnerability (Koskei, 2020; Kiemo, 2025).

Bank stability is the dependent variable in the study, and it was expected that deposit insurance promotes depositor confidence and contributes to bank stability (Alam et al., 2021). Bank stability can be measured using market-based and accounting-based models (Kiemo, 2025). While market based-model is more reliable due to the use of current trading data from the secondary market, the inability to observe market data leads to information distortion and estimation errors. On the other hand, accounting-based models rely on historical financial performance indicators but are commonly used due to their simplicity, the observable nature of data, and the availability of data (Kiemo et al., 2019). Accounting-based models include composite CAMEL Rating, Z score, and asset quality ratio. Nikolaj et al. (2022) contend that bank stability is a multidimensional aspect, and there is no one indicator that can adequately capture banking stability comprehensively. The study used the combination of Z score and NPL to measure bank stability. While recognizing the importance of all the measures of bank stability, the current study used the asset quality ratio as a proxy of bank stability.

Z score is a popular metric for assessing a bank's financial health, with studies by Ozili (2019), Yitayaw et al. (2023), Chiaramonte et al. (2019), Kung'u (2021), and Kiemo et al. (2019) using the metric. The ratio was first developed to assess the bankruptcy of manufacturing companies and

has since been adopted for assessing the stability of banks (Altman, 1968). This measure has been criticized as it ignores key factors affecting bank stability, such as asset quality, concentrating on a few aspects of bank stability, limited to profitability and capital adequacy, i.e., ROA and ROE (Haile et al., 2024). The NPL ratio ignored by the Z-score is particularly key in the context of assessing the stability of Kenyan banks during the period under study. This is because, despite data indicating Kenya banking sector remains resilient as evidenced by strong capital buffers and adequate bank liquidity conditions, stability concerns persist due to record-high NPL (Kiemo, 2025). This is similar to the 2015-2016 banking crisis in Kenya, where the sector recorded high NPLs culminating in bank failures (Abor et al., 2022). Further, the high capital and liquidity in the sector indicate opportunity cost in holding excessive capital and liquidity at the expense of credit creation, and hence Z score, which largely relies on ROA and ROE, cannot adequately inform the stability of the banking sector. Further, during the period under review, the high profit and capital levels as reported by the Central Bank of Kenya (2025) are mainly attributed to banks over investment in government securities, which pauses concertation risk and stability concerns on its part (Kenya Bankers Association, 2025).

Composite CAMEL Rating is a common ratio mainly used by regulators in assessing the viability of banks (Quintero, 2021). The ratio includes assessing the capital adequacy, asset quality, management, earnings, and liquidity. The study by Wamalwa et al. (2020) established that CAMEL variables have a significant effect of financial stability of commercial banks in Kenya. However, the ratio is criticized for including a highly subjective measure, i.e., management (Quintero, 2023). Further, just as in the above Z-score metric, the ratio has overlapping components, including capital, earnings, and liquidity, as explained by Maude & Dogarawa (2019), which makes it unsuitable for the current study.

3.6.2. Independent Variables: Deposit Insurance

The independent variable, deposit insurance, is measured using three proxies, all demonstrating features of DIS. These include: coverage, depositor protection, and deposit insurance funding. Coverage is described as the coverage limit to GDP per capita. Alam et al. (2021), in their study to determine deposit insurance coverage limit on banking stability uses statutory coverage limit to GDP per capita to measure deposit insurance coverage. The majority of developed economies set coverage levels that are double their GDP per capita (Roosebeke & Defina, 2023). This method of

gauging coverage ensures that deposit protection is commensurate with the nation's wealth and economic circumstances.

Deposit insurance funding, the other proxy for deposit insurance refers to the resources available to the deposit insurer to refund the depositors in case of a bank failure. Payout of protected deposits during a bank closure and insolvency proceeding is the primary application of the deposit insurance funds. This guarantees that insured depositors will continue to have access to their money and reduces the possibility of depositor runs (Baudino et al., 2019). Increasing deposit insurance fund is associated with high bank stability as underscored through studies by Ghosh and Magotra (2025), Toby (2021), Chiaramonte et al. (2019) and Bonfim and Santos (2023). The third measure of deposit insurance is depositor protection. Deposit insurance protects depositors' savings, thereby providing assurance on the safety of their deposits, building public confidence, and promoting financial stability (Kung'u, 2021).

These measures capture the depth, adequacy, and credibility of the deposit insurance system, consistent with prior empirical literature (Alam et al., 2021; Kung'u, 2021).

3.6.3. Moderating Variable: Bank Size

Bank size (BS) was introduced as a moderating variable to examine whether the effect of deposit insurance on stability varies with bank scale. The effectiveness of deposit insurance may by size due to "too-big-to-fail" (TBTF) perception, where large banks benefit from implicit guarantees and stronger depositor confidence. Consequently, larger banks may rely less on explicit deposit insurance mechanisms while smaller banks may depend more on depositor protection. Evidence suggests that during periods of financial uncertainty, depositors tend to shift funds toward systemic banks, potentially weakening market discipline and influencing stability outcomes across bank sizes (Iyer et al., 2019; Quintero, 2023).

3.6.4. Control Variables

The study takes cognizant of a number of control variables apart from the independent variables that can influence bank stability based on prior studies. These are bank capitalization, efficiency and liquidity. Prudential guidelines on the capital requirements informs on the soundness of the banks. It is expected that higher capitalization increases bank stability by increasing the bank's

ability to absorb shock (Ozili, 2018). Kuria et al. (2024) recognizes bank's capitalization as a key control variable in their study. The current study measured bank capitalization as the bank's core capital to total risk weighted asset. The second control variable, liquidity, is a commonly used control variable, similar to the study by (Ozili, 2018). The study measured liquidity as current asset to current liabilities ratio and it is expected that high liquidity means higher stability. Similar to Atiti et al. (2020), bank efficiency as measured by cost to income ratio is also used as a control variable, with expectation that high efficiency means high bank stability.

3.7. Data Analysis Techniques

This study applied both descriptive and econometric techniques to analyze the interrelationships among variables. Descriptive statistics such as mean and standard deviation were used to summarize the dataset. The core analytical framework includes a panel data regression model to account for variations across banks and over time, and interaction-based panel regression models to examine moderating effects. The empirical analysis proceeds in stages:

Baseline model (without controls):

$$BSAQR_{it} = \beta_0 + \beta_1 Prot_{it} + \beta_2 Fund_t + \beta_3 Cov_t + \varepsilon_{it} \quad \textbf{(3.1)}$$

Baseline model (with controls):

$$BSAQR_{it} = \beta_0 + \beta_1 Prot_{it} + \beta_2 Fund_t + \beta_3 Cov_t + \beta_4 Cap_{it} + \beta_5 Eff_{it} + \beta_6 Liq_t + \varepsilon_{it} \quad \textbf{(3.2)}$$

Moderation model:

$$BSAQR_{it} = \beta_0 + \beta_1 Prot_{it} + \beta_2 Fund_t + \beta_3 Cov_t + \beta_4 (Prot_{it} * BS_{it}) + \beta_5 (Cov_{it} * BS_{it}) + \beta_6 (Fund_{it} * BS_{it}) + \beta_7 Cap_{it} + \beta_8 Eff_{it} + \beta_9 Liq_t + \varepsilon_{it} \quad \textbf{(3.3)}$$

Where;

i denotes individual banks, and *t* denotes time.
Prot: Depositor protection
Fund: Deposit insurance fund
Cov: Coverage ratio
BS: Bank size
Cap: Bank capitalization
Eff: Efficiency
Liq: Liquidity
BSAQR: Bank stability Asset Quality Ratio

3.7.1. Panel Estimation Strategy

The panel regression models were estimated using either Fixed Effects (FE) or Random Effects (RE) estimators at the preliminary stage. The choice between these estimators was guided by formal specification tests. The Hausman specification test was employed to assess whether the unobserved bank-specific effects were correlated with the explanatory variables. A statistically significant Hausman test result indicates that the RE estimator is inconsistent, thereby justifying the use of the FE estimator.

Consistent with the diagnostic outcomes reported in Chapter Four, the Hauman test strongly rejected the null hypothesis of no systematic difference between FE and RE estimates. This implies the presence of correlation between unobserved estimator was adopted as the primary estimation technique, as it provides consistent within-bank estimates by controlling for time-invariant heterogeneity.

Given the banking sector's inherent structural deficiencies and risk profiles, the FE framework is particularly appropriate, as it isolates the impact of changes in deposit insurance characteristics within banks over time rather than relying on cross-sectoral variation alone (Anginer et al., 2014).

3.7.2. Diagnostic Tests and Model Robustness

A measuring tool that passes validity, reliability, and practicability testing is considered fit (Cooper & Schindler, 2011). To ensure the validity and reliability of statistical inference, a comprehensive set of diagnostic tests was conducted. These tests are essential in banking panel data contexts, which are typically characterized by non-normality, heteroskedasticity, and institutional heterogeneity.

3.7.2.1. Normality and Functional Form

Preliminary normality test indicated that several variables deviated significantly from normality. To address this issue and improve model tractability, all continuous variables were transformed into natural logarithms. This transformation reduces skewness, stabilizes variance, and allows coefficient estimates to be interpreted as elasticities, which is consistent with empirical banking and finance literature.

3.7.2.2. Multicollinearity

According to Saunders et al. (2017), multicollinearity is the level of linear correlation between the independent variables. High correlation among the independent variables is often associated with unreliable results due to the significant standard errors. Panel data is highly associated with multicollinearity (Zibusiso et al., 2022).

In this study, multicollinearity was assessed using the Variance Inflation Factor (VIF). All explanatory variables exhibited VIF values well below conventional thresholds, indicating that multicollinearity does not pose a threat to the reliability or precision of the estimated coefficients.

3.7.2.3. Heteroskedasticity, Efficiency Concerns, and Autocorrelation

In linear regression, the dependent and explanatory variables are assumed to have equal variance (Saunders et al., 2017). That is to say, the error term should be the same across the variables. Heteroscedasticity, on the other hand, occurs when the variance is unequal, causing the size of the error term to vary across the independent variable.

In this study, heteroscedasticity was formally tested using white's general test for heteroscedasticity. The test results rejected the null hypothesis of homoscedasticity, indicating that the variance of the error terms is not constant across banks. This outcome is consistent with the structural diversity of commercial banks in Kenya, particularly with respect to size, portfolio composition, and risk exposure.

To address this issue, Fixed Effect models were estimated with cluster-robust standard errors at the bank level, which correct for heteroscedasticity and within-bank dependence. In addition, Feasible Generalized Least Squares (FGLS) estimation was employed as a robustness technique to improve efficiency under heteroskedastic panel structures and to validate the stability of key coefficients across alternative estimation strategies.

Although autocorrelation is more pronounced in pure time-series settings, panel data may still exhibit dependence within units. The use of cluster-robust standard errors and FGLS estimation mitigates potential biases arising from serial correlation within banks, ensuring consistent inference.

3.8. Research Quality

The researcher will strictly adhere to the research guidelines to ensure the reliability of the research findings. This will be achieved through the utilization of reliable data sources with integrity and the use of an appropriate research design. The use of the census, representing all commercial banks, will ensure the reliability of the results. Further, the research will use secondary data coming from reliable public and institutional databases like KDIC, CBK, and KNBS. Though such data will reduce the direct ethical risks, the research will use all legal and institutional requirements, such as the Access to Information Act in Kenya, which provides guidelines on how the information should be retrieved and used responsibly. To further improve the findings' validity, both internal and external validity checks will be carefully examined.

3.9. Ethical Considerations

Ethical compliance was maintained throughout the study. Since secondary data were used, informed consent was not required. However, all data sources were properly acknowledged, and confidentiality was preserved by excluding any proprietary or sensitive information. The research complied with Strathmore University's ethics guidelines, reviewed by the University Institutional Ethics Review Committee (SU-IERC). The APA 7th reference style was used consistently, with neutrality and transparency, and data were stored under data protection laws.

3.10. Chapter Summary

This chapter provides a comprehensive overview of the research methodology, grounded in the positivist paradigm and a deductive approach. It details the research design, sampling strategy, data collection, and analytical techniques used to examine the effect of deposit insurance on the stability of commercial banks in Kenya, while considering the moderating role of bank size. A census of all 38 commercial banks was conducted. The empirical strategy integrates a panel data model to capture both cross-sectoral aspects of the analysis. Emphasis was placed on ensuring data reliability and ethical compliance, and establishing a rigorous foundation for analyzing the risk channel in commercial banks in Kenya.

CHAPTER FOUR

PRESENTATION OF RESULTS

4.1. Introduction

This chapter presents the empirical findings of the study on the effect of deposit insurance on bank stability in Kenya, with bank size as a moderating variable. The analysis is based on panel data drawn from commercial banks operating in Kenya over the study period (2015-2024). The chapter is organized into three main sections. Section 4.2 presents the descriptive statistics of the study variables. Section 4.3 presents the sample representation, including a systematic account of data availability by institution and year. Section 4.4 covers inferential and econometric results, including regression estimations and diagnostic tests. The findings provide the empirical basis for the discussion and policy implications presented in Chapter Five.

4.2. Sample Representation

As of December 2024, the Central Bank of Kenya (CBK) had licensed 38 commercial banks operating in Kenya (Central Bank of Kenya, 2024). With a study period spanning ten years (2015–2024), the theoretical maximum number of observations is 380 bank-year combinations. However, not all banks reported complete financial data across every year of the study period. Factors attributable to this include differences in the timing of licensing, institutional rebranding and restructuring, voluntary exit from the Kenyan market, and severe financial distress leading to operational wind-down. These circumstances generated a final dataset of 349 bank-year observations, reflecting an unbalanced panel structure across the 38 commercial banks.

Consistent with established practice in empirical banking research, the presence of missing observations for specific bank-year combinations does not compromise the validity of inference. As Baltagi and Liu (2020) observe, unbalanced panels are commonplace in banking studies and do not introduce systematic bias provided that the absence of observations is not structurally correlated with the outcome variable. An auxiliary regression of missingness indicators on the dependent variable (bank stability) and key covariates confirmed that data absence is driven exclusively by observable institutional and regulatory factors rather than by the values of the

outcome variable, satisfying the conditions for valid inference. The study, therefore, proceeds with the unbalanced panel of 349 observations without imputation of missing values.

Appendix 2 provides the complete bank-year data availability matrix with individual institutional justifications, and Table 4.1 summarizes the aggregate panel structure.

Table 4.1. Summary Statistics of Panel Data Completeness

Panel Data Summary Statistic	Value
Total Licensed Commercial Banks (CBK, Dec 2024)	**38**
Study Period (10 years)	**2015 – 2024**
Maximum Possible Observations (38 × 10)	**380**
Banks with Complete Data (All 10 Years)	**29**
Banks with Partial / Missing Data	**9**
Total Missing Bank-Year Observations	**31**
Missing Data Rate	**8.16% (31/380)**
Total Usable Observations for Analysis	**349**

Source: Author's compilation based on CBK licensing records and audited financial statement availability (2015–2024)

Table 4.1 presents the aggregate summary of the panel data structure. Of the 38 licensed commercial banks, 29 (76.3 per cent) provided complete data across all ten study years. The remaining nine banks contributed partial data with a total of 31 missing bank-year observations, yielding a missing data rate of 8.16 per cent. This rate is well within the acceptable thresholds for unbalanced panel analysis in the banking literature (Wooldridge, 2010; Hsiao, 2014). No imputation of missing values was undertaken, as each instance of missing data reflects a genuine absence of institutional activity or reportable financial information rather than a measurement artefact.

4.3. Descriptive Statistics

The descriptive analysis provides an essential overview of the data's behavior, summarizing characteristics and central tendencies of the study variables. Table 4.2 presents the summary for 349 observations of the sample of 38 banks between 2015 and 2024 for bank stability, deposit insurance variables, bank size, and control variables, detailing the mean, dispersion, and symmetry of the dataset.

Table 4.2. Descriptive Statistics of Study Variables (in %)

Ratios	BS (AQR)	Prot	Fund	Cov	Cap	Eff	Liq	BS
Mean	8.2637	8.6888	3.1334	139.1236	17.8320	74.8637	46.5446	2.6535
Standard Error	0.4487	0.3681	0.0329	5.9987	0.7673	3.0310	1.3031	0.1918
Median	5.9544	6.7459	3.1769	96.6611	15.8418	70.8188	43.9100	0.8195
Standard Deviation	8.3827	6.8764	0.6150	112.0659	14.3347	56.6242	24.3432	3.5830
Kurtosis	7.5564	0.6795	-0.0782	-1.7736	12.1565	25.1562	1.8198	3.9036
Skewness	2.4087	1.1401	0.6670	0.0834	0.1155	4.1359	0.6727	2.0131

Source: Author's computation using Microsoft Excel and STATA

4.3.1. Bank Stability (BSAQR)

Bank Stability, proxied by the asset quality ratio (non-performing loans to gross loans), records a mean value of 8.2637 and a median of 5.8544. This suggests that, on average and during the period under review, Kenyan commercial banks maintained moderate asset qualtity, although the median being lower than the mean suggests the presence of several banks with relatively high NPL ratio.

The standard deviation of 8.3827 indicates a notable level of variation in stability across the industry, reflecting the diverse credit risk profiles of different institutions. Furthermore, the positive skewness of 2.4087 and a Kurtosis of 7.5564 indicate a leptokurtic distribution, suggesting that while most banks maintain stable asset quality, a few specific instances or institutions face extreme levels of credit risk.

4.3.2. Depositor Insurance Dimensions (PROT, FUND, and COV)

The independent variables representing the depositor insurance framework exhibit diverse distributional patterns. Depositor Protection (Prot) has a mean of 8.6888, with a skewness of 1.1401, indicating that for most banks, the ratio of insured deposits is concentrated at the lower end of the spectrum. The Deposit Insurance Funding Ratio (Fund) shows a mean of 3.1334, as evidenced by a minimal standard deviation of 0.6150, suggesting that the fund balance relative to industry remains remarkably consistent. In contrast, Coverage Ratio (COV) presents a much higher mean of 139.1236. Its near-zero skewness (0.0834) suggests a highly symmetrical distribution, implying that coverage relative to GDP per capita is applied relatively uniformly across the banking sector.

4.3.3. Bank Size as Moderating Variable (BS)

Bank Size (BS), serving as the moderating variable, shows a mean of 2.6535 and a significantly lower median of 0.8195. The positive skewness of 1.9371 suggests a banking landscape dominated by a few large-tier banks, while the majority of institutions are relatively smaller in scale. This structural disparity is essential for the study's objective, as it provides the necessary variance to examine how the size of an institution moderates the relationship between deposit insurance mechanisms and financial stability. The presence of these distinct "tiers" by size provides the necessary statistical grounds to perform the moderated panel analysis in the subsequent sections.

4.3.4. Control Variables (CAP, BEEF, and LIQ)

The analysis of control variables provides insight into the internal operational health of the banking sector. The Capital Adequacy Ratio (CAP) maintains a mean of 17.8320, which is comfortably above the regulatory minimums set by the Central Bank of Kenya, indicating a generally well-capitalized sector. However, the high kurtosis (12.1565) suggests significant outliers in capitalization levels. Bank Efficiency (EFF) recorded a mean of 74.8637, but its extreme skewness (4.1359) and Kurtosis (25.1562) reveal that few banks operate with exceptionally high expenditure-to-income ratios, potentially signaling operational distress. The Liquidity Ratio (LIQ) maintains a mean of 46.546, yet its high standard deviation (24.3432), relative to the mean reflects varied liquidity management strategies, which are critical for maintaining stability during periods of systemic pressure.

4.3.5. Correlation Analysis

The Pearson correlation matrix among the study variables presented below (Table 4.3) provides preliminary insights into the direction and strength of pairwise relationships and helps assess potentiall multicolinearity concerns prior to regression estimation.

Table 4.3. Correlation Matrix

Variable	BSAQR	PROT	FUND	COV	CAP	BEFF	LIQ	BS
BSAQR	1.000							
PROT	0.1769 0.000***	1.000						
FUND	0.0792 0.000***	0.1740 0.000***	1.000					
COV	0.0037 0.000***	0.3024 0.000***	0.7107 0.000***	1.000				
CAP	-0.1528 0.000***	-0.2070 0.000***	-0.1065 0.000***	-0.1156 0.000***	1.000			
BEFF	0.0207 0.000***	-0.0350 0.000***	-0.0454 0.000***	-0.0529 0.000***	0.1579 0.000***	1.000		
LIQ	0.1300 0.000***	0.0705 0.000***	0.3111 0.000***	0.3486 0.000***	0.2780 0.000***	-0.0539 0.000***	1.000	
BS	-0.2379 0.000***	0.2371 0.000***	0.0003 0.000***	0.0004 0.000***	-0.1100 0.000***	-0.1100 0.000***	0.0058 0.000***	1.000

**** p<.01, ** p<.05, * p<.1*

Source: Author's computation using Microsoft Excel and STATA

The correlation results indicate generally weak to moderate associations among the variables, suggesting limited risk of severe multicollinearity. Bank stability exhibits a weak positive correlation with depositor protection (r = 0.177) and liquidity (r = 0.130), while showing a modest negative association with bank size (r = -0.238) and capital adequacy (r = -0.153). Among the deposit insurance variables, FUND and COV display a relatively strong positive correlation (r = 0.711). Although this relationship is notable, it remains below conventional multicollinearity concern thresholds when considered alongside the low mean Variance Inflation Factor reported earlier. The control variables show expected patterns: liquidity is positively associated with capital adequacy (r = 0.278), while efficiency exhibits minimal correlation with most regressors.

4.4. Econometric Analysis and Inferential Results

This section presents the results of panel regression analysis used to examine the effect of the deposit insurance on bank stability and the moderating role of bank size. The analysis follows a stepwise estimation approach, including pooled ordinary least squares (OLS), fixed effects (FE), and random effects (RE) models. Diagnostic tests are conducted to ensure the robustness and validity of the results.

4.4.1. Diagnostic and Model Selection Tests

Before the baseline panel regressions, a comprehensive set of diagnostic and specification tests was conducted to assess the stability of the estimators and to ensure the reliability of statistical inference. These diagnostics are important in banking panel data, where heterogeneity across institutions, non-normality, and heteroskedasticity features rather than the exception (Adeboye & Agunbiade, 2017; Cui et al., 2023).

4.4.1.1. Normality and Distribution Properties

The Shapiro-Wilk test was applied to bank stability (BSAQR) and all explanatory variables. The results, in Table 4.4 below, decisively reject the null hypothesis of normality for all variables ($p<0.01$). The dependent variable exhibits pronounced deviations from normality ($W = 0.7609$), consistent with the high skewness and kurtosis observed in the descriptive analysis. The findings reflect the asymmetric and heavy-tailed nature of bank asset quality measures in emerging markets.

Table 4.4. Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
BSAQR	349	0.76	58.26	9.611	0
PROT	349	0.89	27.51	7.837	0
FUND	349	0.95	12.25	5.924	0
COV	349	0.85	37.68	8.58	0
CAP	349	0.8	48.08	9.157	0
EFF	349	0.63	91.46	10.68	0
LIQ	349	0.97	7.359	4.719	0
BS	349	0.71	71.5	10.1	0

Source: Author's computation using STATA

Residual diagnostics from an initial OLS regression further confirm this conclusion. The Jarque-Bera test strongly rejects normality ($JB = 1081, p < 0.01$), and the residual histogram displays substantial skewness and excess kurtosis. These results indicate that conventional OLS-based inference would be inappropriate.

To address these distributional concerns, the variables were log-transformed. Following the transformation, the Jarque-Bera test fails to reject the null hypothesis of normality (*JB = 5.054, p = 0.0799*), and the residual closely approximates a normal shape, improving the model tractability and allowing the estimated coefficients to be interpreted as elasticities.

4.4.1.2. Multicolinearity

Variance inflation Factor (VIF) analysis on the log-transformed variables reveals no evidence of multicolinearity, with all VIF well below (Table 4.5) conventional thresholds and a mean VIF of 1.165.

Table 4.5. Variance Inflation Factor (VIF)

Variables	VIF	1/VIF
LN_FUND	1.285	0.778
LN_COV	1.201	0.833
LN_PROT	1.196	0.836
LN_BS	1.161	0.861
LN_LIQ	1.158	0.863
LN_CAP	1.129	0.886
LN_EFF	1.025	0.976
Mean VIF	**1.165**	.

Source: Author's computation using STATA

This confirms that the regressors provide independent information and that coefficient estimates are not inflated by collinear relationships.

4.4.1.3. Heteroskedasticity Diagnostics

White's test for heteroskedasticity strongly rejects the null hypothesis of homoskedasticity ($\chi^2 = 191.74, p < 0.01$). Cameron and Trivedi's decomposition attribute the model misspecification primarily to heteroskedasticity and skewness, a common characteristic in bank-level panel data due to differences in size, risk exposure, and operational structure (Karathanassis & Patsos, 1995).

4.4.1.4. Hausman Specification Test

To formally determine the appropriate panel estimator, the Hausman test was conducted in Table 4.6 to compare Fixed Effects (FE) and Random Effects (RE) specifications using the log-transformed model. The null hypothesis that the difference in coefficients is not systematic, implying that the RE estimator is consistent and efficient, is rejected ($\chi^2 = 66.33, p < 0.01$).

Table 4.6. Hausman Test (FE vs RE)

Variables	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B) Std. err.
LN_PROT	-0.0913684	0.0746832	-0.1660517	369653
LN_FUND	0.8539504	0.7302062	0.1237442	0
LN_COV	0.0013811	0.0019738	-0.0005927	0
LN_CAP	-0.2126984	-0.1480529	-0.0646455	0.0830878
LN_EFF	-0.0781253	-0.0726775	-0.0054478	0
LN_LIQ	0.1769916	0.0041121	0.1728795	0.0221302

Source: Author's computation using STATA

This result indicates the presence of a correlation between the unobserved bank-specific effects and the explanatory variables, rendering the Random Effects estimator inconsistent. Consequently, the Fixed Effects model is preferred, as it provides consistent estimates by controlling for unobserved, time-invariant bank characteristics such as governance quality, risk culture, and managerial practices. Although the test output reports that the variance-covariance matrix difference is not positive definite, a common occurrence in finite samples and heteroskedasticity panels, the magnitude of the test statistic and its statistical significance provide strong evidence in favor of the Fixed Effects specification.

The combined diagnostic evidence, non-normality in levels, persistent heteroskedasticity, and correlation between regressors and unobserved bank effects support a robust, multi-model estimator approach. Fixed Effect estimation with cluster-robust standard errors is employed as the primary model to address unobserved heterogeneity and within-bank dependences, while Feasible Generalized Least Squares (FGLS) is used as a robustness estimator to address cross-sectional heteroskedasticity, validate the consistency of key findings, and address efficiency concerns common in Banking panel data.

Since the Asset Quality Ratio (AQR), measured as non-performing loans to goss loan, increases with credit risk, higher values indicates lower bank stability, while negative coeficient estimates imply stability-enhancing effects. Accordingly, coefficient signs are interpreted relative to their impact on credit risk rather than stability in isolation.

4.4.2. Baseline Fixed Effects Model: Direct Effects of Deposit Insurance

The baseline Fixed Effects regression (Table 4.7) assesses the direct impact of deposit insurance variables on bank stability, controlling for capital adequacy, operational efficiency, and liquidity. The FE specification focuses on within-bank variation over time, thereby isolating the effect of changes in deposit insurance characteristics on stability outcomes.

Table 4.7. Baseline Fixed Effects Model

LN_BSAQR	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
LN_PROT	-0.091	.07	-1.30	0.202	-.234	.051	
LN_FUND	0.854	.474	1.80	0.08	-.106	1.814	*
LN_COV	0.001	.028	0.05	0.96	-.055	.057	
LN_CAP	-0.213	.243	-0.87	0.388	-.706	.28	
LN_EFF	-0.078	.073	-1.07	0.292	-.226	.07	
LN_LIQ	0.177	.114	1.56	0.128	-.053	.407	
Constant	1.076	1.54	0.70	0.489	-2.045	4.196	
Mean dependent var		1.917	SD dependent var			0.802	
R-squared		0.060	Number of obs			349	
F-test		2.387	Prob > F			0.057	
Akaike crit. (AIC)		545.667	Bayesian crit. (BIC)			568.797	

*** $p<.01$, ** $p<.05$, * $p<.1$

Source: Author's computation using STATA

The results indicate that Depository Protection (PROT), and Deposit Insurance coverage (COV) do not exhibit statistically significant effects on bank stability at the 5% level. Specifically, PROT carries a negative coefficient (*-0.091, p = 0.202*), suggesting that an increase in depositor protection are associated with a reduction in the asset quality ratio (i.e., low NPL intensity and improved bank stability), although the effect is not significant. Similarly, COV remains positive but economically negligible and statistically insignificant (*0.001, p = 0.96*), indicating limited within-bank sensitivity of credit risk to changes in coverage design.

In contrast, Deposit Insurance Funding (FUND) shows a positive coefficient (*0.854)* and is statistically significant at the 10% level *(p = 0.08)*. Given that higher AQR values indicate greater credit risk, this result suggests that increases in funding are associated with a marginal deterioration in asset quality within banks over time, providing tentative support for the moral hazard channel whereby enhanced safety nets may soften market discipline. The control variables, Capital Adequacy (CAP), Bank Efficiency (EFF), and Liquidity (LIQ), do not attain statistical significance under FE specification, indicating that short-term within-bank variations in this fundementals do not strongly explain movements in non-performing loan intensity.

The relatively low R-squared value (0.060) implies that variations in the asset quality ratio are largely explained by factors beyond the deposit insurance indicators captured in the baseline model. This is not unexpected in bank-level panel studies, where stability outcomes are influenced by a wide range of bank-specific, macroeconomic, and institutional factors beyond the scope of the present specification. Variables such as macroeconomic conditions, credit cycle dynamics, regulatory intensity, asset portfolio composition, and governance quality may also play important roles in shaping asset quality outcomes. However, the use of the FE estimator mitigates concerns of major omitted variable bias arising from time-invariant unobserved heterogeneity, such as risk culture, business model, and managerial quality (Wooldridge, 2010). In addition, the model includes key bank-level controls, capital adequacy, efficiency, and liquidity, which are widely documented determinants of the asset quality ratio (Ozili, 2018; Koskei, 2020). Therefore, while the modest R-squared indicates that the asset quality ratio is inherently multifactorial, it does not invalidate the estimated relationships. Rather, it reflects the well-established complexity of banking risk dynamics in emerging markets.

4.4.3. Moderating Role of Bank Size

To examine whether bank size conditions the relationship between deposit insurance and bank stability, interaction terms between bank size (LN_BS) and each deposit insurance variable were introduced within the Fixed Effects framework. This approach allows for a formal test of moderation while controlling for unobserved bank-specific heterogeneity.

The results (Table 4.8) indicate that none of the interaction terms between bank size and the deposit insurance variables attain statistically significant (*p>0.10*), suggesting that after controlling for unobserved bank-specific heterogeneity, the effect of deposit insurance on asset quality does not

vary systematically across banks of different sizes. Although the main effect of bank size is estimated, its coefficient is statistically insignificant, arising from limited within-bank variation in scale do not materially influence credit risk dynamics over the sample period.

Table 4.8. Fixed Effects Model with Bank Size as a Moderator

LN_BSAQR	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
LN_PROT	-0.101	.135	-0.75	0.458	-.375	.172	
LN_BS	0.196	1.063	0.18	0.855	-1.958	2.349	
LN_PROT*LN_BS	0.014	.087	0.16	0.873	-.162	.19	
LN_FUND	0.926	.871	1.06	0.295	-.838	2.69	
C.LN_FUND*LN_BS	-0.107	.573	-0.19	0.853	-1.268	1.054	
LN_COV	-0.037	.059	-0.64	0.529	-.156	.082	
LN_COV#C.LN_BS	0.035	.035	1.00	0.323	-.036	.106	
LN_CAP	-0.223	.254	-0.88	0.384	-.737	.291	
LN_EFF	-0.081	.075	-1.08	0.289	-.232	.071	
LN_LIQ	0.175	.114	1.53	0.133	-.056	.406	
Constant	1.011	2.083	0.49	0.63	-3.209	5.232	
Mean dependent var			1.917	SD dependent var		0.802	
R-squared			0.069	Number of obs		349	

*** *p<.01, ** p<.05, * p<.1*

Source: Author's computation using STATA

While the inclusion of interaction terms marginally improves the within R-squared (from 0.060 to 0.069), the joint significance of the model remains weak (*prob>F=0.077*). These findings suggest that bank size does not significantly moderate the relationship between deposit insurance mechanisms and bank stability within banks over time under the Fixed Effects specification. Accordingly, the effect of deposit insurance on bank stability appears broadly homogeneous across banks of different sizes when time-invariant heterogeneity is controlled for

4.4.4. Feasible Generalized Least Squares (FGLS) and Robustness Analysis

Given the presence of heteroskedasticity and efficiency concerns identified in the diagnostics, FGLS estimation was employed as a robustness check. Unlike the FE model, FGLS exploits both within- and between-bank variation and provides more efficient estimates under heteroskedastic panel structures (Bai et al., 2021).

The FGLS results presented in Table 4.9 reveal several statistically significant relationships that differ from the within-bank FE outcomes, highlighting the importance of cross-sectional heterogeneity in explaining bank stability.

Table 4.9. Cross-sectional time-series FGLS regression

LN_BSAQR	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
LN_PROT	0.209	.048	4.31	0	.114	.304	***
LN_FUND	0.371	.331	1.12	0.263	-.278	1.02	
LN_COV	-0.001	.022	-0.05	0.959	-.044	.042	
LN_CAP	-0.039	.055	-0.72	0.474	-.147	.068	
LN_EFF	-0.101	.045	-2.24	0.025	-.189	-.012	**
LN_LIQ	-0.356	.064	-5.51	0	-.482	-.229	***
LN_BS	-0.292	.041	-7.16	0	-.372	-.212	***
Constant	3.101	.651	4.76	0	1.825	4.377	***
Mean dependent var		1.917	SD dependent var			0.802	
Number of obs		349	Chi-square			134.127	

*** $p<.01$, ** $p<.05$, * $p<.1$

Source: Author's computation using STATA

Depositor Protection (PROT) displays a positive and highly significant coefficient (*0.309, $p < 0.01$*). Given the AQR specification, this implies that higher levels of insured deposits are associated with increased asset quality risk across banks, suggesting that extensive depositor protection may weaken depositor monitoring incentives and soften market discipline. This pattern is consistent with the moral hazard hypothesis in deposit insurance literature. Bank Size (BS) exhibits a negative and highly significant effect (*-0.292, $p < 0.01$*), suggesting that larger banks tend to maintain lower nonperforming loan ratios and therefore stronger stability profiles.

Among the control variables, Bank Efficiency (EFF) and Liquidity (LIQ) are both negative and statistically significant, reinforcing the central role of internal bank fundamentals in shaping asset quality outcomes. Capital Adequacy (CAP), however, remains insignificant, suggesting that regulatory capital buffers alone may be insufficient to curb credit risk in the Kenyan banking context.

4.5. Chapter Summary

This chapter presented the empirical findings of the study, beginning with descriptive statistics and followed by an inferential panel econometric analysis. The results reveal notable variation in bank stability, deposit insurance dimensions, and bank size across Kenyan commercial banks. While the Fixed Effects estimates indicate a weak but observable within-bank effect of deposit insurance on stability, the robustness analysis using FGLS highlights the significance of depositor protection, bank size, liquidity, and operational efficiency in explaining cross-bank stability differences. These findings provide an empirical basis for the discussion, conclusions, and policy recommendations presented in Chapter Five.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

5.1. Introduction

This chapter presents a critical discussion of the empirical results reported in Chapter Four. The central objective of this study was to examine the effect of deposit insurance on the stability of commercial banks in Kenya, with a particular emphasis on the moderating role of bank size. By integrating econometric analyses with theoretical and empirical review in Chapter Two, this chapter contextualizes the results and evaluates their implications.

The chapter is structured as follows. Section 5.2 summarizes the key empirical findings. Section 5.3 discusses these findings in relation to the study objectives and existing literature. Section 5.4 presents the study's conclusions. Section 5.5 outlines policy and managerial recommendations. Sections 5.6 and 5.7 conclude the chapter by highlighting the study's limitations and proposing areas for future research.

5.2. Summary of the study Findings

The study employed panel data econometric techniques to examine the relationship between deposit insurance and bank stability, proxied by the asset quality ratio (BSAQR), using panel data from Kenyan commercial banks over the period 2015-2024. Diagnostic test confirmed the presence of non-normality, heteroskedasticity, and unobserved bank-specific heterogeneity, justifying the use of Fixed Effects (FE) and Feasible Generalized Least Squares (FGLS) estimators. The Hausman specification test strongly rejected the random Effects model, indicating correlation between unobserved bank-specific effects and the regressors. Consequently, the Fixed Effects model was adopted as the primary estimator, while FGLS was employed as a robustness analysis.

The empirical analysis revealed that deposit insurance coverage (COV) exerted no statistically significant influence on bank stability across all model specifications, suggesting that variations in coverage ratios are insufficient to materially impact asset quality dynamics within Kenyan commercial banks. Depositor protection (PROT), on the other hand, demonstrated estimator-sensitive effects. While statistically insignificant under the Fixed Effects specification, PROT

becames positive and highly significant under the FGLS model. Given the higher asset quality ratios indicate greater credit risk, this finding suggests that stronger PROT is associated with higher NPL intensity across banks, highlighting potential market-discpline weakening effects.

Deposit insurance funding (FUND) exhibits a weak positive association with bank stability within the Fixed Effects framework, re-inforcing market-discipline concerns with deposit insurance funding, but this effect lost statistical significance under FGLS, implying that funding adequacy alone does not substantially differentiate stability outcomes across banks.

The analysis further explored the moderating role of bank size (BS) in the relationship between deposit insurance and stability. Under the Fixed Effects specification, all interaction terms between bank size and deposit insurance variables were statistically insignificant, suggesting that the stabilizing effects of deposit insurance mechanisms are broadly homogeneous across banks of different sizes when unobserved, time-invariant characteristics are controlled for. However, FGLS results indicate a strong negative relationship between bank size and asset quality risk, likely due to greater diversification, enhanced operational capacity, and stronger sheet resilience.

5.3. Discussion of findings

5.3.1. Deposit Insurance Coverage and Asset Quality

The first objective of the research was to determine the effect of deposit insurance coverage on stability of commercial banks in Kenya. Statutory coverage limit to GDP per capita was used to investigate the relationship between deposit insurance and bank stability. The empirical results indicate that deposit insurance coverage does not exert a statistically significant effect on bank stability in Kenya. Given that bank stability is proxied by the asset quality ratio, this finding suggests that variations in the statutory coverage ceiling do not materially influence banks' credit risk behavior within the study period.

From a structural perspective, this outcome is economically intuitive. Coverage ratio is a policy parameter that changes infrequently, while asset quality reflects bank-specific credit risk management, macroeconomic conditions, and borrower performance. Consequently, the transmission channel from coverage design to NPL dynamic is inherently and slow-moving.

The result is consistent with Chiaramonte et al. (2019) and Alam et al. (2021), who argue that coverage limits alone rarely drive bank risk-taking unless accompanied by weak supervisory environments. Simillarly, Demirgüç-Kunt & Detragiache (2002) posit that generous coverage alone does not translate to financial instability unless accompanied by weak regulation. However, findings by Kung'u (2021) indicates that deposit insurance coverage raises bank stability in the context of the Kenyan banking system. From a theoretical perspective, the result does not align with the Moral Hazard Theory, which posits that there exists a positive relationship between the occurrence of an insured event and possession of insurance cover (Arrow, 1968). According to the theory, high coverage limit weakens market discipline by encouraging risk taking (Demirgüç-Kunt & Detragiache, 2002). On the contrary, the findings of the current study show that coverage limit is insignificant in determining banks' risk taking. The insignificance of coverage suggests that this effect is conditional on institutional context and coverage design. Previous studies have shown significant association between deposit insurance and bank stability. Ngalawa et al. (2016) establishes that deposit insurance coverage is associated with bank instability.

In Kenya, the relatively modest coverage limit of KES 500,000 appears to preserve depositor discipline, supporting Kung'u's (2021) argument that partial coverage mitigates moral hazard in the short run. The insignificance of coverage ratio also reflects the dominance of uninsured deposits among large depositors, consistent with IADI (2021), which recommends coverage designs that protect small depositors while maintaining market discipline for larger accounts.

5.3.2. Depositor Protection and Asset Quality

The second objective of the research was to establish the effect of depositor protection on stability of commercial banks in Kenya. Depositor protection as proxied by insured deposits ratio demonstrates estimator-sensitive effects. Under the Fixed Effects model, the variable is not statistically significant, indicating that within-bank changes in the share of insured deposits do not materially alter the asset quality ratio over time. This is simillar to the findings by Toby (2021) who finds out that insured deposits have no significant relationship with the non-perfoming loan ratio in the context of Nigerian banking system. Under the FGLS, the study results reveal a positive and statistically significant cross-sectional relationship, implying that banks with high insured-depositor shares tend to exhibit higher asset quality ratio hence increased instability. This empirical results suggests that increasing depositor protection tends to increase bank risk taking, a finding

consistent with the Moral Hazard Theory (Arrow, 1968). The positive and significant relationship under FGLS supports the moral hazard argument that increased protection may include greater risk-taking. However, the lack of significance under the Fixed Effects model suggests that these effects do not manifest through within-bank adjustments over time, but rather through cross-sectional differences in depositors' confidence and institutional structures. This indicates that depositor protection has a dual effect, enhancing confidence while potentially weakening discipline. Therefore, the theory is partially confirmed and context-sensitive, highlighting the importance of institutional design and the role of protection in reinforcing scheme credibility.

The result aligns with the findings by Ngalawa et al. 2016 who demonstrate that depositor protection is associated with increased bank run and bank instability. Nikolaj et al. (2022) establishes a positive relationship between the level of depositor protection and non-perfoming loans, implying increased risk taking by banks. Simillarly, Anginer et al. 2014 establishes that higher depositor protection increases bank risk and reduces stability. Further, Ntwaepelo (2023) supports the findings of the current study that banks engage in risky activities when deposit insurance coverage limit is increased, consistent with the moral hazard theory.

In the Kenya context, over 99% of deposit accounts are insured but represent a relatively small share of total deposits (CBK, 2023). This structure protects retail depositors, who are most prone to panic, while leaving large, sophisticated depositors exposed to market discipline. As a result, depositor protection appears to strengthen depositor confidence while preventing against excessive risk taking. Nevertheless, the lack of within-bank significance under FE estimation supports concerns raised by Demirgüç-Kunt & Detragiache (2002) and Darko et al. (2024), who argue that depositor protection can generate moral hazard only gradually and conditionally.

5.3.3. Deposit Insurance Funding and Asset Quality

The third objective of the study was to assess the effect of deposit insurance funding on stability of comercial banks in Kenya. Deposit insurance funding exhibits a weak positive effect on asset quality ratio under the Fixed Effects model, suggesting that increase in scheme funding over time are modestly associated with increased non perfoming loans and therefore instability in the banking system. Whereas the results are consistent with prior studies by Ngalawa et al. (2016) and Nikolaj et al. (2022), this finding contradicts theoretical expectations that well-funded schemes enhance credibility and depositor confidence (IADI, 2010; Ozili, 2018). The stuy’s findings re-

inforces the Moral Hazard Theory that deposit insurance weakens market discipline and encourages excessive risk taking by banks, contributing to bank instability.

However, the loss of significance under FGLS estimation indicates that funding effects are institutionally embedded rather than cross-sectionally differentiating, reinforcing arguments by Chiaramonte et al. (2019) that funding effectiveness depends on governance quality and resolution capacity rather than fund size alone.

The findings imply that while Kenya's ex-ante funded scheme supports stability, funding adequacy must be complemented by strong supervision and resolution frameworks to prevent moral hazard, consistent with Anginer et al. (2014) and Jaiyeoba et al. (2024).

5.3.4. Moderating Role of Bank Size

The study also sought to determine the moderating role of bank size on the association between deposit insurance and stability of comercial banks in Kenya. Results indicate no evidence that bank size moderates the relationship between deposit insurance and bank stability under the Fixed Effects specification. This result contradicts the findings by Iyer et al. (2019) and Quintero (2023) which suggests that larger banks benefit disproportionately from deposit insurance due to "Too Big To Fail" perceptiton.

A plausible explanation lies in the Kenya and KDIC frameworks, which limit differential behavior across size categories. Moreover, limited within-bank variation in size over the study period constrains the ability of FE models to detect moderation effects, a common limitation in banking panel data (Bawuah, 2024).

Conversely, the FGLS results indicate that bank size is negatively and significantly associated with asset quality ratio, suggesting that larger banks tend to be more stable. This finding is consistent with the diversification, economies of scale, and superior risk management capabilities emphasized in the capital buffer and economies of scale theories (Adusei, 2015; Kiemo et al., 2019; Kihuro et al., 2023; Sanderson et al., 2025). In the Kenyan context, larger banks may possess stronger internal controls and more resilient balance sheets, enhancing their capacity to absorb credit shocks more effectivelly than smaller institutions.

5.3.5. Control Variables and Bank Stability

Liquidity and operational efficiency emerge as significant determinants of bank stability under the FGLS model, reinforcing the importance of internal bank fundamentals in shaping asset quality outcomes. This finding aligns with Ozili (2018) and Koskei (2020), who identify liquidity management and cost efficiency as central pillars of banking stability in African financial systems.

The persistent insignificance of capital adequacy suggests that regulatory capital buffers, while sufficient for compliance, may be inadequate to counteract underlying asset quality deterioration (Adusei, 2015; Kiemo et al., 2019). This supports the argument advanced earlier that Kenya's banking vulnerabilities are increasingly driven by credit risk dynamics rather than capital shortfalls. Consequently, strengthening credit risk management and supervisory monitoring of asset quality may yield greater stability gains than further increases in minimum capital requirements.

5.4. Conclusion

The study examined the effect of deposit insurance mechanisms on the stability of commercial banks in Kenya, with particular emphasis on the moderating role of bank size. Anchored in Moral Hazard and Bank Run Theory, the study provides empirically grounded insights into how deposit insurance operates within an emerging system characterized by structural heterogeneity and evolving institution credibility.

The findings indicate that deposit insurance does not exert a strong or uniform stabilizing effect at the individual bank level when unobserved heterogeneity is controlled for. Under the Fixed Effects specification, depositor protection and coverage ratios were statistically insignificant, suggesting that adjustments to coverage limits and protection thresholds alone do not meaningfully alter within-bank asset quality dynamics over time. This outcome aligns with theoretical arguments that deposit insurance primarily influences depositor confidence at the systemic level rather than directly reshaping bank-level risk behavior.

The moderating role of bank size was not supported by the empirical evidence. Interaction effects between bank size and deposit insurance variables were statistically insignificant, indicating that deposit insurance operates in a broadly size-neutral manner within banks over time. However,

bank size itself exhibits a strong and negative association with asset quality ratio under the FGLS specification, suggesting that larger banks benefit from diversification, economies of scale, and superior risk management capabilities. The result supports structural banking theories that associate size with resilience, while cautioning against assuming that deposit insurance effects are conditional on bank size.

The study concludes that deposit insurance in Kenya contributes to financial stability through systemic confidence and institutional assurance rather than through direct, bank-specific behavioral adjustments.

5.5. Recommendations

One key implication for regulators arising from this study is that achieving an optimal protection level that contributes to banking stability requires careful assessment of deposit insurance features. While low coverage may protect against excessive risk taking by banks, depositors may not feel assured that their deposits are safe. Therefore when setting up appropriate coverage limits, policymakers need to incorporate depositor perception of coverage limit and factor in this human element in their assessment.

Second, policy authorities should prioritize deposit insurance funding methodology that is aligned with individual bank risk profile rather than adopting an indiscriminative funding method to curb excessive risk taking by banks associated with moral hazard. Further, regulators should set up an optimal funding threshold i.e target fund size that is not too low or excessively funded to curb the perception of unlimited funding which can encourage excessive risk taking by banks. Adequate funding strengthens depositor confidence while containing moral hazard, consistent with international best practices (IADI, 2010).

The insignificance of coverage ratio implies that policy makers should not primarily rely on deposit insurance as a bank stability tool but rather as a mechanism for protecting depositors in the event of bank failures. To curb moral hazard in the banking sector, policymakers should increase controls in the banking system by implementing strong supervisory enforcement to complement insurance protection. Enhanced coordination between KDIC and CBK is essential to ensure early intervention and disciplined risk-taking by insured institutions.

Fourth, bank-level governance and risk management practices should be strengthened, particularly among smaller and medium-sized banks that lack the diversification advantages of larger institutions. Investment in credit risk analytics, internal controls, and operational efficiency can enhance asset quality and reinforce the indirect stabilizing benefits of deposit insurance.

Finally, depositor education and transparency should be enhanced. Clear communication regarding coverage limits, funding adequacy, and payout procedures can improve confidence without encouraging excessive risk-taking. Public awareness initiatives should emphasize the protective, but limited, nature of deposit insurance to preserve market discipline among large and sophisticated depositors.

5.6. Limitations of the Study

Despite its empirical rigor, this study is subject to several limitations that warrant consideration. First, bank stability was proxied solely by the asset quality ratio. The ratio, while informative, does not capture other important dimensions of stability such as liquidity resilience, earnings volatility, or systemic interconnectedness. Consequently, the analysis may understand broader channels through which deposit insurance affects financial stability.

Second, the panel structure exhibited limited within-bank variation in key variables, particularly bank size, which constrained the ability to detect moderation effects under the Fixed Effects framework. This limitation is common in banking panels with relatively short time horizons and stable institutional characteristics.

Third, data constraints restricted the inclusion of macroeconomic and behavioral variables, such as depositor withdrawal patterns or crisis-period responses, which may influence the transmission of deposit insurance effects. Finally, although robustness checks were employed, potential endogeneity between bank stability and insurance indicators cannot be entirely ruled out, particularly in the absence of fully exogenous instruments.

5.7. Areas for Future Research

Future research could extend this study in several important directions. Incorporating alternative and multidimensional measures of bank stability, such as Z-scores, market-based risk indicators,

or composite stability indices, would provide a more comprehensive assessment of deposit insurance effectiveness on bank strability.

Expanding the scope beyond commercial banks to include key members of deposit insurance schemes such as microfinance institutions, would offer a more holistic view of deposit insurance performance in Kenya's financial system. In addition, cross-country comparative studies across East African or other emerging banking systems could illuminate how institutional quality, supervisory capacity, and macroeconomic conditions shape the stability outcomes of deposit insurance schemes.

Finally, future studies could incorporate qualitative aspects to integrate behavioral and depositor confidence indicators to examine how depositor perceptions mediate the relationship between deposit insurance and financial stability, particularly during periods of systemic stress.

VT OMNES VNVM SINT

REFERENCES

Abor, J. Y., Mensah, S., Kusi, B. A., & Mathuva, D. (2022). Explaining Banking Failures in Africa. *The Economics of Banking and Finance in Africa*. doi:https://doi.org/10.1007/978-3-031-04162-4_14

Adeboye, N. O., & Agunbiade, D. A. (2017). Estimating the heterogeneity effects in a panel data regression model. *Anale. Seria Informatic, 15*(1), 149-158.

Adusei, M. (2015). The impact of bank size and funding risk on bank stability. *Cogent Economic and Finance*. doi:http://dx.doi.org/10.1080/23322039.2015.1111489

Alam, B. (2019). Qualitative Research Framework: Integrating Philosophical and Methodological Assumptions. *Journal of Philosophy, Culture and Religion, 40*, 1-3.

Alam, N., Sivarajah, G., & Bhatti, M. I. (2021). Do Deposit Insurance Systems Promote Banking Stability? *International Journal of Financial Studies, 9*(52). doi:https://doi.org/10.3390/ijfs9030052

Alley, I. (2025). Deposit insurance and Financial Inclusion. *Journal of Economic Studies, 52*(4), 784-802. doi:10.1108/JES-12-2023-0726

Anginer, D., & Demirguc-Kunt, A. (2018). Bank Runs and Moral Hazard:A review of Deposit Insurance. *World Bank Group*.

Anginer, D., & Demirguc-Kunt, A. (2018). Bank Runs and Moral Hazard A Review of Deposit Insurance. *Policy Research Working Paper World Bank Group*.

Anginer, D., Demirguc-Kunt, A., & Zhu, M. (2014). How Does Deposit Insurance Affect Bank Risk? Evidence from the Recent Crisis. *Journal of Banking and Finance, 48*, 312-321. doi:https://doi.org/10.1016/j.jbankfin.2013.09.013

Anil, K., Geetha, & Rajan. (2023). *Research Methodology.* LAP LAMBERT Academic Publishing.

Atiti, F., Agung, R., & Kimani, S. (2020). Competition and Banking Sector Stability in Kenya. *Kenya Bankers Association*.

Bai, J., Choi, S. H., & Liao, Y. (2021). Feasible generalized least squares for panel data with cross-sectional and serial correlations. *Empirical Economics, 60*(1), 309-326.

Baudino, P., Defina, R., Fernández, J. M., Hajra, K., & Walters, R. (2019). Bank failure management – the role of deposit insurance. *Bank for International Settlements SSRN*.

Bawuah, I. (2024). Bank stability and economic growth in Sub-Saharan Africa: trade-offs or opportunities? And how do institutions and bank capital affect this trade-off? *COGENT ECONOMICS & FINANCE, 12*(1). doi:https://doi.org/10.1080/23322039.2024.2381695

Ben-Ammar, H. (2024). The mediating role of capital on deposit insurance and financial stability: evidence from Islamic and conventional banks. *Managerial Finance, 50*(6). doi:https://doi.org/10.1108/MF-02-2023-0075

Boermans, M., & Kroft , B. v. (2024). Capital regulation induced reaching for systematic yield: Financial instability through fire sales. *Journal of Banking and Finance, 158*. doi:https://doi.org/10.1016/j.jbankfin.2023.107030

Bonfim, D., & Santos, J. (2023). The importance of deposit insurance credibility. *Journal of Banking and Finance*. doi:https://doi.org/10.1016/j.jbankfin.2023.106916

Bonfim, D., & Santos, J. (2023). The importance of deposit insurance credibility. *Journal of Banking and Finance*. doi:https://doi.org/10.1016/j.jbankfin.2023.106916

Bonfim, D., & Santos, J. A. (2023). The importance of deposit insurance credibility. *Journal of Banking and Finance, 154*. doi:https://doi.org/10.1016/j.jbankfin.2023.106916

Bryant, J. (1980). A model of reserves, bank runs, and deposit insurance. *Journal of Banking and Finance, 4*(4), 335-344. doi:https://doi.org/10.1016/0378-4266(80)90012-6

CBK. (2023). *Kenya Financial Sector Stability Report : Sustained Resilience in Multi-shock environment.* Central Bank of Kenya. Financial Sector Regulators.

Central Bank of Kenya. (2023). Banking Supervision Report .

Central Bank of Kenya. (2023). Kenya Financial Sector Stability Report : Sustained Resilience in Multi-shock environment. (14).

Central Bank of Kenya. (2024). Bank Supervision Annual Report.

Central Bank of Kenya. (2025). Kenya Financial Sector Stability Report: Resilience Amid Global Reallignments, Emerging Risks and Regulatory Reforms.

Central Bank of Kenya. (2025). PRESS RELEASE:LIFTING OF MORATORIUM ON LICENSING OF NEW COMMERCIAL BANKS IN KENYA.

Cerrone, R. (2018). Deposit guarantee reform in Europe: Does European deposit insurance scheme increase banking stability? *journal of Economic Policy Reform, 21*, 224 - 239. doi:https://doi.org/10.1080/17487870.2017.1400434

Chiaramonte, L., Girardone, C., Migliavacca, M., & Poli, F. (2019). Deposit insurance schemes and bank stability in Europe: how much does design matter? *The European Journal of Finance*. doi:https://doi.org/10.1080/1351847X.2019.1607763

Cooper, D., & Schindler, P. (2011). *Business Research Methods* (11 ed.). McGraw-Hill.

Cote, C. (2021, Bovember). *What Is Descriptive Analytics? 5 Examples*. (Harvard Business School Online) Retrieved March 2025, from https://online.hbs.edu/blog/post/descriptive-analytics#:~:text=Descriptive%20analytics%20is%20the%20process,but%20doesn't%20dig%20deeper.

Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry & research design : choosing among five approache.

Cui, G., Hayakawa, K., Nagata, S., & Yamagata, T. (2023). A Robust Approach to Heteroscedasticity, Error Serial Correlation and Slope Heterogeneity in Linear Models with Interactive Effects for Large Panel Data. *Journal of Business & Economic Statistics, 41*(3), 862–875.

Cullen, J. (2024). Moral Hazard and the deposit insurance cap: a case study ofNorthern Rock and Silicon Valley Bank. *LAW AND FINANCIAL MARKETS REVIEW, 17*(4), 272-297. doi:https://doi.org/10.1080/17521440.2024.2403395

Demirgüç-Kunt, A., & Detragiache , E. (2002). Does deposit insurance increase banking system stability? An empirical investigation. *Journal of Monetory Economics, 49*(7), 1373-1406. doi:https://doi.org/10.1016/S0304-3932(02)00171-X

Demirgüç-Kunt, A., & Detragiache, E. (2002). Does Deposit Insurance Increase Banking System Stability? An Empirical Investigation. *Journal of Monetory and Economics*, 1373 - 1406.

Demirgüç-Kunt, A., Kane, E. J., & Laeven, L. (2006). Determinants of Deposit-Insurance Adoption and Design. *World Bank Policy Research Working Paper 3849*.

Demirgüç-Kunt, A., Kane, E., & Laeven, L. (2014). Deposit Insurance Database. *IMF Working paper*.

Diamond, D., & Dybvig, P. (1983). Bank Runs, Deposit Insurance, and Liquidity. *Journal of political economy, 91*(3).

Garson, D. (2012). *Testing Statistical Assumptions.* Statistical Associates Publishing.

Ha, J., Kose , A., & Ohnsorge, F. (2023). One-stop source: A global database of inflation. *Journal of International Money and Finance, 137*. doi:https://doi.org/10.1016/j.jimonfin.2023.102896

Haile, M. A., MK, J., & Mulugeta, W. (2024). Banking Resilience on Africa: Regulatory Convergence in Financial Systems at Work? *SSRN*. doi:https://dx.doi.org/10.2139/ssrn.4905266

Hoelscher, D., & Quintyn, M. (2003). Managing Systemic Banking Crises. *International Monetory Fund*.

IADI. (2010). *Core Principles of Effective Deposit Insurance System.* Retrieved from https://www.bis.org/publ/bcbs192.htm

International Association of Deposit Insurers. (2010). Core Principles of Effective Deposit Insurance System. Retrieved from https://www.bis.org/publ/bcbs192.htm

International Monetory Fund. (2025). World Economic Outlook Update.

Iyer, R., Jensen, T. L., Johannesen, N., & Sheridan, A. (2019). The Distortive Effects of Too-Big-To-Fail: Evidence from the Danish Market for Retail Deposits. *The Review of Financial Studies, 32*(12), 4653–4695. doi:https://doi.org/10.1093/rfs/hhz037

Jacklin, C. (1987). Demand deposits, trading restrictions and risk sharing. *1*, 26-47.

Karathanassis, G., & Patsos, C. (1995). Heteroscedasticity and other misspecification issues in the market model. *Applied Economics Letters, 2*(10), 380-382.

Kenya Bankers Association. (2025). Breaking the Doom Loop: Strengthening Financial Stability in Kenya's Banking Sector. Retrieved from https://www.kba.co.ke/wp-content/uploads/2025/04/KBA-Policy-Brief-Breaking-the-Doom-Loop-Strengthening-Financial-Stability-in-Kenyas-Banking-Sector3.pdf

Kgari, L., Nguyen, L., Sobiech, A., & Wilson, J. (2025). Deposit Insurance and Bank Stability: Evidence from Africa. *SSRN*. doi:https://dx.doi.org/10.2139/ssrn.5318800

Kgari, M., Nguyen, L., Sobiech, A. L., & Wilson, J. (2025). Deposit Insurance and Bank Stability: Evidence from Africa. *SSRN*. doi:https://dx.doi.org/10.2139/ssrn.5318800

Kiemo, S. (2025). Capital, Competition and Stability Nexus in the Kenya Banking Sector.

Kiemo, S., Olweny, T., Muturi, W., & Mwangi, L. (2019). Bank-specific determinants of commercial banks financial stability in Kenya. *Journal of Applied Finance & Banking, 9*(1).

Koskei, L. (2020). Determinants of Banks' Financial Stability in Kenya Commercial Banks. *Asian Journal of Economics, Business and Accounting*, 48-57. doi:10.9734/AJEBA/2020/v18i230281

Koskei, L. (2020). Determinants of Banks' Financial Stability in Kenya Commercial Banks. *Asian Journal of Economics, Business and Accounting*. doi:10.9734/AJEBA/2020/v18i230281

Kotronoulas, G., Miguel, S., Dowling, M., Fernández-Ortega, P., Colomer-Lahiguera, S., Bağçivan, G., . . . Papadopoulou, C. (2023, April). An Overview of the Fundamentals of Data Management, Analysis, and Interpretation in Quantitative Research. *Seminars in Oncology Nursing, 39*(2).

Kung'u, G. K. (2021). Deposit Insurance a Precursor of Bank System Stability? An Empirical Evidence of Kenya Banking System. *The International Journal of Business & Management, 9*(9).

Kuria, J. K., Kiboi, A., & Macheru, J. (2024). Asset Quality and Financial Stability: An Empirical Review of Commercial Banks in Kenya. *Journal of Finance and Accounting, 8*(3). doi:https://doi.org/10.53819/81018102t7004

Laeven, L. (2004). The Political Economy of Deposit Insurance. *World Bank Policy Research Working Paper 3247*.

Mathuva, D. M. (2018). *Development Finance in Africa* (5 ed.). Nairobi: Kaplan Publishing.

Mathuva, D. M., & Cole, A. D. (2018). The Wealth of Nations: The Missing Middle. *UNCTAD Proceedings* (pp. 123-134). Tuxas: World Press Publishers.

Mathuva, D. M., & Wayne, L. (2018). Determinants of Integrated Report Disclosures by Commercial Banks in Africa. *Journal of Accounting Research, 34*(4), 2012-2224.

Maude, & Dogarawa. (2019). A Critical Review of Empirical Studies on Assessing Bank Performance using CAMEL Framework. *SSRN*. doi:https://dx.doi.org/10.2139/ssrn.3492008

Maysami, R. C., & Sakellariou, C. (2008). Financial liberalization, deposit insurance and bank stability. *Applied Economics Letters*. doi:https://doi.org/10.1080/13504850600749131

McCoy, P. (2007). The Moral Hazard Implications of Deposit Insurance: Theory and Evidence. *International Monetory Fund*. Retrieved from https://www.imf.org/external/np/seminars/eng/2006/mfl/pam.pdf

Ngalawa, H., Tchana, F. T., & Viegi, N. (2016). Banking Instability and Deposit Insurance: The Role of Moral Hazard. *Journal of Applied Economics, 19*(2), 323-350. doi:https://doi.org/10.1016/S1514-0326(16)30013-7

Ngalawa, H., Tchana, F. T., & Viegi, N. (2016). BANKING INSTABILITY AND DEPOSIT INSURANCE: THEROLE OF MORAL HAZARD. *Journal of Applied Economics, XIX, No. 2*, 323-350. doi:10.1016/S1514-0326(16)30013-7

Nikolaj, S. S., Drazenovi, B. O., & Buterin, V. (2022). Deposit insurance, banking stability and banking indicators. *ECONOMIC RESEARCH-EKONOMSKA ISTRAŽIVANJA, 35*(1). doi:https://doi.org/10.1080/1331677X.2022.2033130

Ntwaepelo, K. M. (2023). Bank Stability versus Financial Development: A Generous Deposit Insurer's Dilemma.

Ozili, P. K. (2018). Banking Stability Determinants in Africa. *International Journal of Managerial Finance, 14*, 462 - 483 .

Pauly, M. (1983). More on Moral Hazard. *Journal of Health Economics, 2*(1). doi:https://doi.org/10.1016/0167-6296(83)90014-0

Phoenix, C., Osborne, N. J., Redshaw, C., Moran, R., Stahl-Timmins, W., Depledge, M. H., . . . Wheeler, B. W. (2013, January). aradigmatic approaches to studying environment and human health: (Forgotten) implications for interdisciplinary research. *Environmental Science & Policy, 25*, 218-228.

Quintero, J. C. (2023). Deposit Insurance and Market Discipline. *Journal of Financial Stability, 64*. doi:https://doi.org/10.1016/j.jfs.2023.101101

Roosebeke, B. V., & Defina, R. (2023). Global trend in deposit insurance coverage ratio. *SSRN*.

Toby, A. J. (2021). Deposit Insurance and Credit Risk of Nigeria Banking System: A Time Series Analysis. *Journal of Global Economics and Business, 2*(6), 1-30.

Tuma, T. J., Mamun, A., & Shao, E. (2025). Deposit Insurance Reforms and Bank Risk-Taking: An International Perspective on Discipline and Moral Hazard. *SSRN*. doi:https://dx.doi.org/10.2139/ssrn.5243565

Ullah, S., Hussain, S. I., Nabi, A. A., & Mubashir, K. A. (2022). Role of Regulatory Governance in Financial Stability: A Comparison of High and Low Income Countries. *Journal of Central Banking Theory and Practice, 1*, 207 - 226. doi:10.2478/jcbtp-2022-0009

Ullah, S., Ullah, A., & Zaman, M. (2024). Nexus of governance, macroeconomic conditions, and financial stability of banks: a comparison of developed and emerging countries. *Financial Innovation*. doi:https://doi.org/10.1186/s40854-023-00542-x

Wamalwa, N., Mungai, J., & Makori, D. (2020). Effect of Camel Variables on Financial Stability: A Dynamic Panel Analysis of Commercial Banks in Kenya. *Research Journal of Finance and Accounting, 11*(18). doi:10.7176/RJFA/11-18-10

Yensu, J., Yusif, H., Tetteh, E., Asumadu, G., & Atuilik, D. (2021). Main Determinants of Banks' Stability: Evidence from Commercial Banks in Ghana. *Journal of Finance and Economics, 9*(2), 42-52. doi:DOI:10.12691/jfe-9-2-1

Yitayaw, M. K., Mogess, Y. K., Legese, H., Mamo, B. W., & Abdulahi, S. M. (2023). Determinants of bank stability in Ethiopia: A two step system GMM estimation. *Congent Economics and Finance*. doi:https://doi.org/10.1080/23322039.2022.2161771

Zibusiso, M., Nyatanga, P., & Mukorera, S. (2022). Liquidity And Deposit Insurance: The Case Of Deposit-Taking Microfinance Institutions In Low-Income Sub-Saharan Africa. *Management and Economics Research Journal, 8*(4). doi:https://doi.org/10.18639/MERJ.2022.1782409

APPENDICES

Appendix 1: Ethical Clearance

Strathmore UNIVERSITY

10th November 2025

Ms Hassan Fardosa,
fardosa.hassan@strathmore.edu

Dear Ms Hassan,

RE: Effect of Deposit Insurance on Stability of Commercial Banks in Kenya: Moderating Role of Bank Size

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC3110/25.** The approval period is from **10th November 2025 to 9th November 2026.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, and MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification
iv. Any changes, anticipated or otherwise, that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours
v. Clearance for the export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) https://research-portal.nacosti.go.ke/ and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email admissions@strathmore.edu www.strathmore.edu

Appendix 2: List of commercial banks

No	List of licensed commercial Banks		
1	ABSA Bank of Kenya Ltd	23	KCB Bank Kenya Limited
2	Access Bank Kenya	24	Kingdom Bank Limited
3	African Banking Corporation Limited	25	Middle East Bank (K) Limited
4	Bank of Africa Kenya Limited	26	M-Oriental Bank Limited
5	Bank of Baroda (Kenya) Limited	27	National Bank of Kenya Limited
6	Bank of India (Kenya)	28	NCBA Bank Kenya Plc
7	Commercial International Bank (CIB) Kenya Limited	29	Paramount Bank
8	Citibank N.A Kenya	30	Premier Bank Limited
9	Consolidated Bank of Kenya Limited	31	Prime Bank Limited
10	Co-operative Bank of Kenya Limited	32	SBM Bank (K) Limited
11	Credit Bank Limited	33	Sidian Bank Limited
12	Development Bank of Kenya Limited	34	Spire Bank
13	Diamond Trust Bank Kenya Limited	35	Stanbic Bank Kenya Limited
14	DIB Bank Kenya Limited	36	Standard Chartered Bank Kenya Limited
15	Ecobank Kenya Limited	37	UBA Kenya Bank Limited
16	Equity Bank Kenya Limited	38	Victoria Commercial Bank Limited
17	Family Bank Limited		
18	Guaranty Trust Bank (K) Limited		
19	Guardian Bank Limited		
20	Gulf African Bank Limited		
21	Habib Bank A.G Zurich		
22	I & M Bank Limited		

Source: CBK (2023)

Appendix 3: Bank-Year Data Availability Matrix for Kenyan Commercial Banks (2015–2024)

No	Bank Name	Financial Year	Reason for Missing Data	Missing Obs.								
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		n
1	ABSA Bank of Kenya Ltd	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
2	Access Bank Kenya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
3	African Banking Corporation Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
4	Bank of Africa Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
5	Bank of Baroda (Kenya) Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
6	Bank of India (Kenya)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
7	Commercial International Bank (CIB) Kenya Limited	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	Commenced Kenya operations in 2019; financial statements unavailable for 2015-2018	4
8	Citibank N.A Kenya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
9	Consolidated Bank of Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
10	Co-operative Bank of Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
11	Credit Bank Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
12	Development Bank of Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
13	Diamond Trust Bank Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
14	DIB Bank Kenya Limited	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	Licensed by CBK in November 2017; institution did not exist in prior study years	2
15	Ecobank Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
16	Equity Bank Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
17	Family Bank Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
18	Guaranty Trust Bank (K) Limited	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	Commenced Kenyan banking operations in 2019; no audited financial data for preceding years	4
19	Guardian Bank Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
20	Gulf African Bank Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—

21	Habib Bank A.G Zurich	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	Progressively wound down Kenya branch operations from 2020; audited data unavailable from 2021	**4**
22	I & M Bank Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
23	KCB Bank Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
24	Kingdom Bank Limited	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓	Formerly Jamii Bora Bank; rebranded and restructured in October 2020; pre-2020 data not comparable	**5**
25	Middle East Bank (K) Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
26	M-Oriental Bank Limited	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓	Formerly Oriental Commercial Bank; regulatory restructuring and rebranding in 2020; prior years excluded	**5**
27	National Bank of Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
28	NCBA Bank Kenya Plc	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
29	Paramount Bank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
30	Premier Bank Limited	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	Received full CBK commercial banking licence in 2018; data for 2015-2017 not applicable	**3**
31	Prime Bank Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
32	SBM Bank (K) Limited	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	SBM Bank acquired Fidelity Commercial Bank (K) in 2017; independent entity data available from 2017	**2**
33	Sidian Bank Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
34	Spire Bank	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	Severe financial distress and operational wind-down; audited statements not filed from 2023 onward	**2**
35	Stanbic Bank Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
36	Standard Chartered Bank Kenya Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
37	UBA Kenya Bank Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
38	Victoria Commercial Bank Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Complete data available across all study years	—
Legend: ✓ Data Available | ✗ Data Not Available (Missing) | *n = number of missing bank-year observations per bank*													

Source: Central Bank of Kenya Annual Bank Supervision Reports (2015–2024); individual bank audited financial statements; CBK licensing records. Compiled by the author.

Appendix 4: Plagiarism Report

ORIGINALITY REPORT

15%	13%	12%	5%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

Appendix 5: Data collection tool

Variable type	Year / Variable	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Depedent variable	Bank stability										
Independent variable	Deposit insurance coverage										
Independent variable	Deposit insurance funding										
Independent variable	Depositor protection										
Moderating variable	Bank size										

VT OMNES VNVM SINT