EFFECT OF *SHARI'AH* SUPERVISORY BOARD EFFECTIVENESS AND FINANCIAL DETERMINANTS OF PROFITABILITY OF ISLAMIC BANKS IN KENYA

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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 dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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This research dissertation is my own work and has not been presented for an award of a degree in any other institution.

DEDICATION

I dedicate this work to my family for the sacrifice they made for me to complete this dissertation.

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LIST OF ABBREVIATIONS

AAOIFI: Accounting and Auditing Organization for Islamic Financial Institutions

ADF: Augmented Dickey Fuller

BTP: Before-Tax Profits

CAGR: Compound Annual Growth Rate

CBC: Commercial Bank of Ceylon

CBK: Central Bank of Kenya

CSR: Corporate Social Responsibility

EM: Equity Multiplier

FCB: First Community Bank

GAB: Gulf African Bank

GCC: Gulf Cooperation Council Countries

GDP: Gross Domestic Product

IC: Intellectual Capital

ICD: Islamic Corporation for Development

IFCI: Islamic Finance Country Index

IFSB: Islamic Financial Services Board

KNBS: Kenya National Bureau of Statistics

MENA: Middle East and North Africa

NIM: Non-Interest Margin

NSE: Nairobi Securities Exchange

POLS: Pooled Ordinary Least Square

ROA: Return on Assets

ROE: Return on Equity

SSB: *Shari'ah* Supervisory Board

TA: Total Assets

US: United States

DEFINITION OF TERMS

Bank Size	This represents a measure of the value of the assets of the bank (Chang, Nieh & Peng, 2011).
Capital adeqaucy	This a measure of the banking institution capacity to pay support its risk and met its obligations (Chang, Nieh & Peng, 2011).
Islamic banks	Islamic banks are banking institutions which offer Islamic banking services and products and are required to create a *Shari'ah* Supervisory Board (SSB) so as to advise them and also ensure that the activities and operations of the banking institutions observe *Shari'ah* principles (Bashir, 2003).
Liquidity	Liquidity focuses on how rapidly a bank can change its assets into cash to fulfill maturing liabilities (Chang, Nieh & Peng, 2011).
Macroeconomic factors	These are a set of fiscal, natural and geopolitical factors that have a broad effect on the national economy (Kanwal & Nadeem, 2015).
Profitability	This is a proxy measure of the financial performance of institutions (Obamuyi, 2013).
Regulatory compliance	Regulatory compliance, by definition consistent with literature, is the process of putting in place the measures to adhere to regulations and guidelines set by the state or governing agencies that govern the operations of a business or industry (Agborndakaw, 2010).
***Shar'iah* Supervisory Board**	An independent panel of Islamic scholars specializing in Islamic law (Shari'ah) and finance (Boyante, 2014).
***Shari'ah* Supervisory Board effectiveness**	It is the ability of the *Shari'ah* Supervisory Board to successfully fulfill its role of ensuring compliance with Islamic law in the operations, policies, and products of Islamic financial institutions (Abdalla, 2015).

VT OMNES
VNVM SINT

ABSTRACT

Demand for various Islamic finance products and services is growing because of increasing populations of Muslim within Kenya and the adoption of Islamic finance services by non-Muslims. Even though interest is strictly forbidden in Islamic Banking, Islamic banks have recorded relatively positive financial performance. This study explored the factors influencing the profitability of Islamic commercial banks in Kenya, with particular attention to the role of *Shari'ah* Supervisory Boards (SSBs). The research sought to evaluate how bank size, capital adequacy, liquidity, and macroeconomic conditions impact profitability, measured through return on assets (ROA) and return on equity (ROE). Using a causal research design, the study focused on Kenya's three fully *Shari'ah*-compliant commercial banks, analyzing secondary data through quantitative methods, including descriptive and inferential statistics. The regression analysis indicated a significant relationship between SSB effectiveness, key determinants, and bank profitability. Specifically, bank size had a positive and significant effect on ROE but only a marginally positive effect on ROA. Capital adequacy showed mixed results: while its earnings ratio had a negligible impact on ROE, it negatively and significantly affected ROA. Liquidity, however, exerted a negative and significant influence on both ROA and ROE. Macroeconomic variables—interest rates, inflation, and GDP—were found to have no statistically meaningful effect on profitability. Similarly, SSB effectiveness, as measured by the IFCI index, did not significantly influence ROA or ROE. These findings suggest that internal bank-specific factors, such as size and liquidity, play a more decisive role in shaping profitability than external macroeconomic conditions or SSB governance in Kenya's Islamic banking sector. The study recommends introduction of alternative policy measures in the country that will help to spur development of Islamic banking and support an improved health of the institutions. Bank managers need to pay more attention to their expansion plans by taking into consideration digital channels as a more cost-efficient method of increasing outreach of the banks which can improve their profitability. The research also calls for Islamic banks to reanalyze their portfolio holdings to reduce exposure of their capital in risky investments. The banks should focus on strengthening their capital base through a more robust control of their assets earning investments. The banks should further implement active management of short-term obligations which will help mitigate liquidity risks and any losses arising from the operations of the firm.

Key Words: *profitability, Islamic banks, Shari'ah, bank size, capital adequacy, liquidity, macroeconomic factors*

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The fundamental principles of Islamic finance, including the prohibition of *riba* (interest) and strict adherence to *Shari'ah* law, have been integral to Islam since its inception, with Islamic jurisprudence (*fiqh*) extending these principles to financial practices. As an alternative financial system, Islamic finance promotes financial intermediation and inclusion while fostering economic growth. According to the Islamic Finance Development Report (ICD-Refinitiv, 2022), the sector has experienced remarkable expansion, with global assets surging from $2 trillion in 2015 to $4 trillion in 2021, and projections indicating a rise to $5.9 trillion by 2026—reflecting an 8% compound annual growth rate (CAGR). This growth underscores the substantial investment potential of Islamic finance. Notably, Islamic banking dominates the sector, accounting for 70% of total assets, a trend fueled by post-pandemic recovery, increased demand, and the emergence of digital Islamic banking platforms.

Islamic banking has gained a footing in nearly every Muslim country and also in a few non-Muslim countries since the introduction of the first Islamic Bank in Egypt i.e. Mit Ghamr Savings Bank in 1963 (Issak & Kwasira, 2014). Islamic banks are expected to undertake trade and business activities based on legitimate and fair profits and also give profit-sharing (rather than pre-determined payments of interest) on banking facilities. Making sure of fair practices when dealing with shareholders and customers in such banks takes centre stage than in conventional banking where external regulations are required to impose much fair practice (Ramadan, 2011).

Islamic finance has developed in the fields of banking, insurance, mortgage and assets management business with a global growth rate of 10%-15% annually. But actual growth in Islamic banking began after 1970 because of new techniques of investment, strategies as well as product development (Halkano, 2012). All banks operate according to the financial law of Islam in some countries including Pakistan, Sudan and Iran but

in some countries including Malaysia, Indonesia, Jordan, Bangladesh and Egypt, Islamic banking services are offered via conventional banking (Elsiefy, 2013).

In 2014, the combined Islamic banks' balance sheets had increased from US$150 billion in the year 1990 to almost US$1 trillion, with greater than 300 *Shari'ah*-compliant organizations operating in 80 countries (Hadriche, 2015). While Islamic banking share is still small relative to conventional finance at almost 1% of the worldwide banking system, there is increasing interest in *Shari'ah* compliant instruments and institutions. Hassan (2013) states that Islamic financial industry has acquired wider appreciation and acceptance and has also expanded beyond traditional Muslim-based economies into the main industrial economies to become a crucial constituent and player of the international financial system.

Islamic banking concepts are guided and provided by Hadith as well as Qur'an (Islamic Holy book). The Hadith and Qur'an define what is and not forbidden in Islamic faith. Through involvement in profitable trade, profits earned should be the result of risk sharing (Bashir, 2003). The major guidelines of Islamic finance and banking include risk-sharing, materiality and no exploitation. The underlying terms of transactions must reflect the risk-sharing and returns amongst stakeholders involved in the transaction (Tuitoek, 2012). In addition, all financial transactions ought to be based on equity instead of debt. Further, there must be equality, that is, no party should feel superior or inferior to the other during the transaction (customer and bank), and activities which are prohibited under Islam must not be financed such as pornographic, firearms, gambling and alcohol sale (Adano, 2010).

However, profitability is a major goal of every business activity including both conventional banks and Islamic banks. People and entities involved in the business would set the main business objective being profitability (Issak & Kwasira, 2014). The organization or a company will not be capable of surviving in the long run without profitability. Hence, it is essential to measure the past and current profitability and forecast as well as project the future profitability. In various studies, authors have investigated various financial performance determinants of Islamic banks. Bashir (2003) found that capital-to-asset as well as loan-to-asset ratios were key determinants

of profitability Islamic banks in the Middle East. Similarly, Hassan (2013) found that greater equity to total asset ratio results to higher profit margins. Additionally, sufficient capital ratios perform a weak empirical function in explaining Islamic banks performance. Islamic banks' loan portfolio is greatly biased towards financing of short-term trade. As such, the loan book is relatively low risk and contributes moderately to the profits of the bank.

Upon considering bank size, adequacy of capital, liquidity, deposits as well as asset quality as internal determinants of Islamic banks' profitability Azira, Salwani and Nabilah (2015) found that only size of the bank as well as asset quality had a significant influence on profitability. In Qatar, Elsiefy (2013) found that liquidity negatively influences Islamic banks' profitability. This supports Ramadan (2011) argument that greater liquidity ratios safeguard against any liquidity risk. Results analysis of Islamic banks' reveals that greater liquidity is correlated with greater profits unlike conventional banks hence supporting the argument that banks which are well capitalized usually face lesser financing cost that finally enhances profitability and reduces costs. Ramadan (2011) also found that credit risk, managements' efficiency and efficient management of working expenses significantly and positively influences profit margin of Islamic Banks within Jordan.

The study therefore examined the effect of *Shari'ah* supervisory board effectiveness and financial determinants of the profitability in Islamic commercial banks in Kenya. There have been few studies that comprehensively assess the impact of SSBs in driving compliance and financial performance in the Kenyan context creating an empirical gap that the study sought to fill. Furthermore, Islamic banking in Kenya is relatively new, making the study timely and relevant in evaluating the local challenges and opportunities of implementing *Shari'ah* compliance. The study also bridges the gap between Islamic ethical principles and conventional financial metrics, showing how they coexist and influence each other.

1.1.1 Regulatory and Supervisory Landscape

Regulatory compliance refers to the implementation of measures that ensure adherence to rules and guidelines established by governing bodies to oversee business or industry

operations. In the context of Islamic finance, the Malaysia-based Islamic Financial Services Board (IFSB), founded in 2002, serves as the global standard-setting body tasked with promoting stability and soundness in the industry. The IFSB develops prudential standards and guiding principles for Islamic banking, capital markets, and insurance, while also facilitating research, policy discussions, and stakeholder engagement through seminars and conferences. According to the IFSB (2022), the most widely adopted standards in Islamic banking include *Shari'ah* governance, capital adequacy, corporate governance, and risk management. Kenya, which became an associate member of the IFSB in 2019, was ranked 24th out of 54 countries in the 2022 Islamic Finance Country Index (IFCI). This index evaluates multiple factors, such as the presence of fully-fledged Islamic banks, hybrid institutions offering Islamic financial services, and the strength of the Shari'ah supervisory framework. Additional metrics include assets under management, the Muslim population, outstanding *Sukuk* (Islamic bonds), and the regulatory, educational, and cultural environment supporting Islamic finance. Kenya's position reflects its growing role in the global Islamic finance landscape.

Islamic banks offer Islamic banking services and products. They are required to create SSBs that advise and ensure that the operations of the institutions are compliant with *Shari'ah* principles (Bashir, 2003). In Kenya, the National *Shari'ah* Advisory Council, together with the *Ulamaa* (Islamic scholars), tend to advise the banks on the *Shari'ah* aspects of operation of these institutions as well as their services and products (Boyante, 2014).

The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) was established in 1991 and is based in Bahrain. It operates as the global Islamic infrastructure body steering the Islamic finance industry. It develops standards in five interconnected areas, and enhances human talent and awareness within the industry (AAOIFI, 2022). The standards are either partially or fully adopted or adapted or used as guidelines in various countries. Whereas commercial banks in Kenya are regulated by the Banking Act No. 9 of 1989 and the CBK Act No. 15 of 1966, Islamic banks and their underlying products and services are additionally governed by the *Shari'ah*.

Through the Finance Act in 2010, the Government of Kenya amended the CBK Act to allow the CBK to open up *Shari'ah* compliant investments (Ndung'u, 2011) by recognizing the payment of a return rather than interest on government securities. Islamic banking windows set up by conventional banks allow their customers to access *Shari'ah*-compatible deposits and Islamic trade-finance products. The second model is that of fully-fledged Islamic banks that exclusively offer *Shari'ah*-compliant services and products.

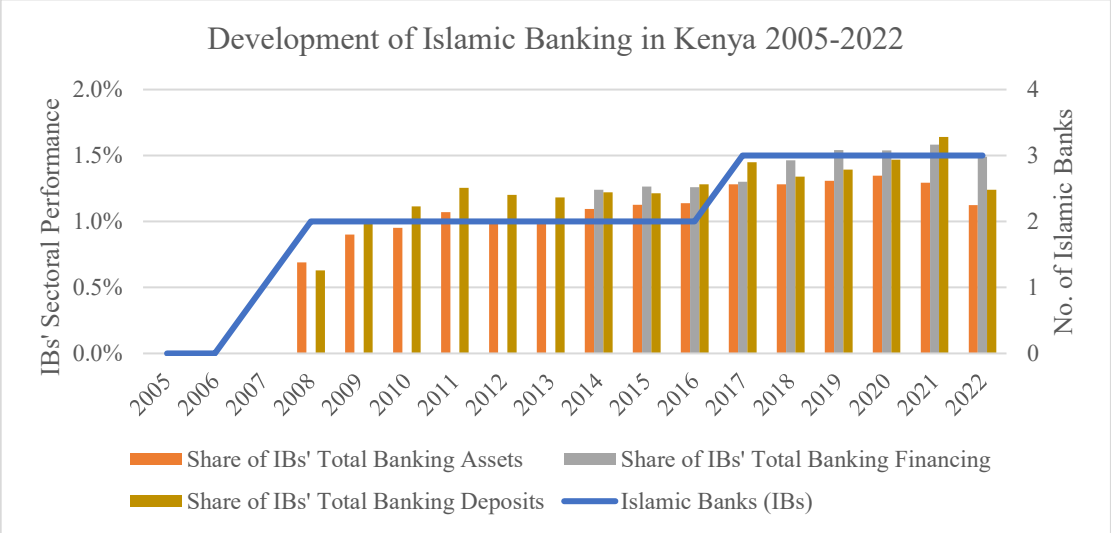

Figure 1.1 Development of Islamic Banking in Kenya.
Source: CBK Bank Supervision Annual Reports (2005-2022)

1.1.2 *Shari'ah* Supervisory Board Effectiveness

A *Shari'ah* Supervisory Board is an independent panel of Islamic scholars specializing in Islamic law (Shari'ah) and finance (Boyante, 2014). Their primary role is to ensure that all financial products, services, and operations of an Islamic bank comply with the principles of *Shari'ah* i.e. prohibition of interest (*riba*), taking excessive uncertainty (*gharar*), and making investments in *haram* (forbidden) activities, such as gambling or alcohol (Boyante, 2014). SSBs also offer guidance on structuring *Shari'ah*-compliant transactions, auditing and monitoring the implementation of their directives, and advising on potential ethical concerns related to banking operations.

According to Abdalla, (2015), SSB effectiveness is the ability of the SSB to successfully fulfill its role of ensuring compliance with Islamic law in the operations,

policies, and products of Islamic financial institutions. It also involves the board's capability to maintain high standards of *Shari'ah* governance, offer sound guidance, and resolve challenges in an efficient, timely, and transparent manner (Abdalla, 2015).

Previous studies have showed conflicting impacts of SSB effectiveness on profitability of Islamic Banks. Boyanta (2014) posits that compliance with Shari'ah principles attracts devout Muslim customers who trust the system, increasing customer base and deposits. SSBs can facilitate innovation such as *sukuk*, that cater to specific market needs, leading to growth according to Adano, (2010). Hadriche, (2015) also links the strong adherence to ethical standards as improving brand reputation and customer loyalty, offering a competitive edge. On the other hand, Elsiefy (2013) notes that establishing and maintaining an effective SSB incurs costs for recruitment, training, and Shari'ah audits, potentially impacting profitability negatively. Furthermore, the extended approval processes due to rigorous SSB oversight can delay new product introduction, reducing revenue opportunities. Issak and Kwasira (2014) also highlighted that a lack of qualified *Shari'ah* scholars in Kenya might limit effective decision-making, creating inefficiencies.

1.1.3 Concept of Bank Profitability

Profitability serves as a fundamental objective for most organizations, including banks, as it ensures financial stability and the ability to cover operational costs while funding future growth. A bank's profitability is crucial not only for its own sustainability but also for meeting the expectations of key stakeholders such as investors, governments, and regulators. Given this significance, bank management must prioritize sound financial strategies and operational efficiency to maintain and enhance profitability, as emphasized by Al-Qudah and Jaradat (2013), Adano (2010) and Obamuyi (2013).

There are four measures that are always deployed to determine the performance of banks. These are profiting margin (Before-Tax Profits, BTP/ Total Assets, TA), net non-interest margin (NIM), ROA as well as ROE. NIM is accrued to a bank from non-interest activities such as fees, service charges, direct investment and foreign exchange activity over overall assets (Abduh & Idrees, 2013). For conventional banks in 1990s,

non-interest income is increasing in significance as a source of income. Some of NIM items that are fastest growing include credit-card fees, ATM surcharges, and fees from sale of joint annuities and funds (Adano, 2010).

Non-interest income, NIM as well as Islamic banks makes up total operating income lion's share and capture the ability of the bank to reduce insolvency risk. Moreover, as the returns on deposits by Islamic banks are contingent on project outcomes financed by banks, then NIM shows management's capability to produce positive returns on deposits. Non-interest income will grow over time if banks could provide new services and participating in fruitful non-loan activities (Abduh & Idrees, 2013). Al-Qudah and Jaradat (2013) utilized net non-interest return as a rough alternative of bank efficiency.

The bank's BTP/TA is employed as a measure of profit margin of the bank. This measure is calculated from the income statement of the bank as the overall of non-interest income divided by total assets take away overhead over total assets take away loan loss provision divided by total assets take away other operating income. BTP/TA shows banks' ability to generate huge profits by expanding their portfolios. Other alternative measures of general performance are ROE and ROA. The two measures are tied closely to major item in income statement i.e., net income (Obamuyi, 2013). In most structure-performance studies ROA as well as ROE have been employed and are used here in order to show banks' ability to make income from various non-traditional services. Moreover, ROA indicates profit which has been received per dollar of assets, mostly; it shows management capability to employ real investment resources as well as banks' finance to make profits. Additionally, for any bank, ROA usually depends on uncontrollable factors concerning government regulations as well as the economy and policy decisions of the bank.

In this study, ROA was deployed as a proxy in measuring banks' profitability. It is because ROA is a better proxy than ROE when determining banks profitability. It is also in line with the studies done on financial performance of Islamic banks. In a study on the internal determining factor of profitability of Islamic banks in Malaysia, Husain, Affandi and Shukur (2015) used ROA to measure profitability. They argued that only ROA should be used to measure the profitability, since the banks aim at measuring its

capability to make profits. In another study on bank-specific determining factor of profitability in Islamic banks located in Jordan, Ramadan (2011) used ROA as the only measure of profitability.

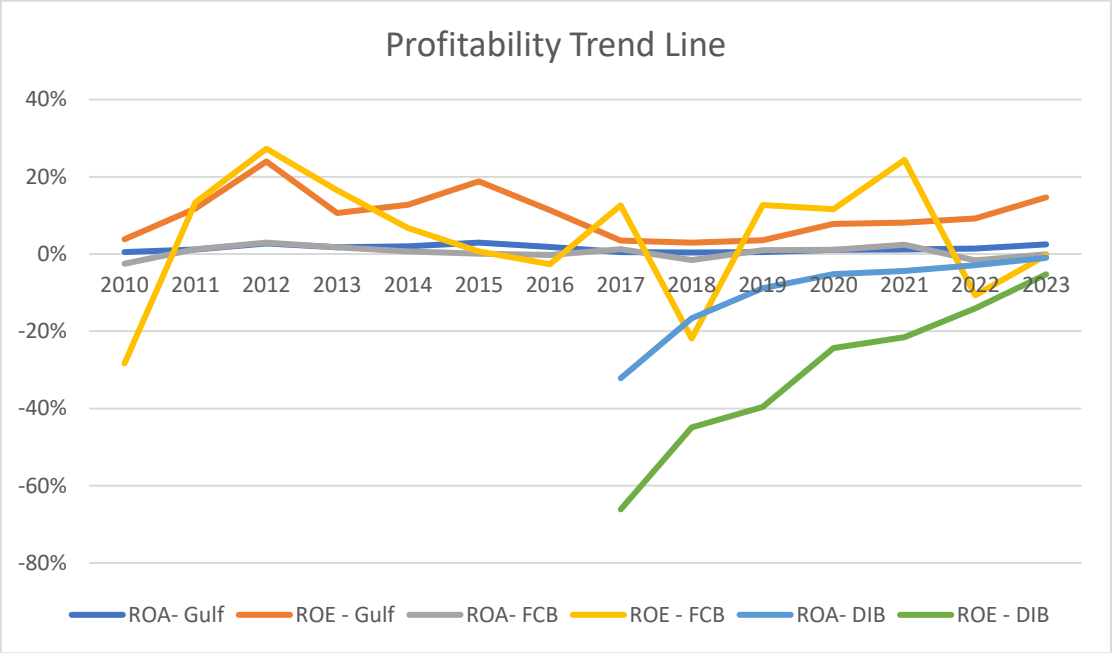

Figure 1.2 Trend in Bank Profitability
Source: CBK Bank Supervision Annual Report (2010-2022) & respective banks' management financials for 2023

1.1.4 Islamic Banking in Kenya

Islamic banking services in Kenya are provided by both fully fledged Islamic banks and conventional banks that provide Islamic banking options. According to the Central Bank of Kenya's 2022 Annual Supervision Report, the banking assets of fully-fledged Islamic banks accounted for 1.3% of the total banking assets in Kenya. Kenya has also expressed aspirations to become the hub of Islamic finance in East Africa. Absa Bank Kenya Plc (then Barclays Bank of Kenya Ltd) in 2005 was the pioneer of *Shari'ah* compliant products and services; by now there are 8 financial institutions which are offering the *Shari'ah* compliant products amid them are three fully fledged Islamic banks which are licensed by the CBK under the Banking Act of Kenya, namely Premier Bank Kenya Ltd (formerly First Community Bank), Gulf African Bank and DIB Bank Kenya Ltd. Unlike other Islamic windows of conventional banks, these three

organizations provide a suite of retail and corporate banking products and services via a recently limited but advancing branch network.

FCB and Gulf launched the *takaful* insurance agency in October 2010. The *takaful* insurance agency in partnership with various insurance companies was set to work so that they could offer *Shari'ah* compliant insurance products (Halkano, 2012). CBK have also announced their plan to launch *Shari'ah* compliant treasury bills within the money market. Moreover, analysts believe that a sovereign Islamic government bond (*Sukuk*) could be a crucial factor in making Kenya as an Islamic finance hub within the region. Moreover, it would be a great move for the two Islamic banks within the country which needed new investment *Shari'ah* compliant opportunities in order to underpin their development. CBK are much aware of the requirement and in 2009, set aside part of the government infrastructure bond for Islamic investment (Tuitoek, 2012).

1.2 Statement of the Problem

The core principle of Islamic banking is the prohibition of interest (Boyante, 2014) as opposed to its permissibility in conventional banking. Another point of divergence is that the type of investments must be screened to ensure they align to *Shari'ah* (Adano, 2010 and Hadriche, 2015). This therefore excludes operations or investments in prohibited (*haram*) items or sources such as alcoholic products. Western governments and financial institutions have established a strong appeal in Islamic finance even though numerous Islamic finance assets are usually based within Saudi Arabia, Kuwait or Malaysia (Issak & Kwasira, 2014).

The fame of Islamic system of banking is not only restrained to Islamic banks since gradually big worldwide conventional banks are as well disclosing interest on Islamic system of banking. According to Boyante (2014), demand for various Islamic finance products and services is growing because of increasing populations of Muslim within Kenya and the adoption of Islamic finance services by non-Muslims. Despite the prohibition of interest in Islamic banking, Islamic banks in Kenya achieved significant profitability in the highly competitive banking sector. In 2012, they recorded

remarkable triple-digit profit growth, with Gulf African Bank (GAB) posting a 154% increase and First Community Bank (FCB) surging by 238% (Abdalla, 2015). This demonstrates their ability to thrive under *Shari'ah*-compliant financial principles.

Various studies have been conducted on Islamic banking in Kenya. Tuitoek (2012) conducted research on the influence of providing *Shari'ah*-compliant products on Kenyan commercial banks' financial performance; Adano (2010*)* evaluated on the factors influencing development of Kenyan Islamic banking and Halkano (2012) carried out comparative analysis on performance of conventional and Islamic banks within Kenya. Profitability has therefore been increasing, and this is important. Further, despite the increasing number of Islamic banks in Kenya and adoption of Islamic banking model among conventional banks, there is little empirical evidence on the determinants of profitability in Islamic banks located in Kenya. Hence this survey sought to establish the control effect of *Shari'ah* supervisory board effectiveness on the determinants of profitability in Islamic banks in Kenya

1.3 Objectives of the Study

The study was guided by both general and specific objectives.

1.3.1 General Objective

The general study objective was to establish the effect of *Shari'ah* supervisory board effectiveness and financial determinants of the profitability in Islamic banks in Kenya.

1.3.2 Specific Objectives

Specific objectives were:

i. To investigate the influence of bank size on the profitability of Kenyan Islamic banks.

ii. To examine the influence of capital adequacy on the profitability of Kenyan Islamic banks.

iii. To assess the influence of liquidity on the profitability of Kenyan Islamic banks.

iv. To evaluate the influence of macroeconomic factors on the profitability of Kenyan Islamic banks.

v. To establish the effect of *Shari'ah* supervisory board effectiveness on the determinants of profitability in Islamic Banks in Kenya.

1.4 Research Questions

The study sought to answer the following questions:

i. What is the effect of bank size on the profitability of Islamic banks in Kenya?

ii. To examine the extent of capital adequacy influence on the profitability of Islamic banks in Kenya?

iii. What is the influence of liquidity on the profitability of Islamic banks in Kenya.

iv. To what extent do macroeconomic factors influence on the profitability of Islamic banks in Kenya?

v. What is the effect of *Shari'ah* supervisory board effectiveness on the determinants of profitability in Islamic Banks in Kenya?

1.5 Significance of the Study

The study results will benefit the management of Kenyan Islamic banks as well as other organizations that offer *Shari'ah* banking services as it will outline the determinants of profitability in Islamic banks that can be used to develop strategic responses to competition and strategies to improve their profitability. The study will give information to the government of Kenya that can be deployed as a background for improving frameworks of Islamic banking thereby contributing to growth of the economy. The study will also provide essential knowledge in formulation of policies as well as a regulatory framework for running various campaigns of advocating Islamic banking as a variation strategy among commercial banks in Kenya.

The study will provide additional information to existing body of knowledge on determinants of profitability in Islamic banks. Besides providing information that can be used as literature review by other researchers, the study gives a base upon which more studies can be performed on the determinants of profitability in Islamic banks. The study will provide valuable insights for practitioners by examining a key factor that impacts the financial performance of Islamic banks in Kenya thereby contributing original knowledge to the field.

1.6 Scope of the Study

This study examined Kenya's three fully-fledged Islamic banks—First Community Bank (FCB), DIB Bank, and Gulf African Bank—analyzing their performance from 2010 to 2023. The research relied on data from the CBK's annual supervision reports and audited financial statements of the respective banks. Theoretically, it was anchored in the inventory theory of capital and liquidity, economies of scale theory, and Clark's dynamic theory of profit. Methodologically, the study adopted a quantitative approach, utilizing panel data analysis to evaluate the research objectives.

1.7 Chapter Summary

The chapter centered on the introduction to the study. It begun by building the background to the study and further described the general principles of Islamic finance and converged into Islamic banking in Kenya. This was followed by the problem statement, objectives, research questions, significance and the scope.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter provides a comprehensive review of existing literature concerning the factors influencing the profitability of Islamic banks. It examines the conceptual understanding of profitability within Islamic banking, outlines the theoretical foundations, and synthesizes empirical studies related to the key variables under investigation. Additionally, the chapter identifies gaps in current research and presents a conceptual framework to guide the study's analytical approach.

2.2 Theoretical Framework

The study was anchored on three key theories: the inventory theory of capital and liquidity, the economies of scale theory, and Clark's dynamic theory of profit. These frameworks guided the research's theoretical foundation.

2.2.1 Inventory Theory of Capital and Liquidity Buffer

The inventory theory of capital and liquidity buffer, introduced by Ernst Baltensperger in 1980, highlights the trade-off banks face in managing liquidity. While holding a reserve of liquid assets safeguards against unexpected financial demands, it also entails an opportunity cost, as these funds could otherwise be invested in more profitable ventures. A liquidity buffer refers to a bank's reserve of readily available assets, ensuring it can meet both anticipated and sudden cash flow or collateral requirements without disrupting its normal operations. This balance between security and profitability remains a critical consideration in banking strategy. It's an expensive venture for any bank to retain a lot of liquid assets (Anuar et al., 2014). However, it may perhaps be of much benefit since it decreases the likelihood of experiencing stock out in case there are unexpected withdrawals of deposits held.

The inventory theory suggests that maintaining liquid assets involves a trade-off: while it reduces the risk of shortages, it also means sacrificing potential returns from loans.

The optimal liquidity buffer depends on the costs of holding liquid assets versus securing emergency funding, as well as the expected frequency and severity of liquidity shocks. Specifically, banks should hold larger buffers when funding sources are unpredictable or raising capital is costly. By keeping sufficient liquid reserves, banks can mitigate liquidity risk by narrowing the maturity gap between assets and liabilities, thereby stabilizing their balance structure (Kanniainen & Tarkka, 2013).

Commercial banks normally build liquidity and convert assets through investing into illiquid loans financed using liquid deposits (Anuar et al., 2014). It includes risk which is correlated with funding illiquid loans which have short term deposits. However, this disparity leads to vulnerability of the banks to confidence of depositors. Commercial banks usually retain illiquid loans which are very hard to sell at a very short notification devoid of experiencing any loss in case of outflow of huge deposit. As a way of preventing liquidity risk resulting from huge deposit expenditures, commercial banks can retain important liquidity as well as capital buffers (Kanniainen & Tarkka, 2013).

As indicated by Ogilo and Mugenyah (2015), it's vital for banks to manage liquidity risk. Since loans are quite illiquid, unexpected and large deposit withdrawals can result in bankruptcy since it may be very costly or even impossible to generate liquid asset on short notice, because of capital market inadequacies. Rather than self-insuring, commercial banks could choose other types of financing. Nonetheless, asymmetric information may perhaps result in coordination failures on interbank market, and external credit lines also may freeze, for solvent although illiquid banks would yet fail.

However, theory critics have noted that the emphasis on keeping to much liquid assets majorly overlook the costs that are incurred which could drastically impact the outcome of the firm negatively. Further, the theory overlooks market dynamics in that it does not account for scenarios where changes in the liquidity in the market cannot be sufficiently be managed by the large buffers especially in times of crisis. The theory was utilized in the study to anchor the influence of capital adequacy and liquidity on the profitability of Kenyan Islamic banks.

2.2.2 Economies of Scale Theory

The economies of scale theory were postulated by economist Adam Smith in the 18th century, suggests that growth can be achieved by increasing production efficiency. According to this theory, as a firm or country expands its output, the average of cost of production decreases due to factors like specialization, bulk purchasing and optimized processes. The theory emphasizes two key determinants for maximizing production returns: (a) division of labor and (b) specialization. In microeconomics, the cost advantages that are obtained by enterprises because of size, scale of operation or output are economies of scale, with cost per unit of output declining with growing scale as fixed costs are spread over more units of output (Beccalli, Anolli & Borello, 2015). Mostly operational efficiency is as well greater with rising scale, resulting in lesser variable cost in addition.

Economies of scale apply to different business and organizational situations and at diverse levels. For instance, all other factors remaining equal, a smaller facility would be anticipated to have a higher cost per unit of output than a big manufacturing facility, while a firm with numerous facilities is expected to have cost advantage over its competitor with lesser (Alhassan & Biekpe, 2015). Hence, economies of scale are internal, external, international, national, dis-aggregative or aggregative and to the benefits due to scale of operation and size of firms (Fung, Gul & Krishnan, 2012). Due to different reasons including research, market power, aggregation of production procedures and development and research efforts, size of the firm has been related with large firms' performance. Bigger firms are thus able to distribute costs over huge production reached. Therefore, theory of economies of scale describes cost advantages that are obtained by enterprises due to output, size or operation scale (Wu, Shen & Zhu, 2015).

Despite the competitive advantages that larger companies may attain such as increased profitability, lower production costs and the ability to offer lower prices to customers, there are drawbacks that may arise too. This includes decrease flexibility, increased bureaucracy to manage increase in complexity and the risk of diseconomies of scale. The theory however fails in that it does not account for the condition where companies

may grow to large and experience diseconomies of scale. Further, with significant growth companies may lose control and become harder to monitor quality and productivity which may weaken the economies of scale being enjoyed. Lastly, with increased economies of scale companies tend to get to large which leads to unnecessary external pressure from regulators which may hamper the overall growth.

The above theory instigated this study's specific objective on the influence of bank size on the profitability of Kenyan Islamic banks.

2.2.3 Clark's Dynamic Theory of Profit

The dynamic theory of profit was introduced by John Bates Clark in 1990. The theory suggests that profits occur in dynamic economy, but not in a static economy (Pisciotta, 1969). Static economy refers to the one with complete freedom of competition; capital and population are stationary; over time process of production remains unchanged; goods continue to be similar; there is no uncertainty; no risk; there is freedom of factor mobility; and if risk occurs, it's insurable. In static economy hence, firms only make the 'normal profit' or management wages. On the other hand, dynamic economy is characterized by the generic changes including population and capital increase; improvement in technique of production; changes in types of business organizations; as well as increase in consumer needs (Tobin, 2013).

In a dynamic environment, the key functions of managers or entrepreneurs is promoting their businesses, taking advantage of changes in generic, reducing costs and expanding sales. In a dynamic economy, entrepreneurs who fruitfully take advantage of transforming situations make pure profit. Pure profit usually exists only in the short run from Clark's standpoint. In the long-run, competition from other firms is forced to imitate all changes which have been made by leading firms, resulting to high demand in factors of production (Jury, 2014). Consequently, the cost of production rises, thus minimizing profits, more-so when revenue continues to be unchanged. In relation to this study, Islamic banks exist in a dynamic business environment with factors such as inflation and GDP influencing their performance and profitability.

Therefore, for them to realize profits, managers must develop strategies focused on internal factors such as liquidity and capital adequacy. The theory however assumes that the emergence, disappearance, and re-emergence of profits is a continuous process. Further, the theory does not articulate or explain the determination of the company profits.

The above theory instigated the study's dependent variable on the profitability of Kenyan Islamic banks.

2.3 Empirical Review Literature

Bank profitability examines a bank's performance, since profit shows how a certain bank performed. Nonetheless, factors determining the performance of a bank have been categorized into external and internal factors. Internal factors entail bank size, capital adequacy ratio and liquidity (Gatete, 2015). These factors indicate those factors which can be effectively managed by bank management. For external factors, there is GDP and inflation.

2.3.1 Bank Size and Islamic Bank Profitability

In rich countries, banks are bigger in size and are expected to minimize the cost of collecting as well as processing information and foster economies of scale. The benefit the banks will get when a bank is big in size, is the banks to give larger financial services menu to their customers, therefore mobilize more finances (Husain, Affandi & Shukur, 2015). Due to the variation in various factors the relationship between a bank's profitability and their size is expected to be uncertain. Bank size is regarded as an internal determinant of profitability, reflecting management's ability to expand the institution by strategically increasing assets and liabilities. This growth-oriented approach positions bank leadership as directly responsible for shaping their organization's scale and financial structure (Gatete, 2015).

Another major argument suggested in the literature is that large banks as well gain from economics of scope i.e., chances for better changes into diverse goods, new markets as well as business lines. Additionally, consistent with the overall view that government is however less likely to let large banks collapse, Flamini et al (2009) reveal that size of

the bank may signify particular bank risk. Moreover, they claim, big banks with larger domestic market share and running in an environment which is non-competitive are likely to enjoy greater profits since they normally pay lesser deposit rates to their depositors requiring lesser deposits rates since they view large banks to be much secure. Moreover, Goddard et al (2004) indicates that if big banks located in greatly concentrated areas have an ability to apply market power in capital or wholesale markets, may perhaps acquire abnormal profits.

On the contrary, Berger et al. (1987) argue that because of bureaucratic processes, agency costs as well as inflexibility in overall, big banks can attain small cost saving by enlarging banks size. Additionally, larger banks have a greater loan loss provision ratio compared to those that are smaller in size. Most literature related to bank performance; natural logarithm of overall assets is utilized as major substitute for size of a bank. Overall risk weighted assets of a bank is used as a substitute proxy for the size of a bank. Within the literature of Islamic banks, there are varied findings on how bank size impacts financial performance of Islamic banks. In the MENA region banking sectors in the period between 2000 and 2008, Majid and Sufian (2011) give evidence obtained from diverse Islamic banks that better capitalized, bigger and more diversified various Islamic banks tend to be quite more profitable. In addition, because large banks have not, however, constantly shown huge profitability while profitable small banks do, in fact, the expectation on effect of bank size on its profitability is left undefined.

In Europe, Terraza (2015) performed research on the impact of bank size on risk ratios and performance of banks. Moreover, the study conducted an empirical analysis relating to 1,270 European banks sampled over the duration between 2005 and 2012. Three panels' data were considered respectively; small, medium and large banks so as to compare European banks in accordance with their size. Velnampy and Nimalathasan (2010) performed research on the size of a firm on profitability of CBC Sri Lanka. This research has started to influence the size of the firm on profitability of almost all Commercial Bank of Ceylon (CBC) branches with 10 years period of accounting: 1997-2006. Moreover, correlation analysis indicates a positive association between profitability and firm size in CBC, but no associations between profitability and firm

size in BOC. In Kenya, Gatete (2015) performed research on the impact of bank size on financial performance of commercial banks. Descriptive research design was deployed in this study. Results revealed that profitability and bank size had statistically significant association, a sign that relatively many commercial banks were financially stable: branch network, asset base as well as customer portfolio. The study identified convergence of most literature linking bank size to ROA. Bank size was therefore identified as a variable influencing ROA of Kenyan Islamic banks.

2.3.2 Capital Adequacy and Islamic Bank Profitability

Rasidah and Mohd Hanafi (2012) claim that as an internal determining factor of bank profitability, capital is a better model since rise in profit may possibly lead to capital increase. The equity-to-asset ratio, also known as the capital ratio, serves as a key indicator of the financial strength of a bank and its capacity to absorb potential losses from loans or other assets. A higher capital ratio signifies greater stability, as it reduces the bank's reliance on external funding while simultaneously enhancing profitability. Furthermore, this ratio reflects the institution's resilience—the larger the proportion of capital relative to assets, the better equipped the bank is to endure financial setbacks without compromising its operations. Essentially, a robust capital buffer not only safeguards against risk but also contributes to improved financial performance.

In Nigeria, Olalekan and Adeyinka (2013) assessed capital adequacy and banks' profitability. Both primary and secondary data was used. Results for primary data analysis indicated insignificant association but secondary data analysis indicated positive significant association between bank profitability and capital adequacy. This means that in Nigerian deposit-taking banks, normally capital adequacy performs a major role in profitability evaluation. It was also revealed that profitability as well as capitalization are signs of bank efficiency in risk management as well as protection against losses which are not covered by recent earnings. It has as well been an intimacy booster to the regulatory authority, depositors and public in Nigeria. Ejoh and Iwara (2014) assessed the impact of capital adequacy on financial performance of Nigerian banks. The study employed Engle as well as Granger two steps process in co-integration. The results revealed that a major role is played by capital adequacy in

describing banks' ROA which measures banks' profitability. The positive significant association between banks' profitability and capital adequacy indicates that banks which have more equity capital are safer and such benefit can be translated to greater profitability.

In the United States, Osborne, Fuertes and Milne (2012) performed research on capital and profitability in banking. The study assessed the influence of capital ratios on profitability of the bank over economic cycles by use of data from US banking sector covering several economic cycles from late 1970s to current financial crisis of year 2008-10. While in most years, most banks average association among banks is however negative, it turns less positive or negative under upset market situations, namely the loan and savings crisis of late 1980s and the present worldwide financial crisis of 2008-10. This is coherent with hypothesis that for banks in such situations rise in capital ratios are cheaper compared to other periods. The results also indicated that banks with excess capital which is relative to the objective, shows a strongly negative association between profitability and capital, both in non-stressed and stressed conditions, meaning that decreasing capital may be an optimal approach for these banks.

Blessing (2015) evaluated the effect of bank reform on capital adequacy on Nigerian banks' profitability. Secondary data which was obtained from the yearly reports as well as accounts of that bank was employed in this research. The statistical tools which were employed comprised of paired sample t-test analysis, correlation analysis as well as descriptive analysis. Findings obtained from analysis indicated that reform program has brought certain effects on banking sector within Nigerian which include structural as well as brand implication. The generated ratios indicated that insufficient bank capitalization and the necessity for recapitalization as an important parameter to facilitate banks' capital adequacy. A very high variability degree was found between pre as well as post recapitalization period in terms of computed ratios. Also, findings indicated that there was almost 72.7% association on share capital acquired for before reform as well as after reform implying strong positive association. The result also found that reform in the bank has significant impact on Zenith Bank Plc share capital

for prior to reform as well as after reform. Additionally, it also established that there was a strong positive association on profit after tax for pre-reform and post-reform.

Therefore, the study deduces that capital adequacy influences both ROA and ROE of Kenyan Islamic banks.

2.3.3 Liquidity and Islamic Bank Profitability

The lack of easy access to sources of funding as well as weak management of liquidity are normal factors resulting in the failures of banks particularly during economic stress. Moreover, liquidity implies how rapidly a bank can change its assets into cash to fulfill maturing liabilities i.e., those that belong to borrowers as well as depositors as they fall due during hostile situations. Moreover, banks with adequate liquid assets investments have higher capability to endure liquidity crises which are short-term (Chang, Nieh & Peng, 2011). Further, without sufficient financial resources to attain requirements of short-term liquidity, even if bank solvency or capital continues to be acceptable, it will usually find it difficult to continue with its operation. However, the question that remains, what is the liquid assets' optimal balance provided risk-return trade-off of retaining quite large share of liquid assets. The greater liquidity level causes banks to be less exposed to breakdowns, however, are normally related with lesser rates of return hence may lead to lost profitable chances of investment, which would negatively affect bank profitability. Olalekan and Adeyinka (2013) argue that great liquidity ratios which are self-imposed because of regulation or for prudential purposes (liquidity or reserve necessities) impose cost on banks as it means banks have to surrender retaining greater generating assets.

Ehiedu (2013) conducted a study analyzing how liquidity impacts profitability within publicly listed companies in the "Domestic/Industrial Products" sector, selecting four firms through non-probability sampling. The results revealed a strong positive link between profitability and the current ratio, suggesting that higher short-term liquidity correlates with better financial performance. However, the study found no meaningful connection between profitability and the acid-test ratio, which excludes inventory from liquidity measurements. Similarly, the relationship between return on capital employed

and profitability showed a positive but statistically insignificant trend, indicating that while capital efficiency might influence earnings, the effect was not conclusive in this sample. These nuanced findings highlight how different liquidity metrics can yield varying insights into financial health.

In Nigeria, Umobong (2015) performed a study on effect of liquidity as well as profitability ratios on profits increase in pharmaceutical companies. The findings showed a positive association between profit variable and liquidity variables as well as profit growth. This means that liquidity level in pharmaceutical companies influences the degree of firms' growth and profitability. The cost of retaining cash entails a low rate of ROA due to cash premium as well as potential tax disadvantage. Holding cash reserves offers companies key advantages such as reducing transactions costs associated with securing external funding and avoids the need to sell assets to support payments. Additionally, liquid assets provide a readily available source of capital to finance operations or investments when alternative funding options are either too costly or inaccessible. This financial flexibility helps businesses maintain stability and seize opportunities with undue reliance on external financing. Companies therefore tend to raise their liquidity till they attain optimal levels which usually maximizes profit. Moreover, the study as well indicates a negative association between profit and equity.

Karani (2014) investigated how liquidity management affects the profitability of commercial banks in Kenya. Using regression analysis and descriptive statistics, the research analyzed the relationship between these variables. With a response rate of 63% (27 out of 40 banks meeting data collection criteria), the findings showed a positive link between effective liquidity management and bank profitability, suggesting that better liquidity practices enhance financial performance.

Liquidity management is factor that determines profitability of Kenyan commercial banks. The study therefore linked capital adequacy as a focus variable that has material impact on the ROA of Kenyan Islamic banks.

2.3.4 Macroeconomic Factors and Islamic Bank Profitability

Particular market environment as well as economic conditions would obviously influence banks' profitability. This study utilized four macroeconomic indicators which include GDP. To start with, it is expected that banks profitability is influenced by GDP growth positively (Kanwal & Nadeem, 2015). The reason being that default risk is higher in downturns than upturns. Besides, greater economic development may perhaps result in a higher demand for interest as well as non-interest undertakings, hence enhancing banks' profitability. Moreover, inflation is normally correlated with greater costs and greater income. Inflation is anticipated to have a positive influence on profitability if bank's income increases more hastily than the costs.

The GDP is amidst the commonly employed macroeconomic indicators for gauging overall economic activity. Moreover, GDP is also expected to affect many factors which are related to demand and supply for deposits and loans. Credit quality declines as GDP growth reduces mostly during recessions and as defaults increase, hence decreasing bank returns (Simiyu & Ngile, 2015).

The variable coefficient is anticipated to be positive. For a bank, inflation is essential since they normally deal in a nominal financial instrument i.e., instrument which is denominated in fixed dollar amount. For example, when a bank advances a loan, it is receiving nominal financial instrument (notes, mortgages, other financial securities as well as commercial paper) as evidence of the obligation of a debtor to the bank. A bank gives nominal financial instruments to its creditors (acceptances, deposit liabilities and debentures) if it borrows as evidence of its responsibility. According to Kiganda (2014), the extent upon which inflation influences bank profitability highly depends on whether future movements of inflation are fully expected, which also depends on a bank's ability to accurately predict its future movements. A fully anticipated inflation rate boosts profits since banks can change interest rates so as to improve income, whereas costs would be raised by unanticipated change because of imperfect adjustment of interest rate.

Ngile and Simiyu (2015) performed research on the impact of macroeconomic variables on commercial banks' profitability registered in the NSE. Panel data analysis utilizing Fixed Effects model was employed on data in order to assess influence of 3 key macroeconomic variables including: GDP, interest rates and exchange rates on profitability of commercial banks listed. The study results revealed that commercial banks' profitability measured by ROA was positively but insignificantly influenced by real GDP growth rate. Moreover, real interest rates influenced profitability of registered Kenyan commercial banks significantly and negatively while exchange rate had significant positive influence on profitability of commercial banks listed on the NSE.

Kanwal and Nadeem (2015) carried out research on the impact of macroeconomic variables on commercial banks' profitability in Pakistan. Pooled Ordinary Least Square (POLS) technique was utilized to assess influence of 3 key external factors; real interest rate, inflation rate, real GDP on indicators of profitability; ROA, ROE as well as ratios of equity multiplier (EM) in 3 different models. The study findings revealed a strong positive correlation of real interest rate with ROE, ROA and EM. Real GDP has positive insignificant influence on ROA, but negative insignificant influence on EM and ROE. Additionally, inflation rate has a negative association with all the three profitability measures. Generally, the chosen macroeconomic factors have a negligible effect on commercial banks earnings. Sheefeni (2015) evaluated macroeconomic determining factors of profitability amid Namibian commercial banks. The study deployed the methods of unit root, impulse reaction functions, co-integration as well as forecast error variance decomposition on four times a year data, covering the year 2001-2014. Findings indicated that GDP variables, interest rate and inflation rate do not significantly affect profitability of commercial bank within Namibia. This proposes that the macroeconomic environment does not perform any role in influencing commercial banks' profitability.

Kiganda (2014) performed research on the impact of macroeconomic factors on profitability of Kenyan commercial banks. This research was centered on production theory and also was based on correlation survey design. The findings revealed that in Kenya macroeconomic factors (exchange rate, real GDP and inflation) have

insignificant influence on profitability of the bank with Equity Bank in emphasis at 5 percent significance level. The study concluded, in Kenya, macroeconomic factors do not influence profitability of the bank.

By reason of the above instances of divergence in literature, the study was instigated to investigate the level of relationship that macroeconomic variables have on the ROA and ROE of Kenyan Islamic banks.

2.3.5 *Shari'ah* Governance and Islamic Bank Profitability

Shari'ah governance is the cornerstone of Islamic banking. Musibah et al., (2014) used a hierarchical multiple regression and established that financial performance (ROA, ROE) was a significant mediating factor for the relationship between *Shari'ah* Supervisory Board Effectiveness (SSBE) and Intellectual Capital (IC) on Corporate Social Responsibility (CSR) in Islamic banks in the Gulf Cooperation Council Countries (GCC). Mollah and Zaman (2015) not only concluded that *Shari'ah* supervision boards (SSBs) contribute positively but also emphasized the need for an enforcement and regulatory mechanism for them to be more effective. The research used a matched pair sample of 86 IBs with 86 conventional banks from 25 countries for the period 2005–2011, i.e., 2005–2007 as pre-Global Financial crisis, 2008–2009 as during-crisis, and 2010–2011 as post-crisis. The results partly converge with those of Islam and Islam (2023) in that effective SSBs are more likely to affect performance when there are strong boards of directors. Their study used a sample of 10 Islamic banks in Bangladesh in the 2011-2020 period.

Among the many significant requirements to deal in Islamic transactions is the establishment of an SSB. The five key mandates of SSBs include, certification of permissible financial instruments through *fatwas* (formal Islamic ruling, ex-ante *Shari'ah* audit), verification of the compliance of transactions with the *fatwas* issued (ex post *Shari'ah* audit), the Zakat calculation and payment, deletion of non-Shari'ah payment compliant earning, and advise concerning the income or expenses distribution to the bank stakeholders (Grais & Pellegrini, 2006). Due to the integral nature of SSBs,

the study identified SSB's effectiveness as an intervening variable on the aforementioned determinants of profitability of Kenyan Islamic banks.

2.4 Summary of Research Gaps

Existing literature review point to that fact that research has been performed on profitability of both conventional and Islam banks, both globally and locally. Globally, Abduh and Idrees (2013) performed research on the determining factors of Islamic banking profitability within Malaysia; Bashir (2003) examined the determinants of profitability in Islamic Banks in Middle East; and Ramadan (2011) conducted a study on bank-specific determining factor of Islamic banks profitability in the Jordanian Market. However, due to differences in policies governing the banking industry in these countries, the results of these research cannot be applied to Kenya. In addition, different countries have different macroeconomic factors, which hinder generalization of the findings.

In Kenya, Kamau (2008) conducted research on the determinants of profitability of microfinance institutions within Kenya; Muthini (2013) evaluated the determining factors of Kenyan banks profitability; and Otieno (2013) carried out a study on the determinants of commercial banks profitability in Kenya (1983-2012). However, most studies conducted in Kenya on profitability within the banking sector have been limited to the conventional banks. The model used in conventional banks is different from that used in Islamic banks and hence the findings from conventional banks cannot be directly applied to Islamic banks.

2.5 Conceptual Framework

The study attempts to examine the controlling effect of *Shari'ah* supervisory board effectiveness on the determinants of profitability in Kenyan Islamic banks. The independent variables were bank size, liquidity, capital adequacy and macroeconomic factors. Dependent variable in the study is profitability of Islamic banks in Kenya.

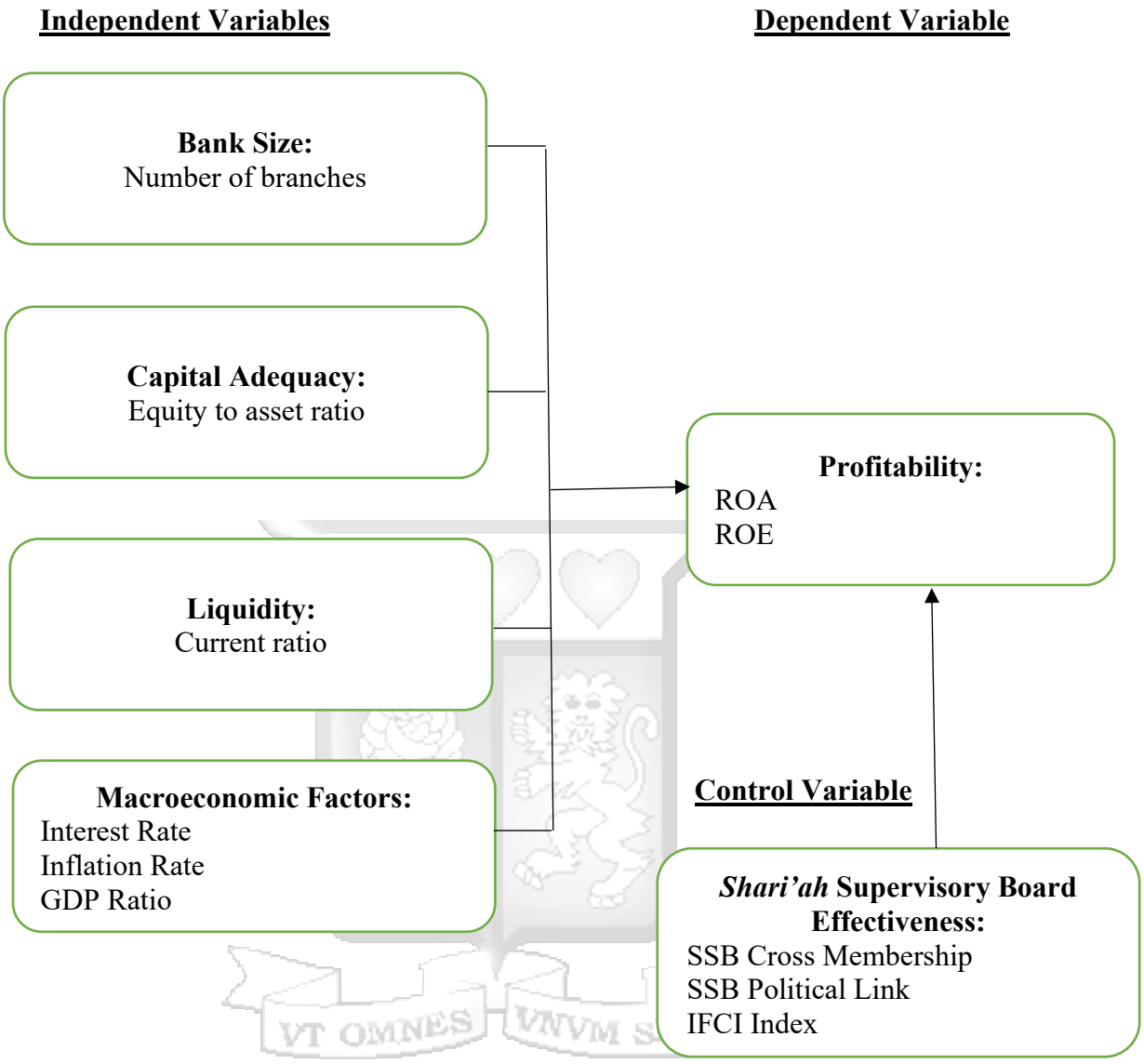

Figure 2.1 A Conceptual Framework of the Control Effect of *Shari'ah* Supervisory Board Effectiveness on The Determinants of Profitability in Kenyan Islamic banks

Table 2.1 Operationalization of Variables

Variable	Description of the variable	Measurement Proxy	Data Source	Literature Source
Financial Performance	Profitability	Return on assets and return on equity	Banks' Financial Statements, CBK	Obamuyi (2013), Ramadan (2011)
Bank Size	Branch network and asset base	Number of branches and total assets	Banks' Financial Statements, CBK	Gatete (2015), Flamini et al. (2009),
Capital Adequacy	Amount of capital to be held as a proportion of assets	Equity to asset ratio	Banks' Financial Statements, CBK	Blessing (2015), Rasidah & Mohd Hanafi (2012)
Liquidity	Ease of converting assets into cash to meet obligations	Current ratio	Banks' Financial Statements, CBK	Chang, Nieh & Peng (2011), Olalekan & Adeyinka (2013), Ehiedu (2013), Umobong (2015)
Macroeconomic Factors	Interest Rate Inflation Rate GDP Ratio	Interest Rate Inflation Rate GDP Ratio	World Bank, KNBS	Simiyu & Ngile (2015), Kiganda (2014), Kanwal & Nadeem (2015), Sheefeni (2015)
***Shari'ah* Supervisory Board Effectiveness**	SSB Cross Membership SSB Political Link IFCI Index	SSB Cross Membership SSB Political Link IFCI Index	Banks' Financial Statements & websites	Islam and Islam (2023), Grais & Pellegrini (2006), Musibah et al., (2014)

2.6 Chapter Summary

The chapter reviewed the literature used in the study. The study explored the inventory theory of capital and liquidity buffer which postulates that the liquidity held should mirror the cost of foregone returns from holding liquid assets rather than loans, and the

cost of raising funds at a short notice. This study also explored economies of scale theory that posits that cost advantages are obtained by enterprises because of size, scale of operation or output, with cost per unit of output declining with growing scale as fixed costs are spread over more units of output. The study also explored the dynamic theory of profit which predicts that profits occur in a dynamic economy, but not in a static economy.

Lastly, the review highlighted that the existence of SSBs is the core difference between Islamic and conventional banks. SSBs' mandates are the cornerstone of Islamic banking in implementing business as required by the *Shari'ah.* The review also shows how each independent variable is related to a dependent variable.

Research completed on the determinants of profitability in commercial banks has largely focused on top-tier commercial banks and those that are publicly listed and traded which are largely conventional banks. Further, research that is aligned to this study have been completed on Islamic banks based in the Middle East where Islamic finance is systemically more important. Due to differences in policies governing the banking industry and inflation rate and GDP in these countries, the results of these research cannot be applied to Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section sets out the methodology which were employed in this research. The chapter starts with research design, then study population, data gathering instruments, data analysis as well as presentation and study limitations.

3.2 Research Philosophy

A research philosophy is a guiding framework for conducting research, based on assumptions about reality and knowledge (Collis and Hussey, 2014, p.43). The two main philosophies are positivism and interpretivism, which offer contrasting perspectives and represent fundamentally different approaches to understanding the world. Positivism views reality as objective and independent of the researcher, who can study it impartially. Interpretivism sees reality as subjective and shaped by individual perceptions and interpretations (Collis and Hussey, 2014, p.45).

To meet the aforementioned objectives, the study adopted a critical realism philosophy which captured only objective information to be collected and subjected to measurement. The study made ontological assumptions that Islamic banks, as is the case with other commercial banks, are driven by the profit goal and the underlying management and supervisory teams of such institutions make conscious decisions towards it. Data was analyzed against statistical thresholds and previously completed research findings in the same line of study. The study adopted a functionalist paradigm as it was concerned with rational explanations and developing sets of recommendations within the current structures of Islamic banks.

3.3 Research Design

Bhattacherjee (2012) refers to research design as an arrangement of various situations for gathering and also analyzing of data in such a way that intends to join significance to purpose of a study with economy in process. This study utilized a causal research

design. Cooper and Schindler (2006) argue that causal research is usually designed to assess the impact of one variable(s) on another which symbolizes causation. Causal research is organized with the aim that is clearly stated of finding associations and causal associations amid diverse variables. Moreover, this design is suited to the study since it entails collection, verification as well as synthesis of evidence in order to determine facts that refute or defend a hypothesis.

3.4 Target Population

A population is a group of persons, items or objects from which samples are obtained for measurement (Bryman & Cramer, 2012). According to CBK (2022), there are 39 operational commercial banks in Kenya. The study targeted Islamic commercial banks in Kenya. Due to the small size population, a census of these banks was targeted for this study. The target for the study was the number of years these commercial banks have been operational.

Table 3.1 Target Population

Islamic Bank Name	Number of financial years in operation	Date of licensing
Gulf African Bank Ltd	16	1st November 2007
Premier Bank Kenya Limited (formerly 'First Community Bank Ltd')	15	29th April 2008
DIB Bank Kenya Ltd	6	13th April 2017

Source: CBK

3.5 Data Collection Instruments

There are mainly two kinds of data i.e., primary and secondary data. Primary data refers to the data gathered directly from first-hand occurrence while secondary data existed somewhere having been gathered and employed for some other purposes. This research utilized secondary data. Secondary data entails publications, periodicals as well as journals. Gathering of secondary data includes gathering and analyzing of information from various published materials and from other search sources including the internet (Creswell, 2006). Other sources such as press releases, annual reports as well as

published data are also used. Secondary data was selected as it is time saving and economical. Data on profitability, capital adequacy, liquidity and size shall be obtained from financial statements of Premier Bank Kenya Limited as well as Gulf African Bank Limited. Data on GDP shall be retrieved from the World Bank as well as the CBK. The research shall cover a duration of 12 years (2010 to 2022).

Secondary data was collected using a data extraction checklist. The data extraction checklist aims at directing reviewers regarding the kind of proper information which can be acquired from various secondary sources (Cramer & Bryman 2012). The data extraction checklist comprised of various columns for each variable of the study, which included return on assets, capital adequacy, liquidity, GDP, inflation, interest rate, SSB cross membership, SSB political link, IFCI index and bank size.

3.6 Data Collection Procedures

The research ensure that all necessary methodological procedures are observed in conducting the survey. The study required the approval of the supervisor before submitting the protocol for approval by the ethical review committee of Strathmore University. Further, research permit was obtained from the National Commission for Science Technology and Innovation before extraction of the survey data. The research relied on secondary data thus did not require the informed consent of participants.

3.7 Data Analysis and Presentation

The study used quantitative secondary data (continuous data) which was edited, coded and analyzed using Stata version fourteen. Both inferential and descriptive statistics were applied, with descriptive statistics including frequency distributions, standard deviation and mean.

3.7.1 Diagnostic Tests

The following tests and analysis were carried out on this model: tests of normality, linearity, stationarity, unit root, heteroscedasticity and co-integration; and autocorrelation and correlation analysis. These tests are detailed as per below:

i. Correlation Analysis

These were used to identify patterns within the datasets i.e., association and direction of the relationship. A positive correlation would mean that both variables increase in relation to each other whereas a negative correlation shall imply that as one variable increases, the other decreases. Pearson's correlation analysis was deployed to examine the association between diverse study variables. To establish whether pairs of associations are significant, the importance of the association was examined. It was important to run the test because data was raw, independent of each other and not according to rank. If Pearson's coefficient indicated no correlation, other non-parametric tests would have been considered and applied.

ii. Shapiro Wilk Test for Normality

It was developed by Samuel Sanford Shapiro and Martin Wilk in 1965. It assesses how well sample data fits to a normal distribution. The test was used to check if variables met the normality assumption required for OLS regression (Creswell, 2006). It is important that data is tested because normal data is an underlying assumption in parametric testing. The sample size was expected to be less than 50 observations per variable hence this was the most appropriate test. However, other tests such as the Kolmogorov–Smirnov test would have been applied in case of violations.

iii. Breusch and Pagan Lagrangian Multiplier Test for Random Effects

Developed in 1979 by Trevor Breusch and Adrian Pagan, the test is used in a linear regression model and assumes that the error terms are normally distributed. This study utilized this test because there was potential subjectivity from the residual plot technique used to establish whether there is residuals difference across all observations being studied (Greener, 2008). Serial correlation normally means that there is relationship between stochastic random error terms of succeeding time periods. Robust standard errors can be utilized to remedy autocorrelation.

iv. Hausman Specification Test

The research further adopted Hausman Specification test to determine whether the random of fixed effects model should be adopted in determining the panel regression model that should be used in the survey.

v. Stationarity Levin-Lin Chu Test (LLC)

It's used to test whether a given time series data is stationary or not. If a time series has a unit root, it means that shocks to the system would have a permanent effect, indicating that the series is non-stationary. This test was chosen since it is not influenced by autocorrelation contrary to other tests (Greener, 2008). If data obtained was found to have unit root and also need first difference to be stationary, variable that was in question would be regarded to have long run correlation with the dependent study variable and therefore would need a co-integration test to be performed. The data in focus was expected to be affecting the model.

3.7.2 Regression Model

The multiple regression model was expressed as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 \sum X_{4it} + \beta_5 \sum X_{5it} + \varepsilon_{it}$$

Y_{it} = study dependent variable (ROA), B_0 = y intercept (Constant), β_1- β_4 and coefficients of determination, X_{1it} = bank size, X_{2it} = capital adequacy, X_{3it} is liquidity, X_{4it} is various macroeconomic factors, X_{5it} are selected Shari'ah board effectiveness measures. While *i* symbolizes number of observations, *t* is total number of observations for a specific bank i.e., time series data while ε_{it} = error term.

3.8 Chapter Summary

The chapter presents a detailed account of the research philosophy, strategy, and methodology according to which we shall conduct this research. The study placed focus on both the critical realism and ontological camps. Data was analyzed against statistical thresholds and previously completed research findings in the same line of study. The

study finally details the operationalization of the practical side of the research and the broad procedures for data analysis.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The fourth chapter focused on presentation of the findings drawn from the extracted data from the three Islamic banks operating in Kenya. The main focus of the section is presentation of the descriptive results, the diagnostic checks, the correlation tests and the panel regression results.

4.2 Descriptive Results

The section presents the summary of the extracted data from the three Islamic banks operating in Kenya for the period 2010-2023. The study relied on descriptive tests such as frequencies, means, maximum, minimum and standard deviation in presenting the findings.

Table 4.1 Summary of Descriptive Results

Variable	Obs.	Mean	Median	Std. Dev	Min	Max
ROA	35	-.0126	-0.0096	.0656	-.3214	.0295
ROE	35	-.0030	0	.2091	-.6612	.2727
Branches	35	14.7142	17	5.1138	4	18
Equity to Asset Ratio	35	.1554	.144	.0818	.0711	.4862
Current Ratio	35	.3076	.114	.1207	.09	.65
SSB Cross Membership	35	.8	3	.4058	0	1
SSB Political Link	35	.6	1	.4971	0	1
IFCI Index	35	3.5775	1	2.1826	2.2	8.67
Inflation	14	6.9336	3	2.5007	3.96	14.02
Interest Rate	14	9.1964	9	2.9436	5.75	18
GDP	14	7,664,570	7,594,064	1,292,529	5,793,514	9,851,329

The analysis revealed that on average the Islamic banks in Kenya had profitability levels of -1.26% (ROA) and -.03% (ROE) indicating concerns with the financial outcomes of three fully-fledged banks within the country. Within the period under investigation the highest recorded profitability was 27.27% (ROE) among the banks. Results further showed an average of 14 branches among the banks with the largest bank having a

branch network of 18 across the country. The findings showed the banks averaged 15.54% in equity to asset ratio indicating positive levels of shareholders financing of the companies' assets which minimizes financial risks.

The study results indicated a liquidity ratio of 30.76% which was above the statutory requirements by the central bank (20%) which demonstrates the institutions' ability to meet their obligations in the short term. The analysis showed there was cross membership among directors within at least one of the institutions with further an average of one director being politically linked. The results indicated the country IFCI index was on average 3.5775 which was lower as compared to other countries conducting Islamic Finance; showing there is much more required to grow Islamic banking within the country. The average inflation rate within the survey period was 6.9336% with an interest rate of 9.1964% and GDP of US$ 7,664,570.

4.3 Diagnostic Tests

The research employed diagnostic checks to determine whether the observations being applied in the survey met the requirements for regression analysis to be applied. The findings are shown in this section.

4.3.1 Normality Test

The study conducted normality tests to ascertain whether or not the standardized residuals are significantly normally distributed; the research relied on the Shapiro-Wilk normality tests.

Table 4.2 Normality Results

Variable	Obs.	W	V	Z	Prob>z
ROA	35	0.5501	16.056	-5.795	0.2254
ROE	35	0.8721	4.564	-3.169	0.3124
Branches	35	0.6363	12.978	- 2.351	0.2136
Equity to Asset Ratio	35	0.7452	9.095	- 4.608	0.3782
Current Ratio	35	0.9619	1.357	0.637	0.2619
SSB Cross Membership	35	0.8625	4.907	.320	0.4540
SSB Political Link	35	0.9903	0.346	-2.215	0.9866
IFCI Index	35	0.6795	5.354	3.269	0.005
Inflation	14	0.8420	2.924	2.112	0.1173
Interest Rate	14	0.7907	3.872	-2.665	0.1385
GDP	14	0.9644	0.626	-0.917	0.8204

W = test statistic on alignment of data to normal distribution, V = related statistic from transformation of W, Z = standardized version of the W

The survey relied on the Prob>z to establish whether the research data observed normality assumptions. Based on the significance values that were above 0.5; thus statistically significant the findings indicated that the data was from normally distributed observations across the research variables.

4.3.2 Heteroscedasticity Test

This research employed the Breusch Pagan tests to establish whether there was subjectivity from the residual plot technique used to determine presence of residual differences across all observations being studied.

Table 4.3 Heteroscedasticity Result

Breusch and Pagan Lagrangian multiplier for random effects test for heteroscedasticity
Ho: Constant variance
Variables: fitted values of ROA (ROA[ID,t] = Xb + u[ID] + e[ID,t])
Var = .00430 SD = sqrt (Var) = .0656
chi2(1) = 0.00
Prob > chibar^2 = 1.0000
Variables: fitted values of ROE (ROE[ID,t] = Xb + u[ID] + e[ID,t])
Var = .0437 SD = sqrt (Var) = .2092
chi2(1) = 0.00
Prob > chibar^2 = 1.000

The Breusch and Pagan Lagrangian multiplier test showed that the Prob > chibar2 = was greater than .05 indicating there was no statistically significant heteroscedasticity. This showed there was constant variance thus indicating there was no heteroscedasticity violation in the observations being utilized in the survey.

4.3.3 Stationarity Test

The survey employed stationarity tests, specifically the Levin-Lin-Chu (LLC) test to determine if the time series data was stationary.

Table 4.4 Stationarity Results

Variable	Obs.	Statistics	Prob. **
ROA	35	-3.19744	.0007
ROE	35	-7.16031	.0000
Branches	35	-2.26062	.0119
Equity to Asset Ratio	35	-.1.07365	.0470
Current Ratio	35	-6.80344	.0000
IFCI Index	35	-5.92358	.0000
Inflation	14	-5.00780	.0000
Interest Rate	14	-2.63040	.0043
GDP	14	-5.86775	.0000

The stationarity results were grounded on the hypothesis (null) that the panel data contains unit roots. The findings of the LLC prob** statistic showed that the variables were statistically significant at 5% significance level which showed the observations exhibited stationarity.

4.3.4 Hausman Specification Test

The Hausman Specification test was used to determine the panel model – either fixed or random effects. The test results of outlines below.

Table 4.5 Hausman Specification Results

Model 1. Fitted for Return on Assets
Test of H0: Difference in coefficients not systematic
chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= -11.78
Prob>chi2 = 0.4337
Model 2. Fitted for ROE
Test of H0: Difference in coefficients not systematic
chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 0.12
Prob>chi2 = 0.9897

The Hausman specification test results for both models showed Prob>chi2 = which was greater than 0.05, leading to the adoption of the random Effect Panel Model (REM) for the panel regression analysis.

4.4 Correlation Analysis

The study applied correlation analysis at 5% significance level to assess relationships between the selected variables and detect potential multicollinearity among the independent variables.

Table 4.6 Correlation Results

	ROA	ROE	Branches	E/A Ratio	Curr. Ratio	SSB Cross	SSB Pol	IFCI	Inflation	Interest	GDP
ROA	1.000										
ROE	0.8802* .0000	1.000									
Branches	0.7026* .0000	0.7366* .0000	1.000								
E/A Ratio	-.8792* .0000	-.7290* .0000	-.7184* .0000	1.000							
Curr. Ratio	-.4758* .0039	-.3221 .0592	-.2058 .2356	.5730* .0003	1.000						
SSB Cross	.6876* .0000	.7404* .0000	.9920* .0000	-.7061* .0000	-.2166 .2113	1.000					
SSB Political	-.3446* .0427	-.4168* .0127	-.3703* .0286	.1270 .4672	-.1039 .5527	-.4082* .0149	1.000				
IFCI	-.2132 .5059	-.2534 .4268	.0096 .9764	.1819 .5714	.6183* .0321	-	-	1.000			.
Inflation	.2793 .3335	.4471 .1090	-.2953 .3054	-.4321 .1228	-.4348 .1202	-	-	-.1711 .5949	1.000		
Interest	.3941 .1633	.5198 .0568	-.0083 .9775	-.1165 .6916	-.2850 .3233	-	-	-.4007 .1968	.0406 .8905	1.000	
GDP	-.2829 .349	-.3714 .2115	.4923 .0874	.3098 .3030	.8542* .0002	-	-	.8291* .0009	-.3167 .2918	-.2256 .4587	1.000

The findings of the research established that the bank size as measured by number of branches had a strong and positive relation with ROA (r = .7026*, sig = .000) and ROE (r = .7326*, sig = .000). Correlation analysis further revealed a strong and positive relation between capital adequacy (earnings asset ratio) and profitability of Islamic banks (ROA (r =-.8792*) ROE (r = -.7290*). The results further revealed that liquidity ratio had a moderate negative relation with ROA (r = -.4758*, sig = .0039) and insignificant weak negative association with ROE (r = -.3221, sig = .0592).

Findings established that Shari'ah supervisor board cross membership had a strong significant relationship with the profitability of Islamic banks (ROA = (r) .6876*, ROE = (r) .7404*). The correlation further revealed a weak significant negative effect of Shari'ah supervisory board political link with profitability metrics (ROA = (r) -.3446*, ROE = (r) -.4168*). Results further revealed there was an insignificant negative relation between IFCI index and the profitability of Islamic banks. The findings further showed a positive and insignificant relation between inflation rate, interest rate and the profitability of Islamic banks. Lastly, the analysis revealed there was no significant relation between GDP and the profitability of Islamic banks.

4.5 Panel Regression Analysis

The analysis of the magnitude of effect of the determinants of profitability of Islamic banks was conducted using panel regression. Based on the findings of the Hausman specification tests, random effects model was adopted for both models and the results are shown in this section.

4.5.1 Control Effect of *Shari'ah* Supervisory Board Effectiveness on Determinants of Islamic Banks profitability (ROE)

The first panel regression model analyzed the Control Effect of *Shari'ah* Supervisory Board Effectiveness on Determinants of Islamic Banks profitability measured by the ROE and results are shown on Table 4.7

Table 4.7 Determinants of Islamic Banks profitability (ROE)

Variable	Coefficient	Std. Error	Z	P>|z|
Bank Size	.0178	.0069	2.57	.010
Capital Adequacy	.0152	.2492	.006	.951
Liquidity	-1.0749	.5170	-2.08	.038
Inflation	-.0042	.0159	-.267	.802
Interest	.009	.006	1.561	.194
GDP	-1.08E	6.06E	-.174	.149
IFCI Index	.0356	.0265	1.344	.250
C	.677	.580	1.167	.308
Weighted Statistics				
R-sq:		Wald chi2(3)	= 51.70	
within = .2490		Prob > chi2	= .000	
between = .9502				
overall = .6251				

The findings of the overall regression revealed a R –squared was .6251, indicating that 62.51% of the changes in the ROE of the Islamic banks was determined by the selected factors (bank size, capital adequacy, liquidity, macroeconomic factors and IFCI index). The remaining 37.49% of the changes in ROE are contributed by other factors that are not in this model. The results showed Prob > chi2 = .000<.05 which indicated that there was a significant relationship between SSB effectiveness, determinant factors and the profitability of the Islamic banks in Kenya.

The results on the first objective; effect of bank size revealed a β_1 = .0178, **P>|z| = .010<.05**, which indicated there was a positive and significant effect. The findings implied that changing the bank size (branch networks) will significantly contribute to ROE change by .0178. The second objective focused on the capital adequacy and the results revealed a β_2 = .0152, **P>|z| = .951>.05**, which indicated there was a positive and insignificant effect of earnings ratio on the ROE of Islamic banks. On the third objective the analysis showed a coefficient of liquidity, β_3 = -1.0749, **P>|z| = .038<.05**, which indicated there was a negative and significant effect. The findings implied that changing

the liquidity ratio of the Islamic banks had a negative effect on the profitability (ROE). The results further showed that macroeconomic factors (interest rate, inflation rate and GDP) had an insignificant effect (sig > .05) on the return on equity of Islamic banks. Further, the SSB effectiveness measured by IFCI index had an insignificant effect on the ROE of the banks. Both SSB cross membership and SSB political link were excluded in the REM model due to limited observations necessary for regression analysis.

4.5.2 Control Effect of *Shari'ah* Supervisory Board Effectiveness on Determinants of Islamic Banks profitability (ROA)

The first panel regression model analyzed the Control Effect of Shari'ah Supervisor Board Effectiveness on Determinants of Islamic Banks profitability measured by the ROE and results are shown on Table 4.8

Table 4.8 Determinants of Islamic Banks profitability (ROA)

Variable	Coefficient	Std. Error	Z	P>|z|
Bank Size	.0019	.0016	1.15	.250
Capital Adequacy	-.6173	.1233	-5.01	.000
Liquidity	-.0021	.0594	-.03	.972
Inflation	-.0007	.0002	-.311	.772
Interest	.0010	.0008	1.153	.313
GDP	-.150	8.86	-1.696	.165
IFCI Index	.005	.0038	1.231	.285
C	.056	.0355	1.58	.115
Weighted Statistics				
R-sq:		Wald chi2(3) =	112.08	
within = .6791		Prob > chi2 =	.000	
between = .9449				
overall = .7833				

The panel regression revealed a R –squared was .7833, indicating that 78.33% of the changes in the return on assets of the Islamic banks was determined by the selected factors (bank size, capital adequacy, liquidity, macroeconomic factors and IFCI index). The remaining 21.67% of the changes in ROA are influenced by other factors that are

not in this model. The results showed Prob > chi2 = .000<.05 which implied that there was a significant relationship between SSB effectiveness, determinant factors and the profitability of the Islamic banks in Kenya (ROA).

The results on the first objective; effect of bank size revealed a β_1 = .0019, **P>|z| = .250>.05**, which indicated there was a positive and insignificant effect. The findings implied that changing the bank size (branch networks) will not significantly contribute to ROA. The second objective focused on the capital adequacy and the results revealed a β_2 = -.6173, **P>|z| = .000<.05**, which indicated there was a negative and significant effect of earnings ratio on the ROA of Islamic banks. On the third objective the analysis showed a coefficient of liquidity, β_3 = -.0021, **P>|z| = .972>.05**, which indicated there was a negative and insignificant effect.

The results further showed that macroeconomic factors (interest rate, inflation rate and GDP) had an insignificant effect (sig > .05) on the return on assets of Islamic banks. Further, the SSB effectiveness measured by IFCI index had an insignificant effect on the ROA of the Islamic banks in Kenya. Both SSB cross membership and SSB political link were excluded in the REM model due to limited observations necessary for regression analysis.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter summarized the research findings, discussed their implications and provided conclusions and recommendations. It also outlines the study's limitations and suggested areas for further research.

5.2 Summary of the Study

The aim of this study was to establish the control effect of *Shari'ah* supervisory board effectiveness on the determinants of profitability in Islamic banks in Kenya. The specific objectives of the study were to assess the influence of bank size, capital adequacy, liquidity and macroeconomic factors on the profitability of Kenyan Islamic banks. The study also sought to understand the control effect of Shari'ah supervisory board effectiveness on the determinants of profitability in Islamic Banks in Kenya. The theoretical scope of the research was grounded on the inventory theory of capital and liquidity, economies of scale theory and the Clark's dynamic theory of profit. The study used secondary data, which was collected by use of a data extraction checklist. Secondary data in the study was quantitative. Inferential as well as descriptive statistics were used to analyze quantitative data.

Correlation tests established that the bank size as measured by number of branches had a strong and positive relation with ROA and ROE. Correlation analysis further revealed a strong and positive relation between capital and profitability of Islamic banks. The results further revealed that liquidity ratio had a moderate negative relation with ROA and insignificant weak negative association with ROE. For the *Shari'ah* supervisory board characteristics, *Shari'ah* supervisory board cross membership had a strong significant relationship with the profitability of Islamic banks, *Shari'ah* supervisory board political link had a weak significant negative effect with profitability metrics, IFCI index had an insignificant negative relation with the profitability of Islamic banks. The findings further showed a positive and insignificant relation between inflation rate,

interest rate and the profitability of Islamic banks and no significant relation between GDP and the profitability of Islamic banks.

The findings of the overall regression revealed that there was a significant relationship between SSB effectiveness, determinant factors and the profitability of the Islamic banks in Kenya in terms of ROA and ROE. The results on the first objective revealed that bank size had a positive and significant effect on the ROE of Islamic banks and a positive and insignificant effect on the ROA of Islamic banks. The second objective focused on the capital adequacy and the results revealed a positive and insignificant effect of earnings ratio on the ROE of Islamic banks and a negative and significant effect of earnings ratio on the ROA of Islamic banks. On the third objective the analysis showed that liquidity had a negative and significant effect on the ROA and ROE of Islamic banks. The results further showed that macroeconomic factors (interest rate, inflation rate and GDP) had an insignificant effect on the return on equity and return on assets of Islamic banks. Further, the SSB effectiveness measured by IFCI index had an insignificant effect on the ROA and ROE of Islamic banks in Kenya.

5.3 Discussion of Findings

The regression analysis revealed a significant relationship between SSB effectiveness, key determinant factors and the profitability of Islamic banks in Kenya (measured by ROA and ROE).

5.3.1 Bank Size and Islamic Bank Profitability

The key findings on the impact of bank size are that it had a positive and significant effect on ROE implying that larger Islamic banks achieve higher returns on equity. Bank size had a positive and insignificant effect on the ROA i.e. it does not substantially improve asset performance. The implication is that while larger Islamic banks may achieve higher equity returns (ROE), it does not translate to meaningful gains in overall asset efficiency (ROA).

The study findings align with the findings of Husain, Affandi, and Shukur (2015), who argue that larger banks in wealthy countries benefit from economies of scale, which

reduces the cost of collecting and processing information. This, in turn, enables banks to offer a broader range of financial services, thereby mobilizing more finances. Larger banks are often able to diversify their products and services, which can lead to greater profitability. This diversification and scale can help in spreading risk and improving efficiency, leading to higher returns on equity.

Additionally, Flamini et al. (2009) suggest that large banks enjoy an implicit guarantee from the government, reducing their risk and enabling them to pay lower deposit rates. This results in higher profitability, as large banks can attract deposits at a lower cost. In less competitive environments, large banks can leverage their market power to secure better terms and generate higher profits. The positive impact of bank size on ROE in the current study aligns with these perspectives, highlighting that larger Islamic banks in Kenya might be benefiting from similar dynamics, such as improved efficiency, diversified services, and potentially lower funding costs.

The study findings were also corroborated by Majid and Sufian (2011) who found that well-capitalized and larger Islamic banks in the MENA region tend to be more profitable. The significant positive effect on ROE observed in this study could suggest that Kenyan Islamic banks similarly benefit from being well-capitalized and diversified, enhancing their profitability. The study findings were also supported by Velnampy and Nimalathasan (2010) who found a positive association between size and profitability for some banks. Furthermore, Gatete (2015) also found a significant positive relationship between bank size and financial performance in Kenyan commercial banks. This aligns with the current study's findings on ROE, reinforcing the notion that larger banks in Kenya, including Islamic ones, tend to perform better financially due to factors such as branch network, asset base, and customer portfolio.

Moreover, the study's finding that bank size has an insignificant effect on ROA is also supported by various previous studies and general expectations. For instance, Terraza (2015) observed varying impacts of bank size on performance across small, medium, and large banks in Europe. This suggests that the relationship between size and overall asset efficiency (ROA) may not be straightforward and could be influenced by other contextual factors specific to the banking environment in Kenya. Berger et al. (1987)

also argue that larger banks might face bureaucratic inefficiencies and higher agency costs, which could limit their profitability gains from increased size. This perspective could explain why the positive impact on ROA was not significant, as larger Islamic banks in Kenya might be experiencing such internal inefficiencies that dampen their overall asset profitability.

5.3.2 Capital Adequacy and Islamic Bank Profitability

The second objective focused on the capital adequacy and the results revealed a positive and insignificant effect of earnings ratio on the ROE of Islamic banks. Further, capital adequacy had a negative and significant effect on the ROA. The positive yet insignificant effect of capital adequacy on ROE suggests that while higher capital levels may provide a buffer against risks and losses, they do not strongly influence the equity returns of Islamic banks in Kenya. The negative and significant impact of capital adequacy on ROA suggests that higher capital ratios may actually reduce the return on assets.

The findings from the study were corroborated by Olalekan and Adeyinka (2013) who found mixed results in Nigeria, where primary data indicated an insignificant association between capital adequacy and profitability. This similarity suggests that in certain contexts, including Islamic banking in Kenya, the relationship between capital and profitability might not be straightforward and could be influenced by other mediating variables. Additionally, Osborne, Fuertes, and Milne (2012) observed that in certain economic conditions, the relationship between capital ratios and profitability can be negative or insignificant. This aligns with the current study findings, indicating that during periods of economic stability or under specific regulatory frameworks, capital adequacy might not significantly boost profitability metrics like ROE.

The study findings were however disputed by Rasidah and Mohd Hanafi (2012) who posit that higher capital ratios enhance a bank's shock-absorbing capacity, potentially leading to greater profitability. However, they also note that the relationship can vary based on other internal factors indicating that while higher capital improves safety, it

does not necessarily translate into higher returns on equity due to other prevailing internal or external factors.

The findings were also not in line with studies in Nigeria including Olalekan and Adeyinka (2013), who through their secondary data analysis, found a positive and significant association between capital adequacy and profitability in Nigerian banks. Additionally, findings were not supported by Ejoh and Iwara (2014) who reported a positive significant association between capital adequacy and ROA in Nigerian banks, suggesting that well-capitalized banks are more profitable. The negative effect observed in the current study may indicate that Kenyan Islamic banks might face higher costs associated with maintaining higher capital levels, reducing their overall asset efficiency.

5.3.3 Liquidity and Islamic Bank Profitability

On the third objective the analysis showed that liquidity had a negative and significant effect on the ROA of Islamic banks. Additionally, the analysis revealed that liquidity had a negative and significant effect on the ROE of Islamic banks. The negative and significant effect of liquidity on both ROA and ROE suggests that higher liquidity levels might be detrimental to the profitability of Islamic banks in Kenya. The findings further note that while liquidity is crucial for ensuring stability and meeting short-term obligations, excessively high liquidity ratios can lead to lower profitability due to the opportunity cost of holding liquid assets rather than investing in higher-yielding opportunities.

The study findings are corroborated by Chang, Nieh, and Peng (2011) who argue that liquidity allows banks to convert assets into cash quickly to meet liabilities during adverse conditions. However, they also acknowledge that holding a high level of liquid assets can result in missed profitable investment opportunities, which aligns with the current findings. High liquidity means funds are not being used in higher-yield investments, leading to lower overall returns. Moreover, Olalekan and Adeyinka (2013) support the notion that while high liquidity ratios can protect banks from crises, they impose a cost by requiring banks to hold lower-yielding assets. This opportunity cost

can negatively impact profitability, which is consistent with the current study's results showing a significant negative impact on ROA and ROE.

The study findings were however not consistent with Ehiedu (2013) who found a significant positive relationship between profitability and the current ratio in selected firms, but an insignificant relationship between profitability and the Acid-test ratio. While this study shows some positive correlations between liquidity and profitability, the mixed results suggest that the optimal balance of liquidity is crucial. Umobong (2015) also found a positive association between liquidity variables and profitability in pharmaceutical companies, indicating that maintaining liquidity helps firms avoid transaction costs and finance activities when other funding sources are expensive or unavailable. These findings contradicted the findings of the current study.

The study findings were also not in line with Karani (2014) who examined the influence of liquidity management on the profitability of Kenyan commercial banks and found a positive correlation. This finding contrasts with the current study, suggesting that context-specific factors, such as the nature of Islamic banking principles and regulatory environments, might influence the relationship differently compared to conventional banks.

5.3.4 Macroeconomic Factors and Islamic Bank Profitability

The results further showed that macroeconomic factors (interest rate, inflation rate and GDP) had an insignificant effect on the return on equity of Islamic banks. The results further also showed that macroeconomic factors had an insignificant effect on the return on assets of Islamic banks. The study notes that macroeconomic variables do not always have a significant impact on bank profitability. This may be particularly true for Islamic banks, which operate under unique principles that might buffer them from some of the broader economic fluctuations affecting conventional banks. These results also suggest that Islamic banks in Kenya might be more influenced by internal factors rather than broad macroeconomic conditions.

The study findings were corroborated by Kanwal and Nadeem (2015) who examined the impact of macroeconomic variables on the profitability of commercial banks and found that while real GDP had a positive but insignificant influence on ROA, other macroeconomic factors like real interest rates and inflation had negligible effects on profitability. This aligns with the study findings, suggesting that macroeconomic variables might not be strong determinants of profitability for banks, particularly in the Islamic banking which operates under different principles and constraints compared to conventional banking. Additionally, Ngile and Simiyu (2015) found that GDP growth had a positive but insignificant influence on the ROA of commercial banks in Kenya, while interest rates had a significant negative impact and exchange rates had a significant positive impact on profitability. The mixed results indicate that while some macroeconomic variables can have significant effects, others might not, supporting the current study findings that GDP and inflation rates do not significantly affect profitability.

The study findings were in line with Kiganda (2014) whose study analyzed the influence of macroeconomic factors on the profitability of Kenyan commercial banks and concluded that factors like exchange rates, real GDP, and inflation have an insignificant impact on bank profitability. This directly aligns with the current study, reinforcing the idea that the profitability of banks in Kenya, including Islamic banks, might be influenced more by internal factors and specific banking practices than by broad macroeconomic indicators. The findings were also consistent with Sheefeni (2015) who investigated the macroeconomic determinants of profitability among Namibian commercial banks and found that GDP, interest rate, and inflation rate did not significantly affect profitability. This suggests that in some regions, the broader economic environment might not play a critical role in influencing bank profitability, which aligns with the current study's findings.

5.3.5 *Shari'ah* Governance and Islamic Bank Profitability

Further, the SSB governance effectiveness measured by IFCI index had an insignificant effect on the ROA of the Islamic banks in Kenya. The study also reveals that SSB

governance measured by IFCI index had an insignificant effect on the ROE of the Islamic banks in Kenya. The findings indicate that the mere presence of an SSB is not sufficient to enhance financial performance significantly. This could be due to various reasons, including potentially weaker regulatory support, less effective integration of SSBs into the overall governance structure, or other internal factors that might overshadow the influence of SSB governance.

The findings of the study were however contrasted by Mollah and Zaman (2015) who emphasized the positive contributions of SSBs to bank performance but also highlighted the necessity for enforcement and regulatory mechanisms to enhance their effectiveness. Their study used a broad sample of Islamic and conventional banks across multiple countries and periods, indicating that SSBs can positively impact performance when supported by strong regulatory frameworks. The lack of a significant direct effect in the current study could imply that Kenyan Islamic banks might lack such robust mechanisms, reducing the effectiveness of SSB governance.

Findings were further not in line with findings by Islam and Islam (2023) who concluded that effective SSBs are more likely to influence performance positively when there are strong boards of directors. Their research, focusing on Islamic banks suggests that the governance structure surrounding the *Shari'ah* board plays a crucial role. If Kenyan Islamic banks do not have equally strong boards of directors, this could explain the insignificant impact of SSB governance on ROA and ROE observed in the current study.

Additionally, Musibah et al. (2014) found that financial performance, measured by ROA and ROE, was a significant mediating factor between *Shari'ah* Supervisory Board Effectiveness and Intellectual Capital on Corporate Social Responsibility in Islamic banks in the Gulf Cooperation Council countries. This suggests that *Shari'ah* Supervisory Board Effectiveness may indirectly influence financial performance through its impact on other variables like IC and CSR, thereby contrasting the study's findings, where the direct effect of *Shari'ah* Supervisory Board Effectiveness on ROA and ROE was insignificant.

5.4 Conclusions

Overall, the research concluded there was a significant effect of *Shari'ah* board effectiveness, bank size, capital adequacy, liquidity and macroeconomic factors positively and significantly improved the profitability of the Islamic banks measured by ROA and ROE. Independently, the research found out that bank size strengthened the return on equity of the firm while it had an insignificant effect on the return on assets of the Islamic banks. The findings implied that expansion of the bank branch network yielded better returns for the equity owners showing there is an opportunity for reaching out to more customers in the market.

The study established that capital adequacy had an insignificant effect on the ROE of the firms while it negatively and significantly affected the ROA of the firms. The significant effect may be as a result of the banks failing to efficiently utilize its capital to generate any returns and other risk. On the third objective the research concludes there was significant negative effect of liquidity on the ROE of the Islamic banks and an insignificant effect on the ROA. This can be a result of the banks tying their liquidity in non-income generating activities thus reducing overall impact on the profitability of the banks.

The research further concluded that macroeconomic factors (inflation, interest rate and GDP) had insignificant effect on the profitability of Islamic banks (ROA & ROE). The analysis supported the conclusion that IFCI index measuring the development of Islamic banking had an insignificant effect on the ROA and ROE of the Islamic Banks in Kenya.

5.5 Recommendations

Policy-wise the study suggests that regulators and policy makers should reassess the statutory requirements and macroeconomic factors to spur profitability among Islamic banks. The results indicated insignificant relationship of macroeconomic factors and bank profitability hence there is need to reconsider the current macroeconomic and fiscal policies that can be critical to economic expansion which supports better

development within banks. Further, controlling the prevailing inflation and interest rates can provide banks with breathing room to iron out their internal policies thus spurring profitability.

Further, alternative policy measures can be introduced that will help to spur development of Islamic banking in the country and support an improved health of the institutions. Lastly, the regulator can tailor requirements and guidelines that can help in entrenching Shari'ah banking in the country and help expand it's access and utilization within the public. This will support increased development of Islamic finance in the country and help spur uptake and introduction of products in the market that meet the demand of the public.

Practically, bank managers need to pay more attention to their expansion plans by taking into consideration digital channels as a more cost-efficient method of increasing outreach of the banks. This will be more prudent than setting up physical branches which may lead to costly investments thus exposing the banks to more risks. Secondly, the banks can be more prudent in resource utilization by being more cautious in their risk-taking behavior thus ensuring there is quality and efficient asset utilization which will not impact the size of the banks.

The research also calls for the Islamic banks should reanalyze their portfolio holdings to reduce exposure of their capital in risky investments. The banks should focus on strengthening their capital base through a more robust control of their assets earning investments which will help yield more income that can strengthen their financial outcome. Further, the banks should maintain their capital adequacy ratios within the statutory limits to ensure there is stability in the bank which is key to enhancing the profitability levels.

The banks should further implement active management of short-term obligations which will help mitigate liquidity risks and any losses arising from the operations of the firm. The study further suggests that through automation the banks can be more precise

in managing their receivables efficiently and forecasting cashflow which is critical to improving overall financial standing of the institution.

5.6 Limitations of the Study

The research was only limited to the three fully-fledged Islamic banks in the country which are fairly young in the market. This limited the spread of data observations that could be included in the study. The study was further limited by the low development of Islamic banking in the country as shown by the low average IFCI index; thus more needs to be done from a regulator point of view to spur growth of Islamic finance. Further, the research was limited by the limited effectiveness in *Shari'ah* Boards within the banks as shown by lack of diversity, *Shari'ah* education, experience among the directors, cross-membership, size and political links. This can be upscaled through the Islamic banks improving their executive management composition to enhance the effectiveness of their boards.

5.7 Areas for Further Studies

Despite a high Muslim population in the country and proliferation of conventional banks, the study showed there is limited development of Islamic banks. Further studies can be considered looking at factors influencing the development of Islamic banks in the country. As an extension, further research is recommended to encompass performance of Islamic banking windows of conventional commercial banks. The research was also limited to three internal determinant factors of profitability, further studies can be conducted investigating other aspects such ownership structure, management efficiency, asset quality and considering other profitability metrics. The study recommends that a survey should be conducted examining the introduction of Islamic banking products and their performance within conventional banks in the country. This will provide more empirical evidence on how to spur growth of Islamic finance in the country. Lastly, the study recommends further research to encompass other Islamic financial institutions such as insurance *(takaful)* and reinsurance *(re-takaful)* companies, capital market players, microfinance institutions, pension funds and cooperatives.

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APPENDICES

Appendix I: Checklist

Financial Year	ROA	Bank size	Capital adequacy	Liquidity	GDP
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					

Appendix II: Ethical Review Approval

Strathmore UNIVERSITY

22nd April 2024

Mr Mwachili Hassan,
hassan.mwachili@strathmore.edu

Dear Mr Mwachili,

RE: The Mediating Effect of Shari'ah Supervisory Board Effectiveness on the Determinants of Profitability in Islamic Banks in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC2210/24.** The approval period is from **22nd April 2024 to 21st April 2025.**
This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, 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 affected 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

STRATHMORE UNIVERSITY INSTITUTIONAL SCIENTIFIC AND ETHICAL REVIEW COMMITTEE
(SU-ISERC)
22-Apr-2024
Email:ethicsreview@strathmore.edu
P.O BOX 59857-00200
NAIROBI-KENYA

Appendix III: NACOSTI Research License

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **575943**

Date of Issue: **22/May/2024**

RESEARCH LICENSE

This is to Certify that Mr., Hassan Mwachili of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: The Mediating Effect of Shari'ah Supervisory Board Effectiveness on The Determinants of Profitability in Islamic Banks in Kenya for the period ending : 22/May/2025.

License No: **NACOSTI/P/24/35502**

575943

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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See overleaf for conditions

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)

Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was the established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
    i. Endanger national security
    ii. Adversely affect the lives of Kenyans
    iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
    iv. Result in exploitation of intellectual property rights of communities in Kenya
    v. Adversely affect the environment
    vi. Adversely affect the rights of communities
    vii. Endanger public safety and national cohesion
    viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
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10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

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