FACTORS AFFECTING PROFITABILITY OF COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

I hereby certify that this study is my novel effort and hasn't been resented for examination at any other academic institution.

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This research project has been submitted for examination with my approval as University Supervisor

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DEDICATION

I pledge this endeavor to my family and friends. Special dedication goes to my loving spouse, Millicent Othieno, for her prayers and motivation and to my loving kids; Shantel, Pendo and Faraja.

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ABBREVIATIONS AND ACRONYMS

CA	Capital Adequacy
CBK	Central Bank of Kenya
CG	Corporate Governance
CPI	Consumer Price Index
GDP	Gross Domestic Product
MFI	Micro Finance Institutions
MS	Market Share
NPL	Non-Performing Loans
NSE	Nairobi Securities Exchange
ROA	Return on Assets
ROE	Return on Equity

ABSTRACT

The purpose of this research was to examine the factors that affect Kenyan's commercial banks' profitability. Its objectives were to determine whether market share, non-performing loans, capital adequacy and corporate governance affect the profitability of Kenya's commercial banks. The research was anchored on three theories which included, Dynamic Capability Theory, Crisis Management Theory and Modern Portfolio Theory. The study adopted descriptive study design. The target population of the study was all the licenced commercial banks in Kenya. All the licenced banks were used in data collection therefore, the study used census sampling technique. The study period was five years from 2017 to 2021. To accomplish this, the study gathered secondary data from CBK website using bank supervision annual reports as well as annual financial reports from the websites of the various banks in Kenya. For data analysis purposes, this inquiry employed both inferential and descriptive statistics which was aided by the Stata software. The former consisted of standard deviation, mean, minimum value and maximum value. On the other side, the former comprised of correlational analysis and the Hausman specification test for fixed and random effect. The findings of the Hausman specifications test revealed that the random effect framework was the most suitable model for the investigation. All the diagnostic tests indicated that no assumption of linear regression was violated thus the derived regression equation was suitable for the study. The study Correlation analysis and panel regression analysis results showed that, market share, capital adequacy and corporate governance had a positive and significant effect on the commercial banks' profitability in Kenya with regression coefficient of 0.5742, 0.2721, 0.4742 and p-values of 0.000, 0.002, and 0.000 respectively. Non-performing loans exerted a detrimental and statistically significant influence on the profitability of the aforementioned banks. This was supported by regression coefficient of -0.4510 and p- value of 0.001. Both inferential and descriptive statistics were employed to analyze the panel data. The findings of the study indicate that the chosen variables exerted a noteworthy influence on the financial performance of the designated banks with an R^2 of 0.5532 which implied that the selected factors explain 55.32% of the targeted commercial banks' profitability in Kenya. The study therefore recommended that Kenya's commercial banks must make a point of enhancing their market share, capital adequacy and corporate governance as they had positive and significant effect in determining their profitability. The study also recommends that commercial banks should work to reduce the levels of non-performing loans since they affect profitability negatively.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Global economic growth is dependent upon the vital role played by various financial institutions. Banks are economic backbone whose performance can generate ripple effect on different sectors hence it's important to comprehend the various aspects that influence the functioning of commercial banks in order to prevent any eventuality of economic instability (Leoni, 2013).

The Kenyan banking sector comprises of 39 licenced commercial banks and over 180 SACCOS and MFIs (Micro-Finance Institutions). According to CBK (2021), the aforementioned banks provide financial services to a population over 43 million individuals. The banking sector plays an important role in the financial services industry by offering distinct financial services that make substantial contributions to the expansion and advancement of the economies (Lagoarde-Segot & Leoni, 2013).

Banks in their nature are prone to economic downturns, this is especially prevalent when the number of non-performing loans rises (Leoni, 2013). Most negative effects of bank performance are more prevalent in developing nations such as Kenya because as the financial resources of customers dwindle due to a constrained economy, they tap into their savings and accounts, causing large-scale withdrawals resulting in a large deposit turnover. As a result, the effects are likely to felt by smaller and unstable banks, which mostly rely on customer savings accounts (Lagoarde-Segot & Leoni, 2013).

The study's basis is formed by three ideas that have been proven to be pertinent to the subject matter of the investigation. Theorizations encompass the philosophical perspectives of crisis management put forth by Alfonso Gonzalez-Herrero and Cornelius Pratt. These theorists created a model in which they listed three steps that must be performed in the event of a crisis: diagnosis, planning and putting changes into place, and monitoring. To address the threat-posing crisis factors for the organization, such as the surprise element and the limited time for decision-making (Avendao, 2022). The second theory that proved relevant in the scope of this study is the Dynamic capabilities theory postulated by Teece, Pisano, and Shuen (1997). They argued that for the survival of a firm or organization, it is essential that strategies are developed adapting to radical and continuous change to ensure continued financial viability and profitability of the firm's operations. The final theory underpinning the study is the Modern Portfolio theory put forward by economist Harry Markowitz (1952) which emphasized the selection of various investments to maximize overall returns within a manageable scope of risk which will in turn ensure continuity under the foundation of diversification. The theory postulates that owning various kinds of financial assets is less risky than basing a whole organization's success on the expected return of a singular asset.

The primary objective of a bank and other financial institution is to make profit. This is also a sign of effective management because it shows that the bank can draw in capital and invest in a variety of investments. The banking sector is highly competitive due to the growing use of information and communication technologies, which affects bank profitability. Banks have been allowed to lower interest rates on loans, postpone payments,

and provide credit to small firms and corporations. This is to ensure survival in difficult economic times as directed by the Central Bank of Kenya (CBK) and as well as fiscal management techniques. Most of the time CBK may issue such directive to increase the money in circulation principally in times of calamities such as drought, disease spread or when the economy is not doing very well (Mathias, 2021).

1.1.1 Factors Affecting Profitability

Both internal and external factors might affect a commercial bank's profitability. External forces are those that the bank management cannot control, whilst internal variables are those that the bank management can influence (Mang'eli, 2012). Regulations, market expansion, and market structure are some of the external factors of the legal and economic environment that have impact on of commercial banks profitability. Interest rates, crises, booms, and price inflation are a few more other external factors (Staikouras & Wood, 2011). The internal factors that impact banking performance are bank specific features. These factors are unique to each bank and have an effect on the bank's financial success and are subjected to manipulation by the bank (Mang'eli, 2012). The internal variables represent the management approaches used by the banks and the decisions made in terms of funding sources, spending, and liquidity management (Mang'eli, 2012).

Because corporate governance encompasses a wide range of interrelated domain, encompassing managerial, ethical, legal, regulatory, structural, and behavioral elements, the authors discuss the concept without clearly defining it (Onuonga, 2014). The approach used, whether shareholder or stakeholder, will impact the kind of corporate governance

that is developed in a company or a country, as well as the protocols for making sure that it is adhered to (Onuonga, 2014). Due to the hegemonic nature of Kenya's commercial banks, failures in the economic industry are thought to have disastrous effects on the country's overall economy. This is because any commercial bank bankruptcy has a cascading impact that could cause economic hardships and overall financial crisis. Despite Kenyan banks' generally strong financial performance, several of them have reported losses (Onuonga, 2014).

Corb (2012) asserts that Kenya's Central Bank employs interest rates as a tool to control inflation and foster economic expansion. It is generally accepted that variability in market interest charges have a substantial effect on how well financial institutions perform. Mang'eli (2012) asserts that variations in the market interest charges have a significant influence on the efficiency with which commercial banks operate. In general, rising interest rates improve bank profits. He maintained that an increase in interest rates is tremendously beneficial rather than detrimental to the banking industry as a whole.

1.1.2 Profitability of Commercial Banks

An organization capacity generate profit from all of its commercial activities is what is meant when a business is said to be profitable (Kajirwa, 2018) and gauges the capability of an investment to accrue profit from its implementation. A company's ability to create money from its core resources is reflected in its financial performance. It's crucial to manage a company's limited resources. This increases productivity and the provision of high-quality goods and services, both of which are necessary for effectiveness (Kajirwa,

2018). Many firms fail due to poor financial management and planning. The financial success of a company during a certain time period has to be monitored so as to evaluate its financial viability (Kajirwa, 2018).

The financial viability of the bank is influenced by both internal and external factors that either lead to the banks' profit or loss. The majority of internal determinants are controllable and are bank-specific and include things like enough capital, asset quality, liquidity, revenue diversification, and operational cost effectiveness (Olweny & Shipho, 2011). External factors are out of the banks' control and include GDP, inflation, interest rates, and exchange rates, which cumulatively are used to determine how their implications affect the profitability of a bank (Mang'eli, 2012).

Return on assets, which is arrived at by dividing an entity's annual profits by its total average assets. It is thought to be a reliable indicator of a bank's profitability because it demonstrates how well the entity uses its assets to boost profit margins (Fathi, Farahmand & Khorasani, 2013). A prominent financial metric used to indicate the revenue produced from invested capital is return on assets. When return on asset, which is dictated by the market value, replaces value ratio increases the firm is influenced to expand its capital investment since it denotes an increase in asset market value above what is recorded (Fathi, Farahmand & Khorasani, 2013).

1.1.3 Relationship between bank specific factors and Profitability of Commercial Banks

The goal of the research was to investigate the internal variables, which vary from bank to bank, that impact Kenyan commercial banks' profitability. Market share, non-performing loans, capital sufficiency, and corporate governance are some of these variables. According to Ogega (2014) market share is an internal determinant of a bank's financial viability and is mostly a non-financial statement variable in relation to a bank's profit or loss in business operations. The market share is however, related with the revenue earned by a bank since there is a direct proportion between the market size and revenues. Market share if not well managed may however, impact negatively on the bank. A bank's expansion policy is crucial in determining the amount of investment that should be undertaken to support the expansion (Ogega, 2014).

Non-performing loans (NPL) are reliable measures of a bank's efficiency (Singh, Basuki & Setiawan, 2021). Singh, Basuki, and Setiawan (2021), assert that financial institutions are legally obligated to disclose the proportion of NPL in relation to its gross total loans. This disclosure serves as the metrics for assessing the level of credit risk relating to the bank and the overall quality of its loan portfolio. A high ratio shows a higher risk of financial loss for the bank in the event that it cannot settle the outstanding loan sums; a low ratio indicates a lower risk associated with the existing loans. Contingencies are required as NPL rises since overall revenues decline (Singh, Basuki & Setiawan, 2021). The likelihood that banks will be affected by the financial crisis will increase if there is a large percentage of bank credit. Since they lower bank profitability and are frequently held

responsible for deterring banks from lending more to consumers and businesses. The banking industry faces significant challenges due to non-performing loans and impede growth in the economy (Singh, Basuki & Setiawan, 2021).

The ability of a commercial bank or strength in terms of finances is measured by its capital adequacy. This reveals the bank's readiness and ability to accept unusual and working losses and shows the bank willingness to try new things. It also evaluates the banks' effectiveness and solvency. The ratio is used to safeguard the bank's fund deposits and to advance the effectiveness and steadiness of financial institutions (Bizuayehu. 2015).

On the other hand, corporate governance directly affects the banks' financial success. The board decision regarding the bank management and investment options directly affect the performance of the banks (Kohlscheen, Murcia, & Contreras, 2018). Studies have shown that a board that is well balanced in terms of gender diversity is able to make better corporate decisions than those with no or lower gender diversity (Al-Harbi, 2019). It has also been reported by Al-Harbi, (2019) that there is a strong positive correlation between profitability and corporate governance.

1.1.4 Commercial Banks in Kenya

According to Alkhazaleh and Almsafir (2014), commercial banks are financial entities that are subject to regulation and engage in activities such as receiving deposits, extending business loans, and providing basic investment products. These banks operate with the primary objective of generating profit. Commercial banks are a vital component of the

banking industry, as they assume a pivotal function in facilitating economic expansion by mobilizing essential resources for investment and productivity. In doing so, they add to the promotion of overall economic development (Alkhazaleh & Almsafir, 2014).

Kenyan banks are ranked by the CBK using a tiered approach that takes into account the banks' market share, asset base, and depositor count to determine their position in the country's banking industry (CBK, 2021). Kenyan banks are ranked by the CBK using a tiered approach that takes into account the banks' market share, asset base, and de positor count to determine their position in the country's banking industry (CBK, 2021). The tier system is comprised of three tiers. Tier 1 encompasses banks with significant cumulative assets and a substantial number of depositors. Tier 2 comprises of medium-sized lenders, while Tier 3 encompasses banks that hold a smaller portion of the market (Ayugi & Ayugi, 2016). The main objective of this research was to evaluate the various elements that influence the profitability of the 39 commercial banks authorized to conduct operations in Kenya as of December 2021.

In recent years, Kenyan commercial banks have encountered swings in profitability attributable to operational and management-related challenges, resulting in financial losses and, in some cases, receivership. In October 2015, Imperial Bank was subjected to receivership as a result of engaging in dangerous and unsound business activities. Furthermore, it is worth noting that Chase Bank was sent to receivership as a result of its failure to accurately declare insider loans (CBK, 2016).

The impact on a bank's profitability has been documented to be influenced by various factors, including capital insufficiency, insufficient market share, non-performing loans, and subpar corporate governance. In 2017, KCB had a market share of 14.14% (CBK, 2017) and by 2021, their overall market shared had declined to 13.81% of the total market share (CBK, 2021). Standard Chartered Bank in 2017 had a cumulative market share of 7.11% (CBK, 2017). However, by 2021, their market share had reduced to 5.70% (CBK, 2021). In addition, Diamond Trust Bank had controlled 6.72% of the market share in 2017 (CBK, 2017) and in 2021, they controlled only 5.64% of the market share (CBK, 2021). In addition, Chase Bank was placed under receivership due to under reporting of insider loans. Chase Bank reported 5.7B instead of 13.62B (CBK, 2016). This implied poor corporate governance issues.

The commercial banks operating in Kenya have been facing an increased in non-performing loans in the recent years. For instance, CBK statistics show that there has been a gradual increase in gross NPL among the commercial banks in Kenya. In 2017, total NPL was KES. 264.6B (CBK, 2017), KES. 316.7B in 2018 (CBK, 2018) and by 2021, the amount had jumped to KES. 460.0B (CBK, 2021).

Although kenya commercial banks mean ratio of capital adequacy within the study was above CBK minimum requirement, some banks reported capital adequacy ratios below the minimum approved rates, these includes: Consolidated Bank 5.1% and National Bank 5.4% in 2017 (CBK, 2017), Spire Bank -22% and National Bank 3.7% in 2018 (CBK, 2018), Spire Bank -20.6% and First Community 8.1% in 2019 (CBK, 2019), Spire Bank -

60.6% and HFC 9.1% in 2020 (CBK, 2020) and in 2021, Spire Bank -10.9%, and Consolidated Bank 5.3% (CBK, 2021). The assessment above presents unique factors which needs further investigation that affect Kenya commercial banks 'profitability.

1.2 Research Problem

The financial crisis of the late 2000s demonstrated the significance of banking sector in the global economy and the need for greater attention to be accorded to banks' performance on a local, national, and international level (Leoni, 2013). This is especially shown in developing nations where banks serve as the primary source of external financing for the majority of businesses as well as individuals (Leoni, 2013). Market share, non-performing loans, capital sufficiency and corporate governance are important factors that impact Kenya's commercial banks' profitability. Many businesses consider market share as a benchmarking tool to track their marketing effectiveness (Katsikeas et al. 2016). According to Edeling and Himme (2018), there is a strong positive association between an entity's profitability and its market share. Between 2017 and 2021, market share among different commercial banks in Kenya have been gradually declining. In 2017, KCB had a market share of 14.14% (CBK, 2017) and by 2021, their overall market shared had declined to 13.81% of the total market share (CBK, 2021). Standard Chartered Bank in 2017 had a cumulative market share of 7.11% (CBK, 2017). However, by 2021, their market share had reduced to 5.70% (CBK, 2021). In addition, Diamond Trust Bank had controlled 6.72% of the market share in 2017 (CBK, 2017) and in 2021, they controlled only 5.64% of the market share (CBK, 2021). In trying to understand the effects and mechanisms linking market share with a bank's profitability as shown above and is economically advantageous

to do so, bank managers of some of these commercial banks now have little pragmatic perceptions into how market share affect profitability which the current study aimed at solving.

NPL have been shown to directly and affect profitability of commercial banks by weakening ROA. Commercial banks face many risks one of them being credit risk brought about by NPL (Ugoani, 2016). An increase in the level of NPLs pause a high risk to commercial banks and the economy at large. It has the potential of negatively influencing credit supply and demand and reducing lending when really needed (Kaaya & Pastory, 2013). statistics from Kenyan commercial banks shows a gradual rise in gross NPLs. Total NPL were KES 264.6 billion in 2017 (CBK, 2017), KES 316.7 billion in 2018 (CBK, 2018), and KES 460.0 billion in 2021 (CBK, 2021). Furthermore, insider lending contributed to the 2016 collapse of Chase Bank, increasing the bank's NPL by KES 13.62 billion, according to Gathaiya (2017). Whereas there is statistical evidence to show that NPL have been increasing among the Kenya commercial banks as demonstrated above, there is minimal evidence if any to demonstrate how this affect profitability of these banks. This study therefore, aimed at exploring how non-performing loans affects Kenya's commercial banks' profitability.

In order to guarantee that banks have adequate capital to offset the threats that they face, capital adequacy is one of the most controlled topics in the global banking sector (Aliyu, Yusof, & Naiimi, 2017). In Kenya, CBK set the least capital adequacy ratio (Total Capital/Total Risk Weighted Assets) at 14.5% during the period under review (CBK, 2017,

CBK, 2021). Commercial banks reported an average of 18.8% in 2017 (CBK, 2017) and the rate has been gradually declining and in 2021, they reported a rate of 16.9% (CBK, 2021). Though these rates are above the minimum required rates by CBK, some banks reported capital adequacy ratios below the minimum approved rates, these includes: Consolidated Bank 5.1% and National Bank 5.4% in 2017 (CBK, 2017), Spire Bank -22% and National Bank 3.7% in 2018 (CBK, 2018), Spire Bank -20.6% and First Community 8.1% in 2019 (CBK, 2019), Spire Bank -60.6% and HFC 9.1% in 2020 (CBK, 2020) and in 2021, Spire Bank -10.9%, and Consolidated Bank 5.3% (CBK, 2021). This goes to show that some commercial banks operated outside the approved capital adequacy ratio by CBK. There is therefore, a need to investigate the least possible capital adequacy ratio that can be set which can be met by commercial banks to remain compliant and at the same time be profitable. In addition, there is lack of information among the different empirical studies on how Kenyan commercial banks' profitability is impacted by capital sufficiency. Using a selection of Nigerian quoted banks from 2010 to 2015, Nestor, Leonard, and Okoye (2017) assessed the influence of capital adequacy on financial performance. They established that capital adequacy is positively and significantly influenced by financial progress. In his study, Musyoka (2017) came to the conclusion that adequate capital has a detrimental outcome on the financial performance of financial institutions. For his part, Mungwang'a (2014) discovered no connection at all between the financial performance of financial institutions and capital adequacy. This indicates that there is still untapped potential for the effect of capital sufficiency on the profitability of commercial banks. In light of this, the purpose of this study is to explore how Kenyan commercial banks' profitability is impacted by capital adequacy.

Maximizing shareholder wealth is a primary goal of corporate governance (Amba, 2013). The concept of corporate governance extends beyond corporate management. To achieve a few clearly stated goals, it also entails an equitable, transparent, and effective administration (Bairathi, 2009). In October 2015, Imperial bank, was placed under receivership due to unsafe and unsound business practices (CBK, 2015). On the other hand, Chase bank was placed under receivership due to under reporting of insider loans. They reported an insider loan of KES. 5.72B instead of the actual loan of KES. 13.62B (CBK, 2016). As shown above, financial difficulties and declining profitability typically precede corporate governance issues, and positive turnarounds are few in Kenya. his raises the question of whether the board takes appropriate action as soon as the problems appear. A number of researches have been done to analyse the correlation between a firms' profitability and its corporate governance. Love and Rachinksy (2011) concluded in their study that corporate governance affects profitability negatively. According to Kiruri's (2013) research, banks with state ownership have worse financial performance than those with higher foreign and domestic ownership. Nyarige (2012) concluded that Kenyan banks' profitability is positively influenced by the size of their boards. However, Wepukhulu (2015) concluded that corporate governance practices had no influence on Kenya's commercial banks' profitability. Studies above have not provided conclusive findings on whether corporate governance (gender diversity) influence of Kenya commercial banks profitability. Therefore, in conclusion it is imperative to undertake a study to determine how the selected factors ceteris paribus affect profitability of Kenya commercial banks.

1.3 Research Objective

To investigate the factors affecting profitability of commercial banks in Kenya**.**

1.4 Value of Study

Kenya commercial banks managers will be able to tell and see the relationship between market share, NPL, capital adequacy and corporate governance and banks' financial performance (profitability). Concerns have remained in the banking sector over the effectiveness of some of these factors, their regulation and link to financial performance and this study intended to address these questions.

This study is valuable to great addition literature to various shareholders within the Kenyan economy and the international market as a whole. The study is keen to ensure it provides value to commercial banks as it has an indication of factors that are crucial and critical to their success.

The study is also valuable to Central Bank of Kenya as the body tasked with the responsibilities of overseeing and ensuring proper functioning of the Kenyan banking sector. The contents of the study are equally helpful to appraise the profitability of financial institutions during economic crises and set up appropriate regulatory measures to mitigate the effects of unforeseen disruptions that accrue due to such crisis.

The study also serves to refine the theories used therein as it tests previously unused premises in the interpretation of the said theories. This study provides unique contribution on developing the theories by expounding on their applications and extending their

usefulness, which in turn result in a widening of the theoretical scope of implementation and use. The study therefore is critical in the confirmation or rebuttal of the implementation of the theories within the study's context.

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CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The theoretical overview is included in this section because it elaborates on the theories that are relevant to the study. The chapter deliberates on some of the factors that influence bank profitability and are used as the study's independent variables. This chapter contain empirical studies that bear relevance to the research. The conceptual framework's outline and a summary of the chapter will be included in the chapter's conclusion.

2.2 Theoretical Review

The research is anchored to three theories found to bear relevance to the study, they include modern portfolio theory, crisis management theory, and dynamic capabilities theory. The theories are expounded below.

2.2.1 The Dynamic Capabilities Theory

Teece, Pisano, and Shuen (1997) made the initial advances in the dynamic capabilities theory. It refers to the dynamicity required when dealing with adaptation to a resource base. It is stated that businesses having a competitive advantage over those without this dynamic-ness demonstrate quick response, swift and versatile goods creation, in addition to having the managerial skills to successfully synchronize and repurpose internal and external resources. It also noted that various firms were in possession of different resource bases but this accumulation of assets did not necessarily constitute a competitive advantage. This capability to a new form giving a competitive advantage to firms is referred to as ‘dynamic

capabilities' and refers to the capacity of a firm or bank to adjust and renew capabilities so as to attain a degree of conformity with a changing business scope.

There are various frameworks that can be used to lay the groundwork for constructing distinctive and hard-to-replicate advantages. A competitive force framework views the problem addressed as market entry, entry deterrence, and positioning (Teece & Pisano, 2003). While resource-based perspectives are primarily concerned with the exploitation of an organization's distinctive asset base, game-theoretic models see it as an engagement involving competition with expectations about how the other parties will react. Therefore, capabilities must be defined in terms of organizational structures and administrative procedures that promote fruitful action rather than being merely viewed as a component of producing a profit and keeping good records. Thus, to determine a firm's capabilities three factors must be put into consideration: processes, positions, and paths. These factors coupled with managerial and organizational processes are key to a firm's successful strategy formation to afford the firm a dynamic capability to adjust to environmental changes with regard to the firm. This makes it possible for the business to develop fresh goods and procedures in response to shifting market conditions.

The theory however, can be criticized due to its lack of operationalization. It is also enigmatic and bears redundant definitions since capabilities are majorly underlying operational and managerial processes and cannot be empirically measured. This creates a problem because it's hard to measure the correlation between these skills and a company's success (Ambrosini & Bowman, 2009). This theory bears relevance to the study as it

elaborates on the ability of an organization or firm to adjust and develop capabilities that will assist in case of a sudden change in the economy and markets. Commercial banks in Kenya may apply this theory to expand their capabilities in the scope of banking so as to assist in times of economic perils.

2.2.2 Crisis Management Theory

Alfonso Gonzalez-Herrero and Cornelius Pratt created the crisis management model in 1990. It defined three stages pertaining to the management of crises when they arise. A crisis is an unpredictable event that may cause adverse impacts on the organization and management of a firm. Thus measures to either prevent or mitigate the effect have to be taken to maintain continuity of operations. Crisis management is therefore the at most innate ability of a firm to adequately react to difficulties that may arise and as a result of managing the crisis effectively alter its otherwise negative effect on its operations.

According to Avendaño (2022), the theory suggested that a crisis typically consists of three elements: a threat to the firm, an element of surprise, and a limited amount of time for decision-making. It can also be postulated that the event of a crisis also necessitates a change, otherwise the event could be deemed a lapse in judgment or a mere failure. A crisis more often than not requires a firm to change its old ways of handling organization and management. The process of crisis management goes through the stages of diagnosis of the crisis, planning, and adjustment to changes (Juneja, n.d.) so as to provide a systematic process of assessing and dealing with crises as they arise. Crisis management requires a crisis management plan which helps the firm overcome the crisis in the best manner

possible as it affords the stakeholders a focused approach in crisis situations instead of haphazardly moving to fix the firm.

The theory however, faces criticism due to its isolation in the field of organization as it seems only to divulge exceptions and not the events before and after a crisis which may also be a direct cause of the crisis (Roux-Dufort, 2007). As a result, it may be seen that crisis management is a dispersed field of study that has little theorization that contains an ambiguity of definitions due to a lack of conceptual foundation and framework. Also, since a crisis is perceived as an event conferring a singularity and contingency that separates it from structuring models and thus makes replication of research findings difficult in other situations.

This theory bears relevance to the study under consideration as it will afford organizational and management departments of firms the basis on how to assess and handle dire situations that put the firm's continuity in jeopardy. In case of sudden crisis, Kenyan commercial banks and other financial institutions could find the theory useful.

2.2.3 Modern Portfolio Theory

Harry Markowitz was the first to propose the modern portfolio theory and hypothesized to allow firms to assemble asset portfolios that maximized expected return for an allowed scope of risk (Ravipati, 2012). The theory suggests that owning various kinds of financial assets is less risky than basing a whole firm's success on the expected return of a singular

asset underlining the need for diversification in an ever-changing market and economy (Ravipati, 2012).

The critical line algorithm was created by Markowitz using the concepts of linear programming, and it was used to find all possible portfolios that exploits returns for a specified level of risk and diminishes risk for a specified level of return (Ravipati, 2012). Noting the efficiency of portfolio diversification, it became apparent that diversification was a viable means for firms and investors alike to reduce the chance of risk. He also developed the mean-variance analysis in order to accurately determine stock portfolios, but it has also proven more effective in assessing and selecting asset allocation since assets are not that many and fall into similar classes (Ravipati, 2012). The theory works under assumptions such as maximization of the expected return of total wealth and that all markets are perfectly efficient meaning no taxes and no transaction costs on operations that involve the assets (Ravipati, 2012).

Modern portfolio theory is criticized for being descriptive rather than prescriptive, and for relying on assumptions that are quite often incorrect (*6 Shortcomings of the Modern Portfolio Theory - Financial Web*,). The theory while assessing return on assets does not model the economy or market where the firm transacts and thus is fairly inaccurate when it comes to matching market fluctuations (Ravipati, 2012).

This model bears significance to the study in that it enables firms to diversify their asset bases thus providing a greater return for relatively reduced risk due to diversification.

Commercial banks in Kenya can implement this theory to ready themselves for unforeseen losses as a result of sudden or unforeseen pandemics as they do not have to depend on a singular source of profit or income.

2.3 Determinants of Profitability of Commercial Banks

Based on the Return on Assets (ROA) metric, the study identifies both external and internal factors that influence a bank's financial performance. Internal factors can be categorised as those that affect financial statements and those that do not affect financial statements. while the external factor can be classified into interest rates. The theoretical expectation of the relationship of these variables in relation to the profitability of banks is as discussed below:

2.3.1 Market Share

Market share is an internal determinant of a bank's financial viability and is mostly a non-financial statement variable in relation to a bank's profit or loss in business operations. The market share is however related with the revenue earned by a bank since there is a direct proportion between the market size and revenues (Ogega, 2014).

Market share if not well managed may however impact negatively on the bank. A bank's expansion policy is crucial in determining the amount of investment that should be undertaken to support the expansion (Ogega, 2014). This requires clear and adequate market research that helps the bank to undertake critical investments which would result to improved performance and the rate of returns for investments are guaranteed and acceptable (Al-Harbi, 2019). It is expected that increased market share would improve the

profitability of the bank. However, operational costs must be factored in, on maintaining and attracting some markets. The risks involved should also be put into consideration as they are important concepts (Ogega, 2014).

2.3.2 Non-Performing Loans

Loans are an internal determinant of a bank's profitability as bank-specific credit growth shows a pragmatic relationship to the financial viability of a bank, especially on a long-term basis (Kohlscheen, Murcia, & Contreras, 2018). This postulation holds true for the most part as an increase in loans equates to increased income for banks and thus ease of operations if the economy is stable. However, banks' lending activities are vulnerable to unstable economic conditions because when borrowers fail to make payments, it will have an adverse effect on the bank's bottom-line since the anticipated income is not realized. It is reasonable to anticipate both a positive and a negative link between lending and profitability of banks in light of these facts (Al-Harbi, 2019).

2.3.3 Capital Adequacy

An internal aspect that influences a bank's profitability is capital adequacy, which is the proportion of a bank's available capital resources to its risk weighted assets and current liabilities (Ahmed Abdel Karim, 1996; Białas & Solek, 2010; Hafez & El-Ansary, 2015; Hsu et al., 2007). There are three types of capital adequacy ratios, namely: core capital to total deposits (minimum rate 8%), core capital to total risk weighted assets (minimum rate 10.5%)and total capital to total risk weighted assets (minimum rate 14.5%) (CBK, 2021). This research utilized the total assets to total risk weighted assets. Although it is

implemented by CBK it is considered an internal factor affecting profitability as it is up to the firm to ensure the business is capable of using the optimum amount of leverage to prevent liquidation (Hafez & El-Ansary, 2015). Firms with a higher capital ratio are considered less likely to fall under as they have access to cheap funding, are adaptable when it comes to developing new business prospects and less vulnerable to the consequences of extreme losses (Al-Harbi, 2019).

There however, arises a problem if the capital adequacy ratio of the bank is too high because it makes financial institution inefficient in the utilisation of the entity's capital resources which can have adverse influence on a bank's productivity (Nguyen, 2021). Empirical data however, show a majorly positive association connecting capital sufficiency and the financial performance of lending institutions as it enhances their financial stability and further increases their capacity to deal with fluctuations in the economy that may be out of their control (Nguyen, 2021).

2.3.4 Corporate Governance

In recent years, corporate governance (CG) practices have expanded quickly, and their significance has been emphasized all over the world. Countries lacking guidelines regarding the application of corporate governance (CG) in their organizations have acknowledged its importance (Grunthan, 2020). The fact that GC supports an organization's functioning structure is the cause of its widespread popularity (Grunthan, 2020). As a result, it is expected that the proprietors will benefit greatly from the adoption and implementation of the CG practice. This is the case because, as the owners, they are

dedicated to employing the doctrines and tools that encompass a comprehensive oversight of a company's activities, particularly when embracing the concepts of disclosure and openness (Grunthan, 2020). According to Al-Harbi (2019), there exists a robust positive correlation involving corporate governance and profitability. As a result of substandard achievement, various companies have resorted to establishment of various committees within the board of directors including finance, audit and others whose aim is to strengthen internal controls of their organizations which in return will lead to better organizational performance (Grunthan, 2020). Keeping in mind that the idea of corporate governance is structured inside business ethics is also crucial. Corporate governance, as it is framed within the context of business ethics, is described as the system used to command and control businesses and is represented by the so-called codes of good governance (Castrillo & Alfonso, 2020).

2.4 Empirical Review

The empirical assessment consists of empirical research carried out previously relative to profitability of lending institutions as well as factors that influence financial performance of banks (Grunthan, 2020). Both local and international studies will be taken into consideration so as to determine the knowledge gap that this study will fill.

2.4.1 Global Studies

A study that looks into the variables that have a bearing on the bank profitability in developing nations was done by Lohano and Kashif (2019). The study used panel data from two hundred and thirty banks in 31 countries from 2011 to 2016. The results of this research indicate that several banks-specific factors, including capital percentage, the size of the

bank, effectiveness of management, credit risk, and diversified portfolios, exert a substantial influence on the financial success of lenders. Furthermore, empirical evidence have demonstrated the existence of an optimal capital ratio that optimizes productivity. Moreover, the association between profitability and capital ratio follows a trajectory that is quadratic. It has also been shown that the association amongst profitability and the size of the bank is similarly quadratic. The findings demonstrate that several factors specific to each country, including GDP per capita, the rate of inflation, and the perception of corruption measure, significantly influence the economic viability of banks. The prior analysis concentrated on 31 nations, in contrast to the current study's concentration on Kenyan commercial banks.

In light of heightened globalization, increasing rivalry, and increased concentration, Brahmaiah (2018) investigated the variables affecting the economic viability of Indian lending institutions. A balanced panel dataset of 89 Indian banks that were in operation from 2005 to 2015 made up the sample. The ROA and ROE metrics were utilized to measure a bank's financial success. The findings indicate that multiple variables exert influence on the financial sustainability of lenders in India. The profitability of banks was strongly influenced favourably by operational efficiency, the robustness of investor capital and the proportion of deposits in the lending industry relative to the Gross Domestic Product (GDP). On the other side, factors that adversely impacted banks' profitability included risk associated with credit, cost of financing, the ratio of non-performing financial assets to total loans, and price increases in the index of consumer prices (CPI). While GDP growth and inflation had significant negative correlation with ROA, ROE positively

influenced by inflation. This research was carried out in India contrary to the current study that was done in Kenya.

A study to identify the key elements and the extent of their influence on Latvian banks' profitability was done by Bojare and Romanova (2017). The analysis is improved by taking into consideration three different perspectives on how the banking industry is divided into: bank business models or their systematic relevance based on the assessments arrived at by both the national oversight body and the Single Monitoring Framework. The study's foundation is the examination of lenders' financial reports and macroeconomic data. Analysis of a panel model with fixed effects and cross-sectional weights was conducted. According to the study, the economic climate, inflation, interest rates (spread), banking sector rivalry, and overall bank performance are the main elements that influence bank profitability in Latvia. The study results describe the discrepancies between various economic models employed by banks from the standpoint of bank business decisions, highlighting the differences between them and the distinctive Latvian banking industry. They also offer analytical data on profitability issues that could be helpful to a range of stakeholders, such as the national regulatory body and the European Central Bank, in their analyses of bank financial performance and evaluations of institutions of systemic importance.

In their study, Ngweshemi and Isiksal (2021) sought to ascertain the variables affecting profitability of Tanzania's private and state banks. The study utilized secondary data, employing an insightful analytical methodology, and employed a general moment

processing tool, and other methods to assess the influence of the factors. The analysis examined annual time series data from both internal and external sources for the years 2013 to 2019. With substantial implications on bank profit, the survey includes eleven institutions that have been studied for seven years. The findings for bank-internal variables include four variables that are statistically significant, namely sufficient capital, quality of assets, loan structure, and cost effectiveness. The growth in domestic product (GDP) and inflation rate are two similarly insignificant macroeconomic determinants. This study was done in Tanzania and used quantitative approach contrary to the current study which is done in Kenya and will adopt a descriptive research design.

2.4.2 Local Studies

Locally, Macharia (2016) undertook research to establish the indicators of Kenyan banks' profitability. The study investigated the impact of various factors, including the size of the bank, adequate capital, liquidity, creditworthiness, and proficiency in operation, on the productivity of banks. The utilization of a descriptive methodology facilitated the discovery of the factors that influence the financial performance of financial institutions in Kenya. The research examined secondary data from the selected banking institutions during the period from 2011 to 2015 that were active as of December 31, 2015. The information was revised, sorted for completeness using the social studies statistical program, and then analysed using Pearson correlation and ordinary least squares (OLS) using statistical techniques. The study established an antagonistic but mostly insignificant correlation connecting bank size, the efficiency of operations, and the financial performance of said the financial institutions. The research also concluded that there was

a significant negative correlation between capital adequacy, risk in the context of credit, and a bank's profitability. The study however failed to address these variables and how they affect profitability.

In a study done by Onsare (2017) aiming to ascertain the elements that contributed to Kenyan banks' profitability in the twenty-first century. The sampling design was stratified random sampling, and the study methodology was quantitative explanatory research. The study's sample consisted of 10 institutions, and the participants were 59 workers who worked in the finance division of those banks. The method of choice for gathering data that was then analysed in Microsoft Excel was a series of questionnaires. According to the report, the new restrictions have boosted operational effectiveness, decision-making speed, and the board of directors' impact. The study concluded that technology was important and that technical advancements had a significant impact on how profitable banks can operate. The study examined GDP and inflation and found that they had an impact on both product prices and business activity levels in the economy; increases in business activity levels resulted in increased bank operations. The study above focused on external factors affecting profitability of commercial banks while this research was focused on internal the elements that affect profitability of commercial banks in Kenya.

Mehrjardi (2012) sought to ascertain how size affected bank profitability in Kenya. Because the study focused on all Kenyan commercial banks, it used a descriptive method. A survey was undertaken to explain the relation between firm size has a positive. Secondary data were employed. The information was gathered using annual central bank

reports, a bank survey report from Market Intelligence magazine, and the annual financial records of commercial banks. The research established a significant positive correlation between bank productivity and market share, the number of branches, deposit liabilities, and customer base. The study also showed that because of these factors, commercial banks' profitability varied more sharply across all categories. The study focussed on size and failed to consider other internal factors that affect which the current study aimed at analysing.

Robert, (2017) undertook a research to explore the factors that affect the commercial banks' profitability as promoted by CBK. To achieve the study's objectives, the study was designed as an explanatory study. As of December 2016, the population was made up of each of the 11 recognized commercial banks. The investigation used all banks. For secondary data covering the period of ten years from 2008 to 2016, CBK and the Banking Survey were consulted. The data analysis made use of descriptive, correlational, and regression analysis. The research found a negative correlation between ROA and inflation rate, but the effects of adequate capital, high-quality assets, effective management, prudent liquidity management, and GDP growth rate were positive.

Rogers Ochenge (2022) for the Kenyan Bankers Association sought to establish the implications of income diversification during the Covid-19 pandemic affecting profitability and security as a result of the economic downturn. The research did an analysis that was empirical in nature to ascertain the correlation connecting diversification (non-interest revenue) and bank performance using annual data from Kenyan banks for the years

2010 through 2020. The study used dynamic panel regressions to find that banks that diversify (functionally) their revenue sources are more successful and financially secure. A significant finding of the study is that reliance on non-interest revenue streams serves as an economically significant shock absorber in periods of diminishing profitability, such as those experienced due to the Covid-19 pandemic. In terms of policy, these findings encourage banks to use new technology to develop non-traditional products with low operational marginal costs. In terms of the direct implications of diversification, the study is inconclusive. The research study was focussed on the effect of Covid-19 pandemic of 2020 contrary to the current study which assessed the factors affecting profitability of commercial banks in Kenya.

2.5 Conceptual Framework

The conceptual framework encompasses the effect of the independent variable on the dependent variable in pictorial format.

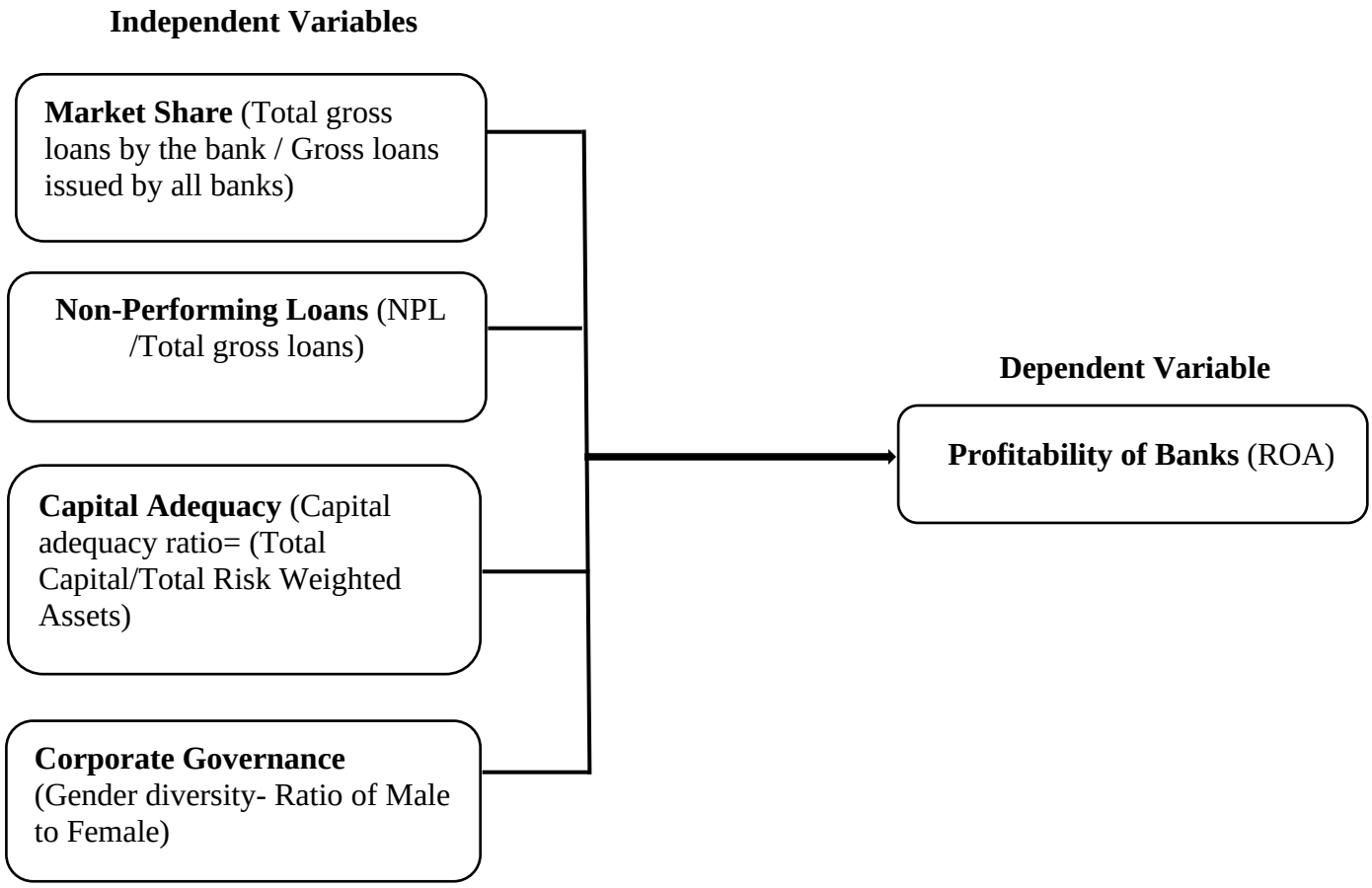

Figure 2. 1: Conceptual Model **Source: Researcher, (2023)**

Figure 2.1 is indicative of the correlation between the independent variables which are: market share, non- performing loans, capital adequacy, and corporate governance, and the dependent variable which is the profitability of banks.

2.6 Summary of Literature Review

This chapter's review of the literature demonstrates how little is known about the variables influencing Kenyan commercial banks' profitability. however, a number of variables influencing bank profitability have been identified in global literature. Different studies have classified these factors as either macro- economic or micro-economics while others

have classified the factors as either internal or external factors. The studies reviewed whether international or local mostly focused the research on a broad scale or with larger banks in mind and not all banks in Kenya. This thus forms the research gap to be expounded upon by this study.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section presents a comprehensive elucidation concerning the methodologies employed in the study to effectively accomplish its stated objectives. Consequently, the study's methodology, sample size, information collection, data processing, and even the diagnostic tests employed in the study were examined.

3.2 Research Design

Research design is depiction of the strategy or outline what a researcher adopts as a way of integrating the various inputs of data of the research study, in a manner that can be termed as coherent and logical. It therefore, brings out the blue print with which the research objectives are to be met. This study adopted descriptive research design that described the variables. It therefore, indicated the differences in means, and standard deviation so as to ascertain the variables that affect profitability of commercial banks in Kenya.

3.3 Population of the Study

The study population encompasses the entirety of objects, individuals, or other entities that are the subject of investigation. As a result, it describes the total assembly of objects or materials from which a researcher would like to draw conclusions. The research population involved all the commercial banks licensed to operate in Kenya. As of December 2021, CBK reported a total of 39 licensed commercial banks operating within the country (CBK, 2021), as shown by Appendix 1. Since the number was small, a census study was

undertaken where all the 39 banks were assessed over a span of five years, from 2017 to 2021.

3.4 Data Collection

Using data collecting forms, secondary data was gathered. The information was gathered from audited annual reports that were located on the websites of specific banks as well as in the supervisory reports of the Central Bank. Over the course of five years, cross-sectional data pertaining to the study variables was gathered. As a result, data on profitability as well as other independent variables were gathered for the study.

3.5 Data Analysis

Prior to transferring the acquired information to STATA, the data underwent editing and sanitization in Microsoft excel. Both inferential and descriptive statistics were employed to analyze the panel data. The descriptive statistics consisted of averages, standard deviation, lowest value and maximum value. Inferential statistics included; correlation analysis, the Hausman test for random and fixed effects and multiple linear regression. The Hausman test concluded that the random effect framework was the most suitable model for this investigation. To determine the efficacy of the regression model, the following diagnostic tests were performed: The Shapiro Wilk test to check for normality, the Wooldridge test to check for autocorrelation, the variance inflation factor to check for multicollinearity, the Levin-Lin Chu test to check for stationarity and the Breach-pagan test to check for heteroscedasticity.

3.6 Diagnostic Tests

Diagnostic examinations were performed to evaluate whether the data obtained in relation to study variables met the assumptions of linear regression. The study conducted diagnostic tests such as normality tests, heteroscedasticity tests, and stationarity tests.

3.6.1 Normality Test

The normality check determines if data is normally dispersed or is skewed positively or negatively. If data is regularly distributed and forms a normal curve, it passes the normality test. This is determined using the Shapiro-Wilk test. If the p-value is larger than 0.05, the variable is considered normally spread; otherwise, the variable is said to be non-normally dispersed. Squaring or standardizing data can be used to change data that is not delivered on a regular basis. According to the study findings, the data was normally distributed since the p-values of Shapiro Wilk test were greater than 0.05 level of significance.

3.6.2 Heteroscedasticity Test

The Breusch-Pagan examination was utilized to assess heteroscedasticity. The assumption is that the data is homoscedastic, thus any difference between each variable and the line of best fit is attributed to random variation. Bias is eliminated from the analysis due to the fact that the distribution lies uniformly above and below the line of best fit. Data that is heteroscedastic shows that prior to performing regression analysis, the data should be transformed. The results showed that the error terms had constant variance since the Breusch-Pagan test in chapter four had a p-value exceeding the significance level of 0.05.

3.6.3 Stationarity Test

The Levin-Len Chu test was employed in the investigation to determine if the time-series information utilized in this research was stationary or non-stationary. A stationary set of information does not show cyclical variability when a variable in the data set varies in value, but only when the variable changes. If the p-values of Levin-Len Chu tests are less than 0.05 it indicates that there is no presence of unit root. The results of the investigation demonstrated that the data didn't contain panel root since the p-values of Levin Lin Chu were found to be lower than the predetermined level of significance of 0.05.

3.6.4 Multicollinearity Test

The study employed Variance Inflation Factor to examine the presence of multi-collinearity in the study information. Multi-collinearity leads to indeterminate regression coefficients and infinite standard errors. VIF larger than 10 indicates the existence of significant multicollinearity. The study results indicated that there was indeed no presence of multi-collinearity between the independent variables since the values of the VIF were less than 10.

3.6.5 Autocorrelation

The Wooldridge analysis for serial correlation was employed in this research to ascertain whether auto-correlation was present in the linear panel data set. Serial auto-correlation, a frequent problem in panel data examination, needs to be considered so as to acquire the proper model specification. The study findings in chapter four demonstrated that there was

no existence of serial correlation between the residuals since the Wooldridge test had probability value greater than 0.05 level of significance.

3.7 Analytical Model

The analytical framework that was employed in the investigation took the following form:

$ROA_{it} = \beta_0 + \beta_1 MS_{it} + \beta_2 NPL_{it} + \beta_3 CA_{it} + \beta_3 CG_{it} + \varepsilon_{it}$.....3.1

ROA = Profitability of banks (ROA)

MS = Market Share (Total gross loans by the bank / Gross loans issued by all banks)

NPL= Non-Performing Loans (NPL /Total gross loans by the bank)

CA = Capital Adequacy (Capital adequacy ratio)

CG = Corporate governance (Gender diversity- ratio of male to female in the Board of Directors)

β1, β2, β3 and β4 are coefficients of MS, NPL, CA and CG

α is the constants while ε is the error term

3.8 Tests of Significance

To determine the study's significance, a t-test model was used. The model was easy to use and interpret, and it could determine the significant level for the study's sample. Because the study's degree of significance was set at 0.05, a confidence level of 95% was employed to denote statistical significance.

CHAPTER FOUR: DATA ANALYSIS, SUMMARY AND DISCUSSION OF FINDINGS

4.1 Introduction

The chapter covers the investigation and discovery of the information gathered from the research's variables. The study aimed to identify the variables influencing the commercial banks' profitability in Kenya. This goal significantly informed this analysis and the conclusions reached. The chapter discusses the analysis' inferential and descriptive statistics to realise the aim of the research. The conclusion of the chapter will include the inquiry conclusions' summary and their interpretation.

4.2 Descriptive Statistics

The analysis was secondary data-based, data that was collected from pertinent sources, such as the CBK annual reports and different banks' financial reports. To illustrate data distribution in each variable, the research described the data acquired for each variable in relations to standard deviation, mean, uppermost value, and lowermost value.

Table 4. 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	195	.3665	.2238	-32.15	7.400
MS	195	2.517	1.444	0.05	14.4
NPL	195	18.95	15.64	0	76.19
CA	195	21.09	13.41	-60.6	94.5
CG	195	24.18	9.697	0	50

Source: Researcher, (2023)

Table 4.1 above demonstrates that the research period was 2017-2021, which is a 5-year period forming a panel of 195 observations from Kenya's 39 commercial banks. The return on assets' mean was 0.3665, with a range of -32.15 to 7.400. The maximum value was

positive, suggesting that a specific commercial bank had made a profit in a certain year during the research period. The minimum value was negative, suggesting that during the study period, a certain commercial bank made loss. The standard deviation on the return on assets was 0.2238, which was lower than the mean indicating variance of return on assets during the study period.

Market share ranged from 0.05 to 14.4, with a 2.571mean and a 1.444 standard deviation. This shows that market share of commercial banks changed over the course of the inquiry. The lowest value demonstrated that some commercial banks had limited market value, which meant that they covered fewer operational areas. The highest value suggested that a commercial bank had a high market value and was operating in a broad geographic area. These findings also demonstrate how market value differs from bank to bank.

The mean for non-performing loans was 18.95, with standard deviations of 0.15.64, ranging from 0. to 76.19. This shows that non-performing loans vary greatly between banks. The positive maximum and minimum figures demonstrated that the issue of NPLs affected all some financial institutions and other commercial banks had zero non-performing loans. A minimum value shows that a certain bank had an extremely low rate of non-performing loans, indicating that the company was not adversely affected by these loans in the past. The maximum value suggests that other banks were significantly impacted by the issue of non-performing loans at some point during the period this study was done, showing that there was a loan defaults' high rate.

The mean for capital adequacy was 21.09, the standard deviation was 13.41, the minimum value was -60.6 and the maximum value was 94.5. The mean of capital adequacy was greater than the standard deviation this indicated that the study data varied across the study period. The minimum value suggests that a certain commercial bank in a particular year had very low capital adequacy, resulting in a lack of operating capital. Maximum value suggests that certain commercial bank had high capital adequacy, indicating that the firm had sufficient capital during a particular year. From the findings, the capital adequacy of various commercial banks varies from bank to bank.

Corporate governance had a standard deviation of 9.697 and a range of 0 to 50, with a mean of 24.18. This demonstrates how the commercial banks' gender diversity was distributed during the course of the research. The bottommost result revealed that some commercial banks had low gender representation, indicating that some banks had corporate governance issues. Some commercial banks higher gender diversity representation in their boards meaning that these commercial banks had good corporate governance practices. These results also show how corporate governance varies from one organization to another.

4.3 Inferential Statistics

This inquiry’s aim was to identify factors affecting profitability banks in Kenya. By utilizing inferential statistics to scrutinize the information, it was possible to realise the dependent and the independent factors’ relationship. Diagnostic tests, correlation analysis, panel data regression examination, and the Hausman test for random and fixed impact were all included in the inferential statistics.

4.3.1 Diagnostic Tests

The research carried some diagnostic test to assess whether or not the data met all the linear regression analysis assumptions. These tests included, normality tests, heteroscedasticity tests, multicollinearity test, Autocorrelation test and stationarity examination.

4.3.1.1 Normality Test

A normality examination was performed to check whether the distribution of the data collected conformed to the normal distribution of data. The Shapiro-Wilk test was employed in the research to examine whether the data for each variable was regularly distributed. If the probability value of the examination was over 0.05, the variable's data distribution would be declared normal.

Table 4. 2: Tests of Normality

Variable(s)	Obser	W	V	Z	Proba>z
ROA	195	0.9861	2.241	1.451	0.1512
MS	195	0.9721	2.212	1.486	0.1217
NPL	195	0.9897	2.930	1.201	0.1791
CA	195	0.9857	1.921	1.531	0.1409
CG	195	0.9821	1.912	1.071	0.1081

Source: Researcher, (2023)

Table 4.2 shows that all parameters in the study had probability values greater than 0.05, suggesting the non-rejection of null hypothesis and thus the conclusion that the data was normal. Therefore, the study adopted parametric tests to identify the impact of selected profitability factors of the Kenyan financial institutions.

4.3.1.2 Residual Normality

Normality examination of residues were done to guarantee normal distribution of residues. The study adopted Shapiro Wilk examination to test for residuals' normality. The tests'

null hypothesis states that data is normally spread at 0.05 level of significance. Table 4.3 below represents results for residuals normality test.

Table 4. 3: Shapiro Wilk test for Residues

Variable(s)	Obser	W	V	Z	Proba>z
Residues	195	.9712	1.956	1.181	.1321

Source: Researcher, (2023)

The results from table 4.3 above show probability value of 0.1321 which is greater than 0.05 implying the non-rejection of the null hypothesis and therefore the conclusion that the residuals were normally distributed.

4.3.1.3 Multi-Collinearity Test

The test's goal is to do away with any research data's potential collinearity issues by confirming that the independent variables do not have any correlation with each other. According to regression analysis, there is a problem when two independent variables are related and tend to measure or have a similar impact on the dependent variable. Variables with Variation Inflation Factors (VIF) multi-collinearity or a value greater than 10 may have an impact on regressions. VIF are used to assess multicollinearity.

Table 4. 4: Multi-collinearity Test

Variable	VIF	1/VIF
CA	1.41	0.7092
MS	1.26	0.7937
NPL	1.18	0.8475
CG	1.21	0.8264
Mean VIF	**1.265**	

Source: Researcher, (2023)

Table 4.4 reveals the study results of multicollinearity test. All the VIF values were greater than one and less than ten indicating the lack of a multicollinearity problem in the research variables.

4.3.1.4 Heteroscedasticity Test

This reserach used the Breusch-Pagan test to determine heteroscedasticity, which produces a Chi-Square statistic and associated probability value. Probability value less than 0.05 shows that heteroscedasticity exists. Breusch- Pagan examination's null hypothesis states that the error terms have a constant variance.

Table 4. 5 Heteroscedasticity Test

Breusch- Pagan/Cook-Weisberg examination for heteroscedasticity
Ho: Constant variance
Variables: fitted values
Chi2 (1)= 0.71
Proba > chi2= 0.5201

Source: Researcher, (2023)

The above table shows study findings on heteroscedasticity tests, the test's p-value was higher than 0.05 significance level indicating null hypothesis non-rejection and therefore, the conclude that the error terms of the study were constant.

4.3.1.5 Stationarity Test

This test was crucial since the inquiry used panel data consisting of cross-sectional and time series, necessitating the testing of the variables' assumed stationarity. Regression models that are unreliable and inaccurate are produced by non-stationarity data and may provide inaccurate outcomes. The Levin-Len Chu test was employed in the study for stationarity check. The test's null hypothesis is that panel root exists in the data. Probability results below 0.05 means that the null hypothesis is rejected. The table below presents the outcome for stationarity tests.

Table 4. 6: Stationarity Test Results

Variables	Period	Panel	T-Statistic	Prob-value
ROA	05	39	-7.714	0.0001
CA	05	39	-8.117	0.0000
MS	05	39	-7.218	0.0003
NPL	05	39	-6.164	0.0456
CG	05	39	-7.033	0.0004

Source: Researcher, (2023)

From table 4.6 above, the study results indicate that the entire probability values of the variables were lower than 0.05 level of significance indicating that our null hypothesis rejection and the conclusion that the data was stationary or did not contain panel root.

4.3.1.6 Test for Autocorrelation

Same variables' linear association at successive times is known as autocorrelation. When there is a correlation between the error terms in the regression framework and the time series, autocorrelation arises. The auto-correlation test assures that the R_2 was not inflated to show a superior match than what is actually the case. The Wooldridge test was employed in the inquiry to check for autocorrelation. The null hypothesis states that there lacked panel data's serial correlation. If there is no serial correlation and the Wooldridge examination's p-values are higher than the 0.05 level of significance. The outcomes for autocorrelation are show in table 4. 7 below.

Table 4. 7: Autocorrelation Tests

Wooldridge examination for Auto-correlation **H01: No serial correlation**
F(1, 6) = 0.19 **Proba> F = 0.5414**

Source: Researcher, (2023)

The table above, demonstrates Wooldridge examination outcomes which indicated that the probability rate of 0.5414 which was bigger than 0.05 significance level. Therefore, this research did not reject its null hypothesis and thus the conclusion that the model's residuals showed no autocorrelation.

4.4 Correlation Analysis

This inquiry is employed to discover how the controlled and uncontrolled elements relate. The inquiry adopted Pearson correlation model to show the relationship between selected factors as shown in the table below.

Table 4. 8: Correlations Table

	ROA	**CA**	**MS**	**NPL**	**CG**
ROA	1.000				
CA	0.2228*	1.000			
	0.0003				
MS	0.4315*	-0.1741	1.000		
	0.0007	0.1131			
NPL	-0.4391*	0.2131*	0.1103	1.000	
	0.0010	0.0184	0.1750		
CG	0.4136*	0.0158	-0.1809	0.1853	1.000
	0.0002	0.6161	0.5054	0.4828	

Source: Researcher, (2023) ***represents a 5% significant level.**

Table 4.8 presents the investigation's correlation outcomes. The investigation's results indicated a notable and favorable correlation between capital adequacy and productivity across commercial banks in Kenya. This finding is supported by a correlation coefficient of 0.2228 and a probability of 0.0003. The outcomes also demonstrated that market share has significant and positive relationship with these banks' productivity. This is substantiated by correlation coefficient of 0.4315 and probability of 0.0007 which was less than 0.05 significance level. These results showed that higher market share value will result in rise in profitability.

NLPs was found to have negative and substantial association with the commercial banks' profitability. This is supported by r of -0.4391 and probability value of 0.0010 which was found to be lower than the predetermined significant level. This indicated that high NPLs leads to reduction in the commercial banks' profitability. The inquiry also discovered that corporate governance had a notable and favorable association with the commercial banks' profitability in Kenya. This is backed up by r of 0.4136 and p-value of 0.0002 less which is less than 0.05 critical value. This implied that good corporate governance plays an important role in increasing commercial banks' profitability in Kenya.

4.5 Fixed and Random Effect Models

Random and Fixed effect frameworks are required when having panel data analysis. They are done to evaluate a study's most appropriate regression framework. The Hausman examination was utilized to identify the appropriate approach between fixed and random effect.

4.5.1 Fixed Effect Model

A fixed effects model takes into account each prospective association amongst the observed and unobserved elements. On utilizing these model, the impact on time-invariant variables are either partially or fully eliminated as shown in table 4.9.

Table 4. 9: Fixed Effect Model

ROA	Coef.	Std. Err.	T	P>|t|
MS	.6231	.1121	5.56	0.000
NPL	-.4011	.1312	-3.06	0.001
CA	.3816	.1876	2.03	0.002
CG	.4125	.1831	2.25	0.000
_cons	. 5146	.1176	4.38	0.000
R-SQ:				
Within= .5412			**F (3, 25) = 8.14**	
Between= .6714			**Proba> F = 0.0001**	
Overall= .5524			**Corr(u_i, Xb) = -0.2413**	

Source: Researcher, (2023)

4.5.2 Random Effect Model

Under this framework, it is presumable that all of the observable elements are independent from one another statistically or strongly uncorrelated. The random effects model is preferred because despite the fixed effects approach ability to approximate time-invariant elements' effects, its standard errors might be large. The outcomes are displayed in the table below.

Table 4. 10: Random Effect Model

ROA	Coefi.	Std. Error.	Z	Prob>|t|
MS	.5742	.1356	4.23	0.000
NPL	-.4510	.1831	-2.46	0.001
CA	.2721	. 0691	3.94	0.002
CG	.4742	.0913	5.19	0.000
_cons	.4621	.1663	2.78	0.000
R-SQ:				
Within= .5311			**F (3, 25) = 8.22**	
Between= .6811			**Proba> F = 0.0008**	
Overall= .5532			**Corr(u_i, Xb) = -0.2628**	

Source: Researcher, (2023)

4.5.3 Hausman Test for Random and Fixed effect

The Hausman examination is used to point out the best framework between random and fixed effects. The former is assumed to be appropriate in the null assumption of the Hausman examination. We do not reject the null assumption and come to the conclusion

that the random effect model is suitable if the Hausman analysis probability value is higher than 0.05. The outcomes are shown in the table below.

Table 4. 11: Hausman Specification Test

	(b) Fixed	(B) Random	(b- B) Diff	(V_ b- V_ B)) S.E.
MS	.6231	.5742	.0049	.0614
NPL	-.4011	-.4510	.0499	.0618
CA	.3816	.2721	.1095	.1581
CG	.4125	.4742	-.0617	.0430
	chi2(3) = (b-B)'[(V_b-V_B) ^ (-1)] (b-B)			
	= 3.14			
	Proba> chi2 = 0.4131			

Source: Researcher, (2023)

The results of the Hausman examination in the table, shows a probability value of 0.4131 which is greater than 0.05 significance level thus adopting the null assumption. Therefore, it was resolved that the random effect model was the study's most appropriate model as shown in table 4.10 above resulting in extraction of the following regression model that aided in assessing the impacts of factors affecting Kenyan commercial banks' profitability:

$ROA_{it} = 0.4621 + 0.5742MS_{it} - 0.4510NPL_{it} + 0.2721CA_{it} + 0.4742CG_{it}$ …4. 1

In which;

ROA= Return on Asset.

MS =Market Share

NP = Non-Performing Loans

CA= Capital Adequacy.

t= time in years

i = Commercial Bank

As per this regression equation's results above, the 0.4621constant show that the commercial banks' profitability in the country will be 0.4621 if the selected factors are not implemented by the bank.

4.6 Summary and Discussion of Results

According to the random effect model, it was found out this the model was significant statistically with a prob>F of 0.008 which was less than 0.05 significant level. The findings also pointed that the selected factors were good determinants of these commercial banks' profitability. This finding is shown by overall R square was 0.5532, implying that the model explained 55.32% in the commercial banks' profitability variations in Kenya (dependent variable). The remaining 44.68% variation was taken care of by other factors which were not addressed by the model.

This study's first aim was to assess the impact of MS on the profitability (ROA) of banks in Kenya. The research's null assumption was that MS value has no notable impact on commercial banks' profitability. The investigation concluded that MS had a favorable and notable impact on Kenya's banks' ROA. This was backed up by r of 0.5742 with probability value of 0.000<0.05 and Z-statistics 4.23 greater than the Z-critical of 1.96, indicating that market share value has positive and significant impact on banks' ROA. Therefore, the study rejected null assumption and concluded that MS has positive and significant impact on commercial banks' profitability in Kenya. These research findings indicated that a unit surge in market share value will lead to subsequent rise in profitability by 0.5742 units. These outcomes are in agreement with (Al-Harbi, 2019) whose research

showed that market share value had favorable and significant influence on commercial banks' financial productivity of the country.

This study's second objective was to evaluate the effect of NPL on l banks' profitability. Its null assumption was that NPLs has no significant impact on commercial banks profitability in Kenya. The outcomes indicated that NPLs has notable and adverse influence on these commercial banks' profitability. These results are backup by regression coefficients of -0.4510 with a probability value of 0.001 which is less than 0.05 significant value and calculated Z-score of -2.46 less than Z-tabulated of -1.96. This implied adverse and notable impact on Kenyan banks' profitability by non-performing loans. These research findings showed that a unit rise in non-performing loans leads to subsequent decrease in commercial banks' performance in Kenya by 0.4510 units. The outcomes correspond to those of Nguyen, (2021), who found that NPLs leads to decrease in financial productivity. These results also agree with Brahmaiah (2018), who found that the capital adequacy percentage of NPAs to total loans had a considerable adverse influence on profitability.

The research's third aim was to determine the impact of capital adequacy on commercial banks' profit making. The objective's null assumption was that CA has no notable effect on banks' profit making in the country. The research outcomes in Table 4.10 and regression equation 4.1 proved that CA has a favourable and notable influence on these banks' profit making. This was supported by r of 0.2721 and probability of 0.002 and statistic Z-score of 3.94 which was higher than critical Z-score of 1.96. This implied that the investigation

rejected the null assumption and thus resolved that CA has favourable and notable influence on these commercial banks' profit making. The outcomes imply that a unit surge in CA will result in accompanying rise in these banks' profit making by 0.2721 units. These outcomes collaborate with (Grunthan, 2020), whose research indicated that capital adequacy has favourable and notable impact on the profit making by firms in India. The outcomes also collaborate with (Hafez & El-Ansary, 2015) whose findings showed that a unit rise in CA resulted in subsequent rise in financial performance. Similarly, Lohano and Kashif (2019) also established that capital ratio had significant implications on enhanced financial performance.

This research's last aim was to evaluate the effect of corporate governance as measured by gender diversity of the panel of directors on profitability of banks in Kenya. This aim was based on the hypothesis that corporate governance has no notable impact on these financial institutions' profit making. The study outcome concluded that corporate governance has a favorable and notable impact on profitability of the mentioned banks. These findings were reinforced by r of 0.4742 and probability value of 0.000 which was lower than 0.05 significance level. It also in line with Z-score statistic results of 5.19 which is higher than Z-critical of 1.96. Therefore, the investigation rejected the null assumption and thus the conclusion that corporate governance has a positive and significant impact on these commercial banks' profitability. These results meant that a unit rise in corporate governance leads to a subsequent increase in Kenyan commercial banks' profit making by 0.4742 units. These findings are in line with (Castrillo & Alfonso, 2020), who indicated that corporate governance leads to positive improvement in financial productivity.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study addresses how the its objective was met in the study's summary in this chapter. The chapter also includes the inquiry's conclusion based on the data, an in-depth recommendation, and constraints experienced during the study time. The chapter finishes by identifying future study directions.

5.2 Summary of the Study

The aim of the research was to look at the factors affecting commercial banks' profitability in Kenya. The purpose was to determine whether market share, capital adequacy, non-performing loans, and corporate governance had an impact on these banks' profitability. The research employed Dynamic Capability Theory, Crisis Management Theory and Modern Portfolio Theory. To do so, this investigation gathered secondary data from a variety of sources, including the banks' websites under study and CBK, which supplied annual financial reports. The inquiry utilized both descriptive and inferential statistics to analyse the data.

The descriptive analysis showed that most of the commercial bank's profitability was positive with a mean of 0.3665 meaning that the average profitability across the banks was 0.3665. A few commercial banks however, made some losses. This is indicated by the minimum value of -0.3215 implying that these banks made some loss during a certain

period of the years under review. The return on assets had a maximum value of .9675 which was positive, indicating that the bank made a reasonable profit during the study period.

The descriptive statistics further established that market share varied from one firm to another and from one period to another. This is evident by the lower and higher values of .05 and 14.4 respective Non-performing loans also varied across the period of this research. This is evident by the lower value of 0 and the higher value of 76.19 respectively. It was also established that capital adequacy varied from one firm to another and across the research period with a smaller value of -60.6 and higher value of 94.5. Finally, it was established that corporate governance varied from one firm to another and across the research period with a smaller value of 0 and higher value of 50.

Inferential statistics that were done consisted of correlation and regression examination. Correlation examination pointed out that market share had a notable and favourable association against commercial banks' profitability in Kenya implying that a change in market share would result in significant impact on Kenya commercial banks' profitability. NPL indicated a negative and significant correlation against profitability. Capital adequacy on the hand indicated a positive significant correlation against profitability implying that its change would result in a significant change in these banks' profitability. Corporate governance showed a positive and significant correlation against profitability assuming that improved governance of companies would result in a rise in these banks' profitability. In regression analysis, the model only explained 55.32% of the changes in Kenyan commercial banks' profitability (dependent variable). The regression analysis also

established that market share, capital adequacy and corporate governance had a notable and favourable impact on financial institutions' profit making. This implied that a rise in the mentioned variables leads to subsequent increase in commercial banks' profitability in Kenya. Non-performing loan on the contrary, was observed to have negative and significant impact on these institutions profit making. This implied that a rise in NPLs leads to decrease in the commercial banks' profitability in Kenya.

5.3 Conclusion and Recommendations

5.3.1 Conclusions

The conclusions of this study were done based on its inferential statistics as follows:

From the inferential statistics, market share and the commercial banks' profitability in Kenya are significantly and positively correlated. The regression model also showed that MS had a favourable and notable impact on these banks' profitability. r of 0.5742 and prob-value of 0.000 both prove this. This implies that an increase in market share per unit also increases the commercial banks' profitability. Consequently, it was concluded that market share had a favourable and notable influence on these banks' profit making in Kenya. Most of these banks cover small percentage of the total market share in Kenya and thus having lower profitability. Therefore, commercial banks should shift more focus on improving their market share which will eventually result in a rise in profit making as the banks will be able to reach more customers.

The realised that non-performing loans had a detrimental and notable association with banks' profitability. This implies that the productivity of Kenyan commercial institutions is adversely affected by NPLs. The regression analysis also established that NPLs has a detrimental and notable impact on these entities profit making. This finding is supported by r of -0.4510 and probability value of 0.001. This indicates that unit rise in non-performing loans would result in fall in these banks' profitability in Kenya. Therefore, the inquiry concluded that NPLs has a detrimental and notable impact on financial entities' profit making in Kenya.

The research inferential statistics also concluded that capital adequacy had a favourable and notable association with profit making implying that the unit rise in CA leads to subsequent rise in the banks' profit making in Kenya. The regression analysis also established CA has positive and notable impact on Kenya's commercial banks' profitability. This is supported by r of 0.2721 and probability value of 0.002. This shows that a unit rise in capital adequacy will consequently lead to a 0.2721 rise in these banks' profitability in Kenya. Therefore, the inquiry concluded that CA has favourable and notable impact on banks' profit making in Kenya. Some commercial banks in Kenya operate below the set minimum capital adequacy ratio, for instance in descriptive statistics, a certain bank in a particular year was having 0 capital adequacy ratio. This implies that some commercial banks in Kenya did not have enough funds to lend out to customers thus having low profitability.

The study inferential statistics also indicated that corporate governance (gender diversity) had a positive significant correlation against profitability implying that the unit rise in corporate governance would consequently result in a subsequent increase in these banks' profitability in Kenya. The regression analysis also established corporate governance has favourable and notable impact on commercial entities' profitability. This finding is backed up by r of 0.4742 and probability value of 0.000. This indicates that a unit rise in corporate governance leads to 0.4742 increase in Kenya's commercial banks' profitability.

Therefore, the research resolved that corporate governance has favourable and notable impact on the profitability of Kenya's banks. In the recent past, commercial banks in Kenya have been faced with major corporate governance issues which have led to closure of some banks for instance Imperial bank and Chase bank were placed into liquidation because of corporate governance issues. In this study, gender diversity for some commercial banks were realised to be very low as shown by descriptive statistics which indicated that a certain commercial bank was having 4.57% gender diversity ratio. This may be the reason why some commercial have profitability problems.

5.3.2 Recommendations

The study established that market share positively affects profitability. This means that high market share value improves profitability of these banks in the country. Therefore, the research suggests that these banks must innovate strategies to increase their market share that will in turn boost their profitability. This is because by increasing market share the firm will reach more customers which in turn improves the profitability. The study also

recommends that the banks can expand market share through investing in remote markets where banking services are not available.

The study also realised that, non-performing loans negatively impacts banks' profit making. This means that a rise in NPLs would lead to a subsequent fall banks' profitability. Therefore, this research recommends that financial entities should work to lower the levels of NPLs. This can be realised through clear verifications of loan applicants, reducing rates of debts, identifying loan load that can easily be managed by the bank and ensuring that credit risk is effectively managed.

The findings showed that capital adequacy positively affected financial entities' profit making in Kenya. This shows that a rise in CA will result in a subsequent rise in these banks' profitability. Therefore, the research recommends that commercial banks should identify optimum capital structure that will ensure there is enough funds to run the activities of the bank. This can also be done through proper management of working capital that will ensure there is enough funds for catering for short-term obligations of the bank.

Finally, the investigation realised that gender diversity has positive and notable impact on a commercial entity's profit making in Kenya. This implies that having high percentage of gender diversity in the Board of Directors leads to subsequent increase in commercial banks' profitability. Therefore, the inquiry suggests that Kenyan commercial banks must come up with good corporate governance structures and models that puts the objectives of the bank first.

5.4 Limitation of the Study

The research only employed selected micro (internal) factors affecting commercial banks' profitability in Kenya and not all factors due to limitation of data availability. Moreover, the study excluded macro (external) factors which also affect profitability a great deal.

This research project's scope was five years, from 2017 to 2021. Nevertheless, the reliability of the outcomes over an extended period of inquiry remains undetermined. In addition, it is unsure whether or not similar results would be found past 2021. A longer research period would be more conclusive because it would take into consideration more commercial circumstances.

During data analysis, the study applied multiple regression model. Because of limitations of pegged on regression frameworks which may yield outcomes that are misleading and erroneous when elements rates vary. In this case, the researcher would be limited to generalize the study outcomes with no surety. The inclusion of additional data in the interactive regression framework may potentially undermine the hypothesized association between two or more variables in this study.

5.5 Areas of Further Research

The research concentrated on internal factors affecting commercial banks' profitability in Kenya and used secondary data. This inquiry suggests further research where other internal variables not used in this study as well as external factors are considered covering all commercial banks in the country as well as other financial institutions.

The study used data covering five (5) years because as it represented the most current and readily accessible data. Subsequent investigations could incorporate a broader temporal scope, spanning from the year 2000 to date which can be more significant in confirming or disapproving this study's findings.

Lastly, due to limitations of regression models, this research suggests further research using other frameworks s such as Vector Error Correction Model (VECM) to analyse the relationship amongst variables.

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APPENDICES

APPENDIX 1: LIST OF LICENCED COMMERCIAL BANKS IN KENYA

S/N	BANK NAME
1	Absa Bank
2	Access Bank
3	African Banking Corporation
4	Bank of Africa
5	Bank of Baroda
6	Bank of India
7	Citibank
8	Consolidated Bank
9	Co-operative Bank
10	Credit Bank
11	Development Bank
12	Diamond Trust Bank
13	DIB Bank
14	Ecobank
15	Equity Bank
16	Family Bank
17	First Community Bank
18	Guaranty Trust Bank
19	Guardian Bank
20	Gulf African Bank
21	Habib Bank
22	HFC
23	I&M Bank
24	KCB
25	Kingdom Bank
26	Mayfair Bank
27	Middle East Bank
28	M-Oriental Bank
29	National Bank
30	NCBA Bank
31	Paramount Bank
32	Prime Bank
33	SBM Bank
34	Sidian Bank
35	Spire Bank
36	Stanbic Bank
37	Standard Chartered Bank
38	UBA Bank
39	Victoria Bank

APPENDIX II: DATA USED

BANK ID	YEAR	ROA	MS	NPL	CA	CG
1	2017	3.68	6.57	7.12	18.00	44.44
1	2018	3.20	6.68	7.44	16.40	45.45
1	2019	3.20	6.80	6.58	16.70	40.00
1	2020	2.20	6.23	7.44	17.50	30.00
1	2021	3.40	6.37	7.73	17.10	36.36
2	2017	0.52	0.28	21.66	30.20	25.00
2	2018	(1.00)	0.25	24.20	19.60	14.29
2	2019	(0.60)	0.21	30.03	20.20	-
2	2020	(19.81)	0.18	4.57	21.20	16.67
2	2021	0.70	0.21	6.46	20.60	25.00
3	2017	0.82	0.59	21.59	15.10	28.57
3	2018	0.60	0.59	22.73	15.80	37.50
3	2019	0.60	0.57	17.68	15.40	33.33
3	2020	0.45	0.58	15.60	15.20	33.33
3	2021	0.30	0.57	19.72	16.20	33.33
4	2017	0.06	1.25	31.47	15.80	50.00
4	2018	0.40	0.99	36.22	16.00	50.00
4	2019	(6.70)	0.80	39.91	10.80	50.00
4	2020	(1.51)	0.72	39.77	16.30	50.00
4	2021	0.70	0.65	31.71	17.50	42.86
5	2017	5.26	2.56	6.07	32.30	12.50
5	2018	4.20	2.92	8.99	34.70	12.50
5	2019	3.80	3.11	8.36	32.70	12.50
5	2020	3.48	3.21	12.40	30.70	14.29
5	2021	3.70	3.14	10.47	30.00	14.29
6	2017	4.72	1.55	2.09	54.00	25.00
6	2018	3.90	1.60	7.03	43.90	30.00
6	2019	4.50	1.56	8.91	48.40	22.22
6	2020	3.64	1.64	4.75	48.50	22.22
6	2021	4.00	1.72	2.78	52.20	33.33
7	2017	6.49	2.56	4.53	25.60	42.86
7	2018	6.60	2.15	3.00	27.60	18.18
7	2019	5.80	2.12	4.12	27.20	42.86
7	2020	5.15	2.20	2.82	22.50	33.33
7	2021	4.50	2.30	1.90	18.80	27.27
8	2017	(3.26)	0.26	25.11	5.10	10.00
8	2018	(2.70)	0.23	25.32	29.80	22.22
8	2019	(4.40)	0.25	29.48	13.50	30.00
8	2020	(2.03)	0.23	24.05	9.20	30.00

BANK ID	YEAR	ROA	MS	NPL	CA	CG
8	2021	(2.00)	0.22	27.51	5.30	30.00
9	2017	4.31	9.85	7.13	22.70	12.50
9	2018	4.30	9.44	11.63	17.90	12.50
9	2019	4.50	9.65	11.07	15.80	15.38
9	2020	3.41	9.56	16.85	17.00	15.38
9	2021	3.90	9.42	12.96	17.10	15.38
10	2017	1.24	0.38	8.62	15.90	25.00
10	2018	1.90	0.41	8.28	14.50	33.33
10	2019	1.40	0.44	10.08	15.00	33.33
10	2020	0.04	0.42	11.52	14.50	22.22
10	2021	0.80	0.41	28.24	15.80	30.00
11	2017	0.35	0.37	21.57	23.60	10.00
11	2018	1.10	0.32	28.70	23.20	20.00
11	2019	7.40	0.34	34.09	31.50	27.27
11	2020	0.11	0.33	33.70	22.20	27.27
11	2021	0.40	0.30	29.31	19.50	25.00
12	2017	3.05	6.72	7.59	19.00	16.67
12	2018	3.30	6.55	7.25	21.10	16.67
12	2019	3.20	6.34	8.30	20.90	16.67
12	2020	1.26	6.00	11.90	22.50	16.67
12	2021	1.40	5.64	15.80	21.20	15.38
13	2017	(32.15)	0.10	-	70.10	25.00
13	2018	(16.60)	0.17	0.38	29.90	27.27
13	2019	(8.80)	0.21	0.99	14.90	27.27
13	2020	(5.22)	0.28	1.42	16.20	20.00
13	2021	(4.40)	0.29	14.97	15.80	27.27
14	2017	(2.68)	1.27	38.62	16.00	25.00
14	2018	0.30	1.19	21.67	16.60	18.18
14	2019	0.30	1.42	19.83	16.30	10.00
14	2020	0.01	1.55	16.28	15.90	25.00
14	2021	0.60	1.49	16.12	17.20	20.00
15	2017	5.68	9.93	6.66	16.50	30.00
15	2018	5.60	9.73	7.39	14.00	27.27
15	2019	5.10	10.24	9.01	17.40	33.33
15	2020	2.13	11.75	12.76	16.20	44.44
15	2021	4.70	13.57	8.43	18.80	44.44
16	2017	(1.99)	1.71	20.20	19.90	25.00
16	2018	0.60	1.56	17.31	19.50	28.57
16	2019	1.70	1.66	15.16	18.70	25.00
16	2020	1.46	1.68	14.88	17.90	33.33

BANK ID	YEAR	ROA	MS	NPL	CA	CG
16	2021	2.80	1.81	15.04	20.90	28.57
17	2017	1.25	0.39	40.01	15.30	18.18
17	2018	(1.60)	0.35	46.21	9.10	27.27
17	2019	1.00	0.34	39.71	8.10	18.18
17	2020	1.09	0.37	36.08	9.30	25.00
17	2021	2.40	0.38	28.82	8.90	18.18
18	2017	0.87	0.85	10.34	26.90	18.18
18	2018	1.20	0.77	18.93	27.00	20.00
18	2019	1.70	0.77	18.47	26.30	11.11
18	2020	1.58	0.74	20.80	27.30	11.11
18	2021	2.60	0.71	13.79	25.40	12.50
19	2017	1.44	0.40	10.89	20.20	22.22
19	2018	2.20	0.38	9.88	22.70	14.29
19	2019	1.50	0.36	9.54	22.20	11.11
19	2020	0.45	0.32	12.77	23.60	9.09
19	2021	0.80	0.31	16.40	26.40	9.09
20	2017	0.81	0.77	9.74	16.20	25.00
20	2018	0.90	0.73	9.66	18.70	22.22
20	2019	0.60	0.71	14.70	17.10	18.18
20	2020	1.49	0.68	17.57	19.00	27.27
20	2021	1.80	0.62	16.11	19.10	30.00
21	2017	2.19	0.45	10.42	27.10	30.00
21	2018	1.70	0.47	9.01	24.60	27.27
21	2019	1.60	0.50	11.24	27.30	27.27
21	2020	1.66	0.47	12.21	26.60	20.00
21	2021	1.90	0.46	11.62	34.50	20.00
22	2017	0.63	1.43	15.60	17.00	33.33
22	2018	(0.70)	1.23	27.09	15.60	33.33
22	2019	-	1.14	27.53	14.30	33.33
22	2020	(1.77)	1.00	25.81	9.10	37.50
22	2021	(1.30)	0.86	22.05	12.10	37.50
23	2017	4.09	4.78	13.91	18.60	11.11
23	2018	3.80	5.32	14.62	17.90	9.09
23	2019	4.70	5.65	12.30	21.60	18.18
23	2020	3.63	5.63	12.56	22.00	10.00
23	2021	3.40	5.31	10.75	21.40	9.09
24	2017	4.94	14.14	8.30	16.10	20.00
24	2018	5.00	14.40	6.91	17.80	10.00
24	2019	4.90	13.89	7.43	17.50	18.18
24	2020	3.11	14.05	12.26	19.40	25.00

BANK ID	YEAR	ROA	MS	NPL	CA	CG
24	2021	4.90	13.81	15.77	20.50	33.33
25	2017	(5.93)	0.35	21.21	19.30	16.67
25	2018	(3.80)	0.21	69.62	22.50	33.33
25	2019	(13.30)	0.12	56.50	8.30	30.00
25	2020	(0.41)	0.28	76.20	13.80	20.00
25	2021	1.60	0.29	74.45	14.90	20.00
26	2017	(8.38)	0.11	-	94.50	27.27
26	2018	(3.90)	0.16	-	44.90	30.00
26	2019	(4.20)	0.17	1.45	17.70	18.18
26	2020	(2.76)	0.31	2.55	53.10	20.00
26	2021	0.60	0.29	3.75	40.30	10.00
27	2017	(0.81)	0.14	44.36	42.60	33.33
27	2018	-	0.14	40.05	30.90	33.33
27	2019	0.70	0.18	14.14	31.20	28.57
27	2020	0.95	0.20	10.34	27.90	28.57
27	2021	1.30	0.18	7.88	26.00	28.57
28	2017	1.10	0.32	10.45	33.90	16.67
28	2018	1.00	0.30	9.64	23.70	16.67
28	2019	0.50	0.31	18.93	34.40	16.67
28	2020	0.33	0.28	23.40	30.50	16.67
28	2021	0.50	0.26	26.82	29.70	-
29	2017	0.67	2.37	40.58	5.40	16.67
29	2018	0.50	2.24	47.58	3.70	14.29
29	2019	(0.70)	2.19	41.49	11.50	20.00
29	2020	0.25	2.17	35.36	10.30	33.33
29	2021	0.90	2.31	33.50	14.30	33.33
30	2017	3.13	6.04	7.29	17.30	10.00
30	2018	3.40	5.66	7.84	1.00	
30	2019	2.00	10.10	12.49	18.60	6.25
30	2020	1.41	9.70	13.86	17.90	
30	2021	3.10	9.72	16.00	18.40	8.33
31	2017	1.01	0.25	12.26	27.40	33.33
31	2018	1.50	0.24	17.32	28.50	22.22
31	2019	0.80	0.23	17.60	30.10	25.00
31	2020	0.85	0.22	17.07	24.70	30.00
31	2021	1.20	0.22	19.13	27.90	30.00
32	2017	2.59	2.01	5.66	22.50	30.00
32	2018	2.10	2.56	7.40	37.30	33.33
32	2019	2.30	2.59	11.70	41.40	33.33
32	2020	1.59	2.44	10.86	39.30	30.00

BANK ID	YEAR	ROA	MS	NPL	CA	CG
32	2021	2.30	2.43	10.93	41.60	33.33
33	2017	(3.07)	0.25	58.64	16.40	20.00
33	2018	1.40	1.37	69.11	24.30	20.00
33	2019	1.60	1.32	55.02	23.10	27.27
33	2020	0.78	1.31	44.14	17.20	27.27
33	2021	0.30	1.21	34.35	16.40	30.00
34	2017	(3.28)	0.49	21.05	16.50	16.67
34	2018	(2.20)	0.59	20.85	14.40	16.67
34	2019	0.20	0.53	20.56	17.90	10.00
34	2020	0.31	0.56	11.45	16.50	16.67
34	2021	1.70	0.60	11.83	18.60	33.33
35	2017	(14.14)	0.23	34.21	12.70	12.50
35	2018	(3.30)	0.09	43.97	(22.00)	16.67
35	2019	(6.60)	0.06	51.47	(20.60)	28.57
35	2020	(24.59)	0.07	70.84	(60.60)	25.00
35	2021	(30.20)	0.05	75.98	(10.90)	20.00
36	2017	2.34	5.62	7.65	17.60	33.33
36	2018	3.10	5.88	10.70	17.40	14.29
36	2019	2.80	5.64	11.81	18.30	16.67
36	2020	1.96	5.53	14.18	18.10	25.00
36	2021	3.00	5.22	11.20	17.30	20.00
37	2017	3.34	7.11	12.64	18.50	30.00
37	2018	4.00	6.60	16.27	19.50	30.00
37	2019	4.20	6.37	13.88	17.70	27.27
37	2020	2.15	6.10	14.63	18.50	27.27
37	2021	3.60	5.70	15.74	17.80	20.00
38	2017	0.21	0.21	4.59	38.80	16.67
38	2018	0.20	0.35	12.76	33.20	28.57
38	2019	0.70	0.34	22.99	25.40	33.33
38	2020	0.30	0.33	40.75	30.40	33.33
38	2021	(10.20)	0.19	47.79	12.60	20.00
39	2017	3.27	0.71	0.09	22.70	16.67
39	2018	1.70	0.77	3.05	21.10	28.57
39	2019	1.90	0.78	4.91	20.20	28.57
39	2020	1.27	0.74	6.60	18.80	33.33
39	2021	1.20	0.74	13.88	16.60	22.22