EFFECT OF PRODUCT INNOVATION ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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DECLARATION

I declare that the work in this dissertation has not been previously published or submitted elsewhere for award of a degree. I also declare that this my own original work and contains no material written of published by other people except where due reference is made and author duly acknowledged.

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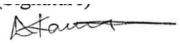
Signature…  Date 10 October 2023

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ABSTRACT

Against the backdrop of heightened competition for the unbanked population, retention of existing members, changing customer preferences and the need for revenue growth at low operating costs for profitability, commercial banks in the country are increasingly adopting product innovation. It however remains scantily explored in the Kenyan body of knowledge, how these product innovations have influenced the intended financial performance of commercial banks in the country. While several related empirical studies have been conducted in the Kenyan literature, notable contextual, methodological, and conceptual gaps still remain. Occasioned by these gaps, the present study sought out to assess the effect of product innovation on financial performance of commercial banks in Kenya. More specifically, the study sought to examine the effect of issuance of credit cards on the financial performance of banks in Kenya; to examine the effect of the use of internet banking on the financial performance of banks in Kenya; to determine the effect of the use of mobile banking on the financial performance of banks in Kenya; and to determine the effect of use of agency banking on the financial performance of banks in Kenya. The study was grounded on three theories, including the Dynamic Capability theory, Diffusion of Innovation Theory and Blue Ocean Theory. This research used the descriptive research design method, with the target population comprising all 39 Commercial Banks as at December 31, 2022. Owing to the relatively manageable population size, the present study adopted a census survey of all 37 commercial banks. The study utilized secondary quantitative data that was collected from the commercial banks' annual integrated financial reports. The study adopted multiple linear regression, whereby five-year average data points for each variable were used. A combination of both descriptive and inferential statistics was used in data analysis. The regression model used in this study was $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$ where, Y=Financial Performance (ROA), X_1 = Issuance of Credit Cards, X_2 = Internet banking X_3 = Mobile banking, X_4 = Agency banking, β_0 = Constant, and β_1, β_2, β_3 and β_4 = Regression Coefficients and ε = Error Term. The study found that this model could was statistically significant and that it could be used to explain 24.3% of the bank's performance measured in return on assets for banks in Kenya. The study found that Agency Banking had the most influence on return on assets and that Mobile banking had the least influence

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DEDICATION

I wish to dedicate this piece of work to my loving family, for the support and encouragement that they gave to me.

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TERMS AND DEFINITIONS

Agency banking:	A banking concept that allows banks and financial institutions to extend their services to customers in remote or underserved areas through third-party agents **(**Akighir et al., 2022**)**
Credit cards:	Payment cards issued by banks and financial institutions that allow to borrow money up to a predetermined credit limit to make purchases or withdraw cash (Chakravorti & To 2017)
Financial performance:	The evaluation of a bank's overall financial health and its ability to Generate profits and achieve its financial goals (Francesca & Claeys, 2020).
Internet banking:	A digital platform provided by banks and financial institutions that allows customers to conduct various banking transactions and services over the internet (Hanafizadeh et al., 2019)
Mobile banking:	The use of mobile devices, such as smartphones or tablets, to perform banking transactions and access financial services (Frame et al., 2020).
Product innovation:	The introduction of new services to the bank’s customers that effectively benefit the customers and benefit the bank in terms of improved financial performance (Adom et al., 2018).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Across both developed and developing economies, the performance of commercial banks is of eminence, since the soundness of the banking industry is closely connected to the soundness of the whole economy (Noreen et al., 2022). Commercial banks are particularly responsible for availing deposit and credit facilities which stimulate economic growth by generating businesses, creation of employment and contribution to Gross Domestic Product (GDP); financing investment portfolios; as well as expanding the national reserve by generating high revenue (World Bank, 2018). In events of economic adversities and recession, commercial banks also help in financing tangible investments and hedging risk (Takon et al., 2019). As such, well performing commercial banks are indicative of a well performing economy.

To enhance their performance, and particularly occasioned by the increasingly competitive nature of the banking industry, commercial banks are constantly adopting a myriad of strategies aimed at differentiating themselves from their competitors. Notable among these, has been the adoption of product innovation (Mwai, 2021). By introducing innovative products and services, banks seek to attract new customers and retain existing ones, giving them a competitive edge in the market. Further, with the rise of digital technology and the increasing use of smartphones, customers expect convenience and personalized services from their bank (Kohlscheen et al., 2020). By adopting product innovation and offering user-friendly and tech-savvy solutions, banks seek to meet these expectations. Ultimately, by offering unique and

valuable services, banks seek to charge premium fees or attract more customers, ultimately boosting their bottom line (El Chaarani & El Abiad, 2019).

New and innovative banking products are also introduced to attract more customers and increase market share. These products often have unique features and value propositions that appeal to specific customer segments, leading to higher demand and increased revenue streams (Ferguson et al., 2020). Introducing innovative products are also aimed at enhancing customer satisfaction and loyalty. When banks offer cutting-edge services and solutions, customers are more likely to stay with the bank and continue using its products, reducing customer churn and improving retention rates (Khraisha & Arthur, 2020). In a competitive banking industry, product innovation can be a key differentiator. Banks that offer unique and customer-centric products seek to stand out from their competitors, making it easier to attract new customers and retain existing ones (Mabrouk & Mamoghli, 2019).

Product innovations are often driven by identifying and addressing specific customer needs and pain points. By launching products that cater to these needs, bank set out to establish themselves as customer-focused institutions and build stronger customer relationships (Akhisar et al., 2019). Some product innovations are designed to improve internal processes and operational efficiency. By streamlining processes and adopting advanced technologies, banks aim at reducing costs and improving overall financial performance (Daneshvar & Ramesh, 2022). Introducing a diverse range of innovative products can help banks spread their risks across various markets and customer segments. A well-diversified product portfolio can provide stability and reduce the impact of adverse market conditions (Tolba & Mourad, 2021).

It is deducible from the foregoing, that overall, the adoption of product innovation is aimed at allowing commercial banks to adapt to a rapidly changing financial landscape, better serve their customers, maintain a strong position in the market and boost their profitability. It however remains scantily explored in the Kenyan body of knowledge, the effect of product innovation on financial performance of commercial banks in Kenya, leading to the present study.

1.1.1 Product Innovation

In the context of banking, product innovation involves the creation of innovative solutions, leveraging technological advancements, and incorporating unique features to enhance the overall banking experience for consumers and businesses (Gündoğdu & Taşkın, 2021). Product innovation is a crucial strategy for commercial banks to remain competitive, attract and retain customers, and adapt to the rapidly changing landscape of the financial sector. Typical product innovations in the banking industry include credit cards, internet banking, mobile banking, and agency banking (Frame et al., 2020). These innovations have driven customer satisfaction, increased efficiency, and expanded the reach of banking services to a wider audience, demonstrating the importance of ongoing product innovation to stay competitive and relevant in the dynamic financial landscape (Adom et al., 2018).

Debit cards are a classic example of product innovation in the banking industry (Mabrouk & Mamoghli, 2019). They revolutionized the way people make payments by offering convenience, security, and flexibility in managing finances, making them a popular choice for consumers worldwide. They have become widely popular and are commonly used by consumers as an alternative to cash or credit cards. Debit cards offer a convenient and secure way to access funds in a bank account without carrying physical cash (Khraisha & Arthur, 2020). Debit cards

have become an essential part of the modern banking landscape, providing customers with a convenient, secure, and efficient means to access their funds. They serve as a bridge between traditional banking services and the digital era, enabling individuals to conduct various transactions seamlessly. Debit cards play a crucial role in the ongoing trend of product innovation within the banking industry, enhancing customer experiences and financial inclusivity (Tabas et al., 2022).

Product innovation is also about reaching underserved or unbanked populations. Many banks are introducing inclusive financial products to cater to those who were previously excluded from traditional banking services (Yao et al., 2018). Mobile banking takes the concept of internet banking one step further by providing banking services through mobile devices. With mobile banking apps, customers can perform banking tasks on their smartphones and tablets, making banking even more accessible on the go (Akhisar et al., 2020). Mobile banking apps often include features like mobile check deposit, real-time notifications, and biometric authentication for enhanced security. The widespread adoption of mobile banking has enabled banks to cater to tech-savvy customers and extend their reach to previously underserved areas (Khraisha & Arthur, 2020).

Internet banking, also known as online banking, is another significant product innovation strategy. Internet banking provides customers with a secure login to access their bank accounts online. They can view their account balances, transaction history, and download account statements (Malhotra & Singh, 2019). Customers can access their accounts and perform banking activities from the comfort of their homes or on the go, eliminating the need to visit physical bank branches. Internet banking allows customers to access their bank accounts, make transactions, pay bills, and perform various banking activities through a secure website or mobile

app (De Young et al., 2023). It provides customers with 24/7 access to their accounts from anywhere, reducing the need to visit physical bank branches. Internet banking has transformed the banking experience, making it more convenient, efficient, and accessible for customers (Acharya, 2021).

Agency banking is a product innovation strategy aimed at expanding banking services to rural and remote areas, where setting up physical bank branches may not be feasible. It involves partnering with local agents, such as grocery stores or post offices, who act as intermediaries for providing basic banking services on behalf of the bank (Lyimo & Mwasakabeto, 2021). Customers can perform cash deposits, withdrawals, fund transfers, and other transactions through these agents. Agency banking facilitates financial inclusion, as it brings banking services closer to unbanked or underbanked populations (Mwawasaa & Ali, 2020). Against this backdrop, the present study measured product innovation using four key attributes, including credit cards, internet banking, mobile banking and agency banking.

1.1.2 Financial Performance

Financial performance is used as an indicator of a firm's economic health in a given period of time or can be used to evaluate the firm in comparison with comparable corporations in the industry (Akims & Jagongo, 2018). It depicts the ability of a firm to exploit its resources out of its predominant mode of commercial enterprise to gain revenues. It involves analyzing various financial metrics, ratios, and key performance indicators (KPIs) to evaluate the bank's profitability, liquidity, solvency, asset quality, and overall operational efficiency (Goddard et al., 2020). Understanding a bank's financial performance is crucial for stakeholders, including

investors, regulators, customers, and management, as it provides insights into the bank's stability and ability to generate sustainable returns (Francesca & Claeys, 2020).

Profitability is one of the most critical aspects of a bank's financial performance (Mansury & Love, 2018). It reflects the bank's ability to generate profits from its core banking activities, such as interest income from loans, fees from services, and trading gains. Common profitability metrics include Net Interest Margin (NIM), Return on Assets (ROA), and Return on Equity (ROE) (Akhisar et al., 2020). Asset quality measures the bank's ability to manage and recover loans and other assets without incurring significant losses. Non-performing loans (NPLs) and the provision for loan losses are essential indicators in assessing asset quality (Yao et al., 2018).

Liquidity measures the bank's ability to meet its short-term financial obligations without incurring significant losses. Maintaining sufficient liquidity is crucial to ensure that the bank can fulfill deposit withdrawals and handle unexpected cash flow requirements (Tabas et al., 2022). Capital adequacy is a key attribute of solvency and measures the bank's financial strength and ability to absorb losses. It is typically assessed through the bank's capital adequacy ratio (CAR), which compares its capital (equity) to its risk-weighted assets (Gündoğdu & Taşkın, 2021). Operating efficiency evaluates how well a bank manages its operating expenses in relation to its revenue. Metrics like the Cost-to-Income Ratio (CIR) and Efficiency Ratio are used to assess operating efficiency (Akims & Jagongo, 2018).

Considering all the foregoing measures of financial performance among commercial banks, profitability is the most common throughout empirical literature (El Chaarani & El Abiad, 2019). This owes to the fact that the primary goal of commercial banks is to generate profits for

their shareholders and stakeholders. As such, profitability is a direct indicator of how successful a bank is in achieving this core objective. It shows whether the bank is effectively utilizing its resources and generating returns on investments (Kohlscheen et al., 2019). Against this backdrop, the present study assessed financial performance using profitability, as indicated by ROA.

1.1.3 Commercial Banks

The banking sector in North America, particularly in the United States and Canada, has historically been characterized by strong and stable financial institutions. The region is home to several large and well-established banks, and the banking industry is heavily regulated to ensure stability and consumer protection (De Young et al, 2023). Before 2021, the North American banking sector showed resilience in recovering from the global financial crisis of 2008 and demonstrated steady growth in subsequent years. The presence of innovative financial technology (fintech) companies has also driven some changes in the industry, with traditional banks adapting to offer digital services and enhance customer experience (Goddard et al., 2020).

The performance of commercial banks in Europe is diverse and can vary significantly between countries. Western European countries, such as Germany, France, and the United Kingdom, have strong and stable banking sectors, while some Eastern European countries experienced challenges in the past due to economic and political transitions (Francesca & Claeys, 2020). Before 2021, the European banking sector faced several challenges, including low-interest rates, increasing competition, and non-performing loans. In response, some banks focused on cost-cutting measures and digital transformation to improve efficiency and customer experience (Gündoğdu & Taşkın, 2021).

The banking sector in Sub-Saharan Africa has been expanding, driven by economic growth, and increasing financial inclusion efforts (Idowu et al., 2022). Many countries in the region have witnessed improvements in financial stability and regulatory frameworks. However, the sector also faced challenges such as low banking penetration in rural areas, high non-performing loans, and exposure to commodity price fluctuations. Despite these challenges, some African countries, like Nigeria and South Africa, had relatively robust and dynamic banking sectors (Mwawasaa & Ali, 2020). The Nigerian banking sector is one of the largest and most dynamic in Africa. Before 2021, the country's banking industry experienced significant growth and transformation, driven by economic expansion and reforms in the financial sector (Aderonke & Charles, 2022). South Africa's banking sector is also well-developed and highly regulated. It is considered one of the most sophisticated in Africa, with a significant presence of both local and international banks (Ndhine et al., 2020).

As of December 31, 2022, the Kenyan banking sector comprised of the CBK as the regulatory authority, 39 Commercial Banks, 1 Mortgage Finance Company and 1 Mortgage Refinance Company. Out of the 41 banking institutions, 38 were privately owned while the Kenya Government had majority ownership in 3 institutions (CBK, 2023a). Of the 38 privately owned banks, 23 were locally owned (the controlling shareholders are domiciled in Kenya) while 15 were foreign owned. The 23 locally owned institutions comprised 22 commercial banks and 1 mortgage finance company. Of the 15 foreign-owned institutions, all are commercial banks with 12 being local subsidiaries of foreign banks and 3 are branches of foreign banks. The CBK, which falls under the Cabinet Secretary to the National Treasury, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and soundness of the financial system in the country (CBK, 2022).

The commercial banks have come together under the Kenya Bankers Association, which serves as a lobby for the banks' interests (Mutai, 2019). The commercial banks in Kenya offer corporate and retail banking services with most of the banks diversifying to offer other services such as investment banking and insurance services. The banking sector acts as a mechanism through which the formulated monetary policies by the government through central bank get implemented (CBK, 2021). One of the most widespread services offered by Kenyan banks is loaning to the members of public (Mutai, 2019). The banks also participate in purchase of government securities for such as treasury bills and bonds which are aimed at raising funds for the government and maintaining low inflation levels and also offering investment opportunities to commercial banks with high and certain returns (Vaita, 2017).

According to CBK (2023a), there was an increase in commercial banks that introduced an innovative product in 2022 compared to 2021, with a total of 77 percent of the banks introduced a new product during the period January 1 to December 31, 2022. Credit, deposit, payments, clearing, capital-raising services and settlement services were the functional areas where most banks introduced an innovative product in the period January 1 to December 31, 2022, with 64 percent of the banks innovating in this area compared to 67 percent in 2021 (CBK, 2023b). Between January 2020 and December 2022, the number of active mobile money customers increased by about 11 million Kenyans, and the volume and value of person-to-person payments rose by 236 percent and 97 percent respectively. Also, as of December 2022, commercial banks in Kenya had 82,780 agents, growing from 78,371 in the previous year (CBK, 2023a).

1.2 Problem Statement

Commercial banks financial performance declined by 0.5% in 2022 in comparison with the previous financial year (CBK, 2023). However, over the same period, there was increased customers deposits portfolio by 10.75 %. CBK attributed the increased number of daily transactions as a result of technological innovation adoption to diversify the institutions products to the increased income (CBK, 2023). Over the last five years, the Kenyan banking sector has recorded mixed results (Maina & Mungai, 2019; Mugane, 2020; Mwai, 2021; CBK, 2022; CBK, 2023a; CBK, 2023b). The sector's profitability was on a declining trend prior to the Coronavirus disease (COVID-19) pandemic, dropping from a ROA ratio of 3.5% in 2018 to 3.3% in 2019 (CBK, 2022). While an inclining trend is then observed post COVID-19, growing from 3.3% in 2021 to 3.6% in 2022, the growth has been a paltry 0.01% from the pre-COVID ratio two full years after the pandemic (CBK (2023a). This is despite considerably higher net income and total assets recorded post COVID, compared to pre-COVID levels. Over the same period, CBK (2023a) reports that the number of product innovations notably increased among commercial banks, with 77 percent of the banks introducing a new product during the period January 1 to December 31, 2022. Out of these innovations, 64 percent of the banks focused their product innovations on credit, deposit, payments, and settlement services. At the same time, the value of agency banking transactions was Kshs1.83 trillion as at December 2022, a slight increase in comparison to the previous year.

Product innovation is proving to be the most suitable tool to unlock the potential of unpenetrated retail financial Markets. According to the world of today is at an auspicious turning point where those market that were untapped in the past are proving to be the future frontiers. To harness this potential, financial institutions have leaned towards innovation as the only way to

ensure that the retail market is well exploited. This has seen financial institutions to be in the front line to adopt financial technologies which have been duped fintech's of the century. These technologies have huge implications to the institutions (Aduda & Kingoo, 2022), and this motivates this study to determine the effect of the adopted innovations in the commercial banking sector in Kenya.

The foregoing point to the increased adoption of four key product innovations among commercial banks, including issuance of credit cards, internet banking, mobile banking, and agency banking. It however remains scantily explored in the Kenyan body of knowledge, how these product innovations have influenced the intended financial performance of commercial banks in the country. Whereas several related empirical studies have been conducted in the Kenyan literature, notable contextual, methodological, and conceptual gaps still remain.

Kiilu and Peter (2020) examined the entrepreneurial innovation processes on firm performance in Kenya. The study presents a conceptual gap as it focused on large organizations while the current study focuses on commercial banks in Kenya. Mwangi and Namusonge (2017) study on the influence of innovation on small and medium Enterprise (SME) growth focused on garment manufacturing industries in Nakuru County while the current study expounded to commercial banks. Munywoki (2016) conveniently sampled 20 Kenyan commercial banks in their study to explore the effects of innovation on financial performance of commercial banks in Kenya. Balyesiima (2018) investigated the effects of financial product innovations on financial performance of commercial banks in Kenya. The study however focused on cheques and electronic funds transfers (EFTs) cleared through Automated Clearing House (ATH), which are conceptually different from the attributes of product innovations explored in the present study. Mwawasaa and ali (2020) further studied the effect of financial innovation on financial

performance of commercial banks in Kenya. The study however focused on Mombasa County, presenting a contextual gap.

Commercial banks main functions include: being a safe place to keep money, being a safe medium to move money from one business or individual to another, and finally being a place where businesses and individuals can obtain credit. These three functions of bank define the areas of product innovation. All the studies done prior to this present study focused on a small geographical coverage of the banks under study, a small subset of the banks in Kenya, or only one product innovation item. There has been no study that focused on all the banks in Kenya, covering all the current product innovations that banks are using to attract new customers and retain existing ones. This study therefore sought to address the contextual problem of how product innovation affects financial performance of Banks in Kenya, covering the entire spectrum of the innovations and also the entire spectrum of the banking industry in Kenya.

1.3 Research Objectives

The general objective of this study was to establish the effects of product innovation on the financial performance of commercial banks in Kenya. Specific objectives of the study include:

i. To determine the effect of issuance of credit cards on the financial performance of banks in Kenya
ii. To determine the effect of the use of internet banking on the financial performance of banks in Kenya
iii. To establish the effect of the use of mobile banking on the financial performance of banks in Kenya
iv. To establish the effect of use of agency banking on the financial performance of banks in Kenya

1.4 Research Questions

The study sought to answer the following questions:

i. Does the issuance of credit cards have a significant effect on the financial performance of banks in Kenya?
ii. Does the use of internet banking have a significant effect on the financial performance of banks in Kenya?
iii. Does the use of mobile banking have a significant effect on the financial performance of banks in Kenya?
iv. Does agency banking have a significant effect on the financial performance of banks in Kenya?

1.5 Significance of the Study

This study will be helpful to the various stakeholders in the banking industry and who will be interested in examining the financial performance of banks in Kenya. These include policy makers, commercial banks, shareholders, and scholars.

1.5.1 Policy Makers

Policy makers, such as regulators and government officials, can use the study's findings to make informed decisions regarding regulations and policies related to product innovation in the banking sector. They can identify areas where policy support is needed to encourage innovation while ensuring stability and consumer protection. Understanding the impact of product innovation on financial performance can also help policy makers gauge the contribution of the banking sector to overall economic growth. Policies that foster a conducive environment for innovation can drive economic development and financial inclusion.

1.5.2 Commercial Banks

Commercial banks can use the study's findings to make strategic decisions related to product development and innovation. Understanding how certain innovations impact financial performance allows banks to allocate resources effectively and focus on initiatives that yield the best results. The study can reveal which types of product innovations lead to superior financial performance. Banks can use this knowledge to differentiate themselves from competitors and gain a competitive advantage in the market.

1.5.3 Shareholders

Shareholders use financial performance metrics to evaluate the bank's profitability and growth potential. The study's findings on how product innovation impacts financial performance can help shareholders assess the bank's prospects and make informed investment decisions. Shareholders are concerned about the returns they receive on their investment in the bank. The study can provide insights into how product innovation affects the bank's profitability and, consequently, the potential for higher dividends and share price appreciation.

1.5.4 Scholars

The study can contribute to the body of knowledge in the field of banking and finance. It may lead to new theories, models, or methodologies that enhance our understanding of the relationship between product innovation and financial performance. Scholars can also use the

study's findings to provide evidence-based policy recommendations for the banking sector, enhancing the effectiveness of regulatory frameworks and encouraging sustainable innovation.

1.6 Justification of the Study

The study aimed to understand how product innovation impacts the financial performance of commercial banks. By identifying the types of innovations that lead to superior financial outcomes, banks can focus their resources on initiatives that are more likely to generate positive results, thereby enhancing their financial performance. Both banks and policy makers can benefit from evidence-based decision-making. The study's findings can inform banks about the effectiveness of their innovation strategies and guide them in making more informed decisions on product development, marketing, and resource allocation. For policy makers, the study will help design regulations that foster innovation while ensuring financial stability.

Innovative banking products have the potential to reach underserved and unbanked populations, promoting financial inclusion. By understanding how product innovation affects financial performance, the study can contribute to the development of inclusive banking solutions. The banking sector plays a crucial role in driving economic growth. Understanding the impact of product innovation on the financial performance of commercial banks can help assess the sector's contribution to the overall economy and identify opportunities for growth. Product innovation introduces both opportunities and risks. The study can help banks identify and manage the risks associated with new products, ensuring a balanced approach to innovation, and safeguarding the bank's stability.

1.7 Scope of the Study

This study sought to examine the effects of product innovation on financial performance of banks in Kenya. It restricted itself to new product offerings by the banks today namely, credit cards, mobile banking, internet banking and agency banking, in contrast to the traditional offerings such as over the counter banking services, Automated Teller Machines and traditional loan offerings through filling of paper work.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the existing literature that is related to the study variables. The study focuses on the effects of product innovation on financial performance of commercial banks in Kenya. The literature review will cover the theoretical review around product innovation and financial performance, empirical literature review related to the study and identify some knowledge gap in the studies done in the past on the area of product innovation and financial performance of banks in Kenya.

2.2 Theoretical Review

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There are several theories relevant in the understanding of how product innovation influences financial performance of commercial banks in Kenya. Of relevance to the concepts of credit cards, mobile banking, internet banking and agency banking, this study was framed on the Dynamic Capability Theory, Diffusion of Innovation Theory and Blue Ocean Theory.

2.2.1 Dynamic Capability Theory

The study was be grounded on the Dynamic Capability Theory (DCT), which was advanced by Teece et al. (1997) and explains why businesses are able to thrive and prosper in dynamic environments. The theory emphasizes a firm's ability to integrate, build, and reconfigure its internal and external resources to adapt to changing environments. As defined by an analysis and evaluation of empirical research, dynamic capacity, is a firm's ability to consistently address

problems caused by its propensity to implement appropriate strategies aimed at increasing performance while also adjusting its resource foundation, to achieve long-term success (Eisenhardt & Martin, 2000).

In the context of the effect of product innovation on the financial performance of commercial banks, the Dynamic Capability Theory becomes relevant as it addresses how banks can effectively develop, implement, and leverage product innovation to enhance their financial performance over time. The first element of the Dynamic Capability Theory is "sensing." In the context of product innovation in commercial banks, this refers to the ability of the bank to identify market opportunities, customer needs, and emerging trends that can be addressed through innovative products and services (Ferguson et al., 2020). Banks need to be vigilant in monitoring changes in customer preferences, technological advancements, and regulatory developments that could impact their product offerings.

The second element is "seizing", which involves the bank's ability to capture and capitalize on identified opportunities effectively. Once a potential product innovation opportunity is identified, the bank must act swiftly to develop and implement the new offering (Daneshvar & Ramesh, 2022). This could involve agile decision-making, streamlined product development processes, and efficient resource allocation. The third element is "transforming". This refers to the bank's capability to reconfigure its resources and organizational structure to support product innovation. This includes allocating financial and human resources, fostering a culture of innovation, and creating cross-functional teams to collaborate on new product development (Brynjolfsson & Hitt, 2020).

The fourth element is "integrating", which encompasses the ability of the bank to integrate the newly developed product innovation into its existing operations seamlessly. This involves aligning the new offering with the bank's overall strategy, marketing it effectively to the target audience, and integrating it into existing service channels and systems (Daneshvar & Ramesh, 2022). The final element is "learning," which emphasizes the importance of continuous learning and improvement. After launching a new innovative product, banks should actively gather feedback from customers, track performance metrics, and learn from both successes and failures. This feedback loop enables banks to adapt and refine their product offerings over time (Loonam & O'Loughlin, 2018).

The fundamental criticism of dynamic capability theory is that it attributes capability disparities to management decisions that differ across enterprises (Zollo & Winter, 2002). If such capability gaps are unrelated to management discretion and are consistent across organizations, the strategic question of which competences should be pursued for competitive advantage is still unresolved. Another criticism of the dynamic capabilities concept is that they are difficult to measure empirically, as are the underlying operational processes as well as the relationship between dynamic capabilities and firm performance (Ambrosini et al., 2009).

The critiques notwithstanding, the Dynamic Capability Theory provides valuable insights into how commercial banks can leverage product innovation to enhance their financial performance. By focusing on sensing opportunities, seizing them promptly, transforming resources, integrating innovations, and fostering a culture of continuous learning, banks can position themselves for sustained success in an increasingly dynamic and competitive banking landscape.

The Dynamic Capabilities Theory is relevant to this study in that as the banking environment evolves, banks will need to assess their inherent resources and use these to adapt to the changing banking environment. With Covid 19 pandemic banks have been forced to fully automate their processes, even those processes that required manual signature of papers have had to be done digitally. The banks that were quick to adapt were those that could harness their technological investments and their internal culture to quickly adapt to the challenges that Covid 19 and the effects of lockdown of economies presented.

2.2.2 Innovation Diffusion Theory

The Diffusion of Innovations Theory, developed by Rogers (1962), is a widely recognized and influential theory that explains how new ideas, technologies, products, or practices spread and are adopted within a social system over time. The theory provides valuable insights into understanding the dynamics of innovation adoption and diffusion among individuals, groups, organizations, and societies (Tolba & Mourad, 2021). It has been extensively applied in various fields, including marketing, technology adoption, public health, and organizational change. In the context of the effect of product innovation on the financial performance of commercial banks, the theory helps us understand how innovative banking products are adopted and embraced by customers and how this adoption process can impact a bank's financial performance.

The Innovation Diffusion Theory identifies five stages of the adoption process: knowledge, persuasion, decision, implementation, and confirmation. When a commercial bank introduces a new product innovation, customers go through these stages to accept and integrate the innovation into their banking behavior (Rogers, 1995). According to the theory, certain segments of the market, known as innovators and early adopters, are more likely to embrace new

innovations quickly. In the context of commercial banks, these early adopters may be tech-savvy customers or those seeking cutting-edge banking services (Rogers, 2003).

The theory introduces the concept of the adoption rate, which represents the relative speed at which an innovation is adopted by customers. Understanding the adoption rate of a new product innovation can help commercial banks gauge its initial success and potential impact on financial performance (Tolba & Mourad, 2021). The theory also emphasizes that an innovation's perceived relative advantage over existing alternatives is a significant driver of adoption. Commercial banks must demonstrate how their product innovation provides unique benefits or superior value compared to traditional banking products (Rogers, 2003).

For a product innovation to gain widespread adoption, it must be compatible with customers' existing behaviors, needs, and values. Banks should consider how well the innovation aligns with their target customers' preferences and banking habits (Sahin, 2006). The complexity of an innovation can influences its adoption. Commercial banks should aim to make their innovative products easy to understand and use, as overly complex offerings may deter customers from adopting them (Lee et al., 2021). The theory suggests that innovations that are more observable to potential adopters are likely to spread faster. For commercial banks, effective marketing and communication strategies can increase the visibility of their product innovations (Agoro, 2019).

The Diffusion of Innovations Theory has been widely studied and applied in various fields, but it is not without its critics. Critics argue that the theory tends to focus too much on individual-level adoption decisions and may not adequately address the complexities of organizational or societal-level adoption processes (Chigona & Licker, 2018). The theory's

adoption process model (innovators, early adopters, early majority, late majority, and laggards) has been criticized for being too simplistic and not fully capturing the intricacies of real-world adoption behaviors. The theory has further been criticized for struggling to explain cases where an innovation experiences initial adoption but then experiences a decline in usage or is eventually replaced by other innovations (Bayer & Melone, 2009).

Despite the criticisms, the Innovation Diffusion Theory offers valuable insights into the adoption process of product innovation in commercial banks. It is therefore relevant to this study in that the success of the product innovations by banks will largely depend on how they target them to the relevant sections of their customer base. Other than forced adoption as was the case during Covid 19, the adoption of innovative products by banks is all about timing, and also how well the product is marketed to the target clientele. Diffusion of Innovation Theory and it's mastery can help banks in ensuring successful adoption of the innovative products that they bring to the market.

2.2.3 Blue Ocean Theory

The Blue Ocean Theory was developed by Kim and Mauborgne (2014) and it revolves around value innovation and how to create uncontested market place by making competition irrelevant. Unlike traditional strategies of beating the competition and focusing on how best the competitors can be beaten, blue ocean theory suggests that the focus instead should be on the customer and how companies can create products or innovate to create a whole new range of value to the customer that either redefines the market or creates new demand altogether (Anderson & Onyemah, 2016). The focus on innovating at value, not positioning the company against

competitors, drives companies to challenge all the areas that the industry competes on and also helps the company not to assume that just because the competition is doing something, then its means that it is connected to buyer value (Lindič et al., 20129).

The Blue Ocean Theory makes sense of the strategic paradox that many organizations face: the more a company attempts to focus on coping with their competitors, trying to match and hopefully beat their rivals' competitive advantages, the more they ironically tend to look like their competitors. To which Blue Ocean Theory would respond: stop trying to look at the competition, value-innovate and let the competition worry about you. The Blue Ocean Theory is all about discovering unchartered waters (Blue Oceans) and creating uncontested market spaces through value innovation (Kindström et al., 2021). Value innovation is a way of thinking about, designing and executing, corporate strategies that result in the creation of a blue ocean and differentiation from the competition. In addition, value innovation defies the value-cost trade-off that is common in most competition-based strategies. Conventionally, it is believed that for companies to create greater value, it must beat a greater cost, or they can create reasonable value, at a much lower cost. Value innovation is however about creating greater value and achieving this at a lower cost than the competition (Rust & Verhoef, 2019).

In the context of the effect of product innovation on the financial performance of commercial banks, the Blue Ocean Strategy becomes relevant as it suggests that banks can achieve superior financial performance by focusing on innovation that creates new market opportunities and sets them apart from traditional competitors (Clemons et al., 2019). The Blue Ocean Strategy encourages banks to challenge existing market boundaries and think beyond traditional banking services. By identifying unmet customer needs or untapped market segments,

banks can redefine the boundaries of their offerings and create new blue ocean markets (Buisson & Silberzahn, 2020).

The strategy emphasizes "value innovation," which means simultaneously increasing the value delivered to customers while reducing costs. In the context of commercial banks, value innovation through product innovation could lead to the creation of unique and compelling banking solutions that customers find valuable and different from what other banks offer (Idowu et al., 2022). The Blue Ocean Strategy encourages banks to focus not only on existing customers but also on non-customers. By understanding the needs of non-customers and designing innovative products to attract them, banks can expand their customer base and revenue potential (Gomber et al, 2018). Through product innovation, banks can differentiate themselves from competitors while achieving cost efficiencies. Innovations that provide unique benefits to customers often allow banks to charge premium prices while reducing costs by streamlining operations (Buisson & Silberzahn, 2020). The Blue Ocean Strategy promotes "market-creating innovation," which means creating new demand and new markets with innovative products. Banks can develop disruptive banking solutions that appeal to underserved or unserved market segments, driving growth and financial success (Clemons et al., 2019).

While the Blue Ocean Strategy has been widely praised for its innovative approach to business strategy and value creation, it has also faced some criticism from various quarters. Critics argue that creating uncontested market spaces or "blue oceans" is easier said than done. Identifying completely new market opportunities and successfully executing innovative ideas can be challenging, especially in established industries with strong competition (Gomber et al, 2018). Some critics also claim that the Blue Ocean Strategy lacks specific guidance on how to identify and create new market spaces. The theory provides a conceptual framework, but it may not offer

concrete steps or methodologies for implementation, making it difficult for companies to apply in practice (Rust & Verhoef, 2019).

This theory is relevant to our study as in the recent years we have seen banks venturing into unchartered waters. A great example is that of Equity Bank Ltd with the Equitel Mobile Banking product where rather than do it like all other banks have been doing it, it has opted to apply to the Communications Authority of Kenya for a special telecommunication license rather than use Safaricom or Airtel platforms. This theory is also relevant to our study in that for banks to make full use of the innovative products discussed in this study, doing things the same way will not yield the desired results. Banks will need to use the strategies advanced by this theory of strategy canvas evaluation, evaluation of the internal culture, processes and systems and finally a re-evaluation of what banks need to drop, what they need to reduce, what they need to do more and what new things they will need to adopt altogether in order to make full use of the innovative products discussed in this study.

2.3 Empirical Literature

This section provides a review of past studies by different scholars in relation to the objectives of the study. The review is thematically structured along the association between mobile banking and bank's financial performance; credit cards and bank performance; agency banking and bank performance; and internet banking and financial performance. The review is critically conducted highlighting the knowledge gaps that form the basis for the present study.

2.3.1 Mobile Banking and Bank's Financial Performance

Tiwari, Buse and Herstatt (2006) defined mobile banking as a transaction that involves the transfer of the right to use a good or a service through a promissory note to pay for the service or good exchanged through the mobile platform. This exchange happens through messages sent from the mobile device, either a phone or a tablet of the merchant and the mobile device of the customer. The exchange of these messages is as good as a payment. Anyasi and Otubu (2012), defined mobile banking as the executing of a financial transaction that ordinarily would be performed by involving a bank, using a mobile device, either a phone or a tablet. Mobile Banking is similar to Electronic Funds Transfer that normally used by banks in funds transfers. The idea is the same, in that there is the use of what is commonly called Electronic Data Interchange (EDI) (Lucey 2015). By it's very definition, mobile banking means availing the power to perform financial transactions through mobile devices that bank clients use for communication. Mobile banking therefore inevitably means, ease of access of financial transactions and since most people own a mobile device, it also means scaling up of the provision of financial services which comes with economies of scale and the resulting advantage of reduction of transaction costs (Maimbo, 2016).

Mobile banking in Kenya started in the year 2007, that was driven by the competition for customers among the two main telecommunication companies in Kenya at the time, Safaricom and Zain (Njenga 2008). Mobile money such as MPESA and Airtel Money, began purely as services offered only by the telecommunication companies and banks for a while shied away from using the service, adopting. When mobile banking grew in terms of adoption by the

telecommunication company customers, banks figured that they could ride on these platforms to offer their own customers banking services through their mobile devices. That is how mobile banking as a service was born. Since then the growth in mobile money and banking has grown to about 6.23 billion being transferred through the mobile platform (CBK 2023). It is against this backdrop that this study examines the empirical studies done in the past and tries to connect these with the context of the Kenyan market. These studies are analyzed under the lenses of ease of access, transaction costs, and ease of use of the service in terms of how safe it is perceived to be by the customers and how easily the customers are able to adopt to the service.

Al-Smadi and Al-Wabel (2021) carried out research in Jordan to study the effect mobile banking has on the Jordan's bank performance for the period between 2010 and 2020. Due to the cultural context of Jordan economy, the study found that mobile banking had negative impact on the banks financial performance. This was due to the fact that mobile banking was perceived to charge for transactions in a manner that did not sit well with the cultural believes of the majority of the populace in Jordan, mostly driven by strong religious believes that are against exploitative charges in business transactions This study goes to show that while mobile banking may be easily accessible and when it may even reduce the transactional costs of accessing banking services, how the customers perceive the innovation may affect how it is adopted and as a result how it ends up contributing to the financial performance of banks. . The study was however conducted in Jordan, which is a different socio-economic context from Kenya and the findings may therefore not be generalizable to the Kenyan context.

In Nigeria, Daniyan-Bagudu et al. (2021) investigated the mobile banking effects on commercial banks financial performance in Nigeria, focusing primarily on their contribution to financial inclusion and whether their adoption had reduced the transactional cost of accessing

financial services. This study focused on the poor and those less likely to access financial services through the legacy banking system. To conduct the study, simple random techniques were employed in this study in selecting 22 commercial banks. To facilitate the obtaining of relevant data that was used for analysis in this study, structured questionnaire was used. Descriptive statistics involving simple graphical charts was applied in presentation and analysis of data. The study found that 90% of the respondents to the questionnaires believed that mobile banking had contributed to the ease of access of financial services. The study also found that 75% of the banks had adopted mobile banking within five years under the study. The study, therefore, concludes that mobile banking positively and significantly affects the financial performance of commercial banks in Nigeria This study done in Nigeria leads to the question; if financial mobile banking contributes to the ease of access of financial services especially by those perceived to be outside the reach of legacy banking system, how then does mobile banking contribute to the financial performance of commercial banks in the context of Kenya? This study sought to explore not just the ease of access which has been studied empirically before, but to go deeper in understanding how the increased access to financial services by banks customers is then translated to financial performance as measured through return on assets.

The issue of risk on mobile banking and their effect on financial performance of banks was studies in by Hani (2019). This study looked at mobile banking access, loans and risks and how these affected the financial performance of banks. The study was done using primary data gathered through administering questionnaires. From the study these factors (access to banking services, access to loans through mobile phone and reduced risk) could explain about 67% of the financial performance of the financial performance of the banks. It is however important to note that 72% of the respondents to these questionaires consisted of junior staff within the banks

under the study, indicating that there may have been some data collection bias with majority of the respondents being staff that may not know much about how mobile banking would contribute to the financial performance of banks. Several similar studies have been done in the past, and this study therefore adopted a different approach. This study wanted to study the effect of mobile banking on the using hard data secondary data generated by the banks themselves to study the effect of mobile banking on the financial performance of banks in Kenya.

A similar study to the one done by Hani (2019) was done by Besufkad (2020) studied the effects of mobile banking on bank performance with reference to selected Ethiopian commercial banks during the period 2015-2019. The study sample consists of six commercial banks in Ethiopia and it studied mobile banking together with the legacy banking systems of automated teller machines and point of sale devices. While the study found that there was statistically significant relationship between bank financial performance and mobile banking, the study did not focus on the other new innovations by banks such as internet banking and agency banking which compliment mobile banking. In addition, this study did not study the entire spectrum of banks in Ethiopia, leading to data bias. This study sought to bridge the gaps in the studies by Hani (2019) and Besufkad (2020) by studying how mobile banking together with the newer product innovations by banks contributes to the financial performance of banks in Kenya.

Mugane (2020) set out to establish the impact of mobile banking services on the financial performance of commercial banks in Kenya. In this study the target population under investigation was all the 40 commercial banks in Kenya and two participants from each bank giving 80 participants from all the 40 commercial banks in Kenya where a census inquiry method was the best method used. Primary data for this study was collected using a questionnaire that was given senior managers from all the departments of these organizations.

Both quantitative and qualitative data was generated in this study. The study findings show that short message service had an above average positive correlation with financial performance of commercial banks and was statistically significant. Bill payments also had a strong positive correlation with financial performance of commercial banks and was statistically significant. The study however used primary data collected by a semi-structured questionnaire. This implies that the study relied on respondents' perception which may be biased, as compared to hard facts in published secondary data.

Maina and Mungai (2019) sought to determine the effects of mobile banking services on financial performance of commercial banks in Kenya. The study employed descriptive research design, targeting 8 tier one commercial banks. The study used secondary data which was obtained from the published financial statements of the tier one commercial banks in Kenya. Descriptive statistics and inferential statistical techniques were used to analyze the data and presented in terms of tables and figures. Based on the findings that mobile withdrawals have a significant positive influence on financial performance of tier one commercial banks in Kenya it can be concluded that banks should always ensure that the mobile withdrawals are efficient and are sound to facilitate participation of the customers in using the banking applications as well as contribute to greater returns. The scope of the study was however tier 1 commercial banks, whose findings may not be generalizable to commercial banks outside tier 1.

The empirical studies done in the past as demonstrated above have proved that mobile banking has led to increased access of financial services among the populations under the studies. The studies have also demonstrated that how the populace perceive the service affects how the adoption of the service will be and as a result the effect on the financial performance of the banks. The empirical studies in the past also have studied the effect of mobile banking on the

financial performance of banks using primary data using questionnaires to obtain the data. As a results, much of the data gathered is prone to bias as a result of the data collection methods used, the rate of response and how the respondents interpreted the questions in the questionnaires administered. To address these issues, the current study used secondary data available from the banks and use the data to study the entire banking industry in Kenya on how mobile banking affects the financial performance of banks. This study will therefore complete the link between ease of access of financial performance, the reduction in the transactional costs of accessing financial services, and the ease of use of the service and how all these together then translate to financial performance measured in return on assets for the banks.

2.3.2 Credit Cards and Banks' Performance

Bloomental (2021) defined a credit card as a plastic card issued by a bank and that is linked to a credit account of the specific customer within the bank and that allows the holder of the card to access credit from the bank up to a limit defined by the bank. This credit is to be paid within a specific period of time, failure which it attracts interest charges on a monthly basis. To be able to access the service, customers will usually be rigorously assessed for their credit worthiness, and they are charged a onetime access fee yearly to use the credit card services. Banks generate revenue from credit cards through the onetime fees, interest on credit taken by their customers and charges to merchants per transaction for the goods or services paid using a credit card. Credit cards are also called plastic money. The use of credit cards started in the USA as early as during the second world war. During the second world war, the financial system in the USA developed a vouchers (paper) payments system that was used for payments. This system would indicate on a piece of paper that a customer had a certain amount of money and as such with that paper, the

merchant would allow the customer to collect items from their shop and then deliver the paper to the bank and get paid (Rotchana et. al 2015) The evolution of the various types of plastic money as we know them today already begun with the introduction of the vouchers system of payment that was used during the Second World War ((Rotchana, Kitumnuai & Speece, 2014). In Kenya, the adoption of credit cards started to take root in the year 2000 and their adoption by the financial institutions has made the credit cards an integral part of the Kenya's financial system (Wafula 2015).

Credit cards offer small amounts of credit as determined by the banks based on the risk profile of the specific customer. They therefore offer ease of access of credit for most people who would otherwise not obtain credit. This is because the know your customer procedures are not as rigorous as those that banks use for the ordinary secured or unsecured loans. This is because the loans offered to the customers are usually micro-loans compared to huge loans issued through the ordinary loans. The credit card loans are also not subject to strict prudential regulations issued by the bank's regulators such as the Central Banks (Anyanzawa 2016). This study will build on the success demonstrated by previous empirical studies on how credit cards have led to increased ease of access to credit, and explore how this ease of access to credit translates to bank's financial performance as measured by return on assets.

Hausman (2016), argues that credit cards also have a global reach. Once obtained, they can be used globally unlike the legacy loans of banks that would be deposited into the local bank account and funds use across the globe is then restricted by strict prudential regulations that govern money transfers across the globe to combat money laundering. In contrast, use of credit cards for e-commerce is a norm rather than an exception. Their global reach therefore makes them the preferred credit of choice for customers doing e-commerce transactions. This also talks

to the convenience of credit cards as a form of credit in contrast to the legacy loan products that banks had been offering prior to credit cards. This study will therefore build on the success of credit cards as shown in prior empirical studies and explore how their global reach and use contributes to the bank's financial performance as measured using return on assets.

Mwende et. al (2017) argue that credit cards not only offer credit they also offer additional benefits in terms of loyalty programs. They argue that while in themselves loyalty programs do not have a significant effect on customer retention, when coupled with proper sensitization programs such that customers understand the loyalty programs on offer and how they specifically stand to benefit, then these loyalty programs offer significant competitive advantage. Credit cards loyalty programs are tied to the customer data that banks have and they include automatic access to certain members only clubs, access to airport business lounges, discounts at specific merchants on items purchased. The customers that enjoy these additional benefits on top of the credit tend to stick with their banks giving the banks competitive advantage. This study explored how this advantage translates into revenue generated through credit card channels and the effect on the financial performance of banks in Kenya.

Contextually, similar studies have been done in Pakistan by Khan (2020). In the study Khan (2020) explored if electronic credit card usage and their impact on Bank's profitability in Pakistan. The study was applied on a sample of commercial banks working in Pakistan, the information and data were collected from annual reports given by the banks and by returning to the credit management in commercial banks. The study found that there is a positive effect between the number of credit cards, the net income from credit cards and the profitability of commercial banks (ROE). The study was however conducted in Pakistan, which is a different socio-economic context from Kenya and the findings may therefore not be generalizable to the

Kenyan context. This study will therefore explore the effect of credit cards issuance on the bank's financial performance, focusing specifically on the banking industry in Kenya.

Credit cards not only offer convenient credit. They are also susceptible to fraud and default just like the legacy credit offerings by the banks. A study done in Nigeria by Jegede (2022) on the effects of card services on the performance of Nigerian Banks using primary data gathered using questionnaire from 125 employees of five selected banks in Lagos State found that the use of credit cards in Nigeria did not have a positive effect on the financial performance of banks in Nigeria due to the prevalent fraud on credit cards in Nigeria. In the Kenyan context where credit card fraud is not as prevalent, the study will examine how safe use of credit cards contributes to the financial performance of banks in Kenya.

Closer home to Kenya, a study done in Rwanda by Rubirima (2022) on the effect of card services on financial performance of bank of Kigali (BK) found that there was a positive correlation between credit card issuance and the financial performance of the Bank of Kigali.While this study is closer home in the East Africa region, the study only focused on only one bank and not the industry as a whole, leaving contextual gaps. In addition the study was done using questionnaires and there was only 76% response to the questionnaires mainly from junior staff of the bank under study. This empirical study therefore may have suffered from data collection bias and the results of the study may therefore not be easily generalized to the context of the banking industry in Kenya. At home in Kenya, Kyalo (2019) studied the effect of credit card usage on the financial performance of commercial banks in Kenya. The study adopted a casual research design. Secondary data for seven commercial banks for the period between 2009 and 2013 was used. The data was drawn from the published annual reports of commercial banks

and the Central Bank of Kenya. Using OLS regression method, inferential tests including the Pearson Product – Moment Correlation Coefficient and regression analysis was conducted. The result established coefficient of determination of 0.612 (R=0.612) between credit card usage and financial performance of the commercial banks. This study only focused on only sevan banks and not the entire industry. In addition, the study was done for 2008 to 2013. This current study will focus on the entire industry and focus on the recent period noting that a lot has changed especially with the Covid 19 pandemic.

Ndhine et al. (2020) sought to determine the effect of debit cards on financial performance of listed commercial banks in Kenya. The study adopted descriptive research design utilizing panel data covering the period from 2009-2019. The population comprised of eleven listed commercial banks operating in Kenya. This study primarily adopted the use of secondary data to collect information from published annual financial statements of the listed commercial banks. Regression statistics was used to determine the significance of the relationship between variables. The results showed that increased in debit card usage enhance the profitability of banking industry in form of ROA over the period of 2009 to 2019 quarterly. The results also showed that increased usage of debit cards significantly reduced transaction costs and enhanced convenience among credit and debit card users. The scope of the study was however listed commercial banks, whose findings may not be generalizable to commercial banks that are not listed.

2.3.3 Agency Banking and Banks' Performance

Agency banking is a banking model in which banks provide financial services through non-bank agents, such as retail shops, retail outlets, post offices, pharmacies, or local market outlets

Rahman (2016). Agency banking is therefore a critical innovation for banks. It helps in scalability of financial services provision, the financial reach of banks to communities and customers that would otherwise not access financial services and also they help in customer service and reduce costs of providing financial services. Agency banking was first introduced in Brazil in 1999 and grew steadily to about 90,000 agents by 2005. These agents consisted of ordinary retail businesses such as shops, hotels pharmacy outlets and the adoption of agency banking then led to about 12.4 million new accounts opening in Brazil (Kumar et al.,2006). The agency banking model led to other developing nations borrowing a leaf especially due to it ease of access to markets that had hitherto not had financial services and the ease of scalability (Atieno 2001). According to Central Bank of Kenya, as of 2022, there are about 92,780 bank agents in the country (CBK 2022). From this report, among the 37 banks in Kenya, 32 have agency banking model. The below empirical studies are therefore themed on the ease of access, scalability of provision of service, customer service and also reduction of cost of provision of financial services. This study explored how the prior empirical studies tie to financial performance of banks as measured using the return on assets.

In Bagladesh, Hasan (2019) examined the effects of agent banking on the profitability of commercial banks in Bangladesh. The study undertook both exploratory and econometric analyses using a balanced panel dataset comprising bank level quarterly data from six commercial banks in Bangladesh which are operating full-fledged agent banking activities including both deposit mobilization and credit disbursement. This study found that agency banking had a significant effect in the uptake of financial services as evidenced by increase in the number of accounts opened during the period under study. The study further noted that although the uptake of accounts had increased and deposits had also increased, there was no significant

increase in credit disbursement. This is due to the fact that credit disbursement required customer assessment of credit worthiness which was beyond the services that agency banking could offer. This study showed that agency banking increased financial inclusion. The current study went deeper and studied how this increased financial inclusion translated to the financial performance of banks through generation of revenue from agency banking.

Closer home in the East Africa region, a study was done by Lyimo and Mwasakabeto (2021) that explored the effect of agency banking on performance of commercial banks with specific focus on the National Microfinance Bank, Arusha. Primary data was used in this study and simple random sampling method was used to select respondents. This study found that agency banking had a significant effect in lowering the cost of accessing financial services. The study further noted that due to the low transactional cost associated with agency banking, there was a positive relation between the low cost of accessing agency banking and the financial performance of the National Microfinance Bank in Arusha. The regression model showed that 41% financial performance of the National Microfinance Bank of Arusha could be explained by the low cost of agency banking. This empirical study underlines the importance of agency banking in reducing not just the cost of accessing financial services, but also the cost of providing these services. The current study looked further into the issue to determine how the reduction in cost is translated to financial performance of banks as measured using the return on assets.

In Uganda, Namaganda (2020) did a study focused on customer service and ease of access of financial services using the agency banking model. This study focused on the Centenary Bank in Uganda and primary data was obtained using self-administered questionnaires. The study found that agency banking increased customer service, with most

respondents indicating that they were happy with the bank's agency model as an alternative to long queues at the banking hall. Further, the study found that most agency banking had greatly increased the ease of access of baking services. The study was conducted in central Uganda and most respondents indicated that Centenary Bank had its network far between the towns and that agency banking therefore had bridged the gap leading to ease of access of the financial services This is another study that underlined the importance of agency banking in improving customer service and increasing ease of access of financial services. The current study therefore sought to study these effects in the context of the Kenyan banking industry and how agency banking through improved customer service affects the financial performance of banks.

In Kenya, Mwangi (2021) studied the effect of agency banking strategy on performance of micro finance institutions (MFIs) in Nairobi city county, Kenya. The study used descriptive research, and in particular, cross-sectional research study design with the targeted population encompassing 13 microfinance institutions licensed by the CBK with 65 respondents. A semi-structured questionnaire was used in the collection of data from the respondents. Secondary data was gathered from CBK reports and the microfinance institutions 'audited financial statements. Data was analyzed using multiple regression and descriptive statistics. Percentage and frequency distribution tabulations were employed. The study found that there was an effect of transactional volumes, deposits and loan repayments via agents' outlets on performance of MFIs in Nairobi. This study in Kenya, although it was done on Micro Finance Institutions indicated that agency banking increased transaction volumes, indicating more financial inclusion, increased deposits also reinforcing increased financial inclusion and most importantly increased loan repayments. Agency banking while it may not be suitable for disbursement of loans, it becomes a critical system through which banks can reduce default of credit repayments due to the ease of access of

the financial services. The current study will therefore study the effect of agency banking on the financial performance of banks in Kenya as opposed to micro finance institutions.

Kanyore (2022) investigated the effect of agency banking on financial performance of commercial banks listed at the Nairobi Securities Exchange, Kenya. The study used survey of the 11 commercial banks which have listed in Nairobi Securities Exchange. Content analysis of data involved gathering data from NSE Handbook. The study adopted a survey research design, and inferential statistics. Excel and Statistical Package for Social Sciences (SPSS) software version 20 was used to analyze the data. Analysis of data involved both descriptive and inferential statistics. Descriptive statistics were in form of mean and standard deviation. Inferential analyses were in form of correlation, regression and analysis of variance All regression coefficients were significant at 5 per cent level. This implies there is a positive significant relationship on the effect of agency banking and performance of listed banking institutions in Kenya and that the model is a good fit for the data. The scope of the study was however listed commercial banks, whose findings may not be generalizable to commercial banks that are not listed.

All the empirical studies above show that agency banking contributes to financial inclusion, improved customer service, scalability in the provision of the financial services and reduction in cost of not only accessing the financial services, but also of providing the financial services. This study therefore builds upon these prior empirical studies and explored how all these benefits of agency banking translate to the bottom line of the commercial banks in Kenya.

2.3.4 Internet Banking and Banks' Financial Performance

Internet Banking also commonly referred to as e-banking is a banking platform that enables bank clients to access financial services and products through the internet. The bank will invest in a secure website and using the website avail to its customers all the banking services that they need. Internet banking enables bank customers to open new bank accounts, reset pins to their credit and debit cards, view transactions, make transfers from their accounts to other accounts, make payments, and apply for credit, all without leaving the comfort of their homes and without the cumbersome paperwork that is the hallmark of legacy banking services (Panida & Sunsern, 2012). Mobile Banking and Agency Banking which have been discussed above are aimed at reaching the customers who are in remote areas and are therefore not able to have easy access to the legacy brick and mortar banking services in a banking hall. Internet banking however requires access to internet services. Internet banking therefore may not target those in marginalized and remote areas but rather the customers who have access to normal brick and mortar banking but are seeking convenient ways to enjoy banking services. The bank customers who use internet banking are likely to be middle to high net worth individual and corporate clients who are knowledgeable about the internet, e-commerce and who want to have seamless banking experience (DeYoung et. al 2023). Internet banking therefore is a critical innovation for banks. This study looked at the empirical studies done in this area under the themes of convenience banking and integration of banking into the business processes and how this all translates to the financial performance of banks as measured using returns on assets.

In the USA, Kegan et al. (2005) carried out an examination on the effects that online banking applications has on community banks' performance within the United States of America. The study majorly focused on banking that uses internet and its effect on how the community banks perform. An online banking index was created by adopting a structural

equation model was adopted. An econometric model was used to appraise bank's performance. A survey involving ten community banks was conducted. According to the obtained results, banks which present widespread e-banking services generally have a better performance than the banks that are lagging behind. Additionally, internet banking aids community banks to increase their ability to earn as per the measurement obtained by ROE, it also these banks to improve the quality if their assets. This is a study that was conducted in the USA. The USA has got widespread internet coverage as compared to Kenya. The study however found that although there was no evidence that internet banking affected the legacy banking system, banks that had widespread adoption of internet banking had better performance than those that did not. The study was however conducted in the United States, and in 2005. With Covid 19 pandemic, internet banking became a need not an option for banking. The current study therefore focused on the Kenyan market and covered the pre-Covid, Covid and post Covid period and studied how internet banking affected the financial performance of banks in Kenya.

In Pakistan, Sumra et al. (2010) carried out a study on the effect the internet banking has on profits earned by Pakistani Banks. The research was performed by evaluating the qualitative aspects that determine the influence of e-banking. Its nature was explanatory and descriptive and was conducted by means of interviewing a sample of Pakistan's bank managers on the electronic services they provide. The research revealed that internet banking has led to increase of the amount of profit earned by the banks by enabling them to bear their costs and to make profits even in a span of time which is relatively short. This study underlines that internet banking is an investment in technology by banks and it may not yield fruits immediately. The study shows that with time, banks were able to reap the benefits of the investment.

Worku (2019) examined the role of electronic banking on financial performance of commercial banks in Ethiopia. Electronic Banking is a term that describes use of electronic gadgets to conduct banking. It therefore not only encompasses the internet, but also other electronic devices such as the Automated Teller Machines, Point of Sale (POS) systems. The study used secondary data employed purposive sampling technique to select ten banks for the study commercial banks operating in Ethiopia covering the periods from 2016 to 2018. In light of prior literature, key explanatory variables were identified to disclose their relationship and influence on financial performance of commercial banks. Result using random effect panel least square regression with the aid of E-view 8 application exhibited that numbers of ATM terminals, number of POS terminals and bank market share have positive and significant role on financial performance of commercial banks measured by return on asset. The study shows that increased number of ATM, POS and market share had a positive role on the financial performance of commercial banks with many banking institutions indicating that increased market share allowed a company to achieve greater scale in its operations which generally improved its profitability. The study however employed purposive sampling, which lacks randomization hence not generalizable.

In Uganda, Bashaija (2021) studied the effect of e-banking and performance of financial institutions in Uganda with reference to Kabale district. The study adopted a descriptive research design and survey designs, which helped in collecting and analyzing qualitative and quantitative data. A sample of 138 participants was selected from a target population of 210 subjects who were purposively and randomly selected. The study used both structured and unstructured questionnaires, and an open-ended interview guide to collect data. The results showed internet banking as the most used form of electronic banking. This study in Uganda showed that internet

banking assisted the banks to integrate financial services to the ordinary lives of their customers and particularly the corporate customers. Internet banking was able to offer the corporate clients to integrate their revenue collection channels with the bank accounts and also automate their payment systems so that it speaks to their cashflows. This led to better customer service and better use of the financial services. The study therefore found that 66% of the financial performance of banks could be explained by internet banking. The current study sought to explore this in the context of the entire banking industry in Kenya.

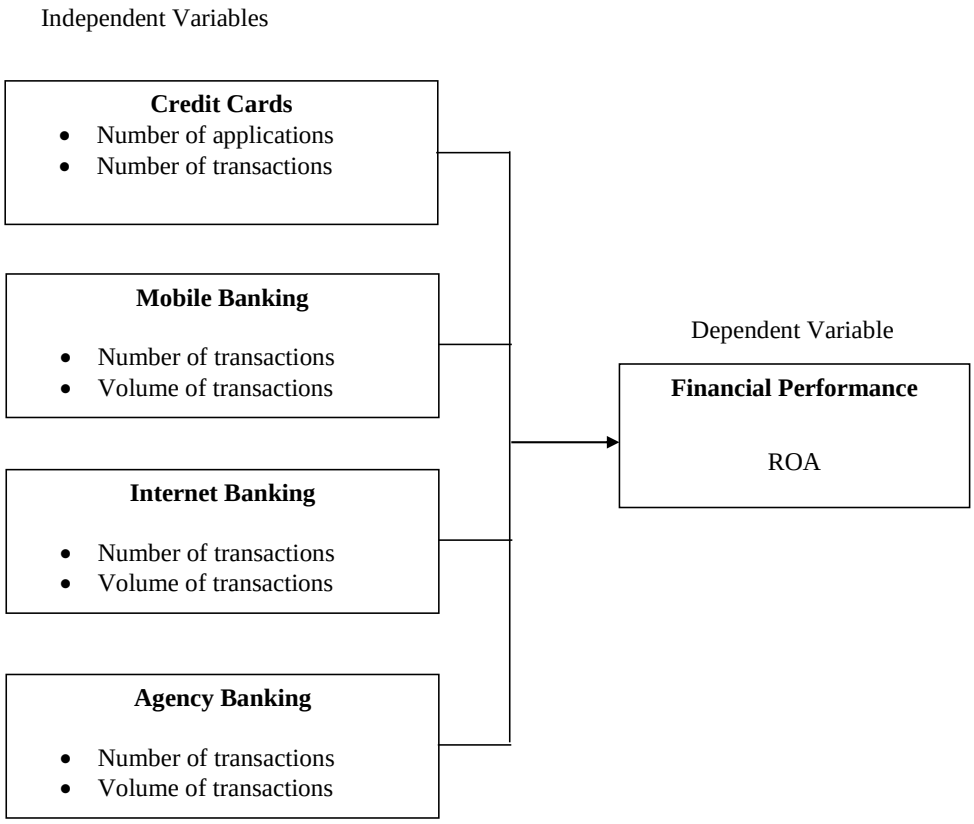
In Kenya, Mutisya (2019) sought to determine the effect of electronic banking on the financial performance of commercial banks in Kenya. The study covered a period of five years that is from the year 2014 to the year 2018 and adopted descriptive research design. Primary data was collected from 34 commercial banks. The trade analysis showed that internet banking was recognized and accepted by the Kenyan commercial banks and the Kenyans as a way of transacting. Electronic banking was found to be positive and significantly related to the financial performance of the commercial banks in Kenya. The study however also relied on primary data which may be subject to bias, unlike secondary data that will be used in the present study.

The empirical studies done in the past have showed that internet banking is a critical innovation for banks. It helps provide a channel through which financial services can be seamlessly integrated to business and payment systems, provides customers with a convenient channel through which to carry out unrestricted banking unlike the mobile and agency platforms and provides banks with an opportunity to use the platform to create customer experiences that go beyond just providing banking services. The current study therefore built on the above empirical studies and went further to explore how internet banking contributes to the financial performance of banks as measured using return on assets.

2.4 Conceptual Framework

FIGURE 1

Relationship between variables



Source: Author (2023)

2.5 Knowledge Gap

There have been several empirical studies done in the area of product innovation by banks and the effect it has on their financial performance. These studies have been done in different countries presenting a contextual gap whereby the findings in those countries may not be

generalized for Kenya. Mpirirwe et. al (2023) did a study in Uganda on the effect of financial innovations on financial inclusion in Uganda. This study focused on Banks in Uganda and restricted itself to financial inclusion instead of financial performance of the banks. Uzikwambara et. al (2022) did a study on the effect of bank innovation on the financial performance of Bank of Kigali. Their study focused on mobile banking, internet banking and automated teller machines. This study therefore left out credit cards and agency banking resulting in some knowledge gap. The bank also focused on only one bank leading to sampling bias as the findings may not be generalized to the rest of the banking population in Rwanda.

In Kenya several studies on banking innovation have been done. However, most of these studies are not recent and the most recent study only covered tier one commercial banks in Kenya, as opposed to the entire banking industry. Kamakia (2014) did a study on the effect of product innovation of banks on their performance, covering all the banks in Kenya. This study however restricted itself on innovation in terms of branch location, technology, and customer service. The study was largely descriptive and used primary data. It did not address the main drivers of innovation in the banking industry; mobile banking, agency banking, internet banking and credit cards. Gitau et. al (2018) did a study on the effect of innovation strategies on the financial performance of the banking industry in Kenya. This study used primary data to analyze the effect of product and organizational innovation on the financial performance of banks. Their study was limited to Nairobi. This study looked at product innovation in general not delving into the specific products that the banks use to drive their performance. This study therefore left knowledge gap in that it did not address the specific products but product innovation in general. Katutu (2019) did a study on the effect of product innovation on the financial performance of banks in Kenya. This study was done on tier 1 banks only, and only covered the products that

banks use to attract deposits and move money among their customers. This study left out a critical role of banks which is to issue credit. The study did not address credit card as a product innovation aimed at addressing advancing credit to the bank's customer.

The current study therefore aims to address the knowledge gap by looking wholistically at the entire spectrum of product innovations by the banks, especially the latest innovations that are shaping the bank of the future. This study also aims to study the effect that these product innovations have especially with the Covid 19 as the backdrop.

2.6 Operationalization of Variables

TABLE 1

Operationalization of research variables

Independent Variable	**Indicator**	**Measurement**
Mobile Banking	Number of customers using mobile banking	Amount of operating income generated through mobile banking
Credit Cards	Credit Cards Issued	Amount of credit and interest income generated by issuance of credit cards
Agency Banking	Evidence that bank has Agency Banking Network	Amount of operating income generated through agency banking
Internet Banking	Banking transactions performed through the internet	Amount of operating income generated through internet banking
Dependent Variable	**Indicator**	**Measurement**
Financial Performance	Profitability to the bank	Return on Asset = Net Income/Total assets

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the design and methodology that the research will employ. It also outlines the population, the sampling frame, the sample and sampling methods that will be used in the study. The chapter also briefly explains the researcher's belief system in regard to this particular research, or his research paradigm. The chapter also outlines the instruments that will be used in the research and validity tests that will be used in the test.

3.2 Research Paradigm

Research paradigm describes an overall conceptual framework within which a researcher may work (Clark et al., 2021). It is the basic belief that guides a researcher in his research. It is the researcher's view of the world around him. This research was carried along the lines of quantitative research. The researcher developed a hypothesis, then test the hypothesis for validity and gather data to test that hypothesis. The researcher therefore leaned towards positivism in his research believing that knowledge can be statistically generalized to the population if the sample size and attributes are representative of the population. The researcher therefore used attributes in his study that can be measured or quantified using statistical methods.

3.3 Research Design

Research design is the plan or the framework in the research that the researcher uses to collect and analyze the data (Kumar, 2018). It outlines the methods for acquiring data and information that is needed to analyze the research problem. It involves defining the objectives of the study or

stating the problem that is to be studied, designing the method to collect data, defining the population and sample, determining what your sources of data will be (will you gather primary data, will you uses secondary data, or will you use a mixture of both primary and secondary data), constructing a questionnaire, specifying the measurement and scaling procedures, specifying and developing a plan for data analysis (Bell et al., 2019). There are six types of research design approaches (Saunders et al., 2019): exploratory research design, descriptive research design, casual research design, case study research design, analytical research design and predictive research design. This research used the descriptive research design method.

Descriptive research design involves observing and determining the behavior of the subject matter of the study without influencing it in any way. Its major emphasis is on the frequency of the occurrences of issues or matters being observed and from this observation, inferring certain relationships between what is observed and the problem matter under the study (Clark et al., 2021). Descriptive research design uses scientific or statistical methods to establish its subject of study (population and sample), to make observations (data collection), to analyze these observations (data analysis) and to infer relationships between what is observed and what is being studies (hypothesis testing).

The researcher in this study therefore chose to use descriptive design method as it blends into the research paradigm. The researcher wants to observe multiple variables (bank product innovations) and how these variables affect or influence the problem under study (bank performance). Cooper and Schindler (2018) argue that this type of research is appropriate for this kind of study because this study seeks to describe the relationship between two variables in which one variable led to a specified effect on the other variable. The researcher used a sample

as that is representative of the entire population and used statistical methods to collect data, analyze data and make conclusions from the analysis.

3.4 Population and Sampling Frame

According to Kothari (2019), a population is a well-defined set of people, services, elements and events, group of things or households that are being investigated. A sampling frame is on the other hand defined as a list or an operational definition of the target population from which a sample is drawn in a research study or survey. It serves as the basis for selecting the participants or elements that will be included in the sample for data collection. The population in the present study comprised all 37 Commercial Banks as at December 31, 2022 (CBK, 2023a). The complete sampling frame is provided in Appendix I.

3.5 Sample Size and Sampling Procedure

Owing to the relatively manageable population size, the present study adopted a census survey of all 37 commercial banks. A census survey, according to Collis and Hussey (2021), entails the methodical and methodical collecting of data from every responder in the target audience, which also serves as the samples. In contrast to sampling, which merely collects data from a sample of a population, a census survey comprises the systematic identification, collection, and collection of information about every person in a specific community (Kothari, 2019).

3.6 Instrumentation and Data Collection

The study utilized secondary data that was collected from the commercial banks' annual integrated financial reports. The secondary data was justified by the fact that the fact that the study relied on hard facts contained in commercial banks' financial reports as opposed to perception-based primary data. Secondary data sources also often provide access to large

datasets with extensive coverage. This larger sample size increases the statistical power of the analysis and allows for more accurate generalizations and insights (Clark et al., 2021). All the information that were collected is indicated in the data collection sheet that is provided as Appendix II in the research. Moreover, information on the financial performance of the selected banks was collected for a period of 5 years, that is, from 2018-2022. The secondary data was collected for Credit Cards, Agency Banking, Mobile Banking, Internet Banking and financial performance

Further, secondary data often includes historical information, enabling researchers to conduct longitudinal analyses and study trends and changes over time. This longitudinal aspect provides valuable insights into the evolution of variables or phenomena (Saunders et al., 2019). Researchers can also use secondary data to compare past trends and patterns with current situations, facilitating historical analyses and providing context for present-day observations (Collis & Hussey, 2021). The study adopted a panel-data approach, whereby the data collected covered a 5-year period, from 2018 to 2022. This time scope is aimed at accounting for both the pre-COVID period (2018-2019); COVID period (2020) and post COVID period (2021-2022).

3.7 Justification of the Research Methodology

The researcher in this study used descriptive quantitative research methodology. Descriptive research was used in this study because the researcher did not have any influence or control on the variables used in this study. The researcher could therefore only report on what he observed from the data collected. In addition, the researcher in this study also wanted to establish the relationship between change of an independent variable to the dependent variable. This relationship is best studied using descriptive research design. The researcher used quantitative

research in this study because he wanted to measure if a unit change in the independent variable would cause a change in the financial performance of banks, measured in return on assets. Since both the dependent and independent variables were measurable in units, the quantitative research methodology was selected. This study also used empirical research design whereby the researcher used data that could then be analyzed and the observations tested using a model or a formula. This was done because the researcher wanted to test a hypothesis. The researcher therefore had to gather data and test it and draw conclusions from the data.

3.8 Data Collection Procedure

The data in this study was obtained from two sources. The data used to calculate the return on assets (dependent variable) was obtained from the financial reports of the banks themselves which is public information. The panel data on the independent variables for all the 37 banks used in this study, was obtained from the Central Bank of Kenya. It took three weeks to obtain all the data used in this study.

3.9 Validity and Reliability of the Data Collected

The data was obtained from the banks themselves and from the regulator, the Central Bank of Kenya. Since the data was from the banks themselves and the regulator, the validity of the data was assured. To ensure that the data was suitable, the researcher calculated the return on assets for each bank using the net income provided and the total assets. This information and how it is reported is regulated by the Central Bank of Kenya, and was therefore suitable for all the banks in Kenya as it was uniform. As for the panel data on the independent variable, the amounts were provided in thousands of shillings for each bank. The researcher checked for any missing data or

erroneously captured data and regularized the data before analysis. The data was also checked for adequacy to ensure that the population sample was fulfilled for all the 37 banks in Kenya.

3.10 Data Management

This data has only been used for this study only. It has not been shared whatsoever with any other entity other than for the purpose of this study. The raw data is also password protected and can only be read when the researcher provides the password.

3.11 Data Analysis and Data Presentation

Data analysis is the process of bringing order, structure and meaning to the mass of collected data. The study collected quantitative data which was analyzed statistically with the aid of SPSS version 27. A combination of both descriptive and inferential statistics was then used in data analysis. The descriptive statistics comprised minimum, maximum, means and standard deviation values while inferential statistics employed both Pearson correlation and multiple regression analyses to determine the contribution of each independent variable to the dependent variable being studied. The regression model that was used is as follows:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Where:

Y = Financial performance

X_1 = Issuance of credit cards

X_2 = Internet banking

X_3 = Mobile banking

X_4 = Agency banking

β_0 = Constant

β_1, β_2, β_3 and β_4 = Regression Coefficients

ε = Error Term

3.12 Assumption Tests

Prior to conducting the inferential analyses, assumption tests were performed. These included tests for normality, correlation, multicollinearity and linearity.

3.12.1 Normality

Statistical operations necessitate that the normality of collected data is tested to check for data distribution. To check for normality, the present study employed the Shapiro-Wilk test (Collis & Hussey, 2021). Data was deemed normally distributed if Shapiro-Wilk statistics had significance values above 0.5.

3.12.2 Multicollinearity

When one or more pairs of predictor variables are highly associated as evidenced by the correlation coefficients and have a value of 9.0 and above, it is called multicollinearity (Teddlie & Tashakkori, 2009). To check for multicollinearity, the study used both the Variance Inflation Factor (VIF) and tolerance. For VIF, values ranging between -10 and 10 was deemed acceptable, while tolerance values was considered acceptable if above 0.1.

3.12.3 Correlation

Correlation analysis is carried out to establish if there is a relationship between the dependent and independent variables. While correlational analysis does not indicate whether the relationship between the dependent variable and the independent variable is significant, it shows the direction and strength of the relationship between the variables.

3.12.4 Linearity

Linearity tests were further performed to determine if variables have a linear association. To check for linearity, Q-Q plots were used for the predictor and outcome variables in line with Kothari (2019). If the data points align along the curves from visual inspection of the graphs, the data was deemed linear.

3.13 Ethical Considerations

The researcher ensured that they had appropriate permissions and legal rights to use the secondary data. If the data is proprietary or subject to copyright, obtaining proper licenses or permissions is essential. The researcher also assessed the reliability and quality of the secondary data to ensure that it was accurate and valid. Data discrepancies or inconsistencies that were identified were addressed appropriately. Main among these were the unbalanced data set attributed to the fact that banks in Kenya did not adopt these innovations at the same time. This was done by extrapolating the data using SPSS. The researcher further provided proper attribution to the original sources of the secondary data. Transparency in reporting the data sources and methodology used in the analysis is essential to maintain research integrity.

CHAPTER FOUR

DATA ANALYSIS, RESULTS, AND INTERPRETATION

4.1 Introduction

This chapter covers data analysis, results, and the interpretations of the study results. In particular, the chapter covers the descriptive statistics of the variables, regression model results, the interpretation of both the tests. The regression model results are covered in this chapter. In addition, the diagnostic tests of the analysis are reported and discussed in this chapter. This study primarily adopted the use of secondary data to collect information from published annual financial statements from five branches of each of the 37 listed commercial banks for five years (2018-2022). Descriptive statistics was carried out first to describe the variable of interest using mean, mode, and standard deviation. Regression analysis was used to establish the significance of the relationship between variables

4.2 Descriptive Statistics

Descriptive statistics was carried out first to describe the variable of interest using mean, mode, and standard deviation.

4.2.1 Descriptive Statistics on Credit Cards Issued

The researcher sought to investigate the credit card issued by measuring the amount of revenue generated from issuance of credit cards. The table below shows the average, minimum, maximum and standard deviation of the amount of credit and interest income generated by issuance of credit cards.

TABLE 2

Descriptive statistics on the credit card issued

Credit Cards KES. '000					
Year	**Mean**	**N**	**Std. Deviation**	**Minimum**	**Maximum**
2018	486458.727	37	896676.1866	3235.7	4126300.4
2019	527775.632	37	984321.6438	848.7	4705567.7
2020	583572.808	37	1068537.3626	13062.6	4309234.8
2021	664493.357	37	1230030.7211	19414.8	5278780.5
2022	737559.076	37	1393601.8974	16011.4	6534941.5
Total	**599971.920**	**185**	**1120089.5075**	**848.7**	**6534941.5**

The statistics in the table 4.2 shows that on average, sampled banks generated income amounting to KES 486,458.73 in 2018 with the minimum income generated being KES 3,235.70 and the maximum revenue generated being KES 4,126,300,.40. In 2019, sampled banks generated income from credit cards worth KES 527,775.63 on average with the minimum issued credit cards being KES 848.70 and the maximum being KES 4,705,567.70 whereas in 2020 an average of KES 583,572.81 credit cards income was generated with the minimum credit cards income generated being KES 13,062.60 and the maximum being KES 4,309,234.80. It was

further observed that an average of KES 664,493.36 credit card income was generated in 2021, with the minimum amount of credit card income being KES 19,414.80 and the maximum credit card income being KES 5,278,780.50. Finally, an average of KES 727,559.08 credit cards income was generated in 2022 with a minimum of KES 16,011.40 and a maximum of KES 6,534,941.50 credit card. In general, the study observed that there was an increase in the amount of credit cards issued from 2018 to 2022 for all the listed banks sampled.

These descriptive statistics show that the commercial banks continued to generate more revenue from credit card issuance from the year 2018 through to the year 2022. This shows that the banks increased adoption of the use of credit cards to generate revenue. The descriptive statistics also show a dip in the revenue generated from credit cards in the year 2020. This being at the period when Covid 19 pandemic effects were at their peak, would explain why the revenues dropped. There malls were closed, hotels were closed, schools were closed, all of which are normally settled using credit cards. The descriptive statistics therefore further supported the objective that credit cards had an effect on the financial performance of banks in Kenya.

4.2.2 Descriptive Statistics on Internet Banking

With emerging technology internet banking is becoming one of the convenient way that bankers use to transact as it is convenient and saves time. The study investigated the amount of operating income generated through internet banking. Table 4.3 shows the descriptive statistics on the amount of operating income generated through internet banking

TABLE 3

Descriptive Statistics on Internet Banking

Internet Banking KES. '000					
Year	**Mean**	**N**	**Std. Deviation**	**Minimum**	**Maximum**
2018	2035113.895	37	3395337.0042	14737.9	14066167.3
2019	2274131.481	37	3934828.1180	3777.3	18252488.4
2020	2518655.654	37	4391158.6099	59241.1	18449459.9
2021	2850762.892	37	5113285.2853	99014.9	22719310.5
2022	3223378.554	37	5826937.2095	74581.6	27841126.7
Total	**2580408.495**	**185**	**4581827.6715**	**3777.3**	**27841126.7**

Analysis result shows an increase in amount of operating income generated through internet banking from 2018 to 2022 by the sampled banks. The minimum amount of operating income generated through internet banking was KES 3777.30 in 2019 whereas the maximum was KES 27841126.7 in 2022. 2022 recorded the highest minimum amount of operating income through internet banking, probably due to covid and the insights most customers had due to lockdown during the Covid 19 Pandemic.

The descriptive statistics show that banks almost doubled their revenue generated from internet banking from the year 2018 to the year 2022. The growth in the revenue generated slowed down during the Covid 19 Pandemic worst period of 2019 and 2020. After that the internet banking revenue steadily grew through the year 2021 and the year 2022. These descriptive statistics support the objective that internet banking has an effect on the financial performance of banks, otherwise the uptake of the product innovation over time would have been slow or negative.

4.2.3 Descriptive Statistics on Mobile Banking

In today's world almost every adult owns a mobile device. Majority of banks have thus adopted mobile banking which is convenient and saves time as one doesn't have to physically visit bank premises to carry out banking activity. The research sought to investigate the amount of income generated through mobile banking. The table below shows the descriptive statistics on the amount of income generated through mobile banking.

TABLE 4

Descriptive statistics on the mobile banking

Mobile banking KES.'000					
Year	**Mean**	**N**	**Std. Deviation**	**Minimum**	**Maximum**
2018	1521354.627	37	2534895.8583	10847.8	10935544.5
2019	1661668.019	37	2779221.5855	2805.0	12508671.3
2020	1849200.032	37	3143091.0285	43079.8	13081429.7
2021	2097907.357	37	3642286.0056	71357.6	16117049.1
2022	2346217.016	37	4163512.0388	54235.4	19824336.9
Total	**1895269.410**	**185**	**3282851.8473**	**2805.0**	**19824336.9**

The study revealed that same to internet banking and use of credit card, the amount of operating income generated through mobile banking was in an increment trend from 2018 to 2022. However, 2019 recorded the lowest amount of operating income through mobile during this period through to the year 2020, the government slashed through policy fees charged on mobile transactions to protect citizens from the harsh economic times occasioned by the Covid 19 pandemic, and also to encourage citizens to use the services. As banks acquired more clients, the income increased as a result.

The descriptive indicate that the mean revenue grew steadily from the year 2018 to the year 2022. This growth is steady from one year to the other the greatest growth happening in the

years after the Covid 19 Pandemic negative effects on the economy had started to decrease. The descriptive statistics support the research objective of the study in that the banks seem to be generating more revenue over time through internet banking indicating either more uptake of this product innovation and the return on investment in technology invested to enable banks to offer internet banking.

4.2.4 Descriptive Statistics on Agency Banking

Agency banking has become a very common method of banking, in every town there are agents of various banks in Kenya.

TABLE 5

Descriptive statistics on the agency banking

Agency Banking KES.'000					
Year	**Mean**	**N**	**Std. Deviation**	**Minimum**	**Maximum**
2018	221851.66	37	417026.00	514.60	1782905.00
2019	237391.18	37	459003.07	407.60	2047439.20
2020	267346.20	37	523217.85	479.10	2209691.00
2021	301830.44	37	611674.86	832.60	2711066.20
2022	326111.55	37	657351.07	624.30	3104267.60
Total	**270906.20**	**185**	**536722.63**	**407.60**	**3104267.60**

The researcher sought to investigate the amount of income generated through agency banking. Table 4.5 below indicates the descriptive statistics on the amount of income generated through agency banking. It was observed that the amount of income generated through agency banking was on an increment trend from 2018 to 2022 with the minimum amount of operating income generated from agency banking being KES 407.60 in 2019 which could be due to the Covid 19 pandemic in our country. Agency Banking is dependent on physical visits to the agency and physically interacting with the agent at the agency location. With Covid 19

restrictions on physical movements and physical interactions, agency banking was negatively affected. However, by 2022 the agency banking was vibrant recording the maximum income generated being KES 3,104,267.60 in 2022.

The descriptive statistics show that from 2018 to 2022 the uptake of Agency Banking by banks in Kenya grew steadily and this supports the objective that Agency Banking has an effect on the financial performance of banks.

4.3 Assumption Tests

The study's tests assumed some certain characteristics or assumptions about the data that the study used. Violation of these assumptions would significantly change how the data was interpreted and the conclusions made from the data. As a result, `normality tests, multicollinearity tests, linearity tests, were performed on the data to test the assumptions. This section discusses these tests.

4.3.1 Normality Tests

Statistical studies necessitate that the normality of collected data is tested to check for data distribution. To check for normality, the study employed the Shapiro-Wilk test (Collis & Hussey, 2021) since the sample is small. Data will be deemed normally distributed if Shapiro-Wilk statistics have significance values above 0.05.

TABLE 6

Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ROA	.061	185	.091	.989	185	.154
a. Lilliefors Significance Correction						

Shapiro-Wilk test of normality was conducted to determine whether return on asset data was normally distributed. The results indicate that we do not reject the null hypothesis for ROA data since ($p = 0.154>0.05$) and conclude that data is normally distributed. With the data being normally distributed, it meant that the confidence levels used to test the significance of the model could be calculated and determined.

4.3.2 Test of Multicollinearity

When one or more pairs of predictor variables are highly associated as evidenced by the correlation coefficients and have a value of 10.0 and above, it is called multicollinearity (Teddlie & Tashakkori, 2009). To check for multicollinearity, the study will use both the Variance Inflation Factor (VIF) and tolerance. The VIF scores should be close to 1 but under 5 is fine and 10+ suggests high collinearity so the variable may not be needed. For VIF, values ranging between 1 and 10 will be deemed acceptable, while tolerance values will be considered acceptable if above 0.1. If the predictor variables are highly correlated then it means we can't carry out multiple regression analysis, and this would mean that our model for this study would not be statistically significant.

TABLE 7

Test of Multicollinearity

Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Beta			Tolerance	VIF
1	(Constant)	4.408		35.597	0		
	Credit Cards KES. '000	1.03E-06	0.764	0.824	0.001	0.12	8.33
	Mobile banking KES.'000	8.44E-07	1.839	1.896	0.061	0.14	7.14
	Agency Banking KES.'000	-1.01E-06	-0.359	-0.531	0.006	0.13	7.69
	Internet Banking KES. '000	-5.81E-07	-1.766	-1.576	0.007	0.103	9.71

a. Dependent Variable: ROA

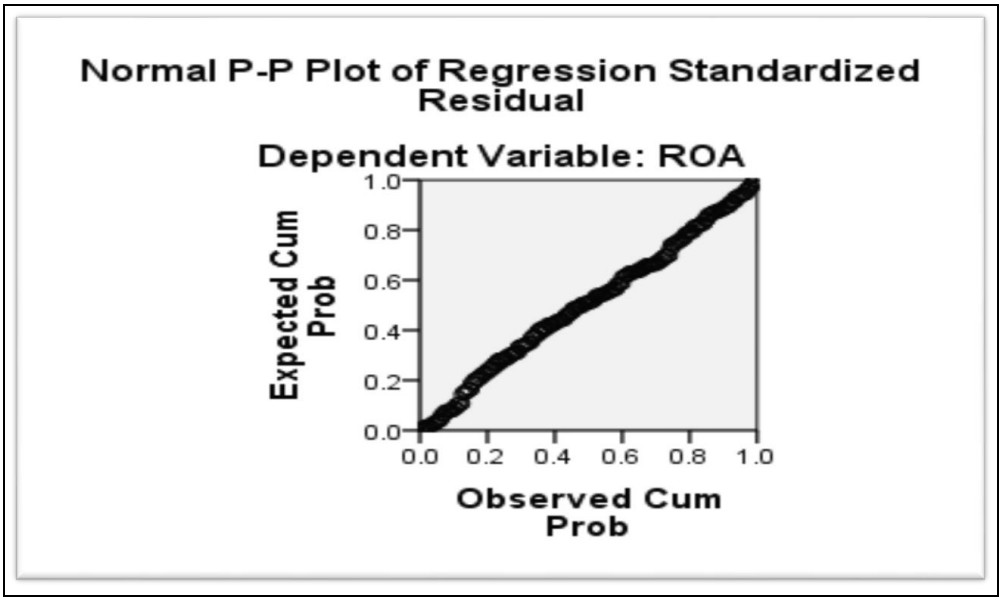
Collinearity statistics measure the relationship between multiple independent variables by giving a score for each independent. The VIF, which stands for variance inflation factor, is (1 / tolerance). Since the VIF for all the predictor variables were less than 10 we conclude that multicollinearity did not exists and hence we could carry multiple regression analysis. This meant that the model used in this study would be statistically significant in explaining the effects of credit card issuance, internet banking, mobile banking and agency banking on the financial performance of banks in Kenya.

4.3.3 Test of linearity

Linearity tests were further be performed to determine if variables had a linear association. To check for linearity, P-P plots were be used for the predictor and outcome variables in line with Kothari (2019). If the data points align along the curves from visual inspection of the graphs, the data will be deemed linear.

FIGURE 2

P-P Plot to test linearity



A linear regression model assumes that the average outcome is linearly related to each term in the model when holding all others fixed. The normal p-p plot above shows that there is a linear relationship among the variables.

4.3.4 Correlation Tests

Prior to fitting of the model correlational analysis was conducted to determine whether there were variables that were strongly correlated with each other. A five-year average was used as the unit of analysis for each of the variables from 2018 to 2022. The results are presented in table 4.2. The correlational analysis was meant to find out the level of relationship among the study variables.

TABLE 8

Correlational Analysis

	ROA	*Credit Cards shs. '000*	*Mobile banking shs.'000*	*Agency Banking Shs.'000*	*Internet Banking Shs. '000*
ROA	1				
Credit Cards shs. '000	0.477	1			
Mobile banking shs.'000	0.481	0.275	1.000		
Agency Banking Shs.'000	0.472	0.195	0.392	1.000	
Internet Banking Shs. '000	0.473	0.296	0.298	0.193	1.000

While correlational analysis does not indicate that the independent variable has a significant relationship with the dependent variable, it shows the direction and strength of the relationship between the variables. The table above indicates moderate positive relationship between the variables.

4.4 Regression Analysis

Regression Tests were conducted to establish the relationship between the dependent variable (Financial Performance of Banks measured by Return on Assets, and the independent variables

(Credit Card Issuance, Internet Banking, Mobile Banking and Agency Banking). The summary of the Regression Analysis is indicated by Table 4.9 below;

TABLE 9

Summary Table of the Regression Analysis

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.49307
R Square	0.243118
Adjusted R Square	0.226298
Standard Error	0.013247
Observations	185

The results indicates that there were 185 data sets in the study. The R squared of 24.3% indicates that in general the model explains about 24.3% of the financial performance of the banks. This is about a quarter of the performance of Banks in Kenya in general and it is significant. Banks therefore should pay close attention the Credit Cards, Internet Banking, Mobile Banking and Agency Banking as these contribute to about a quarter of their Return on Assets.

TABLE 10

Coefficients Table

Coefficients[a]					
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	Std. Error	Beta		
(Constant)	0.04451	0.013		39.619	0
Credit Cards KES. '000	6.41E-07	0	0.477	7.332	0
Internet Banking KES. '000	1.56E-07	0	0.473	7.262	0
Mobile banking KES.'000	2.21E-07	0	0.481	7.414	0
Agency Banking KES.'000	1.32E-06	0	0.472	7.236	0
a. Dependent Variable: ROA					

The results of the Regression Analysis summarized in the Table 4.10 above were interpreted as follows:

The first hypothesis that the study tested was H1: There is significant effect of issuance of credit cards on the financial performance of banks in Kenya, the null hypothesis H0 being: There is no significant effect of issuance of credit cards on the financial performance of banks in Kenya.

Results of the regression coefficient revealed that there was a positive and statistically significant relationship between issuance of credit cards and financial performance of banks and that a unit improvement in issuance of credit cards could lead to improved financial performance by 6.407E-007, (β=6.407E-007, t=7.332, p-value=0.000). This implies that, if banks improve the issuance of credit cards it can lead to an increase in the amount of interest and income generated through this issuance hence improved financial performance of the banks. These results are in agreement with Khan (2020) who observed that there was positive effect between number of credit cards and profitability of commercial banks, Rubirima (2022), who found that there is a positive correlation between card services and financial performance of the Bank of Kigali and Ndhine et al. (2020), who observed that increased debit card usage enhanced the profitability of the banking industry, measured as return on assets (ROA), over the period of the study; 2009 to 2019. The study concluded that there was a statistically and significantly relationship between issuance of credit cards and financial performance of banks in Kenya.

The second hypothesis that the study tested was H2: There is significant effect of internet banking on the financial performance of banks in Kenya, the null hypothesis H0 being: There is no significant effect of internet banking on the financial performance of banks in Kenya.

The results of the regression showed that there was a positive and statistically significant relationship between internet banking and financial performance of banks and that a unit improvement in internet banking could lead to improved financial performance by 1.555E-007, (1.555E-007, t=7.262, p-value=0.000). This implies that, if banks invested in internet banking that was secure, they would attract more clients due to the ease of transacting through internet banking, and the more clients would then lead to an increase in the amount of income generated through internet banking hence improved financial performance of the banks. These results are in agreement with Kegan et al. (2005) who found that banks in United State of America that had extensive online banking services were performing better than those that did not, In Uganda, Bashaija (2021), this study showed that there was a significant relationship between e-banking and financial performance of the banks under the study and Mutisya (2019) although he relied on primary data that could be biased observed that Electronic banking was found to be positively and significantly related to the financial performance of the commercial banks in Kenya. It can therefore be concluded that if banks employ use of internet banking with keenness on security it can lead to an increase in the amount of income generated through internet banking thus improved financial performance of banks in Kenya.

The third hypothesis that the study tested was H3: There is significant effect of mobile banking on the financial performance of banks in Kenya, the null hypothesis H0 being: There is no significant effect of mobile banking on the financial performance of banks in Kenya. The results of the regression coefficient as summarized by table 4.10 above revealed that there was a positive and statistically significant relationship between mobile banking and financial performance of banks and that a unit improvement in mobile banking could lead to improved financial performance by 2.205E-007, (2.205E-007, t=7.414, p-value=0.000). This implies that,

if banks invest in mobile banking, it can lead to improved financial performance of the banks. This results is in line with Daniyan-Bagudu et al. (2021) study that concluded that mobile banking had a positive effect on the financial performance of banks in Nigeria, Besufkad (2020) who found that there was positive effect of mobile banking services on the profitability of commercial banks in terms of ROA and ROE, Ngomiranze (2020) found that the introduction of mobile banking in Uganda has contributed to customer loyalty, convenience and has also influenced the financial performance of the banking sector in Uganda positively. Therefore, there was a positive relationship between mobile banking and financial performance of a bank and finally the result agreed with Maina and Mungai (2019) study which observed that mobile withdrawals had a significant positive influence on financial performance of tier one banks. We can therefore deduce that banks need to make mobile withdrawals and deposits more efficient and safer to facilitate more uptake of the service thus increase the amount of income generated through mobile banking.

The fourth hypothesis that the study tested was H4: There is significant effect of agency banking on the financial performance of banks in Kenya, the null hypothesis H0 being: There is no significant effect of agency banking on the financial performance of banks in Kenya.

The results of the regression coefficient as summarized in the table 4.10 above revealed that there was a positive and statistically significant relationship between agency banking and financial performance of banks and that a unit improvement in agency banking could lead to improved financial performance by 1.323E-006, (1.323E-006, t=7.236, p-value=0.000). This implies that, agency bank is effective in taking the banking services and products to the communities where the bank clients make their livelihood. This results in more clients accessing the services and as a result increased income to the banks. These results is in line with what

Hasan (2019) found that profitability has a positive and statistically significant relationship between the amount deposited and the number of agent banking outlets. It is evident that if agency banking can improve the financial performance of the bank through increased revenue and customer base.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents and discusses the key data findings from the study, draws conclusion from the findings, and makes appropriate recommendations. The conclusions and recommendations drawn were focused on addressing the objectives of the study.

5.2 Summary of Findings

The study found that in general the issuance of credit cards, internet banking, mobile banking and agency banking could explain about 0.24 of the return on investment of banks in Kenya.

5.2.1 Credit Cards Issuance and Financial performance

The results of the regression analysis indicate that there is a statistically significant positive relationship between credit and financial success. This implies that a rise in the volume of transactions conducted using credit cards will have a positive impact on the financial performance of commercial banks in Kenya. The results align with the research conducted by Khan (2020), which shown a favorable correlation between the quantity of credit cards, the net revenue derived from credit cards, and the profitability of commercial banks as measured by return on equity (ROE). Furthermore, Jegede (2022) conducted a study which revealed that the provision of card services by Nigerian banks has, on average, enhanced their performance to a lesser extent due to the concerning prevalence of card services fraud.

5.2.2 Mobile Banking and Financial performance

The regression study revealed a statistically significant positive regression coefficient for mobile banking in relation to financial success from 2018 to 2022. This implies that the adoption of mobile banking services will lead to a positive impact on the financial performance of commercial banks in Kenya. There was a substantial positive correlation seen between mobile banking and return on assets (ROA). This finding demonstrates a favorable correlation between mobile banking and the financial success of commercial banks in Kenya. The results align with the research conducted by Al-Smadi and Al-Wabel (2021), which demonstrated that the implementation of mobile banking has a significant detrimental effect on the performance of banks. This is due to the fact that financial institutions in Jordan primarily rely on conventional channels to provide banking services, resulting in higher costs associated with the adoption of mobile banking that outweigh the incremental revenues. Moreover, the study conducted by Daniyan-Bagudu et al. (2021) establishes that the use of mobile banking services has a favorable and substantial impact on the financial performance of commercial banks operating within the Nigerian context. According to the findings of Maina and Mungai (2019), it was determined that mobile withdrawals have a noteworthy favorable impact on the financial performance of tier one commercial banks in Kenya.

5.2.3 Internet banking and Financial Performance

From the regression analysis, internet banking displayed a significant positive regression coefficient against financial performance. This means that increase in amount transacted through

internet banking would increase the financial performance of commercial banks. The correlation coefficient showed that internet banking had a strong and significant positive effect on return of assets. In tandem with the study findings, Kegan et al. (2005) established that banks which present widespread e-banking services generally have a better performance than the banks that are lagging behind. Additionally, internet banking aids community banks to increase their ability to earn as per the measurement obtained by ROE, it also these banks to improve the quality if their assets. Also, Sumra et al. (2009) revealed that mobile banking has led to increase of the amount of profit earned by the banks by enabling them to bear their costs and to make profits even in a span of time which is relatively short

5.2.4 Agency Banking and Financial Performance

The results of the regression analysis indicate that there is a statistically significant positive relationship between agency banking and financial success. This implies that the augmentation in the volume of transactions conducted through bank agents has resulted in a corresponding enhancement in the financial performance of commercial banks. The analysis of the correlation coefficient revealed a robust and statistically significant positive relationship between agency banking and return on assets. This implies that there exists a favorable correlation between agency banking and the financial performance of commercial banks in Kenya. This finding aligns with the research conducted by Hasan (2019), which demonstrates that there exists a positive and statistically significant correlation between profitability and both the quantity of deposits and the number of agent banking outlets. Furthermore, Namaganda (2020) conducted a study which demonstrated that agency banking has a positive impact on the banking environment. Additionally, the research findings indicated that agency banking has facilitated the provision of financial services to customers residing in remote areas. Moreover, the study

revealed that agent banking has an influence on the performance of commercial banks, although the relationship was not found to be statistically significant.

5.3 Conclusions of the Study

From the R squared value, the study concludes that credit cards issued, mobile banking, agency banking and internet banking are statistically significant determinants of the financial performance of commercial banks in Kenya contributing about a quarter of the banks financial performance. Further, the study concluded that since the revenue of the banks is in tens of millions, credit cards would contribute about 6.41% in the financial performance of banks with all the other variables held constant. The internet banking would contribute about 1.56% and mobile banking would contribute 2.2%. Agency banking would contribute about 33% to the financial performance of banks, with all the other variables held constant.

5.4 Recommendations of the Study

The study concluded that in general, the issuance of credit cards, mobile banking, internet banking, and agency banking contribute about 24% of the return on assets of banks. This is a quarter of the financial performance of the banks as measured by return on assets. This is significant, but it can be more. The recommendations of this study are therefore based on the summary table of the regression analysis. At 24%, the contribution of the variables used in this study is significant, but not robust. This is probably because banks in Kenya, while they have widely accepted the new product innovations, they have only utilized them as a digital platform to deliver the old banking products. Banks therefore need to adopt blue ocean techniques of strategy canvas evaluation where led by their CEOs and business unit heads, they look at the

market, and also look inwardly at their organization and then identify four key things that would be critical to making full use of the product innovations discussed in this study

i. What is it that can be eliminated in the way they are utilizing the four key product innovations to generate revenue? Banks should eliminate the genuine fear that customers have over how secure the platforms are.

ii. What is it that needs to be reduced in utilizing the four key product innovations to generate revenue? Banks should reduce the tendency to use these key product innovations to digitally deliver the same old bank products to their customers.

iii. What is this that the banks can raise or do more in order to fully make use of these product innovations? Banks can move from having digital platforms to what is nowadays called Banking as a Service (BaaS).

iv. What is it that banks can create so as to fully make use of these products? Banks can integrate AI, search engines, and machine learning so as to raise these products from just convenient products to customer experiences that hit at the center of their customer behavioral inclinations and emotions.

The 24% contribution to financial performance also indicates that there is still a lot of unexploited potential in the digital banking space. This study therefore makes recommendations that stakeholders in the banking industry and especially the banks and the fintech companies work together to explore and create uncontested markets that digital banking provides. Equity Bank Kenya has led the way by creating a subsidiary Technology Company called Equitel. Banks in Kenya should themselves be in the lead of the fintech space, because eventually the biggest bank will not be a bank in the traditional sense but a technology company. Banks

therefore ought to be looking at the markets for promising financial technology companies and their product offerings and thinking of how they can either acquire them or collaborate with them to deliver not just banking products but more importantly customer experiences. The customer of tomorrow will not care what a business offered them, but how they made them feel as they offered the product.

Agency banking contributes a huge percentage of the financial performance all the other factors held constant. This is probably because banking as a service is about how people feel, how they behave and how they feel and behave is largely affected by their environment, in terms of community and culture. Agency Banking is basically banking in the community and is more likely to get more adoption among communities as they will feel one with a bank that is part of the community. This study therefore makes recommendations that banks need to take stock of their Agency Banking experiences and evaluate how they can use the channel to be more embedded in the communities where their clients make livelihoods. This will help them in retaining their customers and attracting new ones. The best ambassadors of a product are those who have been positively impacted by the product especially through exceptional customer experience.

Although the product innovations only contribute 24% to the financial performance of the banks, this impact is significant and is likely to increase in the coming years, especially given the lessons the banks have learnt through Covid 19 pandemic. This study therefore recommends that the regulator, the Central Bank of Kenya creates a financial technology unit that evaluates the new technologies of delivering banking services and in so doing readies the financial market in Kenya for the next phase of financial sector development. The regulator should be looking at what prudential measures encourage digital banking instead of these measures being a hurdle.

They should also be ensuring that the composition of boards of directors of banks in Kenya is such that technology savvy individuals are part of what makes the board members. This way, most banks in Kenya would inevitably be steered towards adopting the innovations discussed in this study and even making the full potential of these innovations.

This study also makes a recommendation to learning institutions especially the schools of business in these institutions to realign their curriculum to the current trends of technology, updating the skills of the students and being centers of research where technologies can be developed that are unique to Kenyan culture and business environment. After Kenya trail blazed with mobile money thanks to MPESA and Airtel Money, little has been done since in way of embedding these technologies to the way of life of Kenyans. Banks can work with research centres at the institutions of learning to open up their Application Programming Interfaces (APIs) so as to allow young people develop Apps that would link in a secure manner clients and their accounts at the bank. These Apps can even incorporate Artificial Intelligent and Data Engines so they would advise customers on when to make purchases and make huge savings, where to invest and many other embedded technology innovations that would make use of the product innovations discussed in this study.

5.5. Limitations of the Study

The scope of this analysis was restricted to the time frame of five years, namely from 2018 to 2022. This implies that the results may vary when the research is conducted over an extended timeframe, such as a decade. The study's scope was constrained by the researcher's inability to evaluate the data's trustworthiness. This is despite of the fact that the data was obtained from financial reports and the central bank of Kenya. The scope of the research was restricted to examining product developments specifically within the banking sector.

5.6 Suggestions for Future study

This study suggests a study is made to determine why the banking industry in Kenya is yet to move to the Banking-as-a-Service (BaaS) platform despite the widespread adoption of mobile and internet banking.

This study also suggests that studies in the future focus on how Financial Technology (FinTechs) are eating into the traditional market of commercial banks especially using the Savings and Credit Cooperative institutions (SACCOs) as their medium. How will they shape the financial landscape in the future?

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APPENDICES

Appendix I: Sample Frame

1 ABSA Bank Kenya Plc
2 Access Bank (Kenya) PLC
3 African Banking Corporation Limited
4 Bank of Baroda (K) Limited
5 Bank of India
6 Citibank NA Kenya
7 Consolidated Bank of Kenya Limited
8 Co-operative Bank of Kenya Limited
9 Credit Bank Limited
10 Development Bank of Kenya Limited
11 Diamond Trust Bank Kenya Limited
12 DIB Bank Kenya Limited
13 Ecobank Kenya Limited
14 Equity Bank Kenya Limited
15 Family Bank Limited
16 First Community Bank Limited
17 Guaranty Trust Bank (K) Ltd
18 Guardian Bank Limited
19 Gulf African Bank Limited
20 Habib Bank AG Zurich
21 HFC Limited
22 I & M Bank Limited
23 Kingdom Bank Limited
24 KCB Bank Kenya Limited
25 Mayfair CIB Bank Limited
26 Middle East Bank (K) Limited
27 M-Oriental Bank Limited
28 National Bank of Kenya Limited
29 NCBA Bank Kenya PLC
30 Paramount Bank Limited
31 Prime Bank Limited
32 SBM Bank Kenya Limited
33 Sidian Bank Limited
34 Stanbic Bank Kenya Limited

35 Standard Chartered Bank Kenya Limited
36 UBA Kenya Bank Limited
37 Victoria Commercial Bank Limited

Appendix II: Data

Bank	Year	Assets Shs. '000	Net Income Shs. '000	ROA	Credit Cards shs. '000	Mobile banking shs.'000	Agency Banking Shs.'000	Internet Banking Shs. '000
KCB Bank Kenya Limited	2018	714,313,000.00	48,830,000.00	0.068	4,126,300.37	10,935,544.45	1,782,905.02	14,066,167.30
	2019	738,432,000.00	56,130,000.00	0.076	4,705,567.67	12,508,671.25	2,047,439.23	18,252,488.36
	2020	758,345,431.00	53,470,863.00	0.071	4,289,814.88	11,838,646.19	1,928,532.87	16,955,777.17
	2021	826,394,924.00	61,506,085.00	0.074	4,857,589.87	13,226,283.18	2,200,249.98	19,410,123.86
	2022	971,352,761.00	61,381,388.00	0.063	4,831,570.36	13,032,445.60	2,174,400.00	19,280,523.85
Equity Bank Limited	2018	673,682,000.00	41,422,000.00	0.061	3,086,614.16	8,792,852.91	1,510,939.38	12,712,125.89
	2019	573,384,000.00	44,983,000.00	0.078	3,268,686.34	9,547,601.29	1,622,401.23	13,620,481.73
	2020	1,015,093,000.00	61,770,000.00	0.061	4,309,234.83	13,081,429.70	2,209,690.98	18,449,459.87
	2021	1,304,914,000.00	76,531,000.00	0.059	5,278,780.49	16,117,049.15	2,711,066.20	22,719,310.51
	2022	1,447,010,000.00	94,893,000.00	0.066	6,534,941.53	19,824,336.89	3,104,267.61	27,841,126.70
Co-op Bank	2018	408,303,625.00	30,383,949.00	0.074	2,076,682.92	6,330,885.36	1,095,857.47	8,601,191.29
	2019	449,616,472.00	30,961,222.00	0.069	2,094,750.25	6,284,543.58	1,107,572.17	8,720,349.25
	2020	496,822,948.00	34,399,096.00	0.069	2,290,234.70	6,890,286.01	1,218,567.99	9,475,156.64
	2021	540,386,740.00	38,091,723.00	0.070	2,495,721.85	7,623,526.10	1,389,461.75	10,401,306.46
	2022	562,082,490.00	42,439,402.00	0.076	2,673,250.19	8,423,939.08	1,288,305.38	11,381,770.65
ABSA Bank Kenya Plc	2018	325,362,737.00	21,960,092.00	0.067	1,377,873.90	4,624,686.49	657,090.56	5,827,600.30
	2019	374,109,200.00	23,126,804.00	0.062	1,437,336.77	4,831,479.18	663,122.55	6,120,905.90
	2020	377,935,772.00	23,280,874.00	0.062	1,434,118.54	4,850,868.60	664,916.18	6,097,034.68
	2021	428,746,218.00	25,111,578.00	0.059	1,525,172.42	5,097,176.28	706,526.49	6,502,347.76

	2022	477,290,548.00	32,131,322.00	0.067	1,916,645.60	6,436,041.18	882,861.31	8,279,755.93
Standard Chartered Bank Ltd	2018	284,691,000.00	18,959,000.00	0.067	1,127,448.00	4,025,359.22	520,894.25	4,790,119.70
	2019	302,294,000.00	18,994,000.00	0.063	1,123,191.64	4,031,950.37	517,072.98	4,662,983.58
	2020	325,872,857.00	18,732,425.00	0.057	1,083,702.79	3,975,940.36	508,717.54	4,581,481.89
	2021	334,871,938.00	18,383,829.00	0.055	1,054,865.02	3,893,261.56	491,497.91	4,281,766.31
	2022	381,260,015.00	21,782,185.00	0.057	1,230,505.58	4,587,220.16	543,545.54	5,066,225.64
Stanbic Bank Kenya Limited	2018	280,953,012.00	12,052,373.00	0.043	676,166.48	2,538,170.00	296,186.48	2,791,445.49
	2019	292,730,405.00	13,281,304.00	0.045	738,497.94	2,774,630.85	293,707.12	3,060,492.52
	2020	318,982,000.00	12,735,000.00	0.040	703,754.73	2,653,500.54	278,476.06	2,912,019.06
	2021	319,198,000.00	14,324,000.00	0.045	773,833.49	2,907,501.59	275,224.43	3,263,649.54
	2022	390,320,000.00	18,899,000.00	0.048	1,018,919.55	3,785,550.51	349,794.25	5,992,931.75
Diamond Trust Bank Kenya Limited	2018	281,515,703.00	14,971,104.00	0.053	744,378.38	3,219,389.77	269,342.63	4,724,589.17
	2019	287,250,595.00	13,780,358.00	0.048	684,828.04	2,925,834.23	227,040.25	4,328,551.86
	2020	312,189,185.00	13,004,022.00	0.042	645,935.95	2,760,428.10	212,948.43	3,990,844.59
	2021	326,376,730.00	13,676,651.00	0.042	672,538.58	2,902,856.87	209,599.55	4,141,177.22
	2022	359,289,733.00	14,371,751.00	0.040	687,075.04	3,043,598.03	214,689.05	4,292,553.72
Citibank N.A Kenya	2018	85,638,687.00	5,301,297.00	0.062	251,814.79	1,116,426.86	52,401.10	1,573,765.04
	2019	96,570,193.00	5,284,792.00	0.055	250,094.13	1,104,059.28	14,974.89	1,550,531.27
	2020	106,453,856.00	5,231,156.00	0.049	244,386.57	1,089,978.43	11,653.12	1,480,853.37
	2021	130,940,063.00	7,247,221.00	0.055	615,967.24	1,471,049.05	15,114.62	2,041,208.13
	2022	137,827,065.00	5,253,003.00	0.038	443,896.54	1,052,198.96	7,945.13	1,446,928.32
Family Bank Limited	2018	66,909,838.00	4,334,477.00	0.065	363,373.86	867,485.01	158,107.58	1,183,570.08
	2019	78,857,125.00	4,992,855.00	0.063	400,562.52	991,048.52	180,077.23	1,339,027.60
	2020	90,590,626.00	6,406,043.00	0.071	505,932.54	1,262,965.96	229,162.63	1,699,986.42

	2021	111,683,065.00	7,730,375.00	0.069	608,488.21	1,519,323.31	273,844.04	2,045,976.52
	2022	128,465,438.00	8,547,780.00	0.067	636,948.93	1,652,855.95	297,269.39	2,238,580.52
I & M Bank Limited	2018	248,639,566.00	13,127,847.00	0.053	953,934.02	2,780,168.49	454,170.88	3,921,024.55
	2019	274,027,749.00	13,042,300.00	0.048	909,864.55	2,746,643.71	449,507.22	3,871,791.35
	2020	305,089,478.00	13,119,988.00	0.043	904,960.56	2,740,929.91	446,582.35	3,849,338.18
	2021	339,975,897.00	17,194,252.00	0.051	1,184,106.64	3,582,642.87	562,481.53	4,867,407.15
	2022	344,674,031.00	17,881,427.00	0.052	1,222,160.23	3,629,592.12	580,409.17	5,036,373.84
NCBA Bank Kenya PLC	2018	245,106,892.00	15,769,551.00	0.064	1,066,924.00	3,294,456.83	486,978.88	4,343,688.74
	2019	494,717,416.00	21,536,642.00	0.044	1,433,873.87	4,560,953.03	659,406.70	5,880,784.48
	2020	527,868,381.00	36,009,092.00	0.068	2,359,270.49	7,147,565.30	1,101,916.68	9,657,233.78
	2021	591,088,038.00	37,825,070.00	0.064	2,382,594.26	7,881,338.33	1,148,231.10	10,037,726.14
	2022	619,661,644.00	42,386,630.00	0.068	2,659,525.79	8,855,098.19	1,268,294.08	11,218,349.65
Prime Bank Limited	2018	98,534,455.00	3,762,219.00	0.038	233,822.87	727,487.85	107,875.36	985,288.60
	2019	108,785,527.00	4,389,116.00	0.040	270,372.69	971,766.46	125,355.87	1,391,802.35
	2020	116,203,591.00	4,647,232.00	0.040	282,253.47	999,341.88	130,752.14	1,466,576.01
	2021	126,482,223.00	5,546,593.00	0.044	330,856.39	1,177,648.04	152,401.83	1,742,241.78
	2022	140,402,895.00	5,897,296.00	0.042	350,698.59	1,251,848.20	162,026.88	1,809,839.44
National Bank of Kenya Limited	2018	115,143,443.00	6,002,706.00	0.052	354,964.16	1,274,068.95	163,411.45	1,817,569.91
	2019	112,028,747.00	6,288,579.00	0.056	363,805.04	1,331,772.77	170,779.30	1,878,272.40
	2020	126,841,620.00	7,018,442.00	0.055	402,718.55	1,478,049.09	187,640.43	2,083,523.84
	2021	146,543,305.00	8,263,220.00	0.056	466,800.66	1,726,290.21	206,197.70	2,424,386.99
	2022	142,769,274.00	9,043,603.00	0.063	507,367.40	1,884,350.64	222,246.10	2,560,093.80
SBM Bank Kenya Limited	2018	70,647,739.00	1,055,981.00	0.015	58,717.11	214,344.21	23,352.31	297,421.18
	2019	72,519,356.00	2,774,828.00	0.038	153,341.05	555,809.91	60,677.12	764,320.37
	2020	79,189,702.00	3,733,304.00	0.047	201,686.38	747,168.63	71,732.51	1,019,414.09

	2021	81,957,761.00	3,496,228.00	0.043	188,495.43	693,978.01	64,710.33	937,649.06
	2022	81,757,793.00	3,174,205.00	0.039	157,824.67	625,801.74	57,106.59	842,346.11
HFC Limited	2018	57,083,283.00	2,433,767.00	0.043	120,948.37	478,331.12	40,097.88	644,138.24
	2019	54,531,890.00	2,769,554.00	0.051	137,569.32	535,539.50	45,353.06	725,319.28
	2020	55,445,249.00	1,882,462.00	0.034	92,568.59	398,661.07	28,849.40	562,253.64
	2021	52,903,518.00	1,879,947.00	0.036	89,875.25	395,907.52	28,083.15	558,088.87
	2022	56,951,400.00	2,253,924.00	0.040	107,062.74	470,872.97	69,603.34	661,289.91
Ecobank Kenya Limited	2018	54,463,878.00	1,718,519.00	0.032	81,326.10	358,075.47	52,617.44	486,484.18
	2019	75,377,851.00	2,109,068.00	0.028	98,530.40	428,100.99	64,539.73	594,027.25
	2020	94,428,325.00	2,356,580.00	0.025	148,440.54	472,033.05	71,537.17	649,114.87
	2021	103,388,399.00	2,165,391.00	0.021	135,866.27	433,372.75	64,792.90	591,280.56
	2022	101,225,489.00	3,442,104.00	0.034	213,927.64	689,468.15	98,696.59	948,120.11
Bank of Baroda (K) Limited	2018	123,014,401.00	5,775,545.00	0.047	355,777.72	1,155,894.63	164,953.14	1,577,067.37
	2019	143,311,335.00	6,735,767.00	0.047	409,102.37	1,337,004.96	189,514.09	1,806,457.01
	2020	166,312,530.00	7,625,043.00	0.046	454,836.72	1,503,294.58	209,510.69	2,023,475.26
	2021	180,381,073.00	8,233,166.00	0.046	489,607.39	1,618,141.56	226,204.38	2,179,048.79
	2022	193,775,161.00	9,574,213.00	0.049	566,161.73	1,851,333.91	260,638.46	2,507,393.35
Bank of India	2018	62,867,322.00	3,168,933.00	0.050	183,328.19	671,105.30	86,058.90	946,496.72
	2019	67,867,432.00	3,266,633.00	0.048	187,439.56	687,936.71	87,334.54	969,746.24
	2020	72,867,677.00	3,468,543.00	0.048	195,942.76	724,622.10	86,552.89	1,017,652.99
	2021	86,867,130.00	3,968,572.00	0.046	222,646.22	826,902.86	97,527.46	1,123,436.82
	2022	121,649,324.00	4,691,542.00	0.039	260,870.03	952,294.46	103,750.30	1,321,391.15
Guaranty Trust Bank (K) Ltd	2018	11,333,772.00	668,587.00	0.059	36,947.10	133,920.83	6,608.70	184,160.84
	2019	42,051,809.00	2,786,261.00	0.066	150,523.74	557,631.21	7,895.10	760,815.01
	2020	48,547,285.00	2,949,043.00	0.061	158,994.53	585,365.42	6,569.40	790,900.19
	2021	54,577,750.00	3,591,949.00	0.066	178,595.32	708,160.92	7,491.28	953,203.80

	2022	54,231,224.00	3,833,860.00	0.071	190,527.33	753,504.57	5,798.69	1,014,696.90
Guardian Bank Limited	2018	16,185,963.00	914,798.00	0.057	45,439.86	176,891.46	14,980.35	239,576.71
	2019	16,368,450.00	755,131.00	0.046	37,132.97	167,188.79	18,557.31	239,454.39
	2020	16,784,774.00	821,144.00	0.049	39,256.70	176,579.00	18,159.05	259,137.07
	2021	17,736,400.00	856,559.00	0.048	40,687.07	181,863.90	18,730.36	269,053.97
	2022	15,634,069.00	888,249.00	0.057	47,986.37	188,553.01	17,067.01	272,597.49
Gulf African Bank Limited	2018	33,325,575.00	2,205,312.00	0.066	118,897.06	468,075.49	40,817.26	667,750.30
	2019	35,122,982.00	1,945,010.00	0.055	96,707.86	411,907.26	34,992.35	580,935.47
	2020	37,652,622.00	2,165,621.00	0.058	107,622.60	426,957.11	35,680.00	574,695.84
	2021	37,678,495.00	2,238,717.00	0.059	111,201.58	439,996.11	36,660.29	592,514.91
	2022	38,162,471.00	2,462,000.00	0.065	121,066.92	476,068.80	79,913.50	644,773.88
Habib Bank A.G Zurich	2018	21,520,666.00	902,061.00	0.042	43,125.13	191,035.25	8,916.50	269,427.52
	2019	24,823,459.00	997,621.00	0.040	47,387.60	210,094.04	2,826.84	296,157.91
	2020	27,211,884.00	1,151,783.00	0.042	75,463.38	240,621.90	2,565.75	337,927.31
	2021	28,553,963.00	1,260,739.00	0.044	79,413.72	262,691.14	2,629.37	356,894.27
	2022	30,855,524.00	1,260,000.00	0.041	79,058.01	255,756.21	1,905.74	354,883.93
Paramount Bank Limited	2018	9,886,573.00	363,937.00	0.037	22,618.78	72,898.14	10,435.29	100,245.66
	2019	10,443,296.00	406,346.00	0.039	25,031.21	81,324.47	11,605.49	110,956.63
	2020	11,378,331.00	440,953.00	0.039	26,781.64	87,526.24	12,406.43	118,258.64
	2021	12,447,780.00	572,249.00	0.046	34,134.87	112,820.19	15,723.49	151,859.04
	2022	13,813,300.00	631,476.00	0.046	37,552.42	140,725.56	17,349.66	205,344.88
Sidian Bank Limited	2018	25,329,169.00	1,062,984.00	0.042	62,858.52	235,348.58	28,937.58	337,075.54
	2019	26,451,638.00	933,908.00	0.035	54,028.17	200,827.80	25,362.19	294,723.20
	2020	33,508,517.00	858,629.00	0.026	49,268.17	182,303.40	22,955.74	269,704.18
	2021	41,410,124.00	1,533,121.00	0.037	86,608.11	325,443.18	38,257.00	470,504.25

	2022	42,585,542.00	1,774,818.00	0.042	99,571.46	376,703.52	43,616.07	537,400.27
UBA Kenya Bank Limited	2018	15,332,118.00	591,626.00	0.039	32,896.96	125,292.44	13,083.41	176,706.82
	2019	16,088,319.00	749,446.00	0.047	41,415.48	157,829.61	16,388.13	222,483.65
	2020	18,743,174.00	682,866.00	0.036	36,890.85	142,659.27	13,120.73	200,349.43
	2021	13,598,404.00	360,108.00	0.026	19,414.84	75,033.12	6,665.10	101,940.59
	2022	16,290,399.00	414,550.00	0.025	20,611.84	84,145.82	7,458.10	116,759.63
Victoria Commercial Bank Limited	2018	32,336,955.00	1,500,137.00	0.046	74,550.74	300,483.86	14,828.23	413,209.49
	2019	36,072,410.00	1,828,431.00	0.051	90,821.85	365,934.92	5,181.01	499,270.44
	2020	37,890,143.00	1,883,628.00	0.050	92,625.93	373,887.63	4,196.04	505,167.86
	2021	43,470,928.00	2,255,240.00	0.052	107,817.00	444,625.70	4,703.47	598,478.24
	2022	52,082,032.00	2,689,463.00	0.052	127,751.11	528,585.46	4,067.79	711,812.58
Credit Bank Limited	2018	17,826,028.00	1,294,847.00	0.073	61,276.51	250,380.28	39,645.49	339,107.85
	2019	21,664,445.00	1,285,665.00	0.059	60,063.06	246,458.90	39,342.72	332,907.83
	2020	23,313,033.00	1,456,585.00	0.062	91,750.02	279,012.99	44,216.61	375,339.93
	2021	25,971,150.00	1,286,962.00	0.050	80,749.72	243,882.77	38,508.52	325,159.66
	2022	25,813,218.00	1,143,379.00	0.044	71,061.30	216,443.88	32,784.49	280,696.93
Development Bank of Kenya Limited	2018	15,323,111.00	421,510.00	0.028	25,965.32	88,767.92	12,038.59	125,131.21
	2019	15,358,069.00	404,486.00	0.026	24,566.79	84,502.19	11,380.41	118,674.15
	2020	17,225,446.00	362,309.00	0.021	21,611.87	75,491.73	9,955.04	102,563.66
	2021	17,289,207.00	351,548.00	0.020	20,905.75	71,357.61	9,658.70	99,014.87
	2022	16,891,988.00	270,765.00	0.016	16,011.42	54,235.39	7,371.03	74,581.63
African Banking Corporation Limited	2018	27,212,707.00	1,177,813.00	0.043	68,138.49	235,722.81	31,489.23	321,613.02

	2019	28,680,487.00	1,191,082.00	0.042	68,344.34	236,421.86	29,721.87	319,434.81
	2020	32,643,367.00	1,246,168.00	0.038	70,397.74	245,684.86	30,624.52	330,698.48
	2021	36,340,535.00	1,265,625.00	0.035	70,374.22	248,745.19	27,988.45	334,969.39
	2022	36,965,935.00	1,345,726.00	0.036	74,366.79	260,218.59	29,426.97	352,432.56
Consolidated Bank of Kenya Limited	2018	12,887,332.00	643,008.00	0.050	34,737.58	123,263.09	12,354.89	166,499.36
	2019	11,861,651.00	541,449.00	0.046	29,191.65	103,716.09	10,021.47	139,523.22
	2020	12,888,128.00	643,449.00	0.050	31,992.93	121,935.32	11,576.18	162,571.75
	2021	14,286,874.00	715,646.00	0.050	35,564.71	140,652.64	11,790.73	189,408.01
	2022	15,554,515.00	719,585.00	0.046	35,743.24	139,143.77	11,783.62	188,452.32
M-Oriental Bank Limited	2018	10,675,058.00	574,104.00	0.054	28,231.11	121,581.69	5,674.78	171,473.35
	2019	10,470,921.00	507,574.00	0.048	24,265.76	106,892.57	1,438.25	150,680.53
	2020	12,984,554.00	692,663.00	0.053	32,901.91	144,705.98	1,543.00	203,223.82
	2021	13,657,469.00	647,473.00	0.047	30,640.60	134,909.30	1,350.35	183,288.85
	2022	13,333,772.00	768,587.00	0.058	35,906.47	156,008.65	1,162.48	216,475.53
Access Bank (Kenya) PLC	2018	9,318,142.00	568,137.00	0.061	35,786.85	113,800.27	17,246.57	156,492.11
	2019	10,235,524.00	617,061.00	0.060	38,717.15	123,496.14	18,463.72	168,494.36
	2020	10,415,349.00	557,762.00	0.054	34,665.05	111,722.11	15,992.90	153,634.34
	2021	13,211,421.00	572,380.00	0.043	35,259.02	114,553.86	16,347.53	156,293.79
	2022	14,332,421.00	466,472.00	0.033	28,331.56	92,591.59	13,957.79	125,102.55
Kingdom Bank Limited	2018	9,683,856.00	245,261.00	0.025	14,629.91	48,353.76	7,032.45	65,085.48
	2019	9,169,794.00	14,272.00	0.002	848.72	2,805.01	407.62	3,777.33
	2020	30,611,960.00	1,526,423.00	0.050	90,263.53	295,159.37	42,946.66	399,755.35
	2021	31,690,666.00	2,717,929.00	0.086	157,236.84	575,593.28	74,679.60	811,790.87
	2022	34,659,895.00	2,687,174.00	0.078	154,190.18	565,905.52	73,829.50	797,725.63

First Community Bank Limited	2018	8,775,058.00	574,433.00	0.065	32,450.51	120,006.25	15,637.77	168,535.74
	2019	9,675,058.00	674,104.00	0.070	37,483.10	140,458.21	18,022.40	190,827.65
	2020	11,470,921.00	607,574.00	0.053	33,575.43	123,326.05	15,161.20	171,125.59
	2021	11,984,554.00	692,663.00	0.058	37,420.12	138,743.36	17,022.16	190,792.53
	2022	12,657,469.00	647,473.00	0.051	34,907.82	129,582.67	14,318.43	176,798.65
Mayfair CIB Bank Limited	2018	6,856,572.00	104,704.00	0.015	5,205.99	20,783.05	1,034.96	28,080.44
	2019	8,652,475.00	157,652.00	0.018	7,834.67	31,081.45	446.72	41,836.48
	2020	12,729,360.00	392,410.00	0.031	19,491.79	77,124.03	874.15	103,858.05
	2021	13,460,819.00	691,314.00	0.051	33,994.82	133,677.10	1,441.79	181,048.42
	2022	12,929,077.00	773,410.00	0.060	36,974.67	146,563.28	1,169.78	195,407.27
Middle East Bank (K) Limited	2018	5,360,854.00	243,896.00	0.045	11,585.21	47,935.18	3,993.94	64,551.27
	2019	8,466,284.00	331,012.00	0.039	15,664.60	64,006.70	5,072.88	86,688.83
	2020	11,021,603.00	337,854.00	0.031	15,783.70	71,549.51	5,046.95	100,910.21
	2021	11,186,376.00	454,332.00	0.041	28,618.29	95,680.07	14,030.21	134,874.88
	2022	12,962,188.00	544,551.00	0.042	34,167.55	113,763.53	16,673.01	159,768.51
DIB Bank Kenya Limited	2018	5,250,614.00	52,062.00	0.010	3,235.67	10,847.79	514.61	14,737.89
	2019	8,987,918.00	166,482.00	0.019	10,255.41	33,792.70	471.74	46,890.31
	2020	13,263,344.00	215,072.00	0.016	13,062.58	43,079.84	479.10	59,241.12
	2021	15,522,711.00	399,195.00	0.026	23,812.13	79,893.30	832.55	109,003.98
	2022	18,236,325.00	412,786.00	0.023	24,547.43	82,682.80	624.34	113,701.01